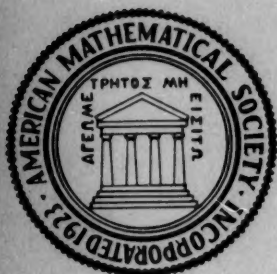


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- Ma, Chih Cheng (with Ju, Frederick D.) On the shear boundary layer of tension plates. *J. Math. Anal. Appl.* 77 (1980), no. 1, 175-197. (I. Tadjbakhsh) **81k:73038** 73K10 (35C20, 73K40)
- Ma, Sheng Kong Dynamics of a vector spin-glass model. *Phys. Rev. B* (3) 22 (1980), no. 9, 4484-4502. (Author's summary) **81i:82045** 82A42
- Ma, Shao Ma (with Coon, Nancy; Redington, Patrick K.; Brown, Billings; Eyring, Henry) A theory of distortion of the reaction zone. *Proc. Nat. Acad. Sci. U.S.A.* 77 (1980), no. 10, part 1, 5575-5579. (Authors' summary) **81i:80009** 80A25 (76A05)
- Ma, D. Y. (with Chan, W. C.) The $GI/Geom/N$ queue in discrete time. (French summary) *INFOR—Canad. J. Oper. Res. Inform. Process.* 16 (1978), no. 3, 232-252. (Joe H. A. de Smit) **81d:60100** 60K25
- van Maarseveen, Martin (with Bagchi, Arunabha) Modelling and estimation of traffic flow—a martingale approach. *Internat. J. Systems Sci.* 11 (1980), no. 4, 429-444. (Authors' summary) **81h:90077** 90B20
- Minassian, Rafanador (with Thiel, Henri) The effect of the shape of the income distribution on two inequality measures. *Econom. Lett.* 4 (1979/80), no. 3, 289-291. (Authors' summary) **81e:90031** 90A19 (62P20)
- (with Gupta, Yash P.) Misspecified polynomial detrending. *Econom. Lett.* 4 (1979/80), no. 4, 329-331. (Authors' summary) **81j:62202** 62P20
- A ridge-like method for simultaneous estimation of simultaneous equations. *J. Econometrics* 12 (1980), no. 2, 161-176. (D. G. Kabe) **81j:62134** 62J07 (62P20)
- Minns, Hans Über eine Spezialschar von Modulformen zweiten Grades. II. *Invent. Math.* 53 (1979), no. 3, 249-253. (J. Spilker) **81a:10037** 10D20 (32N10)
- Über eine Spezialschar von Modulformen zweiten Grades. III. *Invent. Math.* 53 (1979), no. 3, 255-265. (J. Spilker) **81a:10038** 10D20 (32N10)
- Minns, Wolfgang ★ Contributions to α - and β -recursion theory. Minerva-Fachserie Naturwissenschaften. [Minerva Subject Series: Natural Sciences] Minerva Publikation, Munich, 1978. iii + 107 pp. ISBN 3-597-10015-5 (Barry Cooper) **81k:03044** 03D60 (03D25)
- The uniform regular set theorem in α -recursion theory. *J. Symbolic Logic* 43 (1978), no. 2, 270-279. (Douglas Cenzer) **81h:03051** 03D60 (03D30)
- On α - and β -recursively enumerable degrees. *Ann. Math. Logic* 16 (1979), no. 3, 205-231. (Stephen G. Simpson) **81m:03056** 03D60
- Minuchi, Tetsuo (with Ohta, Toyomi) Sub-optimization for singular control problems based on the decomposition method. *Mem. Defense Acad.* 19 (1979), no. 2-4, 71-76. (Benson Kurtaran) **81f:49033** 49D27 (93A15)
- Minuchi, Toshiaki Equivariant embeddings of normal bundles of fixed point loci. *Osaka J. Math.* 16 (1979), no. 3, 707-725. (Alan T. Huckleberry) **81f:14028** 14L30 (32M99)
- On the classification of essentially effective $SL(2; \mathbb{C}) \times SL(2; \mathbb{C})$ -actions on algebraic threefolds. *Osaka J. Math.* 16 (1979), no. 3, 727-744. (Tatsuo Suwa) **81k:14033a** 14J30 (14L30)
- On the classification of essentially effective $SL(n; \mathbb{C})$ -actions on algebraic n -folds. *Osaka J. Math.* 16 (1979), no. 3, 745-758. (Tatsuo Suwa) **81k:14033b** 14J40 (14L30)
- Minuchi, Tetsuo Weakly regular modules. *Proceedings of the 12th Symposium on Ring Theory (Hokkaido Univ., Sapporo, 1979)*, pp. 14-16. Okayama Univ., Okayama, 1980. (Editors) **81e:16020** 16A53
- Weakly regular modules. *Osaka J. Math.* 17 (1980), no. 1, 35-40. (T. Cheatham) **81h:16041** 16A53 (16A30)
- Mit, A. D. (with Malicki, A. A.) Design of experiments in a parameter estimation problem. (Russian) *Theory of random processes*, No. 6 (Russian), pp. 97-101, 135, "Naukova Dumka", Kiev, 1978. (Ivar Petersen) **81h:62091** 62K05
- Mit, A. D., Malicki, A. Anisotropic and inhomogeneous relativistic cosmologies. *General relativity*, pp. 533-580, Cambridge Univ. Press, Cambridge, 1979. (See **81i:83002**) **83F05** (83C15)
- The mathematics of anisotropic spatially homogeneous cosmologies. *Physics of the expanding universe (Proc. Cracow School on Cosmology, Jodłowy Dwór, 1978)*, pp. 1-59, *Lecture Notes in Phys.*, 109, Springer, Berlin, 1979. (C. B. Collins) **81h:83045** 83F05 (58F05)
- Mooney, Richard C. (with Weiss, Philip) Numerical approximations for Volterra integral equations. *Volterra equations (Proc. Helsinki Sympos. Integral Equations, Otaaniemi, 1978)*, pp. 173-191, *Lecture Notes in Math.*, 737, Springer, Berlin, 1979. (Frank G. Hagin) **81e:45001** 45D05 (45L10, 65R20)
- (with Marin, S. P.) A finite element method for exterior interface problems. *Internat. J. Math. Math. Sci.* 3 (1980), no. 2, 311-350. (Georges A. Lebaud) **81h:65113** 65N30
- Variational procedures for a class of exterior interface problems. *J. Math. Anal. Appl.* 78 (1980), no. 1, 248-266. (D. L. Colton) **81k:35035** 35J05
- Minusone, G. D. (with Garuccio, A.; Recami, E.; Vigi, J.-P.) On the physical nonexistence of signals going backwards in time, and quantum mechanics. *Lett. Nuovo Cimento* (2) 27 (1980), no. 2, 60-64. (From the text) **81i:81006** 81B05
- Minuchi, Oshie Résolution adaptative de l'équation de Wiener-Hopf. Cas d'un canal de données affecté de gigue. (English summary) *Ann. Inst. H. Poincaré Sect. B (N.S.)* 14 (1978), no. 3, 355-377. (Authors' summary) **81g:39077** 93E03 (62L20)
- Miner, Jean Walters (with Wilcox, David L.) Coevolution in predator-prey systems: a simulation-kinetic model. *Amer. Natur.* 113 (1979), no. 2, 163-183. (Authors' summary) **81j:92030** 92A17
- MacDonald, Glenn M. (with White, Halbert) Some large-sample tests for nonnormality in the linear regression model. With comments by Sanford Weisberg. *J. Amer. Statist. Assoc.* 75 (1980), no. 369, 16-31. (Mir Masoom Ali) **81e:62077** 62J05 (62F05)
- Macdonald, I. D. Some group elements defined by commutators. *Math. Sci.* 4 (1979), no. 2, 129-131. (N. D. Gupta) **81e:20026** 20F12
- Macdonald, J. G. Algebraic structure of Lie groups. *Representation theory of Lie groups (Proc. SRC/LMS Res. Sympos., Oxford, 1977)*, pp. 91-150, London Math. Soc. Lecture Note Ser., 34, Cambridge Univ. Press, Cambridge, 1979. (See **81j:22001**) **22E15**
- The volume of a compact Lie group. *Invent. Math.* 56 (1980), no. 2, 93-95. (A. H. Dooley) **81h:22018** 22E99 (28C10)
- Zeta functions attached to finite general linear groups. *Math. Ann.* 249 (1980), no. 1, 1-15. (Joe Rejzka) **81m:20062** 20G40 (12B27, 22E50)
- MacDonald, John L. A categorical approach to primary and secondary operations in topology. *Categorical topology (Proc. Internat. Conf., Free Univ. Berlin, Berlin, 1978)*, pp. 225-233, *Lecture Notes in Math.*, 719, Springer, Berlin, 1979. (A. Dold) **81d:56011** 55S20 (18A40)
- Macdonald, Margaret See Wittgenstein, Ludwig. **81a:80019**
- Macdonald, P. D. M. (with Klein, B.) The multitype continuous-time Markov branching process in a periodic environment. *Adv. in Appl. Probab.* 12 (1980), no. 1, 81-93. (P. Jagers) **81h:60082** 60J80
- Macdonald, Sheila Oates See Oates-Williams, Sheila
- MacDougall, J. A. A note on the length of trivectors. *Canad. Math. Bull.* 21 (1978), no. 3, 371-372. (From the text) **81g:15034** 15A75
- MacDowell, Samuel W. Algebraic approach to supergravity in superspace. *Supergravity (Proc. Workshop, Stony Brook, N.Y., 1979)*, pp. 77-84, North-Holland, Amsterdam, 1979. (See **81j:83001**) **83E99** (53B50, 83E15)
- Macedo, A. (with Som, M. M.) The Lewis metric and flat space-time. *Gen. Relativity Gravitation* 11 (1979), no. 3, 217-222. (Richard Sigal) **81a:83007** 83C05 (53C25)
- Macedonika-Nesaka, Olga Note on automorphisms of a free abelian group. *Canad. Math. Bull.* 23 (1980), no. 1, 111-113. (Delmar L. Boyer) **81h:20032** 20E05 (20K30)
- Mack, Joseph (with Maleki, Nasser) Schwinger's variational principle for electron-ion scattering. *Phys. Rev. A* (3) 21 (1980), no. 5, 1403-1411. (Authors' summary) **81a:81075** 81F05
- Macinis, Jonas See MacLoni, Jonas
- Macri, Aldo (with Toscano, Raffaele) A problem of contact through membranes. (Italian. French summary) *Atti Acad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur.* (8) 65 (1978), no. 1-2, 69-77 (1979). (P. Villaggio) **81k:73045** 73K15 (49A29, 53C45, 73T05)
- (with Toscano, Raffaele) Preliminary results on the problem of the plate on unilateral elastic boundary support. *Simulation of systems '79 (Proc. Ninth IMACS Congress, Sorrento, 1979)*, pp. 1149-1153, North-Holland, Amsterdam, 1980. (See **81j:68009**) **49A29** (73C40)
- (with Toscano, Raffaele) Preliminary results on the elastic stability of beams under unilateral constraints. *Simulation of systems '79 (Proc. Ninth IMACS Congress, Sorrento, 1979)*, pp. 1155-1157, North-Holland, Amsterdam, 1980. (See **81j:68009**) **49A29** (35J20, 73C40)
- (with Toscano, Raffaele) Preliminary results on the problem of the elastic plate on one-sided foundation. *Simulation of systems '79 (Proc. Ninth IMACS Congress, Sorrento, 1979)*, pp. 1159-1162, North-Holland, Amsterdam, 1980. (See **81j:68009**) **73Q05** (49A29)
- (with Toscano, Raffaele) On the problem of a beam on a unilateral elastic base. (Italian. English summary) *Boll. Un. Mat. Ital. B* (5) 17 (1980), no. 1, 352-372. (B. A. Boley) **81e:73052** 73K05
- MacFarlane, A. G. J. (with Postlethwaite, I.) Extended principle of the argument. *Internat. J. Comput. Math.* 27 (1978), no. 1, 49-55. (Authors' summary) **81e:93071** 93D99 (30C15)
- MacGillivray, H. L. The moment ratios of particle size distributions in some simple growth models. *J. Appl. Probab.* 17 (1980), no. 4, 956-967. (S. K. Srinivasan) **81m:60023** 60E05 (62E15, 92A40)
- MacGowan, David A new derivation of the reference hypernetted chain equation. *Phys. Lett. A* 76 (1980), no. 3-4, 264-266. (Author's summary) **81k:82040** 82A50
- MacGregor, Robert M. Generalizing the notion of a periodic sequence. *Amer. Math. Monthly* 87 (1980), no. 2, 90-102. (Stephen L. Bloom) **81h:10014** 10A35 (68B99)
- MacGregor, Ronald J. A possible mechanism for the influence of electromagnetic radiation on neuroelectric potentials. *IEEE Trans. Microwave Theory Tech.* 27 (1979), no. 11, 914-921. (Author's summary) **81e:78001** 78A25 (78A40, 92A09)
- MacGregor, Thomas H. (with Abu-Muhanna, Yusuf) Variability regions for bounded analytic functions with applications to families defined by subordination. *Proc. Amer. Math. Soc.* 80 (1980), no. 2, 227-233. (Aharon Atzmon) **81m:30022** 30C75 (30D50)
- Machado, S. (with Prola, João Bosco) The general complex case of the Bernstein-Nachbin approximation problem. (French summary) *Ann. Inst. Fourier (Grenoble)* 28 (1978), no. 1, vii, 193-206. (From the introduction) **81g:46009** 46J10 (41A65)
- Machala, František Projektive Ebenen mit Homomorphismen und erweiterte lokale Ternäritäten. (Russian summary) With a loose English summary. *Math. Slovaca* 29 (1979), no. 3, 227-237. (R. Artzy) **81h:51006** 51A35 (51C05)
- Angordnete affine lokale Ternäritäten und angordnete affine Klingenbergsche Ebenen. With a loose Russian summary. *Czechoslovak Math. J.* 30(105) (1980), no. 4, 556-568. (Dieter Jungnickel) **81m:51022** 51G05 (51C05)
- MacHale, D. Rings that are nearly Boolean. *Proc. Roy. Irish Acad. Sect. A* 80 (1980), no. 1, 41-46. (I. Gy. Maurer) **81k:16034** 16A70
- Macheleidt, G. Zur Greenschen Funktion optisch anisotroper Medien. (English summary) *Ann. Physik* (7) 37 (1980), no. 3, 200-212. (Author's summary) **81g:78013** 78A25
- MacHugh, S. (with Sluckin, T. J.) Driven oscillations of a limit-cycle oscillator. *J. Theoret. Biol.* 84 (1980), no. 1, 119-134. (Authors' summary) **81d:80015** 80A30 (92A09)
- Machty, Michael (with Young, Paul) ★ An introduction to the general theory of algorithms. Computer Science Library—Theory of Computation Series. North-Holland, New York-Oxford-Shannon, 1978. vii + 264 pp. ISBN 0-444-00226-X (Authors' introduction) **81k:68001** 68-01
- Machura, Marek (with Sweet, Roland A.) A survey of software for partial differential equations. *ACM Trans. Math. Software* 6 (1980), no. 4, 461-488. (Authors' summary) **81k:65186** 65M99 (65-04, 65N99)
- Macias, A. (with Riera, A.) The Stark effect: relationship between perturbation and variation treatments. *J. Phys. B* 12 (1979), no. 22, 3631-3647. (From the summary) **81a:81112** 81G45
- Infante Macias, Rafael See Infante Macias, Rafael
- Macias, Roberto A. (with Segovia, Carlos) Lipschitz functions on spaces of homogeneous type. *Adv. in Math.* 33 (1979), no. 3, 257-270. (Sun Yung A. Chang) **81c:33017a** 32A35 (42B30)
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- (with Segovia, Carlos) Singular integrals on generalized Lipschitz and Hardy spaces. *Studia Math.* 65 (1979), no. 1, 55-75. (Alberto Torchinsky) **81e:42031** 42B30 (46E10, 47G05)
- MacIntyre, Angus Combinatorial problems for skew fields. I. Analogue of Britton's lemmas,

- and results of Adjan-Rabin type. *Proc. London Math. Soc.* (3) **39** (1979), no. 2, 211–236. (U. Feigner) **81h:03092** 03D40 (12E15, 16A39, 20F10)
- Macdonis, James The regularity of boundary conditions. (Russian. Lithuanian and English summaries) *Differential'nye Uravneniya i Primenen.—Trudy Sem. Protsessy Optimal. Upravleniya I Sekcija No. 20* (1978), 17–23, 53. (M. Švec) **81a:34052** 34G10
- On the existence of associated functions of boundary value problems. (Russian. Lithuanian and English summaries) *Differential'nye Uravneniya i Primenen.—Trudy Sem. Protsessy Optimal. Upravleniya I Sekcija No. 24* (1979), 67–73, 107. (V. Šeda) **81f:34029** 34B25 (34G10)
- On the discreteness of the spectrum of a boundary value problem. (Russian. Lithuanian and English summaries) *Litovsk. Mat. Sb.* **20** (1980), no. 2, 91–94, 209. (Sergij Aizicovici) **81k:34053** 34G10 (47A10)
- Mack, Gerhard (with Petkova, V. B.) Comparison of lattice gauge theories with gauge groups Z_2 and $SU(2)$. *Ann. Physics* **123** (1979), no. 2, 442–467. (R. Kotecky) **81g:81054** 81E10 (28C10)
- Predictions of a theory of quark confinement. *Phys. Rev. Lett.* **45** (1980), no. 17, 1378–1381. (Author's summary) **81h:81136** 81G05 (81E99)
- Mackay, Alfred (with Wong, Edward) Preference anarchy. *Theory and Decision* **11** (1979), no. 4, 457–463. (From the text) **81a:90031** 90A08
- Mackenthun, Kenneth M., Jr. (with Pursley, Michael B.) Variable-rate universal block source coding subject to a fidelity constraint. *IEEE Trans. Inform. Theory* **24** (1978), no. 3, 349–360. (From the introduction) **81f:94014** 94A29
- An evaluation of the Wyner-Ziv rate region. *IEEE Trans. Inform. Theory* **26** (1980), no. 3, 347–350. (Author's summary) **81h:94025** 94A29
- MacKenzie, D. Karl Pearson and the professional middle class. *Ann. of Sci.* **36** (1979), no. 2, 125–143. (E. Seneta) **81m:01066** 01A70 (62–03)
- Mackey, George W. Origins and early history of the theory of unitary group representations. *Representation theory of Lie groups (Proc. SRC/LMS Res. Sympos., Oxford, 1977)*, pp. 5–19. *London Math. Soc. Lecture Note Ser.*, **34**, Cambridge Univ. Press, Cambridge, 1979. (See **81j:22001**) 01A55 (22–03)
- Induced representations. *Representation theory of Lie groups (Proc. SRC/LMS Res. Sympos., Oxford, 1977)*, pp. 20–64. *London Math. Soc. Lecture Note Ser.*, **34**, Cambridge Univ. Press, Cambridge, 1979. (See **81j:22001**) 22D30
- Harmonic analysis as the exploitation of symmetry—a historical survey. *Bull. Amer. Math. Soc. (N.S.)* **3** (1980), no. 1, part 1, 543–698. (Editors) **81d:01017** 01A55 (22–03, 28–03, 42–02, 43–02, 81–02)
- Macki, Jack W. A singular nonlinear boundary value problem. *Pacific J. Math.* **78** (1978), no. 2, 375–383. (Author's summary) **81h:34018** 34B15
- MacKinnon, James G. (with Beach, Charles M.) Full maximum likelihood estimation of second-order autoregressive error models. *J. Econometrics* **7** (1978), no. 2, 187–198. (Authors' summary) **81h:62103** 62M10 (62P20)
- (with Beach, Charles M.) Maximum likelihood estimation of singular equation systems with autoregressive disturbances. *Internat. Econom. Rev.* **20** (1979), no. 2, 459–464. (V. K. Srivastava) **81a:62055** 62J02 (62P20)
- (with Davidson, Russell) On a simple procedure for testing nonnested regression models. *Econom. Lett.* **5** (1980), no. 1, 45–48. (Bert M. Steece) **81k:62091** 62J05
- Mackowiak, T. Continuous mappings on continua. *Dissertationes Math. (Rozprawy Mat.)* **158** (1979), 95 pp. (A. Lelek) **81a:54034** 54F20 (54C99)
- MacLenn, Gerald R. A growth condition for class Σ . *Michigan Math. J.* **25** (1978), no. 3, 263–287. (D. A. Brannan) **81k:30058** 30E25
- Mac Lane, Saunders (with Browder, Felix E.) The relevance of mathematics. *Mathematics today*, pp. 323–350. Springer, New York, 1978. (See **80h:00007**) 00A05
- Origins of the cohomology of groups. *Enseign. Math.* (2) **24** (1978), no. 1–2, 1–29. (Peter M. Neumann) **81j:01030** 01A60 (18–03, 20–03, 55–03)
- Mathematical models of space. *Amer. Sci.* **68** (1980), no. 2, 184–191. (D. B. Persic) **81d:51001** 51–01 (00A05, 83–01)
- Mathematics. *Science* **209** (1980), no. 4452 *Centennial Issue*, 104–110. (F. J. Murray) **81g:00002** 00A05
- See also *Encyclopedic dictionary of mathematics*, **81d:00003a**
- MacLenn, Alan See MacLenn, H. Alan
- MacLenn, D. W. Residue classes of the partition function. *Math. Comp.* **34** (1980), no. 149, 313–317. (Torleiv Klove) **81a:10002** 10–04 (10A45)
- MacLenn, H. Alan (with Graham, Colin C.) A multiplier theorem for continuous measures. *Studia Math.* **66** (1979/80), no. 3, 213–225. (John F. Price) **81k:43006** 43A10
- (with Elcrat, Alan R.) Weighted Wirtinger and Poincaré inequalities on unbounded domains. *Indiana Univ. Math. J.* **29** (1980), no. 3, 321–332. (Catherine Bandle) **81k:49033** 49G05 (26D10)
- Modifications of Fourier transforms and singular continuous measures. *Math. Proc. Cambridge Philos. Soc.* **87** (1980), no. 3, 383–392. (Colin C. Graham) **81h:42022** 42A16 (42A55)
- MacMillan, L. W. (with Osborn, T. A.) Transit time measures in scattering theory. *Ann. Physics* **126** (1980), no. 1, 1–19. (M. Demuth) **81g:81091** 81F99 (35P25, 47A40)
- Macmah, D. S. (with Beazer, R.) Modal extensions of Heyting algebras. *Colloq. Math.* **41** (1979), no. 1, 1–12. (W. Nemitz) **81d:06013** 06D20 (03G20, 03G25, 06D25)
- Macokina, A. M. (with Kuznetsov, Ju. A.) Iteration methods for the calculation of generalized normal solutions. (Russian) *Computational methods in linear algebra (Proc. Fourth All-Union Conf., Acad. Sci. USSR, Novosibirsk, 1976)*, pp. 15–30. *Akad. Nauk SSSR Sibsk. Otdel., Vychisl. Centr, Novosibirsk*, 1977. (Cs. J. Hegedüs) **81d:65015** 65F10 (65F20)
- (with Kuznetsov, Ju. A.) Optimization of the fictitious component method. (Russian) *Computational methods in linear algebra (Proc. Fourth All-Union Conf., Acad. Sci. USSR, Novosibirsk, 1976)*, pp. 79–86. *Akad. Nauk SSSR Sibsk. Otdel., Vychisl. Centr, Novosibirsk*, 1977. (V. F. Dem'janov) **81c:65019** 65F30 (65K10)
- Macovei, Dolma Some typical free boundary problems. *Variational inequalities and optimization problems (Proc. Summer School, Constanta, 1979)*, pp. 191–217. *Minist. Ed. Încălzimintului, Constanta*, 1979. (Mario Primicerio) **81m:35140** 35R35 (49A29, 76W05, 80A20)
- Macpherson, A. K. On the solution of the Landau equation. *Proc. Roy. Soc. London Ser. A* **336** (1979), no. 1724, 47–61. (Author's summary) **81d:82028** 82A40
- The effect of non-Markovian terms on the Landau equation. *Proc. Roy. Soc. London Ser. A* **371** (1980), no. 1746, 381–392. (R. C. Desai) **81h:82038** 82A45
- Macpherson, Hugh The attenuation of water waves over a nonrigid bed. *J. Fluid Mech.* **97** (1980), no. 4, 721–742. (Author's summary) **81d:76014** 76B15
- Macpherson, Mark K. (with Friak, George V.) The contribution of normal modes in the bottom to the acoustic field in the ocean. *J. Acoust. Soc. Amer.* **68** (1980), no. 3, 929–940. (Authors' summary) **81g:76099** 76Q05 (86A05)
- Macpherson, Robert The combinatorial formula of Gabrielov, Gelfand and Losik for the first Pontrjagin class. *Séminaire Bourbaki, 29e année (1976/77)*, Exp. No. 497, pp. 105–124. *Lecture Notes in Math.*, **677**, Springer, Berlin, 1978. (József Dodziuk) **81a:57022** 57Q99 (57R20)
- Macphie, Robert H. (with Zaghloul, Amir I.) Radiation from a rectangular waveguide with infinite flange—exact solution by the correlation matrix method. *IEEE Trans. Antennas and Propagation* **28** (1980), no. 4, 497–503. (From the introduction) **81e:78039** 78A50
- (with Sinha, Batešwar P.) Translational addition theorems for spheroidal scalar and vector wave functions. *Quart. Appl. Math.* **38** (1980/81), no. 2, 143–158. (F. M. Arscott) **81g:33002** 33A55
- Macrae, Kenneth I. Origin of Higgs fields. *Phys. Rev. D* (3) **22** (1980), no. 8, 1996–2000. (Masatsugu Minami) **81k:81061** 81E10
- MacSithigh, G. P. (with Foslück, R. L.) Shearing motions and the formation of shocks in an elastic circular tube. *Quart. Appl. Math.* **38** (1980/81), no. 2, 191–207. (Alan Jeffrey) **81i:35106** 35L65 (73C99)
- MacVicar-Whelan, P. J. Fuzzy logic: an alternative approach. *Proceedings of the Ninth International Symposium on Multiple-Valued Logic (Bath, 1979)*, pp. 152–158. *IEEE, Long Beach, Calif.*, 1979. (Jiří Šustál) **81j:03040** 03B52 (03E72, 94D05)
- Maczyski, M. J. (with Muszyński, J.; Traczyk, Tadeusz; Żakowski, Wojciech) ★Matematyka: podręcznik podstawowy dla WST. Tom I. (Polish) [Mathematics: textbook for students in polytechnics. Vol. I] *Matematyka dla Politechnik*. [Mathematics for Engineering Colleges] *Państwowe Wydawnictwo Naukowe (PWN)*, Warsaw, 1979. 371 pp. (loose errata). ISBN 83-01-00075-9 (B. Choczwajna) **81g:00003** 00A06 (15–01, 26–01)
- (with Pathak, P. K.) Integration of surveys. *Scand. J. Statist.* **7** (1980), no. 3, 130–138. (V. P. Godambe) **81j:62028** 62D05
- Madan, B. K. (with Ganguly, Ashok) On absolute matrix summability of a factored Fourier series. *Comment. Math. Prace Mat.* **21** (1980), no. 1, 55–61. (Shri Nivas Bhatt) **81d:42016** 42A28
- Madan, Manohar L. (with Valentini, Robert C.) Weierstrass points in characteristic p . *Math. Ann.* **247** (1980), no. 2, 123–132. (R. F. Lax) **81j:14015** 14H05 (14F07)
- Madatov, I. A. 5th degree splines. (Russian. Azerbaijani and English summaries) *Izv. Akad. Nauk Azerbaidžan. SSR Ser. Fiz.-Tehn. Mat. Nauk* **1978**, no. 6, 9–12. (E. Neuman) **81c:41021** 41A15 (65D07)
- Madame-Tort, Monique Singular perturbations for a class of quasilinear hyperbolic equations. (French summary) *Ann. Fac. Sci. Toulouse Math.* (5) **1** (1979), no. 2, 137–163. (Claude-Michel Brauer) **81c:35016** 35B25 (35L15, 35L70)
- Comportement des solutions d'une classe d'équations paraboliques non linéaires dégénérées. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **290** (1980), no. 8, A371–A374. (Author's summary) **81a:35051** 35K65
- Madhala, G. S. (with Lee, Lung Fei; Trost, Robert P.) Asymptotic covariance matrices of two-stage probit and two-stage tobit methods for simultaneous equations models with selectivity. *Econometrica* **48** (1980), no. 2, 491–503. (V. K. Srivastava) **81d:62114** 62P20
- Madhala, Lucia Maximum principle for subsolutions of weakly coupled quasilinear systems. (Italian. English summary) *Rend. Accad. Sci. Fis. Mat. Napoli* (4) **46** (1979), 459–469 (1980). (Mario Primicerio) **81j:35061** 35K55 (35B50)
- Madhoo, I. J. Some analogues of Knopp's core theorem. *Internat. J. Math. Math. Sci.* **2** (1979), no. 4, 605–614. (G. U. Brauer) **81m:40012** 40H05 (40C05, 46A45)
- (with Kuttner, B.) Matrices with infinite norm. *J. London Math. Soc.* (2) **20** (1979), no. 2, 315–318. (D. Leviatan) **81e:40003** 40C05 (40D20)
- Generalized Nörlund means and consistency theorems. *Math. Proc. Cambridge Philos. Soc.* **87** (1980), no. 2, 243–248. (Kazuo Ishiguro) **81a:40008** 40G05
- Madhux, Roger The equational theory of CA_2 is undecidable. *J. Symbolic Logic* **45** (1980), no. 2, 311–316. (D. Monk) **81e:03060** 03G15 (03D35)
- Madell, Robert L. Complete distributivity and α -convergence. With a loose Russian summary. *Czechoslovak Math. J.* **30(105)** (1980), no. 2, 296–301. (B. Šnarda) **81d:06026** 06F15 (54H12)
- Mader, Adolf (with Mines, R.) Functorial topologies with totally ordered neighborhood bases. *Arch. Math. (Basel)* **34** (1980), no. 3, 272–275. (Donald Cook) **81k:20079** 20K45 (54A99)
- A lemma on extensions of abelian groups. *Proc. Amer. Math. Soc.* **78** (1980), no. 3, 304–306. (L. M. Pretorius) **81e:20062** 20K35 (20E22)
- Mader, R. (with Fässler, Albert) Symmetriegreichte Basisvektoren für Permutationsdarstellungen aller endlichen Punktgruppen der Dimensionen 3 und 2. (English summary) *Z. Angew. Math. Phys.* **31** (1980), no. 2, 277–292. (P. Rudra) **81j:20058** 20G05 (20C35, 82A60)
- Mader, W. Connectivity and edge-connectivity in finite graphs. *Surveys in combinatorics (Proc. Seventh British Combinatorial Conf., Cambridge, 1979)*, pp. 66–95. *London Math. Soc. Lecture Note Ser.*, **38**, Cambridge Univ. Press, Cambridge, 1979. (A. K. Dewdney) **81d:05044** 05C40 (05–02)
- Über ein graphentheoretisches Problem von T. Gallai. *Arch. Math. (Basel)* **33** (1979/80), no. 3, 239–257. (Rudolf Halin) **81f:05109** 05C40
- Eine Reduktionsmethode für den Kantenzusammenhang in Graphen. *Math. Nachr.* **93** (1979), 187–204. (Rudolf Halin) **81m:05093** 05C40
- della matita Maderna, Carla See Della Matita Maderna, Carla
- Maderov, Žilvko A procedure for obtaining inequalities. (Macedonian summary) *Prirod.-Mat. Fak. Univ. Kiril Metodij Skopje Godišen Zb.* **28** (1977), 51–57. (A. Lupat) **81c:26018** 26D20
- A note on the obtaining analytic inequalities from the geometric ones. (Macedonian summary) *Prirod.-Mat. Fak. Univ. Kiril Metodij Skopje Godišen Zb.* **29** (1978), 93–98. (S. S. Subramanyam) **81f:51019** 51M99 (26D20)
- A consequence of the Čebyšev inequality. (Macedonian. French summary)

- Prirod.-Mat. Fak. Univ. Kiril Metodij Skopje Godišen Zb. 29** (1978), 99-102. (Editors) **81f:26013** 26D15
- Madhavan, S.** Right inverse semigroups. *J. Austral. Math. Soc. Ser. A* **29** (1980), no. 3, 322-330. (Karl Bylen) **81i:20096** 20M20 (20M30)
- Madhusudan Rao, J.** Mappings on metric spaces. *Indian J. Pure Appl. Math.* **11** (1980), no. 4, 502-506. (G. Marinescu) **81g:54064** 54H25
- Madina, F. S.** Existence of periodic solutions of some countable systems of quasilinear differential equations. (Russian) *Theory of stability and its applications* (Russian), pp. 107-115, 300, "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. (K. R. Schneider) **81i:34049** 34C25
- Madison, Bernard** (with Lindsey, Diana) Congruences on Croisot-Teissier semigroups. *Proceedings of the Conference on Semigroups in Honor of Alfred H. Clifford* (Tulane Univ., New Orleans, La., 1978), pp. 193-206, Tulane Univ., New Orleans, La., 1979. (Howard B. Hamilton) **81i:20086** 20M10
- Madisner, Klaus** (with Avenhaus, Jürgen) String matching and algorithmic problems in free groups. *Rep. Colombiana Mat.* **14** (1980), no. 1, 1-15. (Colin M. Campbell) **81i:20041** 20F10 (68C25)
- Madue, J.** (with Richard, J. L.; Stora, R.) $F = * F$, a review. *Feynman path integrals* (Proc. Internat. Colloq., Marseille, 1978), pp. 304-334, *Lecture Notes in Phys.*, 106, Springer, Berlin, 1979. (R. O. Wells, Jr.) **81d:81055** 81E10 (14F05, 32G13, 53C05)
- Madue, J.** Zeta-function and analytic renormalization. *Ann. Inst. H. Poincaré Sect. A (N.S.)* **32** (1980), no. 3, 249-256. (Authors' summary) **81f:81052** 81E15 (58G25)
- Maduev, L.** (with Petunin, Ju. I.) Some problems on order statistics. (Russian) *Vychisl. Prikl. Mat. (Kiev)* **38** (1979), 41-48, 163. (Authors' summary) **81i:62066** 62G30 (62F10)
- Maduev, L. Henning** Smooth spherical space forms. *Geometric applications of homotopy theory* (Proc. Conf., Evanston, Ill., 1977), I, pp. 303-352, *Lecture Notes in Math.*, 657, Springer, Berlin, 1978. (R. E. Stong) **81e:57041** 57S17
- (with Milgram, R. James) ★The classifying spaces for surgery and cobordism of manifolds. *Annals of Mathematics Studies*, 92. Princeton University Press, Princeton, N.J.: University of Tokyo Press, Tokyo, 1979. xii + 279 pp. ISBN 0-691-08225-1 (Ju. P. Solov'ev) **81h:57014** 57N70 (55P47, 55R35, 57Q60)
- (with Laitinen, Erkki) Topological classifications of $SL_2(\mathbb{F}_p)$ space forms. *Algebraic topology, Aarhus 1978* (Proc. Sympos. Univ. Aarhus, Aarhus, 1978), pp. 235-261, *Lecture Notes in Math.*, 763, Springer, Berlin, 1979. (Stewart B. Priddy) **81h:57017** 57R65 (57S25)
- Spherical space forms. *Proceedings of the International Congress of Mathematicians* (Helsinki, 1978), pp. 475-479, *Acad. Sci. Fennica, Helsinki*, 1980. (R. E. Stong) **81h:57033** 57S17 (57R99)
- See also Algebraic topology, **81h:55001**
- Maduev, Kaj** (with Hald, Jørgen) A 2-stage algorithm for minimax optimization. *International Symposium on Systems Optimization and Analysis* (Rocquencourt, 1978), pp. 225-239, *Lecture Notes in Control and Information Sci.*, 14, Springer, Berlin, 1979. (Vincențiu Dumitru) **81d:65031** 65K10 (90C31)
- Maduev, Rui** ★Grupos e combinatória. (Portuguese) [Groups and combinatorics] *Universidade Estadual Paulista "Julio de Mesquita Filho", Instituto de Biociências, Letras e Ciências Exatas, Departamento de Análise Numérica e Estatística, São Paulo*, 1979. ii + 160 pp. (R. G. Stanton) **81a:20002** 20-01 (05-01)
- Maduev, W. R.** Distributions with strong maximal functions in $L^p(\mathbb{R}^n)$. *Harmonic analysis in Euclidean spaces* (Proc. Sympos. Pure Math., Williams Coll., Williamstown, Mass., 1978), Part I, pp. 249-251, *Proc. Sympos. Pure Math.*, XXXV, Part I, Amer. Math. Soc., Providence, R.I., 1979. (D. Myers) **81d:42031** 42B25 (42A50, 42B30)
- (with Jordan, G. S.; Wheeler, Robert L.) Linear convolution integral equations with asymptotically almost periodic solutions. *Proc. Amer. Math. Soc.* **78** (1980), no. 3, 337-341. (N. K. Karapetian) **81a:45006** 45E10
- Maeda, Fumi-Yuki** Differential equations associated with harmonic spaces. *Complex analysis Joensuu 1978* (Proc. Colloq., Univ. Joensuu, Joensuu, 1978), pp. 260-267, *Lecture Notes in Math.*, 747, Springer, Berlin, 1979. (Ursula Schirmeier) **81b:31015** 31D05 (31B35)
- Maeda, Masao** On the existence of the rays. *Sci. Rep. Yokohama Nat. Univ. Sect. I No. 26* (1979), 1-4. (V. T. Fomenko) **81f:53028** 53C20 (53C45)
- Maeda, Michio** Some remarks on type $(r, 1)$ -cylindrical measures. *Natur. Sci. Rep. Ochanomizu Univ.* **30** (1979), no. 1, 1-9. (Igor Klavinec) **81e:28009** 28C20 (28B05, 46G05, 60B05)
- Maeda, Shichirō** On finite-modular atomic lattices. (Japanese) *Sūgaku* **31** (1979), no. 3, 252-255. (Tadaaki Ohkuma) **81h:06007** 06C05 (46B99)
- Maeda, Toru** (with Hosokawa, Fujitsugu; Suzuki, Shin'ichi) Numerical invariants of surfaces in 4-space. *Math. Sem. Notes Kobe Univ.* **7** (1979), no. 2, 409-420. (R. C. Kirby) **81h:57019** 57Q45
- Maehara, Hiroshi** On random simplices in product distributions. *J. Appl. Probab.* **17** (1980), no. 2, 553-558. (Vangalur S. Alagar) **81d:60015** 60D05 (52A22, 53C65)
- Maehara, Makoto** (with Basu, Sujit K.; Patra, Nishith K.) A nonuniform rate of convergence in a local limit theorem concerning variables in the domain of normal attraction of a stable law. *Yokohama Math. J.* **27** (1979), no. 1, 63-74. (J. L. Mijneer) **81f:60030** 60F05 (60E07)
- (with Hatori, Hirohisa; Mori, Toshio) Supplement to the law of large numbers when extreme terms are excluded. *Z. Wahrsch. Verw. Gebiete* **52** (1980), no. 3, 229-234. (V. K. Rohatgi) **81i:60030** 60F05
- Maekawa, Sadao** (with Hinamoto, Takao) Solution of bilinear minimal realization problems through a canonical form. *Internat. J. Systems Sci.* **10** (1979), no. 7, 837-846. (Authors' summary) **81j:93019** 93B15
- Maekawa, Takayoshi** On the invariant scalar products and the UIR of $SO(n, 1)$. *J. Math. Phys.* **21** (1980), no. 4, 675-679. (Philip Huddleston) **81f:22039** 22E70 (81C40)
- (with Noguchi, N.) Fermi quantization in the representation of $SO(n)$. *J. Math. Phys.* **21** (1980), no. 7, 1659-1661. (R. L. Ingraham) **81i:81033** 81C40
- Maerz, L. S.** On a result of Valiron. (Russian) *Teor. Funkcii Funktsional. Anal. i Prilozhen.* **29** (1978), 89-98, iii-iv. (Authors' summary) **81j:30048** 30D45
- An analogue of a theorem of Pólya and its applications. (Russian. Armenian and English summaries) *Izv. Akad. Nauk Armjan. SSR Ser. Mat.* **15** (1980), no. 1, 45-62, 79. (C. Tanaka) **81k:30032** 30D15 (30D10)
- Maeshiro, Asatoshi** See Glezakos, Constantine, **81i:62193**
- Maell, Gerhard** Iterative Lösung linearer Gleichungssysteme. (English summary) *Nova Acta Leopoldina (N.F.)* **52** (1979), no. 238, 79 pp. (Mieczysław Altman) **81j:65058** 65F10 (65F20)
- Iterative Lösung rechteckiger linearer Gleichungssysteme und verallgemeinerte Matrixinverse. *Numerical methods* (Third Colloq., Kazshy, 1977), pp. 431-447, *Colloq. Math. Soc. János Bolyai*, 22, North-Holland, Amsterdam, 1980. (John Todd) **81m:65047** 65F10 (65F20)
- Maestri, P.** (with Barsi, F.) Error codes in residue number systems with magnitude index. *Calcolo* **15** (1978), no. 3, 299-316. (O. Moreno) **81d:68006** 68A05
- Maffei, C.** (with Ianaro, N.) Nonautonomous differential systems: several functions in the stability problem. *Appl. Math. Comput.* **7** (1980), no. 1, 71-80. (Juri Bogdanov) **81i:34045** 34C35 (34D05, 34D20)
- Maffioli, F.** (with Camerini, P. M.) Exact and heuristic methods for NP-hard matroid problems. (French summary) *Problèmes combinatoires et théorie des graphes* (Colloq. Internat. CNRS, Univ. Orsay, Orsay, 1976), pp. 71-72, *Colloques Internat. CNRS*, 260, CNRS, Paris, 1978. (B. Korte) **81f:05054** 05B35 (68C25)
- (with Camerini, P. M.) Polynomial bounding for NP-hard problems. *Survey of mathematical programming* (Proc. Ninth Internat. Math. Programming Sympos., Budapest, 1976), Vol. 2, pp. 319-323, North-Holland, Amsterdam, 1979. (Authors' introduction) **81h:68022** 68C25
- (with Camerini, P. M.; Fratta, L.) A note on finding optimum branchings. *Networks* **9** (1979), no. 4, 309-312. (Authors' summary) **81h:68034** 68C05 (68E10)
- (with Camerini, P. M.; Galbati, G.) Complexity of spanning tree problems. I. *European J. Oper. Res.* **5** (1980), no. 5, 346-352. (Authors' summary) **81i:68057** 68C25 (68E10)
- (with Camerini, P. M.) Polynomial bounding for NP-hard problems. Combinatorial optimization. *Math. Programming Stud.* **12** (1980), 115-119. (Authors' summary) **81j:90080** 90C10 (68C25)
- (with Camerini, P. M.; Fratta, L.) The K best spanning arborescences of a network. *Networks* **10** (1980), no. 2, 91-110. (Lawrence V. Saxton) **81h:68023** 68C25 (68E10)
- Magagnoli, David** Recurrences and formulae in an extension of the Eulerian numbers. *Discrete Math.* **30** (1980), no. 3, 265-268. (G. P. Egorychev) **81k:05009** 05A15 (10A40)
- Magari, S. G.** The use of a probabilistic model for optimization of a telephone network. (Russian) *Telephone traffic theory and networks with controllable elements* (Russian), pp. 206-210, 216, "Nauka", Moscow, 1980. (Authors' summary) **81m:90048** 90B15
- Magazhenkov, L. N.** (with Meleiko, V. P.; Snerov, B. E.; Švec, Marko; Dmitrieva-Arrago, L. R.; Parfina, G. V.; Jušina, E. P.; Bogačenko, S. V.; Šelmin, D. A.) A hydrodynamic model of the general circulation of the atmosphere. (Russian) *Trudy Glavn. Geofiz. Observator. No. 410 Dinamika Global. Atmosf. Processov i Prognoz Pogody* (1980), 3-33, 142. (Authors' summary) **81h:86006** 86A10 (76R05)
- Schemes for integration with respect to time of the equations of motion of a fluid, with effective suppression of high-frequency components. (Russian) *Trudy Glavn. Geofiz. Observator. No. 410 Dinamika Global. Atmosf. Processov i Prognoz Pogody* (1980), 120-129, 146. (Authors' summary) **81g:76033** 76C99 (65D30)
- Abul-Magd, A. Y.** See Abul-Magd, A. Y.
- Magge, Michael J.** Theoretical characterizations of images that can be totally refined using the transducer oscillation algorithm. *Proceedings of the Fourth International Joint Conference on Pattern Recognition* (Kyoto, 1978), pp. 521-524, IEEE, New York, 1979. (Shinichi Tamura) **81e:68111** 68G10
- Mägi, R.** Metrizability of compact sets and continuous selections. *Proc. Amer. Math. Soc.* **72** (1978), no. 3, 607-612. (Peter J. Nyikos) **81h:54017** 54C65 (46A99)
- (with Namioka, I.) Intersection numbers and weak* separability of spaces of measures. *Math. Ann.* **249** (1980), no. 3, 273-279. (S. A. Peregrudov) **81j:28022** 28C15 (06A10, 54H99)
- Maggioni, Schettini, Andrea** (with Uccella, G.) SOL: an exercise in defining a language. *Fund. Inform.* **4** (2) (1978/79), no. 3, 337-349. (Authors' summary) **81d:68041** 68B99
- (with Winkowski, József) Processes in structures. *Graph grammars and their application to computer science and biology* (Internat. Workshop, Bad Honnef, 1978), pp. 317-330, *Lecture Notes in Comput. Sci.*, 73, Springer, Berlin, 1979. (From the introduction) **81i:68056** 68C40 (68B20)
- (with Wedde, Horst; Winkowski, József) Modeling a solution for a control problem in distributed systems by restrictions. *Semantics of concurrent computation* (Proc. Internat. Sympos., Eötvös, 1979), pp. 226-248, *Lecture Notes in Comput. Sci.*, 70, Springer, Berlin, 1979. (Authors' summary) **81f:68036** 68B20
- (with Germano, Giorgio) Computable stack functions for semantics of stack programs. *J. Comput. System Sci.* **19** (1979), no. 2, 133-144. (Pavel Strnad) **81h:68060** 68C30
- (with Fachini, E.) A hierarchy of primitive recursive sequence functions. (French summary) *RAIRO Inform. Théor.* **13** (1979), no. 1, 49-67, i. (Authors' summary) **81i:68062** 03D20 (68C25)
- Maggioni, Renato** (with Ragusa, Alfio) Algebras for which the generalized Hilbert nullstellensatz holds. (Italian. English summary) *Ann. Univ. Ferrara Sez. VII (N.S.)* **25** (1979), 205-218. (Gerhard Pfister) **81i:13002** 13B99 (14A25)
- Maggiori, C. J.** (with Nachamkin, Jack) A Fourier Bessel transform method for efficiently calculating the magnetic field of solenoids. *J. Comput. Phys.* **37** (1980), no. 1, 41-55. (Alok Nath Chakrabarti) **81j:78007** 78A25 (65R10)
- Maggu, P. L.** (with Das, Ghansham) Short note on the paper: "Equivalent jobs for job blocks in job sequencing" [Opsearch **14** (1977), no. 4, 277-281; MR **57** #11715]. *Pure Appl. Math. Sci.* **9** (1979), no. 1-2, 53-54. (From the text) **81d:90061** 90B35
- (with Das, Ghansham; Singhal, M. L.) On $n \times m$ flow-shop scheduling problem: an extension to Johnson's $n \times 3$ flow-shop scheduling problem. *J. Indian Soc. Statist. Oper. Res.* **1** (1980), no. 1-4, 15-20. (From the text) **81k:90050** 90B35
- (with Das, Ghansham) On idle/waiting time operator: O_i , having applications to solution of some sequencing/scheduling problems. *Pure Appl. Math. Sci.* **11** (1980), no. 1-2, 71-78. (F. A. van der Duyn Schouten) **81j:90057** 90B35
- (with Das, Ghansham) On $2 \times n$ sequencing problem with transportation times of jobs. *Pure Appl. Math. Sci.* **12** (1980), no. 1-2, 1-6. (From the text) **81h:90079** 90B35 (68C15)

- On the proof of Fermat's last theorem. *Pure Appl. Math. Sci.* **12** (1980), no. 1-2, 7-9. (L. C. Egan) **81g:10032** 10B15
- Maghsoudloo, Saeed (with Hool, James N.) Normal approximation to linear combinations of independently distributed random variables. *AIEE Trans.* **12** (1980), no. 2, 140-144. (Authors' summary) **81i:62039** 62E20 (60F05)
- Magid, Andy R. Faithfully representable analytic groups. *Algebraic geometry (Proc. Summer Meeting, Univ. Copenhagen, Copenhagen, 1978)*, pp. 384-395, *Lecture Notes in Math.*, 732, Springer, Berlin, 1979. (G. L. Litvinov) **81f:22007** 22D12 (22E10)
- Separated G_α -actions. *Proc. Amer. Math. Soc.* **76** (1979), no. 1, 35-38. (Amassa Fauntleroy) **81e:14027** 14L30 (14D25)
- Representative functions on simply connected solvable groups. *Amer. J. Math.* **102** (1980), no. 2, 303-319. (G. L. Litvinov) **81f:22008** 22D12 (22E10, 22E25)
- Picard groups of rings of invariants. *J. Pure Appl. Algebra* **17** (1980), no. 3, 305-311. (L. Bădescu) **81g:14004** 14C22 (14L30)
- Moduli for analytic left algebraic groups. *Trans. Amer. Math. Soc.* **260** (1980), no. 1, 281-291. (V. L. Popov) **81f:14029** 14L10 (20G05, 22E10)
- Magidor, Menachem Precipitous ideals and Σ_1^1 sets. *Israel J. Math.* **35** (1980), no. 1-2, 109-134. (Douglas Cenzer) **81k:03048** 03E15 (03E55)
- (with Jech, Thomas J.; Mitchell, W.; Priky, Karel) Precipitous ideals. *J. Symbolic Logic* **45** (1980), no. 1, 1-8. (James Baumgartner) **81k:03097** 03E35 (03E55)
- Magiera, Ryszard Estimation problem for the exponential class of distributions from delayed observations. *Mathematical statistics and probability theory (Proc. Sixth Internat. Conf., Włocławek, 1978)*, pp. 275-287, *Lecture Notes in Statist.*, 2, Springer, New York, 1980. (Mayer Alvo) **81i:62143** 62L12
- Magill, Kenneth D., Jr. Green's \bar{E} -relation for semigroups and compactifications. *Aequationes Math.* **19** (1979), no. 2-3, 123-133. (Adrian C. Albu) **81a:54023** 54D35 (20M10, 54H99)
- Automorphism groups of laminated near-rings. *Proc. Edinburgh Math. Soc.* (2) **23** (1980), no. 1, 97-102. (Günter Pilz) **81i:16046** 16A76 (20F29)
- (with Subbiah, S.) Another semigroup characterization of the simple closed curve. *Semigroup Forum* **20** (1980), no. 1, 89-90. (Bridget B. Baird) **81f:20091** 20M20 (54F25)
- Magill, Michael J. P. (with Brock, William A.) Dynamics under uncertainty. *Econometrica* **47** (1979), no. 4, 843-868. (From the introduction) **81a:93085** 93E03 (90A16)
- The stability of equilibrium. *Internat. Econom. Rev.* **20** (1979), no. 3, 577-597. (Yves Balasko) **81h:90041** 90A16
- Magnum, Kenjiro Stability of spatially homogeneous periodic solutions of reaction-diffusion equations. *J. Differential Equations* **31** (1979), no. 1, 130-138. (C. V. Pao) **81j:35062** 35K55 (34C25, 92A05)
- Stability of travelling wave solutions of the active Josephson junction transmission line. *J. Differential Equations* **37** (1980), no. 2, 238-260. (Alwyn C. Scott) **81j:35015** 35B35 (35Q20, 78A25)
- Magros, Demetrios G. Remarks on stability concepts of solutions of dynamical systems. (Greek summary) *Prakt. Akad. Athinon* **49** (1974), no. 2, 408-416 (1975). (Editors) **81a:34014a** 34A99
- On the linearization of nonlinear models of the phenomena. I. Linearization by exact methods. (Greek summary) *Prakt. Akad. Athinon* **51** (1976), 659-668 (1977). (Editors) **81a:34014b** 34A99
- On the linearization of nonlinear models of phenomena. II. Linearization by approximate methods. (Greek summary) *Prakt. Akad. Athinon* **51** (1976), 669-683 (1977). (Editors) **81a:34014c** 34A99
- Characteristic properties of linear and nonlinear systems. (Greek summary) *Prakt. Akad. Athinon* **51** (1976), 907-935 (1977). (Editors) **81a:34014d** 34A99
- Nonlinear differential equations with several general solutions. (Greek summary) *Prakt. Akad. Athinon* **52** (1977), 221-229 (1978). (Editors) **81a:34014e** 34A99
- The general solutions of nonlinear differential equations as functions of their arbitrary constants. (Greek summary) *Prakt. Akad. Athinon* **52** (1977), 524-532 (1978). (Editors) **81a:34014f** 34A99
- Magliveras, Spyros S. (with Kramer, Earl S.; Kreher, Donald L.; Mesner, Dale M.) Coherent room rectangles from permutation groups. *Ars Combin.* **9** (1980), 101-111. (Bhagwandas) **81j:05032** 05B15
- (with Kramer, Earl S.) A $57 \times 57 \times 57$ Room-type design. *Ars Combin.* **9** (1980), 163-166. (Authors' summary) **81e:05045** 05B15
- (with Kramer, Earl S.; Mesner, Dale M.) Some resolutions of $S(5, 8, 24)$. *J. Combin. Theory Ser. A* **29** (1980), no. 2, 166-173. (Peter Hammond) **81j:05039** 05B30 (05B15)
- Magnum, T. L. (with Bitran, Gabriel R.) The structure of admissible points with respect to cone dominance. *J. Optim. Theory Appl.* **29** (1979), no. 4, 573-614. (Christian Malivert) **81e:90077** 90C25
- Magnum, L. G. Academician N. I. Mushelishvili. (Georgian) With a Russian translation. *Trudy Tbilis. Univ.* **185** (1977), 115-119 (1 plate). (Editors) **81k:01040** 01A70
- Magnum, N. G. On the motion of two bodies of variable masses in a Newtonian gravitational field. (Russian, Georgian and English summaries) *Trudy Tbilis. Univ.* **204** (1978), 13-28, 130. (Rudolf Veselkov) **81i:70001** 70F05 (70P05)
- Magneron, Bernard Une extension de la notion d'indices de Maslov. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **289** (1979), no. 14, A683-A686. (Author's summary) **81d:58059** 58G99 (22E45)
- Maguila, Louis Vecteurs analytiques dans les représentations unitaires des groupes localement compacts connexes. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **289** (1979), no. 15, A715-A718. (Pierre Eymard) **81i:22006** 22D10
- Maguon-Ashtekar, Anne (with Ashtekar, Abhay) Une remarque concernant la théorie quantique des champs en espace-temps courbe. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **286** (1978), no. 11, A531-A534. (Authors' summary) **81e:83026** 83C45 (53C80)
- (with Ashtekar, Abhay) A geometrical approach to external potential problems in quantum field theory. *Gen. Relativity Gravitation* **12** (1980), no. 3, 205-223. (Authors' summary) **81d:81064** 81E99 (58G40)
- Magnus, Alphonse (with Gilewicz, Jacek) Valleys in c-table. *Padé approximation and its applications (Proc. Conf., Univ. Antwerp, Antwerp, 1979)*, pp. 135-149, *Lecture Notes in Math.*, 765, Springer, Berlin, 1979. (Authors' summary) **81i:65016** 65D15
- Recurrence coefficients for orthogonal polynomials on connected and nonconnected sets. *Padé approximation and its applications (Proc. Conf., Univ. Antwerp, Antwerp, 1979)*, pp. 150-171, *Lecture Notes in Math.*, 765, Springer, Berlin, 1979. (T. S. Chihara) **81e:42034** 42C05
- Magnus, Arne (with Jones, William B.) Computation of poles of two-point Padé approximants and their limits. *J. Comput. Appl. Math.* **6** (1980), no. 2, 105-119. (C. Dierckx) **81j:65039** 65D15 (65H05)
- Magnus, Jan R. Maximum likelihood estimation of the GLS model with unknown parameters in the disturbance covariance matrix. *J. Econometrics* **7** (1978), no. 3, 281-312. (Lubomir Kubáček) **81h:62054a** 62F10 (62J05)
- The moments of products of quadratic forms in normal variables. *Statist. Neerlandica* **32** (1978), no. 4, 201-210. (Goro Nagase) **81a:62054** 62H99
- (with Neudecker, H.) The commutation matrix: some properties and applications. *Ann. Statist.* **7** (1979), no. 2, 381-394. (D. S. Tracy) **81f:15037** 15A69 (62H99)
- Corrigenda: "Maximum likelihood estimation of the GLS model with unknown parameters in the disturbance covariance matrix". *J. Econometrics* **10** (1979), no. 2, 261. (Editors) **81h:62054b** 62F10 (62J05)
- The expectation of products of quadratic forms in normal variables: the practice. *Statist. Neerlandica* **33** (1979), no. 3, 131-136. (Donald R. Jensen) **81k:62024** 62E30 (62H10)
- (with Don, F. J. Henk) On the unbiasedness of iterated GLS estimators. *Comm. Statist. A—Theory Methods* **9** (1980), no. 5, 519-527. (H. T. Amundsen) **81e:62073** 62J05 (62P20)
- Magnus, Robert (with Poston, Tim) Infinite dimensions and the fold catastrophe. *Structural stability in physics (Proc. Internat. Symposia Appl. Catastrophe Theory and Topological Concepts in Phys., Inst. Inform. Sci., Univ. Tübingen, Tübingen, 1978)*, pp. 63-83, *Springer Ser. in Synergetics*, 4, Springer, Berlin, 1979. (D. R. J. Chillingworth) **81h:58018** 58C28 (47A53, 58E07, 73C50)
- Topological equivalence in bifurcation theory. *Functional differential equations and bifurcation (Proc. Conf., Inst. Cienc. Mat. São Carlos, Univ. São Paulo, São Carlos, 1979)*, pp. 263-276, *Lecture Notes in Math.*, 799, Springer, Berlin, 1980. (D. R. J. Chillingworth) **81m:58020** 58C27 (58F14)
- A splitting lemma for nonreflexive Banach spaces. *Math. Scand.* **46** (1980), no. 1, 118-128. (D. R. J. Chillingworth) **81m:58025** 58E05 (58C28, 58E07)
- Magnus, Wilhelm (with Tretkoff, C.) Representations of automorphism groups of free groups. *Word problems, II (Conf. on Decision Problems in Algebra, Oxford, 1976)*, pp. 255-259, *Studies in Logic and Foundations of Math.*, 95, North-Holland, Amsterdam, 1980. (Charles C. Edmunds) **81i:20048** 20F28 (20C32, 20E05)
- Rings of Frick characters and automorphism groups of free groups. *Math. Z.* **170** (1980), no. 1, 91-103. (D. L. Johnson) **81a:20043** 20F28 (13B25, 20F36, 20G20)
- Magnus, A. R. A theorem on the existence and uniqueness of solutions of linear differential equations with "maxima". (Russian, Azerbaijani and English summaries) *Izv. Akad. Nauk Azerbaidžan. SSR Ser. Fiz.-Tehn. Mat. Nauk* **1979**, no. 5, 116-118. (Nicolae Luca) **81j:34010** 34A10 (34K05)
- Magnus, G. M. A method of a priori estimates for nonlinear equations with singular integrals. (Russian) *Dokl. Akad. Nauk SSSR* **253** (1980), no. 2, 292-294. (R. K. Radeva) **81j:45009** 45E05 (45J05, 45L10)
- Magott, Jan A parametric automaton as a learning element of a digital computer system. (Polish, Russian and English summaries) *Arch. Automat. Telemech.* **24** (1979), no. 3, 397-408. (From the summary) **81i:68062** 68D27 (68A05, 68G05)
- Magri, F. A geometrical approach to the nonlinear solvable equations. *Nonlinear evolution equations and dynamical systems (Proc. Meeting, Univ. Lecce, Lecce, 1979)*, pp. 233-263, *Lecture Notes in Phys.*, 120, Springer, Berlin, 1980. (B. A. Kupersmidt) **81h:58036** 58F07
- Magnus, Bruce A. Whitehead groups of some hyperbolic groups. *J. London Math. Soc.* (2) **21** (1980), no. 1, 176-188. (Chih-Han Sah) **81g:20006** 20C05 (12A57, 16A54)
- (with Jajodia, Sushil) Subjective stability of units and simple homotopy type. *J. Pure Appl. Algebra* **18** (1980), no. 1, 45-58. (V. P. Snaith) **81j:18018** 18F25 (57Q10)
- Mahaffy, J. M. Periodic solutions for certain protein synthesis models. *J. Math. Anal. Appl.* **74** (1980), no. 1, 72-105. (John J. Tyson) **81h:34000** 34K15 (92A09)
- Mahajan, Arvind A Bessel function inequality. *Univ. Beograd. Publ. Elektrotehn. Fak. Ser. Mat. Fiz.* No. 634-677 (1979), 70-71. (G. Gasper) **81i:26015** 26D15 (33A40)
- (with Ross, Dieter K.) An inequality for the ratio of two quadratic forms. *Univ. Beograd. Publ. Elektrotehn. Fak. Ser. Mat. Fiz.* No. 634-677 (1979), 72-73. (William N. Everitt) **81i:26015** 26D20
- Mahalanabis, A. K. (with Singh, Ramanand) On decentralized feedback stabilization of large-scale interconnected systems. *Internat. J. Control* **32** (1980), no. 1, 115-126. (Authors' summary) **81i:93064** 93D05 (93D15)
- (with Rana, R.) Guaranteed cost solution of optimal control and game problems for uncertain systems. *Optimal Control Appl. Methods* **1** (1980), no. 4, 353-360. (Authors' summary) **81m:90116** 90D25 (49B50)
- Mahaldian, N. V. (with Katylev, Ju. V.; Mahan'kov, V. G.) On the stability of soliton solutions to the Schrödinger equation with nonlinear term of the form $\psi|\psi|^2$. *Phys. Lett. A* **66** (1978), no. 6, 456-458. (Authors' summary) **81m:81015** 81C05 (35Q20)
- Mahan, G. D. (with Jonson, M.) Mott's formula for the thermopower and the Wiedemann-Franz law. *Phys. Rev. B* (3) **21** (1980), no. 10, 4223-4229. (Authors' summary) **81c:82023** 82A55
- Mahaney, Stephen R. Sparse complete sets for NP: solution of a conjecture of Berman and Hartmanis. *21st Annual Symposium on Foundations of Computer Science (Syntex, N.Y., 1980)*, pp. 54-60, *IEEE, New York, 1980*. (Author's summary) **81k:68033** 68C25 (03D15)
- al-Mahini, Abū 'Abdullāh Muhammad ibn Isā See Matvičskaja, G. P., **81j:01007**
- Mahan'kov, V. G. (with Katylev, Ju. V.; Mahaldian, N. V.) On the stability of soliton solutions to the Schrödinger equation with nonlinear term of the form $\psi|\psi|^2$. *Phys. Lett. A* **66** (1978), no. 6, 456-458. (Authors' summary) **81m:81015** 81C05 (35Q20)
- (with Kummer, G.; Švačka, A. B.) Interaction of two-space-dimensional classical Q solitons. *Phys. Lett. A* **70** (1979), no. 3, 171-176. (Authors' summary) **81i:81078** 81E99 (35Q20, 81G25)
- Quasiclassical solitons in the Lindner-Fedyanin model— "hole"-like excitations. *Phys. Lett. A* **81** (1981), no. 2-3, 156-160. (Author's summary) **81k:82062** 82A67 (81E99)

- Mahanta, M. N. Is strong gravity an aspect of strong interaction? *Proceedings of the Conference on Mathematical Methods in Physics (Mysore, 1978), Part A*, pp. 81-89, *Mathematics Rep.*, 96, Inst. Math. Sci., Madras, 1979. (From the summary) **81g:83069** 83F05 (81G05)
- Mahanti, P. K. (with Naoum, R. S.) Application of finite element method to bi-harmonic equation. (Arabic summary) *Iraqi J. Sci.* **19** (1978), no. 1, 131-136. (From the introduction) **81g:65156** 65N30
- (with Naoum, R. S.; Ghobrial, I. R.) Numerical solution and error bound for the linear boundary value problem by finite difference method. *An. Univ. Bucuresti Mat.* **28** (1979), 55-67. (E. L. Albasiny) **81a:65079** 65L10
- Mahapatra, G. B. Solution of optimal control problem of linear diffusion equations via Walsh functions. *IEEE Trans. Automat. Control* **25** (1980), no. 2, 319-321. (Author's summary) **81a:93042** 93C20
- Mahapatra, P. K. (with Roy, C. L.) Stark ladders via evolution operator. *Lett. Nuovo Cimento* (2) **27** (1980), no. 4, 117-121. (From the text) **81e:82055** 82A60
- Mahar, Thomas J. (with Willner, Barry E.) Extrema of functions of eigenvalues. *J. Math. Anal. Appl.* **72** (1979), no. 2, 730-739. (Walter Eberhard) **81c:34019** 34B25
- (with Fleishman, Bernard A.) A minimum principle for superharmonic functions subject to interface conditions. *Transactions of the Twenty-Fifth Conference of Army Mathematicians (Johns Hopkins Univ., Baltimore, Md., 1979)*, pp. 381-396, *ARO Rep.* **80**, 1, U. S. Army Res. Office, Research Triangle Park, N.C., 1980. (U. Kuran) **81b:31002** 31A05 (35J15)
- (with Willner, Barry E.) Sturm-Liouville eigenvalue problems in which the squares of the eigenfunctions are linearly dependent. *Comm. Pure Appl. Math.* **33** (1980), no. 4, 567-578. (Walter Eberhard) **81h:34029** 34B25
- Maharam, Dorothy (with Stone, A. H.) Category algebras of complete metric spaces. *Mathematika* **26** (1979), no. 1, 13-17. (V. V. Milkin) **81h:54040** 54H05 (54E50)
- (with Stone, A. H.) One-to-one functions and a problem on subfields. *Measure theory, Oberwolfach 1979 (Proc. Conf., Oberwolfach, 1979)*, pp. 49-52, *Lecture Notes in Math.*, 794, Springer, Berlin, 1980. (B. Rodriguez-Salinas) **81j:28004** 28A10
- Maharashtra, A. (with Dutt, Ranabir; Chatterji, D.) Some applications of time-dependent canonical transformations to nonlinear nonconservative classical systems. *J. Math. Phys.* **20** (1979), no. 11, 2221-2225. (H. S. P. Grasser) **81a:70021** 70H15 (34C20)
- Mahdavi-Hezavehi, M. Matrix valuations on rings. *Ring theory (Proc. Antwerp Conf. (NATO Adv. Study Inst.), Univ. Antwerp, Antwerp, 1978)*, pp. 691-703, *Lecture Notes in Pure and Appl. Math.*, 51, Dekker, New York, 1979. (P. M. Cohn) **81d:16017** 16A39
- (with Cohn, P. M.) Extensions of valuations on skew fields. *Ring theory, Antwerp 1980 (Proc. Conf., Univ. Antwerp, Antwerp, 1980)*, pp. 28-41, *Lecture Notes in Math.*, 825, Springer, Berlin, 1980. (D. A. Jordan) **81m:12024** 12E15 (12J10, 13A18, 16A39)
- Mahé, Louis (with Coste-Roy, Marie-Françoise; Coste, Michel) Contribution to the study of the natural number object in elementary topos. *J. Pure Appl. Algebra* **17** (1980), no. 1, 35-68. (E. B. Kacov) **81h:18005** 18B25 (03G30)
- Maher, David P. Lee polynomials of codes and theta functions of lattices. *Canad. J. Math.* **30** (1978), no. 4, 738-747. (Vera Pless) **81h:94019** 94B05
- Modular forms from codes. *Canad. J. Math.* **32** (1980), no. 1, 40-58. (L. D. Baumert) **81f:94021** 94B05 (05B25, 10D20)
- On Fourier transforms over extensions of finite rings. *IEEE Trans. Comput.* **29** (1980), no. 4, 331-333. (Author's introduction) **81c:94003** 94A11
- Existence theorems for transforms over finite rings with applications to 2-D convolution. *Math. Comp.* **35** (1980), no. 151, 757-765. (Jack K. Wolf) **81f:10002** 10-04 (94B35)
- Mahmoud, W. E. Comparison theorems for delay differential equations. *Pacific J. Math.* **83** (1979), no. 1, 187-197. (R. D. Driver) **81m:34100** 34K15
- Mahler, K. On a special function. *J. Number Theory* **12** (1980), no. 1, 20-26. (C. Tanaka) **81c:30006** 30B10 (30B30)
- Mahmood, Suraiya J. Limits and colimits in categories of d.g. near-rings. *Proc. Edinburgh Math. Soc.* (2) **23** (1980), no. 1, 1-7. (Jaroslav Libich) **81j:16045** 16A76
- Mahmoud, Magdi S. (with Eid, Shawkī Z.) Decomposition and coordination for feedback process control. *Simulation of distributed-parameter and large-scale systems (Proc. IMACS European Simulation Meeting, Univ. Patras, Patras, 1979)*, pp. 155-160, *North-Holland, Amsterdam*, 1980. (Authors' summary) **81f:93051** 93C45 (93C55)
- Hierarchical control policies for macroeconomic systems stabilization. *Simulation of distributed-parameter and large-scale systems (Proc. IMACS European Simulation Meeting, Univ. Patras, Patras, 1979)*, pp. 181-186, *North-Holland, Amsterdam*, 1980. (Author's summary) **81i:90048** 90A17 (93C55)
- (with Younis, Mohamed I.; Vogt, William G.) A computational procedure to stabilize nonlinear sampled-data systems. *Comput. Electr. Engng.* **7** (1980), no. 1, 3-9. (Authors' summary) **81h:93084** 93D15
- Mahmudov, A. Discrete models of the development of biological populations. (Russian) *Dokl. Akad. Nauk UzSSR* **1980**, no. 6, 13-15. (From the text) **81j:92038** 92A15 (10A35)
- Mahmudov, E. N. (with Pšeničnyĭ, B. N.) Polyhedral mappings. (Russian. Azerbaijani and English summaries) *Izv. Akad. Nauk Azerbaidžan. SSR Ser. Fiz.-Teh. Mat. Nauk* **1979**, no. 2, 10-15. (Joachim Hirche) **81g:52007** 52A25 (90C99)
- Mahmudov, Ju. A. See Questions of engineering cybernetics, **81i:90007**
- Mahmudov, M. D. The asymptotic behavior of eigenvalues and eigenfunctions of a second-order elliptic operator with variable coefficients in thin domains. (Russian. Azerbaijani and English summaries) *Izv. Akad. Nauk Azerbaidžan. SSR Ser. Fiz.-Teh. Mat. Nauk* **1978**, no. 5, 70-75. (Jan Bochenek) **81m:35109** 35P20
- Mahmūd, A. A. Generation of finite groups by classes of involutions. (Russian) *Mat. Sb. (N.S.)* **111**(153) (1980), no. 2, 266-278, 320. (V. D. Mazurov) **81j:20014** 20D05
- Mahske, Dietrich ★Leibnizens Synthese von Universalmathematik und Individualmetaphysik. (German) [Leibniz' synthesis of universal mathematics and individual metaphysics] Facsimile of the 1925 edition. *Friedrich Frommann Verlag (Günther Holzboog), Stuttgart*, 1964. ii+308 pp. ISBN 3-7728-0212-5 (Editors) **81d:01028** 01A75 (00A25, 03A05)
- Mahso, S. Ja. Stochastic equations of evolution type. (Russian) *Theory of random processes*, No. 6 (Russian), pp. 101-107, 135, "Naukova Dumka", Kiev, 1978. (D. Bobrowski) **81c:60074** 60H20
- Mahoney, J. F. (with Sivazian, B. D.) Probability of shortage for Erlang distributed demand in a (s, S) inventory problem. *SIAM J. Appl. Math.* **38** (1980), no. 1, 156-162. (Masafumi Sasaki) **81e:90036** 90B05 (90B15)
- Partial fraction evaluation by an escalation technique. *Math. Comp.* **36** (1981), no. 153, 241-246. (E. Frank) **81h:65019** 65D15
- Mahony, J. J. (with Chapman, P. B.) Reflection of waves in a slowly varying medium. *SIAM J. Appl. Math.* **34** (1978), no. 2, 303-319. (Authors' summary) **81e:78024** 78A40
- Mahorkin, A. V. A Pfaffian system of differential equations for a class of complexes of quadrics in P_3 (Russian). *Kaliningrad. Gos. Univ. Differentsial'naja Geom. Mnogobraz.* *Fig. No.* **10** (1979), 63-66, 162. (H. Kil'p) **81m:53013** 53A20
- Mahort, F. G. Theory of deformation of polarizable and magnetizable bodies. *Prikl. Meh.* **16** (1980), no. 3, 22-31, 140 (Russian); translated as *Soviet Appl. Mech.* **16** (1980), no. 3, 191-198. (From the text) **81m:73073** 73R05
- Mahowald, Mark E. (with Feder, Samuel; Gitler, Samuel) On the stable homotopy type of stunted projective spaces. *Bol. Soc. Mat. Mexicana* (2) **22** (1977), no. 1, 1-5. (Kee Yuen Lam) **81h:55017** 55P15
- Ring spectra which are Thom complexes. *Duke Math. J.* **46** (1979), no. 3, 549-559. (Edgar H. Brown, Jr.) **81f:55010** 55P99 (55N20)
- (with Davis, Donald M.) The Euler class for connective k-theory and an application to immersions of quaternionic projective space. *Indiana Univ. Math. J.* **28** (1979), no. 6, 1025-1034. (David Handel) **81h:57013** 57N35 (55R10, 55S35)
- (with Lin, Wen Hsiung; Davis, Donald M.; Adams, John Frank) Calculation of Lin's Ext groups. *Math. Proc. Cambridge Philos. Soc.* **87** (1980), no. 3, 459-469. (Harvey Margolis) **81e:55025** 55S10
- (with Bahri, A. P.) A direct summand in $H^*(MO(8), \mathbb{Z}_2)$. *Proc. Amer. Math. Soc.* **78** (1980), no. 2, 295-298. (Vincent Giambalvo) **81h:57029** 57R90 (55S10)
- Mahr, Bernd Aspects of graphrepresentation. *Graphs, data structures, algorithms (Proc. Workshop, Graphtheoretic Concepts in Comput. Sci., Erlangen, 1978)*, pp. 308-323, *Applied Comput. Sci.*, 13, Hanser, Munich, 1979. (See 80m:68008) **68E10**
- (with Ehrig, Hartmut) Complexity of implementations on the level of algebraic specifications. *Conference Proceedings of the Twelfth Annual ACM Symposium on Theory of Computing (Los Angeles, Calif., 1980)*, pp. 281-293, *ACM, New York*, 1980. (See 81j:68006) **68C25** (68B15)
- (with Ehrig, Hartmut; Kreowski, Hans-Jörg; Padawitz, Peter) Compound algebraic implementations: an approach to stepwise refinement of software systems. *Mathematical foundations of computer science, 1980 (Proc. Ninth Sympos., Rydzyn, 1980)*, pp. 231-245, *Lecture Notes in Comput. Sci.*, 88, Springer, Berlin, 1980. (See 81h:68003) **68B10** (68C20)
- Mahviladze, G. M. (with Ščerbak, S. B.) A numerical method for investigation of non-steady-state spatial motions of a compressible gas. (Russian. Bulgarian and English summaries) *Teoret. Prikl. Meh.* **11** (1980), no. 2, 41-53, 4, 8. (Authors' summary) **81h:76038** 76N10 (65P05)
- Mai, Brigitte See Arnold, V. I., **81c:34001**
- Mai, Ming Cheng (with Wang, Guang Yin; Lu, Zhu Jia) Discrete phenomena in the initial value problem. (Chinese) *Kexue Tongbao* **33** (1978), no. 5, 279-282. (Chung Lie Wang) **81i:35115** 35L70 (35M05)
- (with Lu, Zhu Jia) Uniqueness in Cauchy problems for linear partial differential equations. (Chinese. English summary) *Acta Math. Sinica* **22** (1979), no. 5, 569-578. (Long-Yi Tsai) **81m:35007** 35A07 (35L30)
- (with Wang, Guang Yin; Lu, Zhu Jia) A remark on uniqueness for partial differential equations of nonprincipal type. (Chinese. English summary) *Acta Math. Sinica* **22** (1979), no. 6, 713-718. (Long-Yi Tsai) **81m:35008** 35A07
- (with Lu, Zhu Jia; Wang, Guang Yin) Discrete phenomena in existence in the initial value problems. *Sci. Sinica* **22** (1979), no. 11, 1229-1237. (Maria Cinquini-Cibrario) **81i:35121** 35M05
- Maihuang, T. S. E. (with Lucena, Carlos J.) Higher order data types. *Internat. J. Comput. Inform. Sci.* **9** (1980), no. 1, 31-53. (Authors' summary) **81d:68034** 68B15 (68J10)
- Maihoroda, L. A. (with Batutin, V. D.) A formalization of external problems. (Russian) *Dokl. Akad. Nauk SSSR* **250** (1980), no. 1, 11-14. (Ju. A. Melencova) **81h:49009** 49B05
- Maiellaro, Michele (with Rionero, Salvatore) Uniqueness and universal stability in media in fluid dynamics. (Italian. English summary) *Rend. Circ. Mat. Palermo* (2) **27** (1978), no. 2, 305-326. (Giovanni P. Galdi) **81e:76027** 76E99
- (with Palese, Lidia) On the steady MHD flows of a binary mixture into a porous slant layer in the presence of the Hall effect and on their stability. (Italian. English summary) *Rend. Accad. Sci. Fis. Mat. Napoli* (4) **46** (1979), 471-481 (1980). (J. Ławrynowicz) **81j:76037** 76E25 (76S05, 76T05)
- (with Redaelli, Aldo) On steady magnetohydrodynamic motions between coaxial cylinders in the presence of anisotropic currents and on their stability. (Italian. English summary) *Rend. Accad. Sci. Fis. Mat. Napoli* (4) **46** (1979), 483-499 (1980). (Salvatore Rionero) **81j:76038** 76E25 (76W05)
- Maler, David An efficient method for storing ancestor information in trees. *SIAM J. Comput.* **8** (1979), no. 4, 599-618. (Fabrizio Luccio) **81c:68034** 68C25 (92A20)
- Maler, Steven F. (with Cohen, Kalman J.; Schwartz, Robert A.; Whitcomb, David K.) On the existence of serial correlation in an efficient securities market. *Portfolio theory, 25 years after*, pp. 151-168, *Studies in the Management Sci.*, 11, North-Holland, Amsterdam, 1979. (See 80k:90001) **90A09**
- Maler, Volker The L_p norm of the approximation error for linear positive operators. *Fourier analysis and approximation theory (Proc. Colloq., Budapest, 1976)*, Vol. II, pp. 531-535, *Colloq. Math. Soc. János Bolyai*, 19, North-Holland, Amsterdam, 1978. (D. D. Stancu) **81d:41031** 41A36 (41A25)
- Maler, Z. See Mayer, Jacques
- Maleria, Luigi The fifth postulate of Euclid in Cristoforo Clavio. (Italian. English summary) *Physica-Riv. Internaz. Storia Sci.* **20** (1978), no. 1-4, 191-212 (1979). (H. L. L. Busard) **81j:01012** 01A40 (01A20)
- Malgret, Nelly Théorème de limite centrale fonctionnel pour une chaîne de Markov récurrente au sens de Harris et positive. (English summary) *Ann. Inst. H. Poincaré Sect. B (N.S.)* **14** (1978), no. 4, 425-440 (1979). (Author's summary) **81i:60023** 60F05 (60J05)
- Main, Brian G. M. (with Akerlof, George A.) Maximum likelihood estimation with pooled

- observations: an example from labor economics. *Internat. Econom. Rev.* 21 (1980), no. 3, 507-515. (From the introduction) **81k:90025** 90A19 (62F10)
- Mal'gouneau, M. A.** Temps d'arrêt optimaux et théorie générale. *Séminaire de Probabilités, XII (Univ. Strasbourg, Strasbourg, 1976/1977)*, pp. 457-467, *Lecture Notes in Math.*, 649, Springer, Berlin, 1978. (Author's review (Zbl 376:60050)) **81j:60055** 60G40 (60G07)
- Malinskii, I. F.** r -inscribed curves. (Russian) *Sibirsk. Mat. Ž.* 20 (1979), no. 1, 95-108, 205. (Author's summary) **81i:41032** 41A99
- Mal'varing, Diane** (with Pearson, K. R.) Decomposability of finite rings. *J. Austral. Math. Soc. Ser. A* 28 (1979), no. 2, 136-138. (Thomas Laffey) **81f:16029** 16A44
- Mala, Alfonso** (with D'Anna, Armando; Monte, Anna-Maria) Limiting equations in asymptotic stability problems for nonautonomous differential equations. (Italian summary) *Ann. Univ. Ferrara Sez. VII (N.S.)* 25 (1979), 75-97. (F. Visentin) **81d:34038** 34D05 (34D20)
- (with D'Anna, Armando; Moauro, Vinicio) Global stability properties by means of limiting equations. *Nonlinear Anal.* 4 (1980), no. 2, 407-410. (F. Visentin) **81a:34043** 34D20
- Malorino, J. R.** (with Siewert, C. E.) The complete solution for the scattering of polarized light in a Rayleigh and isotropically scattering atmosphere. *Astrophys. and Space Sci.* 72 (1980), no. 1, 189-201. (Authors' summary) **81h:78023** 78A45 (85A25)
- Malorov, S. A.** (with Rudenko, A. A.; Sipulin, A. V.) A numerical method for solving systems of equations for the potential and charge carrier in semiconductors. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 20 (1980), no. 1, 112-120, 261. (Gh. Adam) **81j:78021** 78A55 (65N20, 82A65)
- Malorov, V. E.** Linear diameters of Sobolev classes. (Russian) *Dokl. Akad. Nauk SSSR* 243 (1978), no. 5, 1127-1130. (T. Precupanu) **81f:41036** 41A65 (46B20, 46E35)
- Extremal chains of subspaces for Kolmogorov and linear diameters. (Russian) *Funktsional. Anal. i Prilozhen.* 13 (1979), no. 3, 91-92. (M. I. Kadec) **81d:41032** 41A46 (46E35)
- Malorova, N. L.** (with Zabreiko, P. P.) Solvability of the nonlinear Uryson integral equation. (Russian) *Qualitative and approximate methods for the investigation of operator equations*, No. 3 (Russian), pp. 61-73, *Jaroslavl. Gos. Univ., Yaroslavl*, 1978. (C. Corduneanu) **81c:45011** 45G10 (45N05, 47G05)
- Maître, H.-M.** Hypocoelliptic overdetermined systems of partial differential equations. *Comm. Partial Differential Equations* 5 (1980), no. 4, 331-380. (David S. Tartakoff) **81f:35027** 35H05 (35N10, 58G05)
- Maison, H. Dieter** (with Burzlaff, Jürgen) On stationary, axially symmetric solutions of Jordan's five-dimensional, unified theory. *J. Math. Phys.* 20 (1979), no. 7, 1352-1355. (Authors' summary) **81b:83010** 83E15 (53C30)
- Maisonneuve, B.** Temps local et dénombrements d'excursions. (English summary) *Z. Wahrsch. Verw. Gebiete* 52 (1980), no. 1, 109-113. (Henryk Gzy) **81d:60075** 60J55
- Maisonneuve, Philippe** See *Pham, Frédéric*, **81k:32015**
- Maisner, P.** (with Steigenberger, J.) Lagrange-Formalismus für diskrete elektromechanische Systeme. (English and Russian summaries) *Z. Angew. Math. Mech.* 59 (1979), no. 12, 717-730. (N. D. Sengupta) **81j:78040** 78A55 (49H05, 94C05)
- Maister, Penka I.** The second factorial moment of a branching diffusion process. (Russian) *Serdica* 4 (1978), no. 4, 359-366. (Walter Warmuth) **81h:60083** 60J80
- The expectation of a branching diffusion process with continuous time. (Russian. English summary) *Teor. Veroyatnost. i Primenen.* 23 (1978), no. 4, 831-836. (Author's summary) **81j:60066** 60J35
- Maistrovskii, G. D.** A locally quadratically converging method of conditional minimization using a modified Lagrangian. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 20 (1980), no. 1, 27-37, 259. (Ju. A. Melencov) **81g:90083** 90C30
- Maisnradze, V. G.** (with Gabisonija, V. E.) A finite antagonistic game with constraints on mixed strategies. (Russian. Georgian and English summaries) *Sovetsk. Akad. Nauk Gruzin. SSR* 98 (1980), no. 3, 649-652. (From the text) **81k:90111** 90D05
- Maital, Shlomo** Multidimensional scaling. Some econometric applications. *J. Econometrics* 8 (1978), no. 1, 33-46. (Author's summary) **81a:62110** 62P20
- Maitani, Fumio** Boundary functions and extremal problems for Hardy classes. *Tech. Rep. Osaka Univ.* 29 (1979), no. 1459-1491, 9-17. (T. W. Gamelin) **81d:30062** 30D55 (30F25, 31A99)
- (with Kubo, Tadao) Remarks on Ahlfors functions of open Riemann surfaces. *Tech. Rep. Osaka Univ.* 29 (1979), no. 1492-1516, 327-335. (Charles M. Stanton) **81j:30076** 30F25 (30E20)
- Maiti, M.** Stress distribution in vicinity of an external crack. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Tech.* 27 (1979), no. 1, 23-25. (Author's summary) **81a:73046** 73M05
- (with Pal, T. K.) Some results on orbital contractions. *Mat. Vesnik* 3(16)(31) (1979), no. 1, 31-32. (S. L. Singh) **81a:54077** 54H25
- (with Achari, J.; Pal, T. K.) Mappings having common fixed points. II. *Pure Appl. Math. Sci.* 10 (1979), no. 1-2, 9-12. (T. C. Lim) **81c:54067** 54H25
- On the equilibrium of a Griffith crack opened by a rigid inclusion. *SIAM J. Appl. Math.* 38 (1980), no. 2, 209-214. (R. P. Srivastava) **81e:73078** 73M05
- Maima, K.** The structure of admissible complexes of lines in CP^n . (Russian) *Trudy Moskov. Mat. Obšč.* 39 (1979), 181-211, 236. (Rolf Sulanke) **81h:53011** 53A25 (43A55, 53C65)
- Maisenberg, T. L.** (with Kolmanovskii, V. B.) Some problems of optimal estimation and control of systems with aftereffect. (Russian) *Problems of stability of motion, analytical mechanics and control of motion (Third All-Union Četaev Conf., Irkutsk, 1977)* (Russian), pp. 227-234, 325, "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. (Authors' summary) **81g:93106** 93E10
- Maj, Mercedes** (with Longobardi, Patrizia) Some observations about groups with characteristic endomorphism images. (Italian) *Ricerche Mat.* 28 (1979), no. 1, 159-167. (John S. Wilson) **81f:20035** 20E15
- Majcher, G.** (with Styrylska, T.) On a multistage optimization problem. I. *Comment. Math. Prace Mat.* 21 (1980), no. 1, 163-171. (Joachim Hirsche) **81g:90070** 90C20
- Majchrzak, J.** On relations between continuous and discrete multicriteria optimization problems. *Optimization techniques (Proc. Ninth IFIP Conf., Warsaw, 1979), Part 1*, pp. 473-481, *Lecture Notes in Control and Information Sci.*, 22, Springer, Berlin, 1980. (P. Rutkavskas) **81a:90106** 90C31
- Majda, Andrew** (with Ralston, James) Discrete shock profiles for systems of conservation laws. *Comm. Pure Appl. Math.* 32 (1979), no. 4, 445-482. (Ronald Di Perna) **81i:35110** 35L65 (35L60)
- (with Ralston, James) An analogue of Weyl's formula for unbounded domains. III. An epilogue. *Duke Math. J.* 46 (1979), no. 4, 725-731. (V. M. Babič) **81k:35121** 35P20
- (with Klainerman, Sergiu) Formation of singularities for wave equations including the nonlinear vibrating string. *Comm. Pure Appl. Math.* 33 (1980), no. 3, 241-263. (Tommaso Ruggeri) **81f:35080** 35L70 (35B65, 35L67, 70K99)
- (with Crandall, Michael G.) Monotone difference approximations for scalar conservation laws. *Math. Comp.* 34 (1980), no. 149, 1-21. (Christopher Caldwell) **81b:65079** 65M05
- (with Crandall, Michael G.) The method of fractional steps for conservation laws. *Numer. Math.* 34 (1980), no. 3, 285-314. (Darrell L. Hicks) **81j:65101** 65M10 (35L65)
- Majda, George** (with Caltich, Russel E.; Peskin, Charles S.; Strumolo, Gary) Distortion of the arterial pulse. *Math. Biosci.* 51 (1980), no. 3-4, 229-260. (Authors' summary) **81i:92005** 92A09 (76Z05)
- Majewski, Adam** (with Pelzner, Eugeniusz) Anisotropic dielectric rod with partially metallized surfaces. (Polish. Russian and English summaries) *Arch. Elektrotech.* (Warsaw) 29 (1980), no. 1, 63-73. (Authors' summary) **81j:73077** 73R05 (35J25)
- Calculation of the electric field distribution around a system of bodies in an electric field. (Polish. Russian and English summaries) *Arch. Elektrotech.* (Warsaw) 29 (1980), no. 1, 267-269. (Authors' summary) **81j:78011** 78A30 (35J25)
- Majima, Yoshiyuki** (with Sugimoto, Nobumasa) Nonlinear third harmonic resonance of flexural waves on a waveguide of thin elastic plate. *J. Acoust. Soc. Amer.* 69 (1981), no. 2, 410-415. (Authors' summary) **81h:73032** 73D35
- Majidi, R. K.** (with Baumeister, K. J.) Applications of velocity potential function to acoustic duct propagation using finite elements. *AIAA J.* 18 (1980), no. 5, 509-514. (Authors' summary) **81a:76037** 76Q05 (65N30)
- Majur, P.** A note on Kolmogorov's law of iterated logarithm. *Studia Sci. Math. Hungar.* 12 (1977), no. 1-2, 161-167 (1980). (Gutti J. Babu) **81d:60039** 60F15
- (with Dobrušin, R. L.) Non-central limit theorems for nonlinear functionals of Gaussian fields. *Z. Wahrsch. Verw. Gebiete* 50 (1979), no. 1, 27-52. (B. S. Nahapetjan) **81i:60019** 60F05 (60G15, 60K35)
- (with Šlosman, S. B.) A local limit theorem for the convolution of probability measures on a compact connected group. *Z. Wahrsch. Verw. Gebiete* 50 (1979), no. 2, 137-148. (Eberhard Siebert) **81h:60015** 60B15
- Majumdar, Dhyan** (with Dodge, Yadolah) An algorithm for finding least square generalized inverses for classification models with arbitrary patterns. *J. Statist. Comput. Simulation* 9 (1979), no. 1, 1-17. (R. Kala) **81i:62122** 62J10 (65F20)
- (with Mitra, Sujit Kumar) Statistical analysis of nonestimable functionals. I. Estimation. *Mathematical statistics and probability theory (Proc. Sixth Internat. Conf. Wista, 1978)*, pp. 288-317, *Lecture Notes in Statist.*, 2, Springer, New York, 1980. (Friedrich Pukelsheim) **81j:62124** 62J05
- Majumdar, Hiranmay** (with Sen, Pranab Kumar) Nonparametric testing for simple regression under progressive censoring with staggering entry and random withdrawal. Time-sampled statistical procedures. *Comm. Statist. A—Theory Methods* 7 (1978), no. 4, 349-371. (See **81i:62141**) **62G10** (62N05, 62P10)
- Majumdar, Mukul** (with McFadden, Daniel; Mitra, Tapan) Pareto optimality and competitive equilibrium in infinite horizon economies. *J. Math. Econom.* 7 (1980), no. 1, 1-26. (Authors' summary) **81a:90052** 90A14 (90A16)
- Majumdar, Pradip Kumar** A critical study of the drawbacks of the development of the modern pure mathematics in India. *Math. Ed. (Sivan)* 13 (1979), no. 3, B36-B50. (Phillip S. Jones) **81b:01009** 01A32 (01A74, 01A80)
- Makal, Endre** Complete systems of eigenfunctions of the wave equation in some special cases. *Studia Sci. Math. Hungar.* 11 (1976), no. 1-2, 139-144 (1978). (Author's review (Zbl 412:35034)) **81j:35086** 35P10
- On the Schrödinger equation of the three-body problem. I, II. *Studia Sci. Math. Hungar.* 12 (1977), no. 1-2, 41-46, 257-265 (1980). (J. Weidmann) **81i:35043** 35J10 (81C05)
- On zeros of Bessel functions. *Univ. Beograd. Publ. Elektrotehn. Fak. Ser. Mat. Fiz.* No. 602-633 (1978), 109-110 (1979). (M. E. Muldoon) **81i:33011** 33A40
- Makar, Boshra H.** Transfinite cryptography. *Cryptologia* 4 (1980), no. 4, 230-237. (Authors' summary) **81j:94043** 94B99 (15A99)
- Makar, Malak** (with Nishihara, Katsunobu; Uji, Masataka; Mima, Kunioki) Parametric instabilities in two-electron temperature plasma by laser. *Tech. Rep. Osaka Univ.* 39 (1980), no. 1517-1550, 129-136. (Authors' summary) **81j:76054** 76X05
- Makarov, A. A.** The criterion of correct solvability of a boundary value problem in a layer for a system of linear convolution equations in topological spaces. (Russian) *Theoretical and applied questions of differential equations and algebra (Russian)*, pp. 178-180, 268, "Naukova Dumka", Kiev, 1978. (M. Švec) **81c:35030** 35G15 (34G20, 35R20, 46E10)
- Makarov, G. I.** (with Novikov, V. V.) The effect of high-altitude inhomogeneities of the atmosphere on the eigenvalues of normal waves in the problem of diffraction of radio waves around the spherical earth. (Russian) *Problems in the diffraction and propagation of waves*, No. 17 (Russian), pp. 3-38, 208, Leningrad. Univ., Leningrad, 1979. (A. S. Alekseev) **81g:78028** 78A45 (86A35)-
- Makarov, I. A.** Solution of the Cauchy-Goursat problem for a second-order equation with two lines of degeneracy. (Russian) *Sibirsk. Mat. Ž.* 21 (1980), no. 1, 215-219, 240. (Megumi Saigo) **81h:35070** 35M05
- Makarov, I. P.** (with Kuznetsova, L. M.) Existence of periodic motions determined by a countable system of differential equations. (Russian) *Theory of stability and its applications (Russian)*, pp. 115-122, 300, "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. (V. G. Zadorožnii) **81i:34035** 34C25
- Makarov, V. L.** Some Sturm-Liouville finite-difference boundary value problems. (Russian) *Numerical methods in plasma physics (Russian)*, pp. 55-59, 259, "Nauka", Moscow, 1977. (From the introduction) **81h:65085** 65L10
- (with Burkovskaja, V. L.; Klunnik, O. O.) An interpolation problem in a class of X^n -harmonic functions. (Russian) Software for control systems. *Akad. Nauk Ukrain. SSR Inst. Kibernet. Preprint* No. 17 (1978), 20-31. (È. O. Zeel') **81c:41044** 41A30 (31C99)

- (with Kuz'min, A. V.; Meladze, G. V.) Completely conservative three-layer difference schemes for gas dynamics equations in Euler variables. (Russian. Georgian and English summaries) *Sem. Inst. Prikl. Mat. Dokl. No. 12-13* (1978), 37-39. (L. Berg) **81j:76067** 76N15 (65M05)
- (with Samarskii, A. A.) Application of exact difference schemes to estimation of the convergence rate of the method of lines. (Russian) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 113* (1979), 32 pp. (Jaroslav Jelen) **81c:65131** 65N40
- (with Burkovskaja, V. L.; Klunnik, O. O.) Hermitian interpolation in the class of x^m -harmonic functions of a given smoothness. (Russian) *Ukrain. Mat. Z.* **31** (1979), no. 3, 317-320, 336. (Anthony G. O'Farrell) **81d:41001** 41A05 (41A30)
- (with Sa'dullaev, S. S.) Four-point difference schemes for a Goursat problem. (Russian) *Voprosy Vychisl. i Prikl. Mat. (Tashkent) No. 57* (1979), 19-26, 167-168. (S. P. Gavelja) **81j:39004** 39A12 (65N10)
- (with Sa'dullaev, S. S.) On the question of convergence of difference schemes for the Helmholtz equation in a rectangle. (Russian) *Voprosy Vychisl. i Prikl. Mat. (Tashkent) No. 58* (1979), 30-38, 120. (S. P. Gavelja) **81c:58082** 65N10 (39A12)
- (with Gavriljuk, I. P.; Šmanenko, T. L.) The regularization of difference schemes for quasilinear elliptic equations in the strip. (Russian. English summary) *Vychisl. Prikl. Mat. (Kiev) No. 39* (1979), 94-101, 174. (Authors' summary) **81b:65090** 65N10
- (with Gavriljuk, I. P.; Luznih, V. M.) Exact and truncated difference schemes for a class of Sturm-Liouville problems with degeneration. (Russian) *Differentsial'nye Uravnenija* **16** (1980), no. 7, 1265-1275, 1350. (Roman Andrushkiw) **81c:65098** 65L15 (65N10)
- (with Samarskii, A. A.) On the question of the convergence rate of truncated schemes of the m th rank for generalized solutions. (Russian) *Differentsial'nye Uravnenija* **16** (1980), no. 7, 1276-1282, 1351. (W. S. Loud) **81c:65091** 65L10
- (with Gavriljuk, I. P.) A method for solving boundary value problems for nonlinear parabolic equations. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* **1980**, no. 7, 10-13, 96. (Garry J. Tee) **81c:65074** 65M15
- (with Sa'dullaev, S. S.) Four-point difference scheme for the Goursat problem. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* **1980**, no. 8, 21-24, 87. (V. D. Glushenkov) **81m:65149** 65M05 (65M10)
- (with Kuz'min, A. V.; Meladze, G. V.) A completely conservative difference scheme for equations of gas dynamics in Euler variables. (Russian) *Z. Vychisl. Mat. i Mat. Fiz.* **20** (1980), no. 1, 171-181, 262. (Authors' summary) **81b:76043** 76L05 (65M10)
- Makarov, V. S. (with Gucul, I. S.) A property of Fiedorov groups of a Lobachevskii space. (Russian) *Algebra, number theory and their applications. Trudy Mat. Inst. Steklov.* **148** (1978), 106-108, 273. (Ju. I. Merzjakov) **81a:20056** 20H15 (51M10)
- Makarova, A. D. A formula for the generalized resolvents of a symmetric nondensely defined operator with a bounded inverse. (Russian) *Functional analysis, No. 12* (Russian), pp. 112-120, *U'janovsk. Gos. Ped. Inst., U'janovsk*, 1979. (Björn Textorius) **81b:47037** 47B25
- Makaryčeva, D. N. (with Alekseev, A. S.; Čubarov, M. A.) Algorithms for the analytic investigation of the stability of dynamical systems using a digital computer. (Russian) *Theory of stability and its applications* (Russian), pp. 229-239, 303, "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. (A. A. Martynuk) **81c:65080** 65L07
- Makaskis, Aristidis Sur l'isomorphisme d'algèbres de groupes sur un champ modulaire. *Bull. Soc. Math. Belg.* **28** (1976), no. 2, 91-109. (P. Donovan) **81b:20009** 20C05
- Makcenko, Ju. M. (with Migdal, A. A.) Self-consistent area law in QCD. *Phys. Lett. B* **97** (1980), no. 2, 253-256. (Authors' summary) **81j:81060** 81G05
- Maķeev, A. I. (with Svidziński, A. V.) Theory of current states in an extremely polluted SNS-contact in the neighbourhood of the zero temperature. (Russian. English summary) *Teoret. Mat. Fiz.* **44** (1980), no. 1, 85-92. (Authors' summary) **81b:81184** 81J05
- Maķeev, G. N. On the question of the involutivity of systems of Pfaffian equations. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* **1980**, no. 1, 39-44. (H. Kil'p) **81d:58085** 58A15
- Maķeev, S. P. (with Komolov, S. V.; Serov, G. P.; Šahnov, I. F.) Optimal control of a finite automaton with fuzzy constraints and a fuzzy target. *Kibernetika (Kiev)* **1979**, no. 6, 30-34 (Russian); translated as *Cybernetics* **15** (1979), no. 6, 805-810 (1980). (Authors' introduction) **81j:90090** 90C15 (90C40, 93A15)
- Makhaldiani, N. V. See Makhaldiani, N. V.
- Makhsukov, Vladimir G. See Makhsukov, V. G.
- Makhort, F. G. See Makhort, F. G.
- Makhout, J. (with Viswanathan, R.) Adaptive lattice methods for linear predictive signal processing. *Pattern recognition and signal processing* (Proc. NATO Adv. Study Inst., Paris, 1978), pp. 559-573, NATO Adv. Study Inst. Ser., Ser. E: Appl. Sci., 29, *Sijthoff & Noordhoff, Alphen aan den Rijn*, 1978. (See **80j:68076**) 94A05
- Maki, Haruo (with Kobayashi, Teichi; Yoshida, Toshio) Extensibility with degree d of the complex vector bundles over lens spaces and projective spaces. *Mem. Fac. Sci. Kōchi Univ. Ser. A Math.* **1** (1980), 23-33. (David Handel) **81c:58027** 55R50 (55R40)
- Maklad, Maher S. (with Nichols, S. T.) A new approach to model structure discrimination. *IEEE Trans. Systems Man Cybernet.* **10** (1980), no. 2, 78-84. (Authors' summary) **81b:68121** 68J10
- Makrva, M. Metric and analytic number theory at Vilnius University. (Russian. Lithuanian and English summaries) *Lietuv. Mat. Sb.* **20** (1980), no. 3, 29-37, 216. (Authors' summary) **81k:10063** 10H10 (01A65, 01A72, 10-03, 12-03)
- Makovsky, Emil The crystallographic art of Hans Hinterreiter. *Z. Krist.* **150** (1979), no. 1-4, 13-21. (M. P. Closs) **81c:51027** 51M20 (00A05)
- Makovoz, Ju. I. (with Šesko, M. A.) Approximate solution of a singular characteristic integral equation. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* **1979**, no. 12, 69-72. (N. L. Vasilevskii) **81d:45011** 45E05 (45L05)
- Diameters of Sobolev classes and splines deviating least from zero. (Russian) *Mat. Zametki* **26** (1979), no. 5, 805-812, 816. (S. D. Riemschneider) **81b:41060** 41A45 (42A05)
- Makowski, Andrzej Some equations involving the sum of divisors. *Elem. Math.* **34** (1979), no. 4, 82. (Carl Pomerance) **81b:10004** 10A20
- Makowsky, J. A. Some observations on uniform reduction for properties invariant on the range of definable relations. *Fund. Math.* **99** (1978), no. 3, 199-203. (Author's summary) **81c:03029** 03C40
- (with Shelah, Saharon) The theorems of Beth and Craig in abstract model theory. I. The abstract setting. *Trans. Amer. Math. Soc.* **256** (1979), 215-239. (W. Hodges) **81b:03041** 03C80 (03C95)
- Makroglou, Athina (with Baker, Christopher T. H.; Short, Edward) Regions of stability in the numerical treatment of Volterra integro-differential equations. *SIAM J. Numer. Anal.* **16** (1979), no. 6, 890-910. (E. N. Houstis) **81b:65121** 65R20
- Convergence of a block-by-block method for nonlinear Volterra integro-differential equations. *Math. Comp.* **35** (1980), no. 151, 783-796. (Sean McKee) **81c:65100** 65R20
- Maksa, Gyula (with Daróczy, Zoltán) Nonnegative information functions. *Analytic function methods in probability theory* (Proc. Colloq. Methods of Complex Anal. in the Theory of Probab. and Statist., Kossuth L. Univ. Debrecen, Debrecen, 1977), pp. 67-78, *Colloq. Math. Soc. János Bolyai*, 21, North-Holland, Amsterdam, 1979. (Pl. Kannappan) **81b:99008** 39B20 (94A15)
- On near-derivations. *Proc. Amer. Math. Soc.* **81** (1981), no. 3, 406-408. (J. Aczél) **81m:39010** 39B20 (39C05)
- Maklincev, B. I. Rate of radiationless electronic transitions for molecules in the condensed phase. *Chem. Phys.* **49** (1980), no. 3, 397-415. (Authors' summary) **81j:82034** 82A60
- (with Fleurov, V. N.) Radiationless transitions in systems with quasidiscrete spectrum. *Chem. Phys.* **50** (1980), no. 1, 71-77. (Authors' summary) **81f:81092** 81G55
- Maklanov, A. V. Large deviations in a linear model with nuisance parameters. (Russian. English summary) *Investigations in the theory of probability distributions, IV. Zap. Nauch. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* **85** (1979), 137-157, 240, 246. (M. Hušková) **81a:62061** 62J05 (60F10)
- Makhsantsev, B. I. See Maklincev, B. I.
- Makulm, M. S. (with Linis, V. K.) The number of transport facilities necessary for fulfillment of a traffic schedule. (Russian) *Mathematical modeling of planning and control processes. Mat. Issled.* **60** (1980), 115-122, 171. (Authors' summary) **81f:90056** 90B35
- Minimization of the number of transport facilities by change in the days of fulfillment of nondaily trips. (Russian) *Mathematical modeling of planning and control processes. Mat. Issled.* **60** (1980), 127-136, 172. (Authors' summary) **81f:90058** 90B35
- Maksimov, A. V. Scheduling with restriction on resource use rate. *Kibernetika (Kiev)* **1979**, no. 6, 91-95 (Russian); translated as *Cybernetics* **15** (1979), no. 6, 876-881 (1980). (Authors' summary) **81j:90068** 90B35 (68C15)
- Maksimov, Ju. B. (with Krivoručko, E. I.) Application of the branch and bound method to the solution of discrete volume scheduling problems. (Russian) *Avtomat. Sistemy Upravlenija i Priboj Avtomat. No. 54* (1980), 74-80, iii. (Authors' summary) **81i:90113** 90B35
- Maksimov, M. M. (with Vahitov, G. G.; Tetelbaum, Ja. I.) A parallel microprocessor system design for simulation of multiphase flow problems. *Simulation of systems '79* (Proc. Ninth IMACS Congress, Sorrento, 1979), pp. 189-198, North-Holland, Amsterdam, 1980. (See **81j:68009**) 68C05 (65F05)
- Maksimov, V. M. (with Konradov, A. A.; Levitin, E. I.) Mathematical modeling of the processes of the development and optimal treatment of acute leukemia. (Russian) *Mathematical models of mechanisms of pathological processes. Voprosy Kibernet. (Moscow) No. 49* (1979), 5-32. (See **81f:92007**) 92A07
- Local theorems for Euclidean motions. I. *Z. Wahrsch. Verw. Gebiete* **51** (1980), no. 1, 27-38. (Paolo Baldi) **81b:60016** 60B15 (60J15)
- Maksimov, V. P. (with Azbelev, N. V.) A priori estimates of the solutions of the Cauchy problem and the solvability of boundary value problems for equations with retarded argument. (Russian) *Differentsial'nye Uravnenija* **15** (1979), no. 10, 1731-1747, 1916. (Erwin Kozakiewicz) **81c:34048** 34K10
- Maksimova, L. L. A classification of modal logics. (Russian) *Algebra i Logika* **18** (1979), no. 3, 328-340, 385-386. (P. Ecsedi-Tóth) **81i:03032** 03B55 (03B45)
- Interpolation theorems in modal logics and amalgamable varieties of topological Boolean algebras. (Russian) *Algebra i Logika* **18** (1979), no. 5, 556-586, 632. (Jerzy Kotas) **81j:03031** 03B45 (03C40, 06E15)
- Interpolation properties of superintuitionistic logics. *Studia Logica* **38** (1979), no. 4, 419-428. (Peter Köhler) **81f:03035** 03B55
- Maksimović, Dragoslav M. A short proof of generalized Hadamard's inequalities. *Univ. Beograd. Publ. Elektrotehn. Fak. Ser. Mat. Fiz. No. 634-677* (1979), 126-128. (Paul R. Beesack) **81j:26010** 26D15 (26A51)
- Makuslov, F. G. (with Guseinov, M. M.) Expansion in generalized eigen- and associated elements of a linear pencil of operators in a Banach space. (Russian) *Spectral theory of operators* (Proc. Second All-Union Summer Math. School, Baku, 1975) (Russian), pp. 44-64, "Elm", Baku, 1979. (Boris Pavlov) **81m:47029** 47A70
- (with Veliev, S. G.) Factorization of the scattering matrix for a system of Dirac equations on the entire axis. (Russian) *Spectral theory of operators* (Proc. Second All-Union Summer Math. School, Baku, 1975) (Russian), pp. 121-133, "Elm", Baku, 1979. (M. Otelbaev) **81i:34020** 34B25 (47E05)
- (with Guseinov, Z. A.) A mixed problem for quasilinear hyperbolic equations. (Russian. Azerbaijani and English summaries) *Akad. Nauk Azerbaidžan. SSR Dokl.* **35** (1979), no. 12, 3-6. (J. Muszyński) **81i:35105** 35L70
- (with Palaeva, E. E.) A multiple expansion in eigenfunctions. (Russian) *Dokl. Akad. Nauk SSSR* **249** (1979), no. 3, 544-547. (Boris Pavlov) **81c:47052** 47E05 (34B25, 47A70)
- (with Mardanov, I. D.; Šamilov, A. H.) Some new conditions for solvability of a boundary value problem for nonlinear differential equations with deviating argument of neutral type. (Russian. Azerbaijani and English summaries) *Izv. Akad. Nauk Azerbaidžan. SSR Ser. Fiz.-Tehn. Mat. Nauk* **1979**, no. 2, 26-32. (József Kalinowski) **81d:34058** 34K10
- Makuslova, M. K. A combinatorial problem connected with the calculation of groups of automorphisms of positive quadratic forms. (Russian) *Voprosy Vychisl. i Prikl. Mat. (Tashkent) No. 54* (1979), 47-54, 198. (Harvey Cohn) **81f:10030** 10C02
- Makymiv, E. M. Approximate properties of Thiele's formula in a class of elementary functions. (Russian) *Vestnik L'vov. Politehn. Inst. No. 141 Differentsial'nye Uravnenija i*

- ih Priložen. (1980), 55–56, 119. (Author's summary) **81i:65021** 65D20
(with Kutniv, M. V.) A nonlinear explicit method for numerical integration of differential equations. (Russian) *Vestnik L'vov. Politehn. Inst. No. 141 Differentsial'nye Uravneniya i ih Priložen.* (1980), 57–58, 119. (Authors' summary) **81i:65038** 65L05
(with Marko, V. F.; Pustomei'nikov, I. P.) Nonlinear Taylor-Aitken formulas. (Russian) *Vestnik L'vov. Politehn. Inst. No. 141 Differentsial'nye Uravneniya i ih Priložen.* (1980), 60–62, 120. (Authors' summary) **81i:65017** 65D15
- Makulian, R. V.** (with Volkodavov, V. F.) Uniqueness and existence of the solutions to a problem with shift in a bounded domain for the Euler-Darboux equation. (Russian) *Differentsial'nye Uravneniya (Ryazan) No. 14* (1979), 32–40. (Authors' summary) **81b:35057** 35L65 (35Q20)
- Mal, A. K.** (with Chatterjee, A. K.; Knopoff, L.; Hudson, John Arthur) Attenuation of elastic waves in a cracked, fluid-saturated solid. *Math. Proc. Cambridge Philos. Soc.* **88** (1980), no. 3, 547–561. (I. M. Longman) **81j:73026** 73D15 (73M05)
- Mal, Dingur** Proximate order of meromorphic functions. *Jiñabha* **7** (1977), 76–82. (S. M. Shah) **81b:30055** 30D30
- Malaev, O. A.** Stability in noncooperative games with an infinite number of players. (Russian) *Some questions of differential and integral equations and their applications, No. 2* (Russian), pp. 51–56, 189, *Yakutsk. Gos. Univ., Yakutsk*, 1977. (Author's summary) **81c:90097** 90D10
- Stability in differential games. (Russian) *Existence of solutions, stability and informeness in game theory (Russian)*, pp. 99–103, 112, *Kalinin. Gos. Univ., Kalinin*, 1979. (Author's summary) **81m:90117** 90D25
- Malahov, A. N.** (with Saichev, A. I.) Representation of a wave reflected from a randomly inhomogeneous layer in the form of a series satisfying the causality condition. (Russian. English summary) *Izv. Vys. Uchebn. Zaved. Radiofizika* **22** (1979), no. 11, 1324–1333. (Authors' summary) **81a:78015** 78A45
- Malahovskii, V. S.** A class of congruences of quadrics. (Russian) *Kaliningrad. Gos. Univ. Differentsial'naja Geom. Mnogooobraz. Figur* **10** (1979), 60–62, 162. (D. I. Papuc) **81k:53005** 53A20
- Congruences of quadrics in three-dimensional projective space. (Russian. English summary) *Collection of articles on geometry, II. Trudy Tbiliss. Mat. Inst. Razmadze Akad. Nauk Gruzii* **64** (1980), 65–71. (Vladislav Goldberg) **81j:53012** 53A20
- Malikain, K.** (with Adomian, G.) Inversion of stochastic partial differential equations—the linear case. *J. Math. Anal. Appl.* **77** (1980), no. 2, 505–512. (K. R. Parthasarathy) **81m:60114** 60H15
- Malikisano, T. G.** The truncated operator Hamburger moment problem. (Russian) *Teor. Funkcii Funkcional. Anal. i Priložen.* **31** (1979), 90–95, 157. (From the text) **81b:47031** 47B15 (44A60)
- Malamud, M. M.** Spectral analysis of operators of convolution type. (Russian) *Mathematical analysis and probability theory (Russian)*, pp. 105–108, 215, "Naukova Dumka", Kiev, 1978. (G. K. Kalisch) **81d:47011** 47A65 (45P05)
- Transformation operators for higher-order equations. (Russian) *Mathematical analysis and probability theory (Russian)*, pp. 108–111, 216, "Naukova Dumka", Kiev, 1978. (E. Barvinok) **81c:34012** 34A30 (34A25)
- Malanovskii, K. S.** See Optimization techniques, **81j:49001a** and Optimization techniques, **81j:49001b**
- Malachenko, Ju. E.** (with Stanevičius, A.-I. A.) Solution of an integer programming problem. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* **20** (1980), no. 3, 623–629, 812. (Authors' summary) **81c:90069** 90C10 (90B10)
- Malachenko, S. V.** (with Ilinskii, A. Ju.; Storozhenko, V. O.; Temchenko, M. E.; Šilkin, P. G.) Method of balancing rotating bodies on a string drive. *Izv. Akad. Nauk SSSR Meh. Teor. Tela* **14** (1979), no. 5, 3–18 (Russian); translated as *Mech. Solids* **14** (1979), no. 5, 1–14. (Authors' summary) **81d:70006** 70E99
- Malaspinas, A.** (with Droz, Michel) Real space dynamic renormalization group for an Ising spin glass. *Helv. Phys. Acta* **53** (1980), no. 2, 214–222. (Authors' summary) **81k:82030** 82A42 (81E15)
- Malave, Nelson** (with Czechowicz, Kazimierz) A complex of operations approach to the optimal control of the set of plants. *Systems Sci.* **5** (1979), no. 4, 417–423 (1980). (From the introduction) **81d:93005** 93A10 (90B99)
- Malave, Pushpa B.** (with Bhonsle, B. R.) Some recurrence relations and differential formulae for two-variable orthogonal polynomials $P_{n,k}(x,y)$ which are orthogonal over the unit disk. *Ranchi Univ. Math. J.* **9** (1978), 47–52. (T. S. Chihara) **81k:33013** 33A65
(with Bhonsle, B. R.) On generating functions for certain two-variable orthogonal polynomials. *Pure Appl. Math. Sci.* **11** (1980), no. 1–2, 9–12. (Tom H. Koornwinder) **81h:33016** 33A65
- Malaviya, Shashi D.** (with Singh, Vijendra Pal) Transmission lines loaded at regular intervals. *IEEE Trans. Microwave Theory Tech.* **27** (1979), no. 10, 854–859. (Authors' summary) **81c:78012** 78A55 (78A40)
- Malboussin, A. P. C.** (with de Calan, C.) Complete Mellin representation and asymptotic behaviours of Feynman amplitudes. (French summary) *Ann. Inst. H. Poincaré Sect. A (N.S.)* **32** (1980), no. 1, 91–107. (M. Demuth) **81f:81017** 81C30 (32A45)
- Mal'cev, A. I.** Symmetric groupoids. *Twelve papers in logic and algebra*, pp. 235–250, *Amer. Math. Soc. Transl.*, 113, *Amer. Math. Soc., Providence, R.I.*, 1979. (See **80m:00006**) 20L05
- Mal'cev, I. A.** Homomorphisms of totally bounded extensions of iterative Post algebras. (Russian) *Rostock. Math. Kolloq.* **11** (1979), 85–92. (P. Ecsedi-Tóth) **81d:03061** 03G20
- Mal'cev, Ju. N.** (with Nečae, A. A.) Critical rings and varieties of algebras. (Russian) *Algebra i Logika* **18** (1979), no. 3, 341–347, 386. (E. W. Kiss) **81j:16024** 16A38
Varieties of associative algebras whose submanifold lattice is nondistributive. (Russian) *Algebraic structures. Mat. Issled.* **56** (1980), 110–112, 161. (A. A. Iskander) **81j:16003** 16A06 (16A38)
- Mal'nikov, S. V.** Approximate method of statistical analysis of systems with random operating time. *Automat. i Telemekh.* **1979**, no. 11, 93–97 (Russian. English summary); translated as *Automat. Remote Control* **40** (1979), no. 11, part 1, 1630–1633 (1980). (Author's summary) **81d:93056** 93E03
- Malcolmson, Peter** Determining homomorphisms to skew fields. *J. Algebra* **64** (1980), no. 2, 399–413. (P. M. Cohn) **81k:16005** 16A08
- On making rings weakly finite. *Proc. Amer. Math. Soc.* **80** (1980), no. 2, 215–218. (David Handelman) **81f:16028** 16A42 (16A54)
- Malcolmson, James M.** Prices vs. quantities: a critical note on the use of approximations. *Rev. Econom. Stud.* **45** (1978), no. 1, 203–207. (From the text) **81d:90014** 90A09 (90A12)
- Malcev, Edward** Bifurcation solutions of cylindrically symmetric Yang-Mills equations. *J. Phys. A* **13** (1980), no. 8, 2609–2614. (Franco Strocchi) **81i:81074** 81E10 (35Q20, 58E07)
- Malec, Marian** Sur une méthode des différences finies pour une équation non linéaire différentielle fonctionnelle aux dérivées mixtes. *Ann. Polon. Math.* **36** (1979), no. 1, 1–10. (Author's summary) **81i:65078** 65N05
- Maleev, R. P.** Conditionally convergent series in some Banach lattices. (Russian) *C. R. Acad. Bulgare Sci.* **32** (1979), no. 8, 1015–1018. (Ju. A. Abramović) **81g:46029** 46B30 (40A05, 46B15)
- Malek, Miroslaw** (with Liu, Kuen Y.) Graph theory models in fault diagnosis and fault tolerance. *J. Design Automat. Fault-Tolerant Comput.* **3** (1979), no. 3–4, 155–169. (Authors' summary) **81a:68114** 68J10 (68A05, 94C15)
- Maleki, Nasser** (with Macek, Joseph) Schwinger's variational principle for electron-ion scattering. *Phys. Rev. A* (3) **21** (1980), no. 5, 1403–1411. (Authors' summary) **81a:81075** 81F05
- Malek-Mansour, M.** (with Houard, J.) A new approximation scheme for the study of fluctuations in nonuniform nonequilibrium systems. *Phys. Lett. A* **70** (1979), no. 5–6, 366–368. (Authors' summary) **81i:80011** 80A30 (82A35)
- (with Nicolis, G.) Systematic analysis of the multivariate master equation for a reaction-diffusion system. *J. Statist. Phys.* **22** (1980), no. 4, 495–512. (Authors' summary) **81j:80008** 80A30 (82A35)
- (with van den Broeck, C.; Houard, J.) Chapman-Enskog development of the multivariate master equation. *Phys. A* **101** (1980), no. 1, 167–184. (G. A. Skorobogator) **81j:80006** 80A30 (60J70, 82A35)
- Malek-Shahmoradian, Mansour** Application of Neumann's lemma to the minimum and characteristic polynomials. *Linear Algebra Appl.* **29** (1980), 217–224. (Thomas H. Foregger) **81a:15012** 15A18 (15A51)
- On a conjecture by D. Ž. Djoković. *Linear Algebra Appl.* **30** (1980), 177–182. (Jacques Dubois) **81h:15007** 15A15 (15A51)
- Malek-Zavarei, M.** Time-optimal control of a class of unstable third-order plants. *J. Franklin Inst.* **309** (1980), no. 3, 125–134. (From the summary) **81g:93091** 93D99
- Near-optimum design of nonstationary linear systems with state and control delays. *J. Optim. Theory Appl.* **30** (1980), no. 1, 73–88. (Author's summary) **81g:93036** 93C05 (49B36)
- Suboptimal control of systems with multiple delays. *J. Optim. Theory Appl.* **30** (1980), no. 4, 621–633. (Benson Kurtaran) **81f:49023** 49B36 (93C05)
- Time-optimal control of a third-order plant. *Kybernetika (Prague)* **16** (1980), no. 1, 71–85. (Authors' summary) **81d:93043** 93C50 (49A36)
- Malevič, T. L.** (with Abdalimov, B.) Asymptotic estimates for functions of the distribution of sample central moments and certain other statistics. (Russian) *Izv. Akad. Nauk UzSSR Ser. Fiz.-Mat. Nauk* **1979**, no. 6, 22–28, 91. (W. Hoeffding) **81m:62070** 62G05 (62E20, 62F12)
- Finiteness conditions for the moments of the number of zeros of Gaussian stationary processes. (Russian. English summary) *Teor. Veroyatnost. i Primenen.* **24** (1979), no. 4, 741–753. (Jack Cuzick) **81i:60038** 60G15 (60G17)
- Malliet, W. P. M.** A systematic method for the solution of some nonlinear evolution equations. I. The Burgers equations. *J. Phys. A* **13** (1980), no. 9, 2929–2935. (D. ter Haar) **81j:35099** 35Q20 (76E99)
- Malghan, S. R.** (with Benchalli, S. S.) On new separation axioms. *J. Karnatak Univ. Sci.* **23** (1978), 38–47. (C. E. Aull) **81m:54029** 54D10
- Malgoure, Jean** (with Voisin, Christine) ★Factorisation de Stein topologique; découpe. (French) [Topological Stein factorization; cutting] With an introduction by Alexandre Grothendieck. *Cahiers Mathématiques Montpellier, 15. Université des Sciences et Techniques du Languedoc, U.E.R. de Mathématiques, Montpellier*, 1979. v + 63 pp. (Jack Weinstein) **81m:57005** 57N05 (14F20, 18F20, 54C10)
- Malgrange, Bernard** L'involutivité des caractéristiques des systèmes différentiels et microdifférentiels. *Séminaire Bourbaki, 30e année (1977/78), Exp. No. 522*, pp. 277–289. *Lecture Notes in Math.*, 710, Springer, Berlin, 1979. (P. Schapira) **81a:58046** 58D07
- Mal'hanov, V. P.** (with Derevjanchenko, G. V.) On the question of numerical integration of a system of Euler equations. (Russian. English summary) *Vyčisl. Prikl. Mat. (Kiev)* **39** (1979), 142–144, 175. (Authors' summary) **81a:65117** 65P05
- Malicki, A. A.** (with Mac, A. D.) Design of experiments in a parameter estimation problem. (Russian) *Theory of random processes*, No. 6 (Russian), pp. 97–101, 135, "Naukova Dumka", Kiev, 1978. (Ivar Petersen) **81b:62091** 62K05
- Connection between problems in the design of experiments and the problem of moments. (Russian) *Teor. Funkcii Funkcional. Anal. i Priložen.* **33** (1980), 86–93, iii. (Andrej Pázmán) **81f:62119** 62K05 (44A60)
- Malig, Hans-Jürgen** Eine Bemerkung zu einem Satz über übergroße Abweichungen von Yu. V. Linnik. *Wiss. Z. Tech. Univ. Dresden* **28** (1979), no. 5, 1193–1195. (Reinhard Michel) **81f:60042** 60F10
- Maligranda, Lech** Interpolation of Lipschitz operators for the pairs of spaces (L^1, L^∞) and (l^1, c_0) . *Comment. Math. Prace Mat.* **21** (1980), no. 2, 327–339. (Colin Bennett) **81j:46040** 46E30 (46M35)
- Malik, Henrik J.** (with Mikhail, N. N.) Unbiased estimates of Dwyer's moment function and their products for finite population. *J. Indian Statist. Assoc.* **16** (1978), 71–82. (B. C. Gupta) **81a:62020** 62E30 (62D05, 62F10)
- Exact formula for the cumulative distribution function of the quasirange from the logistic distribution. *Comm. Statist. A—Theory Methods* **9** (1980), no. 14, 1527–1534. (Author's summary) **81j:62044** 62E15
- Malik, S. K.** (with Singh, Manohar) Modulational instability in a self-gravitating fluid column. *Astrophys. J.* **238** (1980), no. 1, part 1, 326–332. (Authors' summary) **81d:76053** 76E20 (85A30)
- (with Singh, Manohar) Nonlinear surface waves in self-gravitating fluids. *Quart. Appl. Math.* **38** (1980/81), no. 2, 235–240. (Charles J. Amick) **81h:76010** 76B15 (35B40, 76E20)

- Mallin, S.** (with Charach, Ch.) Cosmological model with gravitational, electromagnetic, and scalar waves. *Phys. Rev. D* (3) 21 (1980), no. 12, 3284-3294. (Authors' summary) **81f:83040** 83F05
- Mallin, S.** Transfer methods and conditions for well-conditioning. (Russian) *Computational methods in linear algebra* (Proc. Fourth All-Union Conf., Acad. Sci. USSR, Novosibirsk, 1976), pp. 87-96, Akad. Nauk SSSR Sibirsk. Otdel., Vychisl. Centr., Novosibirsk, 1977. (Cs. J. Hegedűs) **81f:65031** 65F05 (15A06, 65L10)
- Mallin, Ju. V.** (with Tatur, V. E.) A method for diagnosing complex computation systems. (Russian. English summary) *Elektronnoe Modelirovanie* 1980, no. 4, 92-93, 112. (Authors' summary) **81g:68006** 68A05
- Mallina, T. B.** (with Smilyajeva, L. G.) The factorization method in optimal filtering of a class of steady-state perturbations. (Russian) *Mathematical methods of optimization and structuring of systems* (Russian), pp. 20-26, 181, Kaliningrad. Gos. Univ., Kaliningrad, 1979. (Authors' summary) **81k:93071** 93E11
- Mallikowski, Ju. V.** Diffusion approximation of stationary distribution of batches in a queueing system. (Russian. English summary) *Vesci Akad. Nauk BSSR Ser. Fiz.-Mat. Nauk* 1980, no. 4, 52-56, 140-141. (W. Szczotka) **81k:60099** 60K25 (90B22)
- Mallikowski, L. G.** ★Классификация объектов средствами дискриминантного анализа. (Russian) [Classification of objects by means of discriminant analysis] With an introduction by A. D. Deev. "Nauka", Moscow, 1979. 260 pp. (László Györfi) **81h:62115** 62H30
- Hypotheses on subspaces in the problem of discriminant analysis of normal populations. (Russian) *Models. Algorithms. Decision making* (Russian), pp. 195-216, 250, "Nauka", Moscow, 1979. (László Györfi) **81f:62100** 62H30
- Classification criteria in m normal populations with a restriction on mutual error probabilities. (Russian) *Models. Algorithms. Decision making* (Russian), pp. 217-232, 251, "Nauka", Moscow, 1979. (László Györfi) **81f:62101** 62H30
- Mallinowski, Grzegorz** ★Topics in the theory of strengthenings of sentential calculi. With a Polish summary. *Polish Academy of Sciences, Institute of Philosophy and Sociology, Warsaw*, 1979. 112 pp. (Joze errata). (Jerzy Kotas) **81f:03032** 03B50 (03B99)
- Mallinowski, Krzysztof** (with Nowosad, Krzysztof; Strulak, Michał) Simplification of models of linear systems using the continued fractions method and the application of simplified models. (Polish. Russian and English summaries) *Arch. Automat. Telemekh.* 24 (1979), no. 3, 351-370. (Authors' summary) **81a:93063** 93C99
- Mallievskii, A. V.** (with Alizerman, M. A.) ★Choice of best variants: some aspects of general theory. Preprint. *Institute of Control Sciences, Moscow*, 1980. 37 pp. (Authors' summary) **81h:90012** 90A08 (68J10, 93A99)
- Mallik, Jovan** On the extrapolation of some stationary processes with nonrational densities given the entire past. (Russian) *Mat. Vesnik* 2(15)(30) (1978), no. 2, 167-177. (M. I. Jadrénko) **81m:60072** 60G25
- Malliz, Jerome** ★Introduction to mathematical logic. Set theory, computable functions, model theory. Undergraduate Texts in Mathematics. Springer-Verlag, New York-Heidelberg, 1979. x + 198 pp. ISBN 0-387-90346-1 (John W. Dawson, Jr.) **81h:03002** 03-01
- (with Ehrenfeucht, Andrzej; Fajtlowicz, Siemion; Mycielski, Jan) Some problems on the universality of words in groups. *Algebra Universalis* 11 (1980), no. 2, 261-263. (D. M. Silberger) **81k:20045** 20F05 (03D40)
- Malliza, Mircea** (with Gaiușu, Silviu) ★Coalition and connection in games. Problems of modern game theory using models belonging to systems theory and information theory. Pergamon Press, Oxford-New York-Toronto, Ont., 1980. viii + 156 pp. ISBN 0-08-023033-4 (G. Duru) **81f:90126** 90D12 (90-01, 93E05)
- Mallvert, Christian** (with Penot, Jean-Paul; Théra, Michel) Minimisation d'une fonction régulière sur un fermé non régulier et non convexe d'un espace de Hilbert. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 286 (1978), no. 24, A1191-A1193. (Authors' summary) **81f:58019** 58E05 (47H05, 90C30)
- Malljukov, V. P.** (with Krass, Isiof) The existence of optimal mixed strategies for some antagonistic games. (Russian) *Optimizacija* No. 20(37) (1978), 135-146, 157. (Klaus Lommatzsch) **81h:90163** 90D10
- Malljutov, M. B.** (with Matveev, P. S.) The design of screening experiments with a nonsymmetric response function. (Russian) *Dokl. Akad. Nauk SSSR* 244 (1979), no. 1, 42-46. (H. Bandemer) **81d:62074** 62K99
- (with Matveev, P. S.) Design of screening experiments with a nonsymmetric response function. (Russian) *Mat. Zametki* 27 (1980), no. 1, 109-127, 159. (H. Bandemer) **81h:62140** 62K99
- See also Seber, G. A. F., **81j:62128**
- Mallkevitch, Joseph** Spanning trees in polytopal graphs. *Second International Conference on Combinatorial Mathematics* (New York, 1978), pp. 362-367, Ann. New York Acad. Sci., 319, New York Acad. Sci., New York, 1979. (Joseph Zaks) **81h:05062** 05C10 (52A25)
- Malkin, David S.** Finite elements with penalties in nonlinear elasticity. *Internat. J. Numer. Methods Engrg.* 16 (1980), Special Issue, 121-136. (Author's summary) **81m:73024** 73C50 (65N30)
- Malkin, V. I.** Two classes of differential equations in functional derivatives. (Russian) *Vestnik L'vov. Politehn. Inst.* No. 141 *Differentsial'nye Uravnenija i ih Prilozhen.* (1980), 59-60, 119. (Author's summary) **81i:93025** 93D20 (34H05)
- Malle, Günther** Edge orientations on cub graphs with a maximum number of pairs of oppositely oriented edges. *Discrete Math.* 31 (1980), no. 3, 293-296. (D. Ja. Kesel'man) **81i:05117** 05C99
- (with Dörfler, Willibald; Harary, Frank) Covers of digraphs. (Russian summary) *Math. Slovaca* 30 (1980), no. 3, 269-280. (D. R. Lick) **81k:05081** 05C70 (05C20)
- Mallela, Sivanarayana** (with Masson, Gerald M.) Diagnosis without repair for hybrid fault situations. *IEEE Trans. Comput.* 29 (1980), no. 6, 461-470. (Guy Jumarie) **81f:94051** 94C99
- Maller, Michael** Fitted diffeomorphisms of nonsimply connected manifolds. *Topology* 19 (1980), no. 4, 395-410. (P. Mendes) **81m:58042** 58F10 (28D20, 57R50, 57R65)
- Maller, R. A.** A local limit theorem for independent random variables. *Stochastic Process. Appl.* 7 (1978), no. 1, 101-111. (Author's summary) **81g:60022** 60F05
- On convergence rates and the expectation of sums of random variables. *Stochastic Process. Appl.* 8 (1978), no. 2, 171-179. (Author's summary) **81h:60031** 60F15
- Relative stability, characteristic functions and stochastic compactness. *J. Austral. Math. Soc. Ser. A* 28 (1979), no. 4, 499-509. (E. Seneta) **81e:60020** 60F05 (60E10, 60G50)
- A note on domains of partial attraction. *Ann. Probab.* 8 (1980), no. 3, 576-583. (Aart J. Stam) **81f:60035** 60F05
- On one-sided boundedness of normed partial sums. *Bull. Austral. Math. Soc.* 21 (1980), no. 3, 373-391. (R. J. Tomkins) **81j:60039** 60F15 (60G50)
- An extension of Kesten's generalised law of the iterated logarithm. *Bull. Austral. Math. Soc.* 21 (1980), no. 3, 393-406. (R. J. Tomkins) **81j:60040** 60F15 (60G50)
- On the law of the iterated logarithm in the infinite variance case. *J. Austral. Math. Soc. Ser. A* 30 (1980/81), no. 1, 5-14. (R. J. Tomkins) **81j:60041** 60F15 (60G50)
- Mallet, J.-L.** Régression sous contraintes linéaires: application au codage des variables aléatoires. *Rev. Statist. Appl.* 28 (1980), no. 1, 57-68. (Friedrich Pukelsheim) **81j:62142** 62J99
- Mallet-Paret, John** Generic unfoldings and normal forms of some singularities arising in the obstacle problem. *Duke Math. J.* 46 (1979), no. 3, 645-683. (J. E. Marsden) **81e:58018** 58C27 (58E07)
- Generic bifurcation in the obstacle problem. *Quart. Appl. Math.* 37 (1979/80), no. 4, 355-387. (A. Vanderbauwhede) **81d:58026** 58E07 (35R35)
- (with Chow, Shui Nee; Hale, Jack K.) An example of bifurcation to homoclinic orbits. *J. Differential Equations* 37 (1980), no. 3, 351-373. (P. Mendes) **81m:58056** 58F14 (34C05)
- (with Chow, Shui Nee) The parameterized obstacle problem. *Nonlinear Anal.* 4 (1980), no. 1, 73-91. (C. Iliesi) **81j:35106** 35R35 (49C10, 73C99)
- Malli, G.** (with Matsuoka, O.; Suzuki, N.; Aoyama, T.) Relativistic self-consistent-field methods for molecules. I. Dirac-Fock multiconfiguration self-consistent-field theory for molecules and a single-determinant Dirac-Fock self-consistent-field method for closed-shell linear molecules. *J. Chem. Phys.* 73 (1980), no. 3, 1320-1328. (Authors' summary) **81h:81173a** 81G55
- Mallavin, Marie-Paule** See Mallavin-Brammeret, Marie-Paule
- Mallavin, Paul** ★Géométrie différentielle stochastique. (French) [Stochastic differential geometry] Notes prepared by Danièle Dehen and Dominique Miché. Séminaire de Mathématiques Supérieures [Seminar on Higher Mathematics], 64. Presses de l'Université de Montréal, Montréal, Que., 1978. 144 pp. ISBN 0-8405-0425-X (Mark Pinsky) **81d:60077** 60J60 (32F05, 32F20, 35H05, 49A60, 53C20, 58G32)
- Stochastic calculus of variation and hypoelliptic operators. *Proceedings of the International Symposium on Stochastic Differential Equations* (Res. Inst. Math. Sci., Kyoto Univ., Kyoto, 1976), pp. 195-263, Wiley, New York, 1978. (Kiyosi Itô) **81f:60063** 60H05 (35H05, 58G32, 60J60)
- Approximation polynomiale pondérée et produits canoniques. *Approximation theory and functional analysis* (Proc. Internat. Sympos. Approximation Theory, Univ. Estadual de Campinas, Campinas, 1977), pp. 237-262, North-Holland Math. Studies, 35, North-Holland, Amsterdam, 1979. (E. W. Cheney) **81f:41025** 41A30
- On the multiplier theorem for Fourier transforms of measures with compact support. *Ark. Mat.* 17 (1979), no. 1, 69-81. (Satoru Igari) **81e:42023** 42A45 (42A38)
- (with Devinatz, Allen) On the possibility of defining the Chapman-Kolmogorov semigroup on L^∞ . *Proc. Roy. Soc. Edinburgh Sect. A* 83 (1979), no. 3-4, 327-331. (J. A. Goldstein) **81f:60054** 60H10 (47D05, 60J35)
- Mallavin-Brammeret, Marie-Paule** See Séminaire: Algèbre Paul Duhreil et Marie-Paule
- Mallavin, 81f:16001**
- Mallik, N.** (with Talukdar, B.; Chatterjee, M.) Off-shell wave matrix in the two-body scattering. *Progr. Theoret. Phys.* 63 (1980), no. 4, 1245-1251. (Authors' summary) **81d:81085** 81F05
- Mallion, R. B.** (with Rigby, M. J.) On the eigenvalues and eigenvectors of certain finite, vertex-weighted, bipartite graphs. *J. Combin. Theory Ser. B* 27 (1979), no. 2, 122-129. (H. Sachs) **81d:05052** 05C50
- Mallios, Anastasios** On a convenient category of topological algebras. I. (Greek summary) *Prakt. Akad. Athinon* 50 (1975), 454-477 (1976). (J. B. Cooper) **81d:46058a** 46H05 (46M05)
- On a convenient category of topological algebras. II. Applications. (Greek summary) *Prakt. Akad. Athinon* 51 (1976), 245-263 (1977). (J. B. Cooper) **81d:46058b** 46H05 (46M05)
- Mallows, C. L.** Some theoretical results on Tukey's 3R smoother. *Smoothing techniques for curve estimation* (Proc. Workshop, Heidelberg, 1979), pp. 77-90, Lecture Notes in Math., 757, Springer, Berlin, 1979. (G. P. Bhattacharjee) **81f:62170** 62M10
- Baxter permutations rise again. *J. Combin. Theory Ser. A* 27 (1979), no. 3, 394-396. (Fan R. K. Chung) **81j:05014** 05A15 (05A05)
- (with Hwang, F. K.; Lin, Shen) Some realizability theorems in group testing. *SIAM J. Appl. Math.* 37 (1979), no. 2, 396-400. (Santosh Kumar) **81e:62110** 62N05
- Some theory of nonlinear smoothers. *Ann. Statist.* 8 (1980), no. 4, 695-715. (E. J. Hannan) **81j:62183** 62M10 (62F35)
- Malluh, Malik** See Ibn al-Razzaz al-Jazari, Badi 'al-Zaman Abi al-'Izz Isma'il, **81e:01010**
- Mallia, R. V.** (with Widnall, M. K.) Economic batch quantities for manufactured parts. *J. Oper. Res. Soc.* 31 (1980), no. 10, 875-882. (Authors' summary) **81h:90071** 90B30 (90B05)
- Maloletkin, G. N.** (with Andrianov, Anatolii N.) Behavior of theta-series of genus n of indeterminate quadratic forms under modular substitution. (Russian) *Algebra, number theory and their applications. Trudy Inst. Steklov.* 148 (1978), 5-15, 271. (K.-B. Gundlach) **81d:10017** 10D20
- The construction of Siegel cusp forms of genus 2 from cusp forms of genus 1. (Russian) *Studies in number theory*, 6. *Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 93 (1980), 186-191, 227-228. (A. N. Andrianov) **81h:10044** 10D20 (10D40)
- Malone, D. P.** (with Reismann, H.; Pawlik, P. S.) Laser induced thermoelastic response of circular plates. *Solid Mech. Arch.* 5 (1980), no. 3, 253-323. (From the introduction) **81m:73062** 73U05
- Malone, J. J.** A nonabelian 2-group whose endomorphisms generate a ring, and other examples of E-groups. *Proc. Edinburgh Math. Soc.* (2) 23 (1980), no. 1, 57-59. (J. Hausen) **81m:20057** 20F28 (16A76)
- Malonek, Helmut** Eine Normalform für reelle partielle Differentialgleichungen höherer Ordnung in der Ebene. *Beiträge Anal.* No. 14 (1979), 109-115. (B. P. Tkáč) **81k:35019** 35A30
- Malov, K. M.** An algebraic method of investigation of discrete systems. (Russian) *Trudy*

- Moskov. Orden. Lenin. Énerget. Inst. No. 412 (1979), 128-134, 163. (Author's summary) **81k:94043** 94C05
- On the algebraic theory of discrete systems. (Russian) *Trudy Moskov. Orden. Lenin. Énerget. Inst. No. 419* (1979), 32-42, 162. (Author's summary) **81k:93120** 03G05
- Isomorphism (similarity) invariants of discrete systems. (Russian) *Trudy Moskov. Orden. Lenin. Énerget. Inst. No. 438* (1979), 155-160. (From the text) **81j:12014** 12C05 (93C55)
- Malovička, V. O. On solvability of boundary value problems for a class of elliptic-parabolic systems. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* **1980**, no. 4, 18-21, 98. (Ja. A. Roitberg) **81f:35046** 35J70
- On the first boundary value problem for a class of equations with nonnegative characteristic form. (Russian) *Ukrain. Mat. Ž.* **32** (1980), no. 2, 226-230, 285. (Ja. A. Roitberg) **81d:35044** 35K70
- (with Gončarenko, V. M.) A boundary value problem that arises in the theory of random oscillations of dynamical systems. (Russian. English summary) *Vyšisl. Prikl. Mat. (Kiev)* **No. 40** (1980), 146-149, 161. (G. V. Hmelevskaja-Plotnikova) **81f:70026** 70L05
- Malozemov, V. N. (with Volton, E. F.; Daugavet, V. A.) Nonlinear approximation of problems of electric circuit synthesis. (Russian) *Operations research and statistical simulation*, No. 5 (Russian), pp. 28-55, 200, Leningrad. Univ., Leningrad, 1979. (Authors' summary) **81f:94035** 94C05
- (with Pervnyi, A. B.) Spline interpolation. (Russian) *Mat. Zametki* **26** (1979), no. 6, 817-822, 972. (S. D. Riemschneider) **81g:41004a** 41A05 (41A15)
- (with Belyi, V. M.) The dimension of the set of solutions of a best linear-fractional approximation problem. (Russian. English summary) *Vestnik Leningrad. Univ. Mat. Meh. Astronom.* **1979**, exp. 1, 21-27, 133. (A. Magnus) **81h:41012** 41A20
- (with Vasil'ev, A. A.; Pervnyi, A. B.) Interpolation and approximation by spline functions of an arbitrary defect. (Russian. English summary) *Vestnik Leningrad. Univ. Mat. Meh. Astronom.* **1979**, exp. 4, 23-30, 121. (S. D. Riemschneider) **81g:41004b** 41A05 (41A15)
- (with Pervnyi, A. B.) On the best quadrature formula on the class W_1^{r+1} . (Russian) *Dokl. Akad. Nauk SSSR* **252** (1980), no. 1, 37-40. (G. P. Ismatullayev) **81k:41020** 41A55 (41A65)
- (with Gavurin, M. K.) Foundations of the theory of quadratic programming. (Russian. English summary) *Vestnik Leningrad. Univ. Mat. Meh. Astronom.* **1980**, exp. 1, 9-16, 117. (G. D. Maistrovskii) **81f:90078** 90C20
- Malach, H. Zur Berechnung linearer Schwingungen mit finiten Raum-Zeit-Elementen. *Z. Angew. Math. Mech.* **39** (1979), no. 9, 474-477. (B. A. Bondarenko) **81d:73060** 73K12 (65N30)
- Malta, I. P. Hyperbolic Birkhoff centers. *Trans. Amer. Math. Soc.* **262** (1980), no. 1, 181-193. (Carmen Chicone) **81j:58063** 58F15 (58F20)
- Malitz, Frederick H. (with Hitzl, Donald L.) Nonlinear adaptive estimation procedures for increasing the efficiency in Monte Carlo computations. *J. Guidance Control* **3** (1980), no. 3, 251-256. (Authors' summary) **81d:65007** 65C05
- Maluta, Elisabetta Generalized nonexpansive maps on the real axis: existence and approximation of fixed points. (Italian summary) *Istit. Lombardo Accad. Sci. Lett. Rend. A* **112** (1978), no. 1, 213-221 (1979). (S. Swaminathan) **81h:47069** 47H09 (47H10, 58F20)
- (with Roux, Delfina) Contractive Kannan maps in compact spaces. *Riv. Mat. Univ. Parma* **4** (5) (1979), part 1, 141-145 (1980). (Silvio Massa) **81h:54038** 54H25 (47H10)
- Malý, Jan The Peano curve and the density topology. *Real Anal. Exchange* **5** (1979/80), no. 2, 326-329. (L. E. Ward, Jr.) **81e:54037** 54G20 (28A12, 54F50)
- Malýkh, V. I. Ramsey spaces. (Russian) *Dokl. Akad. Nauk SSSR* **247** (1979), no. 6, 1312-1316. (N. Hadživanov) **81a:54006** 54A25 (03E05, 03E35)
- Extremely disconnected topological groups. (Russian) *Uspehi Mat. Nauk* **34** (1979), no. 6(210), 59-66. (V. V. Miškin) **81c:54007** 54A35 (03E45, 54G05)
- (with Ufjanov, V. M.) Spaces with a single point of extremal disconnectedness. (Russian. English summary) *Fund. Math.* **107** (1980), no. 2, 91-98. (Aleksander Błaszczyk) **81k:54067** 54G05 (54G15)
- Luzin spaces. (Russian) *Mat. Sb. (N.S.)* **111**(153) (1980), no. 3, 453-464, 480. (Andrzej Szymański) **81m:03060** 03E35 (04A30, 54A35)
- Malý, V. I. Quasiconstant operators in the theory of viscoelasticity of nonaging materials. *Izv. Akad. Nauk SSSR Meh. Teord. Tela* **15** (1980), no. 1, 77-86 (Russian); translated as *Mech. Solids* **15** (1980), no. 1, 68-76. (From the introduction) **81g:73056** 73F99
- Malýšev, A. V. The critical determinant of the region $|x|^p + |y|^p < 1$. (Supplement to the article "The application of an electronic computer to the proof of a certain conjecture of Minkowski from the geometry of numbers" [Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI) **71** (1977), 163-180; MR **58** #27801]). (Russian) Studies in number theory, 5. *Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* **82** (1979), 29-32, 165. (Author's summary) **81k:10049** 10-04 (10E05)
- (with Pačev, U. M.) On the arithmetic of second-order matrices. (Russian) Studies in number theory, 6. *Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* **93** (1980), 41-86, 226. (A. I. Vinogradov) **81k:10032** 10C05 (15A30)
- See also *Studies in number theory*, **81f:10004**
- Malýšev, F. M. Complete complex structures on homogeneous spaces of semisimple Lie groups. (Russian) *Izv. Akad. Nauk SSSR Ser. Mat.* **43** (1979), no. 6, 1294-1318. (Jaroslav Bureš) **81g:32025** 32M10 (53C30)
- Decomposition of root systems. (Russian) *Mat. Zametki* **27** (1980), no. 6, 869-876, 988. (H. de Vries) **81k:17005** 17B20
- On the nilpotency class of the Engel Lie algebras. (Russian. English summary) *Vestnik Moskov. Univ. Ser. I Mat. Meh.* **1980**, no. 2, 55-58, 104. (James E. Humphreys) **81h:17013** 17B30
- Malýšev, Ju. V. On the stability of noncompact sets for nonautonomous systems. (Russian) *Theory of stability and its applications* (Russian), pp. 66-70, 298, "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. (J. Auslander) **81k:34040** 34D20
- Stability of sets for nonautonomous systems. (Russian) *Differentsial'nye Uravnenija* **16** (1980), no. 5, 818-826, 956. (A. A. Martinkuk) **81k:34048** 34D20
- Malýšev, S. A. The lattice of subvarieties of the variety $\Pi(x_1 \dots x_n = x_1 \dots x_n^{k+1}, xy = yx)$. (Russian) *Semigroup varieties and semigroups of endomorphisms* (Russian), pp. 113-122, Leningrad. Gos. Ped. Inst., Leningrad, 1979. (G. Pollák) **81i:08011** 08B15 (20M07)
- Finite lattices of certain permutational varieties. (Russian) *Semigroup varieties and semigroups of endomorphisms* (Russian), pp. 123-125, Leningrad. Gos. Ped. Inst., Leningrad, 1979. (Tomáš Kepka) **81f:08007** 08B15
- Malýšev, V. A. One particle states and scattering theory for Markov processes. *Locally interacting systems and their application in biology* (Proc. School-Sem. on Markov Interaction Processes in Biology, Pushchino, 1976), pp. 173-193, Lecture Notes in Math, 653, Springer, Berlin, 1978. (Sergio Alberverio) **81e:60106** 60K35 (60G60, 60J35, 82A05)
- (with Timofeev, A. V.) Algorithms for construction of programmed manipulator motions with consideration of constructional constraints and obstacles. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* **1978**, no. 6, 64-72 (Russian); translated as *Engng. Cybernetics* **16** (1978), no. 6, 46-53. (Authors' summary) **81d:68131** 68G99 (68J05)
- (with Terleckii, Ju. A.) A limit theorem for noncommutative fields. (Russian. English summary) *Vestnik Moskov. Univ. Ser. I Mat. Meh.* **1978**, no. 3, 47-51. (R. A. Minlos) **81d:60009** 60B99 (46L50, 81C20)
- (with Minlos, R. A.) Invariant subspaces of clustering operators. *J. Statist. Phys.* **21** (1979), no. 3, 231-242. (Kiran Chandra Das) **81d:82065** 82A67 (47A15, 47B99)
- Cluster expansions in lattice models of statistical physics and quantum field theory. (Russian) *Uspehi Mat. Nauk* **35** (1980), no. 2(212), 3-53, 279. (S. S. Ivanov) **81j:81059** 81E99 (82A05)
- See also *Glimm, James G.; et al.* (See **81f:81002**)
- Malýšev, V. V. (with Lepel'skii, N. A.) Characterization and uniqueness of representation by arc graphs. (Russian. English summary) *Dokl. Akad. Nauk BSSR* **24** (1980), no. 3, 200-202, 283. (Jerald A. Kabell) **81j:05064** 05C20
- Mal'zan, Jerry (with Đoković, Dragomir Ž.) Products of reflections in $U(p, q)$. *C. R. Math. Rep. Acad. Sci. Canada* **1** (1978/79), no. 6, 299-304. (Editors) **81g:20004** 20B25 (22E10)
- (with Đoković, Dragomir Ž.) Products of reflections in the general linear group over a division ring. *Linear Algebra Appl.* **28** (1979), 53-62. (F. D. Veldkamp) **81a:20050** 20G15 (16A39, 20F05)
- (with Đoković, Dragomir Ž.) Orbits of nilpotent matrices. *Linear Algebra Appl.* **31** (1980), 157-158. (Authors' summary) **81d:20045** 20H20
- Mamaev, S. G. (with Grib, A. A.; Mostepanenko, V. M.) Vacuum stress-energy tensor and particle creation in isotropic cosmological models. *Fortschr. Phys.* **28** (1980), no. 4, 173-199. (Authors' summary) **81e:83028** 83C45
- (with Grib, A. A.; Mostepanenko, V. M.) Particle creation and vacuum polarisation in an isotropic universe. *J. Phys. A* **13** (1980), no. 6, 2057-2065. (Authors' summary) **81d:83056** 83F05
- (with Mostepanenko, V. M.) Isotropic cosmological models determined by vacuum quantum effects. *Ž. Éksper. Teoret. Fiz.* **78** (1980), no. 1, 20-27 (Russian); translated as *Soviet Phys. JETP* **51** (1980), no. 1, 9-13. (Authors' summary) **81e:83056** 83F05 (81M05)
- Mamal'yev, V. M. Synthesis of response-optimal control of a vibrational system. *Izv. Akad. Nauk SSSR Meh. Teord. Tela* **14** (1979), no. 3, 37-45 (Russian); translated as *Mech. Solids* **14** (1979), no. 3, 31-38. (Author's summary) **81e:70017** 70J99 (70J05, 93C15)
- Mamatkulov, O. Optimal choice of the acceptance number in statistical quality control with fixed sample size. (Russian) *Random processes and mathematical statistics* (Russian), pp. 95-101, 188, "Fan", Tashkent, 1978. (K. Sarkadi) **81f:62150** 62N10 (62C10)
- Mamator, A. Application of the method of heat potentials to a nonlinear heat equation. (Russian) *Voprosy Vyčisl. i Prikl. Mat. (Tashkent)* **No. 57** (1979), 27-35, 168. (L. I. Rubinstein) **81j:35010** 35A25 (35K05)
- Mamator, Ju. A. Asymptotic behavior of the number of minimal covering sets. (Russian) *Heuristic algorithms of optimization* (Russian), pp. 94-106, Jaroslav. Gos. Univ., Yaroslavl, 1978. (Jaroslav Nešetřil) **81j:05015** 05A15 (05C35)
- Design of optimum schedules for execution of subroutines by uniform multiprocessor computers that minimize the amount of storage required. *Avtomat. i Vyčisl. Tehn. (Riga)* **1979**, no. 4, 77-80, 95 (Russian); translated as *Automat. Control Comput. Sci.* **13** (1979), no. 4, 66-69. (Author's summary) **81j:68048** 68C15
- A method for the synthesis of planar disjunctive normal forms for logic functions. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* **20** (1980), no. 4, 1075-1077, 1088. (Jerzy Kotas) **81k:94053** 94C10 (03B05, 06E99)
- See also *Heuristic algorithms of optimization*, **81a:90004**
- Mamayev, S. G. See *Mamayev, S. G.*
- Mambriani, Antonio (with Mambriani, Giuseppe) Restricted deralgebra: first step towards a new "functional analysis". II. (Italian) *Riv. Mat. Univ. Parma* **4** (5) (1979), part 1, 1-25 (1980). (I. Fenýő) **81j:44009** 44A40 (03H05, 34A25, 65L99)
- Mambriani, Giuseppe (with Mambriani, Antonio) Restricted deralgebra: first step towards a new "functional analysis". II. (Italian) *Riv. Mat. Univ. Parma* **4** (5) (1979), part 1, 1-25 (1980). (I. Fenýő) **81j:44009** 44A40 (03H05, 34A25, 65L99)
- Mamandani, E. H. (with Sembi, B. S.) On the nature of implication in fuzzy logic. *Proceedings of the Ninth International Symposium on Multiple-Valued Logic* (Bath, 1979), pp. 143-151, IEEE, Long Beach, Calif., 1979. (Maurizio Fattorosi-Barnaba) **81d:03027** 03B52 (94D05)
- (with Sembi, B. S.) Process control using fuzzy logic. *Fuzzy sets (Proc. Symp. Policy Anal. Inform. Systems, Duke Univ., Durham, N.C., 1980)*, pp. 249-265, Plenum, New York, 1980. (Guy Jumarie) **81k:93048** 93C99 (03B52, 94D05)
- Mamedhanov, Di. I. (with Ibragimov, I. I.) Direct and inverse approximation theorems in the complex domain. (Russian) *The theory of the approximation of functions* (Proc. Internat. Conf., Kaluga, 1975) (Russian), pp. 190-194, "Nauka", Moscow, 1977. (N. I. Skiba) **81k:30065** 30E10
- Mamedov, È. N. Linear averages of Fourier-Gegenbauer series of functions of L^p classes. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* **1978**, no. 9, 789-793, 661. (D. P. Gupta) **81h:42081** 42C10
- Mamedov, G. A. Study of a constructive characteristic of a class of almost periodic functions. (Russian. Azerbaijani and English summaries) *Akad. Nauk Azerbaidžan. SSR Dokl.* **36** (1980), no. 2, 9-12. (R. L. Cooke) **81j:42029** 42A75
- Mamedov, G. K. (with Aliiev, Rašid Mus) Solvability of nonlinear operator equations.

- (Russian. Azerbaijani and English summaries) *Izv. Akad. Nauk Azerbaidžan. SSR Ser. Fiz.-Tehn. Mat. Nauk* 1979, no. 5, 94–100. (Joachim Naumann) **81k:47050** 47H15
- Mamedov, G. M.** Asymptotic values of an approximation of multiply differentiable functions by conjugate m -singular integrals. (Russian) *Studies in some questions of the constructive theory of functions and differential equations (Russian)*, pp. 32–37, *Azerbaidžan. Inst. Nefti i Himii, Baku*, 1974. (See **80d:00021**) 41A60
- (with Mamedov, R. G.) The order of approximation of conjugate functions by conjugate m -singular integrals. (Russian) *Studies in some questions of the constructive theory of functions and differential equations (Russian)*, pp. 38–52, *Azerbaidžan. Inst. Nefti i Himii, Baku*, 1974. (See **80d:00021**) 41A35
- Mamedov, I. T.** On a priori estimation of the Hölder norm of the solutions to quasilinear parabolic equations with discontinuous coefficients. (Russian) *Dokl. Akad. Nauk SSSR* 252 (1980), no. 5, 1052–1054. (P. Szeptycki) **81m:35064** 35K10 (35B45)
- (with Novruzov, A. A.) On R -identity of second-order elliptic and parabolic operators. (Russian) *Dokl. Akad. Nauk SSSR* 253 (1980), no. 6, 1314–1317. (R. Guenther) **81j:35042** 35J25 (35K20)
- Mamedov, Ju. D.** (with Aširov, S. A.) ★Методы последовательных приближений для решения операторных уравнений. (Russian) [Methods of successive approximations for solving operator equations] *Turkmen. Gos. Univ., Ashkhabad*, 1980. 119 pp. (L. B. Rall) **81k:65068** 65J15 (47H15)
- Mamedov, Ju. A.** Some conditions for solvability of boundary value problems in the first quadrant. (Russian. Azerbaijani and English summaries) *Izv. Akad. Nauk Azerbaidžan. SSR Ser. Fiz.-Tehn. Mat. Nauk* 1979, no. 2, 74–80. (S. P. Gavelja) **81k:35025** 35C15 (35G30)
- Mamedov, K. S.** A theorem on the multiple completeness of eigen- and associated vector functions of polynomial and differential-operator pencils. (Russian) *Spectral theory of operators (Proc. Second All-Union Summer Math. School, Baku, 1975) (Russian)*, pp. 133–139, "Elm", Baku, 1979. (R. M. Džabar-Zade) **81m:47067** 47E05 (47A70)
- Mamedov, O. M.** Equational compactness in some classes of ordered algebras. (Russian. Azerbaijani and English summaries) *Izv. Akad. Nauk Azerbaidžan. SSR Ser. Fiz.-Tehn. Mat. Nauk* 1979, no. 5, 13–17. (V. N. Salii) **81k:08004** 08A45 (06B99, 06F30)
- Mamedov, R. G.** A remark on the degree of saturation of m -singular integrals. (Russian) *Studies in some questions of the constructive theory of functions and differential equations (Russian)*, pp. 3–7, *Azerbaidžan. Inst. Nefti i Himii, Baku*, 1974. (See **80d:00021**) 41A35
- (with Orudžev, G. N.) Saturation classes of linear operators giving a high order of approximation in a space. (Russian) *Studies in some questions of the constructive theory of functions and differential equations (Russian)*, pp. 8–18, *Azerbaidžan. Inst. Nefti i Himii, Baku*, 1974. (See **80d:00021**) 41A35
- The degree of saturation of linear operators that are invariant with respect to shift. (Russian) *Studies in some questions of the constructive theory of functions and differential equations (Russian)*, pp. 19–24, *Azerbaidžan. Inst. Nefti i Himii, Baku*, 1974. (See **80d:00021**) 41A35
- (with Mamedov, G. M.) The order of approximation of conjugate functions by conjugate m -singular integrals. (Russian) *Studies in some questions of the constructive theory of functions and differential equations (Russian)*, pp. 38–52, *Azerbaidžan. Inst. Nefti i Himii, Baku*, 1974. (See **80d:00021**) 41A35
- (with Veisov, I. A.) Some theorems on functional multipliers for Fourier and Laplace transforms. (Russian) *Studies in some questions of the constructive theory of functions and differential equations (Russian)*, pp. 53–59, *Azerbaidžan. Inst. Nefti i Himii, Baku*, 1974. (See **80d:00021**) 42B15 (44A10)
- Mamada, Masachi** On singularities of the Harish-Chandra expansion of the Eisenstein integral on $\text{Spin}(4, 1)$. *Tokyo J. Math.* 1 (1978), no. 1, 113–138. (K. D. Johnson) **81f:22014** 22E30 (22E45, 43A80)
- Mamourian, A.** General transmission and boundary value problems for first-order elliptic equations in multiply-connected plane domains. *Demonstratio Math.* 12 (1979), no. 3, 785–802. (M. O. Bačelivili) **81c:35051** 35J65 (30E25, 35C05)
- Mamulla, Ju.** (with Zabelo, L. E.) On controllability of a linear nonstationary system. (Russian) *Vestnik Belorus. Gos. Univ. Ser. I* 1980, no. 2, 30–33, 63. (Authors' summary) **81f:93023** 93B05
- Man, T.** Théorie des paires de faisceaux de groupes. *Rev. Roumaine Math. Pures Appl.* 24 (1979), no. 3, 469–487. (A. Dold) **81d:18022** 18F20 (55N30)
- Manabe, Shojiro** (with Ikeda, Nobuyuki) Integral of differential forms along the path of diffusion processes. *Publ. Res. Inst. Math. Sci.* 15 (1979), no. 3, 827–852. (Mark Pinsky) **81k:58061** 58G32 (60J60)
- Manacher, Glenn K.** (with Zobrist, Albert L.) Neither the greedy nor the Delaunay triangulation of a planar point set approximates the optimal triangulation. *Inform. Process. Lett.* 9 (1979), no. 1, 31–34. (From the text) **81c:68049** 68C25
- Manacorda, T.** (with Amendola, Giovambattista) Small thermoelastic deformations superimposed on a finite thermodynamic deformation. (Italian. English summary) *Riv. Mat. Univ. Parma* (4) 5 (1979), part 2, 487–501 (1980). (D. Işan) **81j:73081** 73U05
- Manakov, N. L.** (with Ovsiannikov, V. D.) Two-photon transitions between atomic levels with different parity. *Phys. B+C* 100 (1980), no. 2, 260–272. (Authors' summary) **81d:81097** 81F99 (81K05)
- Manakov, S. V.** (with Zaharov, V. E.; Novikov, S. P.; Pitaevskii, L. P.) ★Теория солитонов. (Russian) [Theory of solitons] Метод обратной задачи. [The method of the inverse problem] "Nauka", Moscow, 1980. 320 pp. (Eugene Gutkin) **81g:35112** 35Q99 (35P25, 58F07, 76B99, 81C05)
- Manara, Carlo Felice** See Pizzamiglio, Pier Luigi. **81c:01014**
- Manaresi, Mirella** Some properties of weakly normal varieties. *Nagoya Math. J.* 77 (1980), 61–74. (Nadia Chirali) **81c:13011** 13H10 (14M05)
- Maue, Alfred B.** (with Rosenstein, Joseph G.) Two-dimensional partial orderings: recursive model theory. *J. Symbolic Logic* 45 (1980), no. 1, 121–132. (Egon Börger) **81d:03047a** 03D45 (03C15, 03C65, 06A10)
- (with Rosenstein, Joseph G.) Two-dimensional partial orderings: undecidability. *J. Symbolic Logic* 45 (1980), no. 1, 133–143. (Egon Börger) **81d:03047b** 03D45 (03D35, 06A10)
- Maue, Paolo** A conjecture on a characterisation of all 4-connected planar graphs. (Italian summary) *Riv. Mat. Sci. Econom. Social.* 1 (1978), no. 1, 105–108. (D. Barnett) **81f:05110** 05C40
- On a simple characterisation of threshold graphs. *Riv. Mat. Sci. Econom. Social.* 2 (1979), no. 1, 3–8. (R. A. Brualdi) **81g:05096** 05C99
- Mancini, Giovanni** (with Ambrosetti, Antonio) A free boundary problem and a related semilinear equation. *Nonlinear Anal.* 4 (1980), no. 5, 909–915. (Jesús Hernández) **81k:35164** 35R35 (35J65, 76X05)
- Mandaf, V.** (with Huseyin, K.) Nonlinear bifurcation analysis of nongradient system. (French and German summaries) *Internat. J. Non-Linear Mech.* 15 (1980), no. 3, 159–172. (D. R. J. Chillingworth) **81k:70017** 70K20 (58F14)
- Mandan, Sahib Ram** (with Sanyal, Arun) An extension of Hesse's theorem. *Math. Student* 45 (1977), no. 3, 92–94 (1979). (From the text) **81j:51020** 51N15 (51A05)
- Orthologic Desargues' figure. *J. Austral. Math. Soc. Ser. A* 28 (1979), no. 3, 295–302. (Libule Marková) **81j:51002** 51A05 (51N15)
- Special pairs of semibilogic and biologic tetrahedra. *J. Austral. Math. Soc. Ser. A* 28 (1979), no. 3, 303–308. (Libule Marková) **81j:51003a** 51A05 (51N15)
- Corrigendum: "Orthologic Desargues' figure" [51002 above] and "Special pairs of semibilogic and biologic tetrahedra" [ibid. Ser. A 28 (1979), no. 3, 303–308]. *J. Austral. Math. Soc. Ser. A* 30 (1980/81), no. 2, 256. (Editors) **81j:51003b** 51A05 (51N15)
- Mandel, I. D.** A principle for choice of objects according to certain criteria. (Russian) Expert estimates. *Voprosy Kibernet. (Moscow)* No. 58 (1979), 127–132. (Author's summary) **81c:90012** 90A08 (90A06)
- Mandel, Jean** Généralisation dans R^9 de la règle du potentiel plastique pour un élément polycristallin. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 22, B481–B484. (Author's summary) **81j:73044** 73E99
- Mandel, P.** (with Dembiński, S. T.; Kossakowski, A.; Pełowski, P.; Lugiatto, L. A.) Laser instability below threshold. *Phys. Lett. A* 68 (1978), no. 1, 20–22. (Authors' summary) **81m:81067** 81K05
- Fluctuations in laser theories. *Phys. Rev. A* (3) 21 (1980), no. 6, 2020–2033. (K. Wódkiewicz) **81k:81122** 81K05
- Mandelbaum, David M.** Two applications of cyclotomic cosets to certain BCH codes. *IEEE Trans. Inform. Theory* 26 (1980), no. 6, 737–738. (Author's summary) **81k:94036** 94B35 (94B15)
- Some methods of detecting sequential errors in computer operation. *J. Inform. Optim. Sci.* 1 (1980), no. 1, 27–40. (Author's summary) **81g:68040** 68B20
- Mandelbaum, Richard** Four-dimensional topology: an introduction. *Bull. Amer. Math. Soc. (N.S.)* 2 (1980), no. 1, 1–159. (Anatoly Libgober) **81j:57091** 57–02 (14J10, 14J25, 32J15, 55N15)
- Special handlebody decompositions of simply connected algebraic surfaces. *Proc. Amer. Math. Soc.* 80 (1980), no. 2, 359–362. (R. C. Kirby) **81f:57033** 57R65 (14J99)
- (with Moishezon, Boris) On the topology of simply connected algebraic surfaces. *Trans. Amer. Math. Soc.* 260 (1980), no. 1, 195–222. (R. C. Kirby) **81g:14018** 14J99 (57R99)
- Mandelbrot, Benoit B.** Discussion paper: fractals, attractors, and the fractal dimension. *Bifurcation theory and applications in scientific disciplines (Papers, Conf., New York, 1977)*, pp. 463–464, *Ann. New York Acad. Sci.* 316, New York Acad. Sci., New York, 1979. (Editors) **81f:90010** 00A69 (76F99)
- (with Gefen, Yuval; Aharoni, Amnon) Critical phenomena on fractal lattices. *Phys. Rev. Lett.* 45 (1980), no. 11, 855–858. (Authors' summary) **81g:82020** 82A25 (58C30)
- Mandelkern, Mark** Resolutions on the line. *Pacific J. Math.* 88 (1980), no. 1, 91–100. (Douglas S. Bridges) **81m:54018** 54B99 (03F65)
- Mandel'yan, L. I.** See Ginzburg, V. L. **81c:01029**
- Manders, Kenneth L.** (with Adleman, Leonard) NP-complete decision problems for binary quadratics. *J. Comput. System Sci.* 16 (1978), no. 2, 168–184. (Authors' summary) **81c:68032** 68C25 (03D15, 10N05)
- The theory of all substructures of a structure: characterisation and decision problems. *J. Symbolic Logic* 44 (1979), no. 4, 583–598. (Author's summary) **81k:03047** 03C52
- Theories with the existential substructure property. *Z. Math. Logik Grundlege. Math.* 26 (1980), no. 1, 89–92. (Paul Bankston) **81c:03021** 03C35
- Mandil, V. P.** Area theorems for systems of multivalent functions. (Russian) *Sibirsk. Mat. Ž.* 20 (1979), no. 6, 1275–1281, 1408. (A. W. Goodman) **81c:30013** 30C55
- Mandl, Christoph E.** Evaluation and optimization of urban public transportation networks. *European J. Oper. Res.* 5 (1980), no. 6, 396–404. (Author's summary) **81j:90069** 90B35 (90B20)
- Mandl, Petr** Foundations of multistage system optimization. *Amer. Math. Soc. Transl.* (2) 111 (1978), pp. 165–211, *Amer. Math. Soc., Providence, R.I.*, 1978. (See **80c:00006**) 49–01
- On aggregating controlled Markov chains. *Contributions to statistics*, pp. 137–156, *Reidel, Dordrecht*, 1979. (Nicole El Karoui) **81j:60076** 60J10 (90C40, 93E20)
- On the adaptive control of countable Markov chains. *Probability theory (Papers, VIIth Semester, Stefan Banach Internat. Math. Center, Warsaw, 1976)*, pp. 159–173, *Banach Center Publ.*, 5, PWN, Warsaw, 1979. (Lennart Ljung) **81k:90063** 93E03 (60J10, 90C40)
- See also *Proceedings: Prague Symposium on Asymptotic Statistics*, **81c:62085**
- Mandras, Franco** On the regularity of the solutions of a class of degenerate nonvariational elliptic equations. (Italian. English summary) *Rend. Sem. Fac. Sci. Univ. Cagliari* 49 (1979), no. 1–2, 137–155. (Maurizio Chicco) **81k:35068** 35J70 (35J15)
- Mandrek, V.** (with Giné, Evarist; Zinn, Joel) On sums of independent random variables with values in L_p ($2 < p < \infty$). *Probability in Banach spaces, II (Proc. Second Internat. Conf., Oberwolfach, 1978)*, pp. 111–124, *Lecture Notes in Math.*, 709, Springer, Berlin, 1979. (J. Hoffmann-Jorgensen) **81j:60009** 60B12
- (with Hamedani, G. G.) Lévy-Khinchine representation and Banach spaces of type and cotype. *Studia Math.* 66 (1979/80), no. 3, 299–306. (Albert Tortrat) **81g:60085** 60B11
- Mandrioli, Dino** (with Sangiovanni-Vincentelli, Alberto; Somalvico, Marco) Toward a theory of problem solving. *Topics in artificial intelligence*, pp. 47–167, *CISM Courses and Lectures*, 256, Springer, Vienna, 1978. (See **80c:68102**) 68G20
- (with Ghezzi, Carlo) Augmenting parsers to support incrementality. *J. Assoc. Comput. Mach.* 27 (1980), no. 3, 564–579. (Authors' summary) **81f:68097** 68F25
- Mandžaparašvili, T. V.** On the definition of probability of fuzzy events. (Russian. Georgian

- and English summaries) *Sobbič. Akad. Nauk Gruzin. SSR* 97 (1980), no. 3, 585-588. (Koriolan Gilezan) **81k:94058** 94D05 (03E72, 60A99)
- Mandzavidze, G. F.** Application of the theory of generalized analytic functions to the study of boundary value problems of conjugacy with shift. (Russian) *Differential and integral equations. Boundary value problems* (Russian), pp. 165-186, Tbilisi. Gos. Univ., Tbilisi, 1979. (I. M. Spitkovskii) **81m:30037** 30E25
- A family of boundary value problems of linear conjugacy. (Russian. Georgian and English summaries) *Sobbič. Akad. Nauk Gruzin. SSR* 95 (1979), no. 2, 289-292. (D. Mitrović) **81h:30076** 30E25
- Mandzgaladze, K. V.** An estimate for the Neyman-Pearson optimal critical region for a parametric family of distributions. (Russian. Georgian and English summaries) *Sobbič. Akad. Nauk Gruzin. SSR* 96 (1979), no. 1, 33-36. (Author's summary) **81h:62030** 62F05
- Mames, Ernest G.** (with Arbib, Michael A.) Foundations of system theory: the Hankel matrix. *J. Comput. System Sci.* 20 (1980), no. 3, 330-378. (Michel Fliess) **81m:93038** 93B99 (18B20, 68D30)
- (with Arbib, Michael A.) Generalized Hankel matrices and system realization. *SIAM J. Math. Anal.* 11 (1980), no. 3, 405-424. (K. Amborski) **81m:93007** 93A10 (15A57, 18A20)
- Manev, K. N.** (with Koen, R. I.) Algebraic properties of the universal functions of the algebra of logic. (Russian) *C. R. Acad. Bulgare Sci.* 31 (1978), no. 10, 1237-1240. (Martin Weese) **81c:03053** 03G05 (03G25, 94C10)
- Manev, N. L.** Extension of Varshamov-Gilbert bound under arbitrary additive metric for burst-correcting codes. *C. R. Acad. Bulgare Sci.* 32 (1979), no. 7, 863-866. (Sat Narain Gupta) **81h:94022** 94B20
- Manevič, V. A.** (with Kračkovskii, S. N.; Petri, N. V.) The Hausdorff representation of positive polynomials in convex approximations. (Russian) *Dokl. Akad. Nauk SSSR* 246 (1979), no. 4, 842-846. (B. Bojanov) **81c:41038** 41A29 (41A63)
- Manevič, Larry** (with Stavi, Jonathan) Δ_2^2 operators and alternating sentences in arithmetic. *J. Symbolic Logic* 45 (1980), no. 1, 144-154. (C. Smoryński) **81a:03064** 03H15 (03D80, 03F30)
- Manfredi, Bianca** On certain asymptotic almost periodic motions. (Italian. English summary) *Riv. Mat. Univ. Parma* (4) 5 (1979), part 2, 885-896 (1980). (A. Halanay) **81m:34054** 34C27
- Mang, H. A.** (with Haugeneder, E.) On an improper modification of a variational principle for finite element plate analysis. *Z. Angew. Math. Mech.* 59 (1979), no. 11, 637-640. (From the introduction) **81a:73033** 73K25
- Symmetrizability of pressure stiffness matrices for shells with loaded free edges. *Internat. J. Numer. Methods Engrg.* 15 (1980), no. 7, 981-990. (From the summary) **81c:73069** 73L99
- Mangani, Piero** (with Marja, Annalisa) Shelah rank for Boolean algebras and some application to elementary theories. *I. Algebra Universalis* 10 (1980), no. 2, 247-257. (Daniel Lascar) **81c:03044** 03C45 (06E99)
- Mangasarian, O. L.** (with Han, S.-P.) Exact penalty functions in nonlinear programming. *Math. Programming* 17 (1979), no. 3, 251-269. (Pierre Loridan) **81h:90132** 90C30 (49D30)
- (with Meyer, R. R.) Nonlinear perturbation of linear programs. *SIAM J. Control Optim.* 17 (1979), no. 6, 745-752. (A. G. Azpeitia) **81b:90134** 90C30
- Mangel, Marc** Small fluctuations in systems with multiple limit cycles. *SIAM J. Appl. Math.* 38 (1980), no. 1, 120-138. (V. Sree-Hari-Rao) **81c:50043** 58F14 (34C05, 92A17)
- Mangency, A.** (with Lacombe, C.) Nonlinear interaction of Alfvén waves with compressive fast magnetosonic waves. *Astronom. and Astrophys.* 88 (1980), no. 1-2, 277-281. (Authors' summary) **81g:76125** 76X05 (76W05, 85A30)
- (with Dobrowolny, M.; Velti, P.) Fully developed anisotropic hydromagnetic turbulence in interplanetary space. *Phys. Rev. Lett.* 45 (1980), no. 2, 144-147. (Authors' summary) **81c:76183** 76W05 (76F99)
- Mangera, Dumitru Ion** (with Bondarenko, B. A.; Leung, K. V.; Oğuztöreli, Mehmet Namik) Mathematical analyses. Studies on polylinear equations. I. (Italian. French summary) *Math. Notae* 26 (1977/78), 13-20. (Editors) **81f:35110** 35Q99
- (with Sestopal, A. F.; D'Ambrosio, Ubratan; Njang, S.) Contribution to the problem of the asymptotic behavior of the number of eigenvalues. I. The estimation of certain expansions in Bessel functions. (Russian. Romanian summary) *Bul. Inst. Politehn. Iași Sect. I* 25(29) (1979), no. 3-4, 9-16. (P. Günther) **81j:10078** 10J25 (35P20, 58G25)
- (with D'Ambrosio, Ubratan; Krivošev, L. E.; Shimbo, Masaru) Méthode unitaire d'étude de différentes classes de problèmes "bien posés" concernant certains systèmes intégraux-différentiels non linéaires aux opérateurs polyvivants et aux autocontrôles dans les limites d'intégration. (English and Romanian summaries) *Bul. Univ. Galați Fasc. II Mat. Fiz. Mec. Teoret.* 2 (1979), 7-15. (Thomas S. Angell) **81f:45020** 45K05 (93C20)
- Mangiarotti, Luigi** (with Busoni, Giorgio; Frosali, Giovanni) Some applications of functional analysis to problems of neutron transport. *Rend. Circ. Mat. Palermo* (2) 28 (1979), no. 1, 91-107. (M. Breiteneker) **81d:82078** 82A75 (47B38)
- Mechanics on a Galilean manifold. *Riv. Mat. Univ. Parma* (4) 5 (1979), part 2, 787-801 (1980). (Tudor S. Rădui) **81k:70011** 70G99 (58F05)
- Mangulis, Valdis** Lanchester-type equations of combat which account for multiple killing hits. *Oper. Res.* 28 (1980), no. 3, part 1, 560-569. (Author's summary) **81d:90119** 90D25
- dao Manh Cuong** See **Dao Manh Cuong**
- nguyên Manh Dac** See **Nguyen Manh Duc**
- Mani, P.** (with Hadwiger, H.; Larman, D. G.) Hyperbombs inscribed to convex bodies. *J. Combin. Theory Ser. B* 24 (1978), no. 3, 290-293. (H. Groemer) **81m:52011** 52A20
- Manigat, Csaba** A mathematical model for design of computer networks. (Hungarian. English summary) *Alkalmaz. Mat. Lapok* 5 (1979), no. 1-2, 123-140. (Author's summary) **81g:68069** 68A05
- Maniglia, A.** Singular generalized groups of functions. (Italian. English summary) *Riv. Mat. Univ. Parma* (4) 5 (1979), part 1, 115-123 (1980). (Eliisa Udeschini-Brinis) **81k:50061** 58F99
- Manija, G. M.** See **Mathematical methods in economic research**, **81i:90004**
- Manija, M. G.** δ -martingales and their sets of convergence. (Russian. Georgian and English summaries) *Sobbič. Akad. Nauk Gruzin. SSR* 99 (1980), no. 1, 45-48. (Author's summary) **81m:60086** 60G48
- Manikymba, P.** (with Swamy, U. Maddana) Prime ideal characterization of Stone lattices. *Math. Sem. Notes Kobe Univ.* 7 (1979), no. 1, 25-31. (Terence P. Speed) **81a:06014** 06D05
- (with Swamy, U. Maddana) Representation of certain classes of distributive lattices by sections of sheaves. *Internat. J. Math. Math. Sci.* 3 (1980), no. 3, 461-476. (H. A. Priestley) **81h:06009** 06D05 (03G20, 06D25, 18F20)
- Mani-Levitska, Peter** Geometric theories of measure and area. *Contributions to geometry* (Proc. Geom. Sympos., Siegen, 1978), pp. 77-91, Birkhäuser, Basel, 1979. (P. R. Goodey) **81k:28011** 28A75 (52A22)
- Manin, Ju. I.** (with Kupersmidt, Boris) Long wave equations with a free surface. I. Conservation laws and solutions. (Russian) *Funkcional. Anal. i Priložen.* 11 (1977), no. 3, 31-42, 96. (V. Oproiu) **81a:58027** 58F05 (35L65, 76C99)
- (with Kupersmidt, Boris) Long wave equations with a free surface. II. The Hamiltonian structure and the higher equations. (Russian) *Funkcional. Anal. i Priložen.* 12 (1978), no. 1, 25-37. (V. Oproiu) **81a:58028** 58F05 (35L65, 76C99)
- (with Drinfel'd, V. G.) Instantons and sheaves on CP^3 . *Algebraic geometry* (Proc. Summer Meeting, Univ. Copenhagen, Copenhagen, 1978), pp. 60-81, *Lecture Notes in Math.*, 732, Springer, Berlin, 1979. (Editors) **81k:14014** 14F05 (53C05, 55R25, 81C99, 81E10)
- (with Drinfel'd, V. G.) Instantons and sheaves in CP^3 . (Russian) *Funkcional. Anal. i Priložen.* 13 (1979), no. 2, 59-74, 96. (P. E. Newstead) **81b:14007** 14F05 (53C05, 55R25, 81C99)
- (with Lebedev, D. R.) The Gel'fand-Dikii Hamiltonian operator and the coadjoint representation of the Volterra group. (Russian) *Funkcional. Anal. i Priložen.* 13 (1979), no. 4, 40-46, 96. (V. Oproiu) **81a:58029** 58F05 (58F07)
- (with Drinfel'd, V. G.) Yang-Mills fields, instantons, tensor products of instantons. *Jadernaja Fiz.* 29 (1979), no. 6, 1646-1654 (Russian); translated as *Soviet J. Nuclear Phys.* 29 (1979), no. 6, 845-849. (R. O. Wells, Jr.) **81d:81050** 81E10 (14F05, 57R25)
- Modular forms and number theory. *Proceedings of the International Congress of Mathematicians* (Helsinki, 1978), pp. 177-186, Acad. Sci. Fennica, Helsinki, 1980. (Martin L. Karel) **81f:10034** 10D12
- (with Bellinson, A. A.; Gel'fand, S. I.) An instanton is determined by its complex singularities. (Russian) *Funkcional. Anal. i Priložen.* 14 (1980), no. 2, 48-49. (P. E. Newstead) **81m:14011** 81E10
- (with Lebedev, D. R.) Benney's long wave equations. II. The Lax representation and conservation laws. (Russian) Boundary value problems of mathematical physics and related questions in the theory of functions, 12. *Zap. Nauch. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 96 (1980), 169-178, 309. (Alexander A. Pankov) **81m:28040** 58F07 (35Q20, 49C10, 76B15)
- Maniscalco, C.** (with Di Piazza, L.; Marino, T.) Heredity of Carathéodory measures. (Italian. English summary) *Rend. Circ. Mat. Palermo* (2) 28 (1979), no. 1, 134-142. (A. Revuz) **81f:28002** 28A12
- Manika, Roman** Fixed point theorems for λ -dendroids. *Fund. Math.* 106 (1980), no. 2, 119-128. (L. E. Ward, Jr.) **81k:54078** 54H25 (54F20)
- Man'ko, V. I.** (with Dodonov, V. V.; Kurmyšev, E. V.) Exact Green function of a damped oscillator. *Phys. Lett. A* 72 (1979), no. 1, 10-12. (Authors' summary) **81i:81012** 81C05 (35P25)
- (with Dodonov, V. V.; Kurmyšev, E. V.) Generalized uncertainty relation and correlated coherent states. *Phys. Lett. A* 79 (1980), no. 2-3, 150-152. (F. R. Halpern) **81j:81026** 81C99
- (with Krivovlyuk, S. G.) Coherent states and Bloch functions. (Russian summary) *Phys. Status Solidi (B)* 97 (1980), no. 1, 77-85. (Martin Kummer) **81d:81031** 81C40 (14K25, 22E70, 32M15, 33A45, 82A60)
- Man'ko-Boritskii, N.** (with Fonda, L.; Rosina, M.) The decay of coherent rotational states subject to random quantum measurements. *Nuovo Cimento A* (11) 56 (1980), no. 2, 229-235. (Authors' summary) **81c:81063** 81D99
- Man'kovskii, A. A.** The Cauchy-Dirichlet problem for systems of differential equations with an operator coefficient of elliptic type, degenerating on part of the boundary of the domain. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* 1980, no. 6, 16-19, 91. (Johannes Elschner) **81j:35051** 35J70 (65N30)
- Mankwald, Karl Peter** (with Rosendahl, Manfred) Analysis of programs by reduction of their structure. *Graph-grammars and their application to computer science and biology* (Internat. Workshop, Bad Honnef, 1978), pp. 409-417, *Lecture Notes in Comput. Sci.*, 73, Springer, Berlin, 1979. (Carlo Montangero) **81j:68025** 68B10 (68F05)
- Manley, P. L.** A note on valuation fields. *Bull. Calcutta Math. Soc.* 69 (1977), no. 6, 349-351. (Niel Shell) **81c:12038** 12J10
- grané Manlles, José** See **Grané Manlles, José**
- Mann, Arinoam** A note on the minimum condition. *Proc. Amer. Math. Soc.* 80 (1980), no. 2, 378. (From the text) **81c:20041** 20F05
- Mann, Benjamin M.** (with Miller, Edward Y.) The construction of the Kervaire sphere by means of an involution. *Michigan Math. J.* 27 (1980), no. 3, 301-308. (R. De Sapio) **81m:57023** 57R55 (57R60)
- Mann, G.** (with Dörfel, B.; Dorn, H.) On the exponentiation of infrared logarithms in massless $(\varphi)_4$ -theory. (German summary) *Ann. Physik* (7) 36 (1979), no. 6, 471-478. (James D. Fabrey) **81g:81065** 81E99
- Mann, J. E.** A simple sequential criterion for testing a normal mean with unknown variance. *Comm. Statist. A—Theory Methods* 9 (1980), no. 15, 1619-1624. (Author's summary) **81j:62160** 62L10
- Mann, Nancy R.** (with Fertig, K. W.; Meyer, M. Eugene) On constructing prediction intervals for samples from a Weibull or extreme value distribution. *Technometrics* 22 (1980), no. 4, 567-573. (Authors' summary) **81k:62139** 62N05
- Mann, W. Robert** Averaging to improve convergence of iterative processes. *Functional analysis methods in numerical analysis* (Proc. Special Session, Annual Meeting, Amer. Math. Soc., St. Louis, Mo., 1977), pp. 169-179, *Lecture Notes in Math.*, 701, Springer, Berlin, 1979. (From the introduction) **81c:65005** 65B10 (65H05)
- Manna, Zohar** (with Waldinger, Richard) The logic of computer programming. *IEEE Trans. Software Engrg.* 4 (1978), no. 3, 199-229. (Andrea Maggiolo-Schettini) **81b:68011** 68B10

- (with Denshowitz, Nachum) Proving termination with multiset orderings. *Automata, languages and programming (Sixth Colloq., Graz, 1979)*, pp. 188-202, *Lecture Notes in Comput. Sci.*, 71, Springer, Berlin, 1979. (Authors' summary) **81i:68023** 68B10 (68C30)
- (with Pnueli, Amir) The modal logic of programs. *Automata, languages and programming (Sixth Colloq., Graz, 1979)*, pp. 385-409, *Lecture Notes in Comput. Sci.*, 71, Springer, Berlin, 1979. (Authors' summary) **81i:68022** 68B10 (03B45, 68C01)
- ★Lectures on the logic of computer programming. CBMS-NSF Regional Conference Series in Applied Mathematics, 31. *Society for Industrial and Applied Mathematics (SIAM)*, Philadelphia, Pa., 1980. iv+49 pp. ISBN 0-89871-164-9 (Leon Levy) **81i:68005** 68Bxx (68-01)
- Mansarov, N. N. (with Igamberdyev, H. Z.) Stable reconstruction, in Tikhonov's sense, of conductivity operators of dynamical systems. (Russian) *Dokl. Akad. Nauk UzSSR* 1980, no. 5, 18-21. (C. Ilioi) **81i:58044** 65J10 (35R25, 49D30)
- Manservigi, Paul (with Pomeau, Yves) Intermittent transition to turbulence in dissipative dynamical systems. *Comm. Math. Phys.* 74 (1980), no. 2, 189-197. (Authors' summary) **81g:58024** 58F13 (65L20)
- (with Pomeau, Yves) Different ways to turbulence in dissipative dynamical systems. *Phys. D* 1 (1980), no. 2, 219-226. (Authors' summary) **81h:58041** 58F13 (76F05, 86A10)
- Manning, Anthony Topological entropy. (Portuguese) *Proceedings of the Ninth Brazilian Mathematical Colloquium (Poços de Caldas, 1973)*, Vol. II (Portuguese), pp. 347-353, *Inst. Mat. Pura Apl., São Paulo*, 1977. (J. S. Joel) **81i:58047** 58F20 (28D20, 54H20, 58F11)
- Upper semicontinuity of topological entropy. *Bifurcation theory and applications in scientific disciplines (Papers, Conf., New York, 1977)*, pp. 118-120, *Ann. New York Acad. Sci.*, 316, New York Acad. Sci., New York, 1979. (D. Newton) **81h:58029** 58F14 (28D20, 54H20)
- Topological entropy for geodesic flows. *Ann. of Math.* (2) 110 (1979), no. 3, 567-573. (William Perzino) **81i:58044** 58F17 (28D20, 58F11)
- Manning, R. (with McMillan, J.) Public goods in optimal economic growth. *Z. Nationalökonom.* 39 (1979), no. 3-4, 351-364. (From the introduction) **81i:90068** 90A16
- Mano, M. Morris ★Digital logic and computer design. *Prentice-Hall, Inc., Englewood Cliffs, N.J.*, 1979. xii+612 pp. ISBN 0-13-214510-3 (From the preface) **81i:68002** 68-02 (68A05, 94Cxx)
- Manocha, H. L. (with Agarwal, A. K.) A new class of generating functions for generalized hypergeometric polynomials. *Comment. Math. Univ. St. Paul.* 28 (1980), no. 2, 157-162. (N. K. Thakare) **81i:33005** 33A35
- (with Agarwal, A. K.) On the unified presentation of operational formulas and generating functions for certain classical polynomials. *Comment. Math. Univ. St. Paul.* 28 (1980), no. 2, 169-178. (N. K. Thakare) **81i:33015** 33A65 (33A70)
- (with Agarwal, A. K.) A note on Konhauser sets of biorthogonal polynomials. *Nederl. Akad. Wetensch. Indag. Math.* 42 (1980), no. 2, 113-118. (H. M. Srivastava) **81g:33003** 33A65
- (with Kalnins, E. G.; Miller, Willard, Jr.) The Lie theory of two-variable hypergeometric functions. *Stud. Appl. Math.* 62 (1980), no. 4, 143-173. (Carl Wulfsberg) **81i:33010** 33A75 (22E05, 22E70, 33A30, 33A50, 53B20)
- (with Kalnins, E. G.; Miller, Willard, Jr.) Transformation and reduction formulas for two-variable hypergeometric functions on the sphere S^2 . *Stud. Appl. Math.* 63 (1980), no. 2, 155-167. (J. P. Singhal) **81i:33011** 33A75 (17B10, 22E45)
- Manoff, S. See Manov, S. S.
- Manohar, Ram P. (with Gupta, Murlu M.) On the use of central difference scheme for Navier-Stokes equations. *Internat. J. Numer. Methods Engrg.* 15 (1980), no. 4, 557-573. (William H. H. Banks) **81i:76029** 76D05 (65N10)
- Mandelstam-Grammatico, Marietta Renormalized G-convolution of N-point functions in quantum field theory. II. Asymptotic behavior. *Ann. Physics* 122 (1979), no. 2, 297-320. (J. G. Taylor) **81i:81029** 81E05
- (with Bros, Jacques) Renormalized G-convolution of N-point functions in quantum field theory. I. Convergence in the Euclidean case. Part 1. *Comm. Math. Phys.* 72 (1980), no. 2, 175-205. (Masatsugu Minami) **81i:81026a** 81C30
- (with Bros, Jacques) Renormalized G-convolution of N-point functions in quantum field theory. I. Convergence in the Euclidean case. Part 2. *Comm. Math. Phys.* 72 (1980), no. 3, 207-237. (Masatsugu Minami) **81i:81026b** 81C30
- Mannella, G. D. (with Beskos, D. E.) Dynamic response of beam structures with the aid of numerical Laplace transform. *Proceedings of the 16th Midwestern Mechanics Conference (Kansas State Univ., Manhattan, Kan., 1979)*, pp. 85-89, *Develop. in Mech.*, 10, Kansas St. Univ., Manhattan, Kan., 1979. (See **81i:73010**) 73H10
- (with Beskos, D. E.) Thermally induced vibrations of beam structures. *Comput. Methods Appl. Mech. Engrg.* 21 (1980), no. 3, 337-355. (Authors' summary) **81i:73055** 73U05 (73K05)
- Manolov, Emanuel H. (with Bennets, Roger G.) A method for detection of the fault cover for a given test using combinational logic circuits. (Bulgarian. Russian and English summaries) *Problemi Tehn. Kibernet.* 9 (1980), 52-58. (Authors' summary) **81i:94036** 94C10
- Manolov, Spas M. The existence of periodic trajectories with a nonglobal inner resonance of autonomous systems with a semi-odd nonlinearity. (Bulgarian. Russian and French summaries) *Godišnik Viz. Učebn. Zased. Prilozna Mat.* 13 (1977), no. 1, 9-29 (1978). (D. Balnov) **81i:34033** 34C25
- (with Raeva, M. B.; Karandzulov, L. I.) Nonglobal internal resonances of autonomous systems with an arbitrary set of initial velocities of the eigenvectors of the matrix of the linear part. (Bulgarian. Russian and English summaries) *Godišnik Viz. Učebn. Zased. Prilozna Mat.* 14 (1978), no. 2, 43-58 (1979). (G. V. Hmelevskaja-Plotnikova) **81i:34036** 34C25
- (with Raeva, M. B.) A condition for existence of periodic trajectories of autonomous systems. (Bulgarian. Russian and French summaries) *Godišnik Viz. Učebn. Zased. Prilozna Mat.* 14 (1978), no. 2, 59-67 (1979). (G. V. Hmelevskaja-Plotnikova) **81i:34037** 34C25
- (with Karandzulov, L. I.) Periodic trajectories with internal resonance of class $K^{(1)}$ of autonomous systems with a polynomial even nonlinearity. (Bulgarian. Russian and English summaries) *Godišnik Viz. Učebn. Zased. Prilozna Mat.* 14 (1978), no. 2, 69-98 (1979). (G. Bojadziev) **81i:34052** 34C25
- Existence of periodic trajectories with nonglobal internal resonance of autonomous systems with a semi-odd nonlinearity. (Russian) *Mat. Fiz. No. 26* (1979), 51-62, 128. (A. I. Perov) **81i:34034** 34C25
- Manor, Ruth A language for questions and answers. *Theoret. Linguist.* 6 (1979), no. 1, 1-21. (Authors' summary) **81i:03032** 03B45
- Manoukian, E. B. Dimensional analysis of subtracted-out Feynman integrands. *J. Phys. A* 13 (1980), no. 9, 2903-2911. (Authors' summary) **81i:81030** 81C30
- Low-energy analysis of subtracted Feynman amplitudes. (Italian and Russian summaries) *Nuovo Cimento A* (11) 57 (1980), no. 4, 377-386. (Authors' summary) **81i:81017** 81C30
- Manov, S. S. (with Nedjalkov, I. P.; Nikolov, O.) On an inverse problem of the relativistic dynamics of a material point in post-Newtonian approximation. (Bulgarian and Russian summaries) *Godišnik Viz. Učebn. Zased. Tehn. Fiz.* 14 (1977), no. 1, 69-78 (1979). (From the introduction) **81i:83010** 83C10
- Lie derivatives and deviation equations in Riemannian spaces. *Gen. Relativity Gravitation* 11 (1979), no. 3, 189-204. (R. F. Biljalov) **81i:53023** 53B20 (83C99)
- Manselli, Paolo On a special problem for an ordinary differential operator, quadratic in the parameter. (Italian summary) *Boll. Un. Mat. Ital. B* (5) 16 (1979), no. 3, 842-856. (Walter Eberhard) **81i:34015** 34B25
- (with Miller, Keith) Calculation of the surface temperature and heat flux on one side of a wall from measurements on the opposite side. (Italian summary) *Ann. Mat. Pura Appl.* (4) 123 (1980), 161-183. (Authors' summary) **81i:80004** 80A20 (35K05)
- A nonexistence and nonuniqueness example in Sobolev spaces for elliptic equations in nondivergence form. (Italian summary) *Boll. Un. Mat. Ital. A* (5) 17 (1980), no. 2, 302-306. (Ja. A. Roitberg) **81g:35026** 35J25 (46E25)
- (with Miller, Keith) Dimensionality reduction methods for efficient numerical solution, backward in time, of parabolic equations with variable coefficients. *SIAM J. Math. Anal.* 11 (1980), no. 1, 147-159. (Philip Brenner) **81i:65097** 65M30 (65N25)
- Manslov, K. B. On the optimality of singular controls in Goursat-Darboux systems with functional constraints of inequality type on the state of the system. (Russian. Azerbaijani and English summaries) *Akad. Nauk Azerbaidžan. SSR Dokl.* 35 (1979), no. 10, 11-14. (From the text) **81i:49018** 49B36
- Mansour, M. (with Agathoklis, P.; Jury, E. I.) Evaluation of quantization error in two-dimensional digital filters. *IEEE Trans. Acoust. Speech Signal Process.* 28 (1980), no. 3, 273-279. (Authors' summary) **81i:94006** 94A12
- (with Agathoklis, P.; Jury, E. I.) A note on the 2-D partial fraction expansion. *IEEE Trans. Circuits and Systems* 27 (1980), no. 8, 719-721. (Authors' summary) **81i:93106** 93E11 (94A12)
- Malek-Mansour, M. See Malek-Mansour, M.
- Mansouri, R. There is no slow uniform contraction of a fluid sphere obeying an equation of state. *Acta Phys. Polon. B* 11 (1980), no. 3, 193-200. (Authors' summary) **81i:83035** 83C55
- Másson, Bengt Cosmic time functions in certain Robinson-Trautman space-times. *J. Phys. A* 13 (1980), no. 3, 945-952. (Garry Ludwig) **81i:83014** 83C20 (58D05)
- Manstavičius, E. Probabilistic number theory. (Russian. Lithuanian and English summaries) *Litovsk. Mat. Sb.* 20 (1980), no. 3, 39-52, 216. (Authors' summary) **81i:10080** 10Kxx (01A65, 01A72, 10-03)
- Mansurov, H. (with Azharov, T. A.) Approximation of continuous functions by linear operators of a certain class. (Russian) *Dokl. Akad. Nauk UzSSR* 1979, no. 6, 3-5. (V. A. Baskakov) **81i:41037** 41A36 (41A25)
- Mansurov, V. N. (with Aleev, V. R.) Linguistic models and computation. *Kibernetika (Kiev)* 1979, no. 5, 1, 34-37, 153 (Russian. English summary); translated as *Cybernetics* 15 (1979), no. 5, 641-645 (1980). (From the text) **81i:68088** 68F05
- Mantel, B. (with Bristeau, M. O.; Glowinski, Roland; Periaux, J.; Perrier, Pierre; Pironneau, Olivier) A finite element approximation of Navier-Stokes equations for incompressible viscous fluids. Iterative methods of solution. *Approximation methods for Navier-Stokes problems (Proc. Sympos., Univ. Paderborn, Paderborn, 1979)*, pp. 78-128, *Lecture Notes in Math.*, 771, Springer, Berlin, 1980. (Authors' summary) **81i:62098** 65N30 (76D05)
- (with Glowinski, Roland; Periaux, J.; Pironneau, Olivier; Poirier, G.) An efficient preconditioned conjugate gradient method applied to nonlinear problems in fluid dynamics via least square formulations. *Computing methods in applied sciences and engineering (Proc. Fourth Internat. Sympos., Versailles, 1979)*, pp. 445-487, North-Holland, Amsterdam, 1980. (Nima Geffen) **81i:76035** 76H05 (49D07, 65N30)
- Mantel, Nathan (with Hankey, Benjamin F.) A logistic regression analysis of response-time data where the hazard function is time dependent. Time-sequential statistical procedures. *Comm. Statist. A—Theory Methods* 7 (1978), no. 4, 333-347. (See **81i:62141**) 62P10 (62J02)
- (with Byar, David P.) Marginal homogeneity, symmetry, and independence. Special issue on theory and practice for categorical data analysis. *Comm. Statist. A—Theory Methods* 7 (1978), no. 10, 953-976. (See **80d:62042**) 62H99
- Mantero, Anna Maria Modified Poisson kernels on rank one symmetric spaces. *Proc. Amer. Math. Soc.* 77 (1979), no. 2, 211-217. (A. Korányi) **81i:22015** 22E30 (31C05, 43A85)
- (with Tonge, Andrew) The Schur multiplication in tensor algebras. *Studia Math.* 68 (1980), no. 1, 1-24. (A. Pietsch) **81i:46074** 46M05 (46J35)
- Manteuffel, Thomas A. Shifted incomplete Cholesky factorization. *Sparse Matrix Proceedings 1978 (Sympos. Sparse Matrix Comput., Knoxville, Tenn., 1978)*, pp. 41-61, SIAM, Philadelphia, Pa., 1979. (Ky Fan) **81i:65052** 65F35 (15A23)
- Solving structures problems iteratively with a shifted incomplete Cholesky preconditioning. *Computing methods in applied sciences and engineering (Proc. Fourth Internat. Sympos., Versailles, 1979)*, pp. 427-444, North-Holland, Amsterdam, 1980. (Authors' summary) **81i:65059** 65F10
- Manton, Kenneth G. (with Stallard, Eric) A stochastic compartment model representation of chronic disease dependence: techniques for evaluating parameters of partially unobserved age inhomogeneous stochastic processes. *Theoret. Population Biol.* 18 (1980), no. 1, 57-75. (Authors' summary) **81i:92012** 92A09 (92A15, 93E10)
- Mann, Cornelius (with Ingrassia, Anthony R.) Stress-intensity factor computation in three

- dimensions with quarter-point elements. *Internat. J. Numer. Methods Engrg.* 15 (1980), no. 10, 1427-1445. (Authors' summary) **81m:73017** 73C05 (65N30, 76M05)
- Mamulov, N. F. (with Balk, M. B.) Factorization of an entire polyanalytic function of several variables having a bounded null set. (Russian) *Teor. Funktsii Funktsional. Anal. i Prilozhen.* No. 31 (1979), 10-13, 164. (Wolfgang Tutschke) **81c:32011** 32A30 (30C15)
- Mauvel, Bennet (with Bollobás, Béla) Optimal vertex partitions. *Bull. London Math. Soc.* 11 (1979), no. 2, 113-116. (J. Mitčhem) **81h:05042** 05C15
- (with Goldsmith, Donald L.; Faber, Vance) Separation of graphs into three components by the removal of edges. *J. Graph Theory* 4 (1980), no. 2, 213-218. (Authors' summary) **81e:05092** 05C40
- Mäntz, P. (with Borisovič, Ju. G.; Sviagin, V. G.) Nichtlineare Fredholm-Operatoren, Abbildungsgrad und Anwendungen auf nichtlineare Eigenwertprobleme. *Math. Nachr.* 91 (1979), 281-295. (Christian Fenske) **81d:59019** 58C40 (47H99, 55M25, 58B15)
- Mäntz, P. Study of a thermodynamic system by seminormed topologies. *Proceedings of the International Symposium on Applications of Mathematics in System Theory (Univ. Braşov, Braşov, 1978), I*, pp. 145-154. Univ. Braşov, Braşov, 1979. (See **81j:93066a**) 73B99 (80A99)
- di Manno, M. See Di Manno, M.
- Marashin, Alexei A. (with Mazur, Paul) Effects of surface roughness on the van der Waals force between macroscopic bodies. *Phys. Rev. B* (3) 22 (1980), no. 4, 1677-1686. (Authors' summary) **81h:82041** 82A55 (78A25, 82A77)
- al-Marikhi, Abi T-Hann See Karpova, L. M.; et al. **81d:01002**
- Marandijan, G. B. On the sets of minimal indices of partial recursive functions. *Mathematical foundations of computer science, 1979 (Proc. Eighth Sympos., Olomouc, 1979)*, pp. 372-374. *Lecture Notes in Comput. Sci.*, 74, Springer, Berlin, 1979. (A. M. Dawes) **81f:03052** 03D15 (03D20, 03D30)
- Marathe, Kalpana Y. (with Gopalan, M. N.) Availability analysis of 1-server 2-unit system with slow switch subject to maintenance. (German and Russian summaries) *Math. Operationsforsch. Statist. Ser. Optim.* 10 (1979), no. 4, 585-590. (Carl M. Harris) **81d:90050** 90B25
- Marčević, Manjlo Riesz summability of multiple Fourier series. (Serbo-Croatian. French summary) *Akad. Nauka Unjet. Bosne Hercegov. Rad. Odelj. Teh. Nauka* 65 (1979), no. 5, 5-13. (M. Tomić) **81c:42058** 42B05 (42B15)
- (with Perić, Vencin; Vajzović, Fikret) Life and work of Academician Mahmut Bajraktarević. (Serbo-Croatian) *Akad. Nauka Unjet. Bosne Hercegov. Rad. Odelj. Prirod. Mat. Nauka* No. 19 (1980), 5-17. (Editors) **81i:01013** 01A70
- Marcondato de Dominis See Ziggelaar, Augustine. **81b:01011**
- Marcella, S. Mathematical description of the responses of simple cortical cells. *J. Opt. Soc. Amer.* 70 (1980), no. 11, 1297-1300. (Authors' summary) **81j:92058** 92A27
- Marcellini, Paolo (with Sbordone, Carlo) Relaxation of nonconvex variational problems. (Italian summary) *Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur.* (8) 63 (1977), no. 5, 341-344 (1978). (Lucio Boccardo) **81h:49004** 49A21 (94A15)
- Periodic solutions and homogenization of nonlinear variational problems. *Ann. Mat. Pura Appl.* (4) 117 (1978), 139-152. (Pierre-Louis Lions) **81j:35008** 35B10 (35J65, 49D50)
- Bounds for the third membrane eigenvalue. *J. Differential Equations* 37 (1980), no. 3, 438-443. (J. Hersch) **81m:35105** 35P15 (49G05)
- (with Sbordone, Carlo) Semiconvexity problems in the calculus of variations. *Nonlinear Anal.* 4 (1980), no. 2, 241-257. (Erich Miersemann) **81d:49011** 49A50
- Marčenko, I. I. The growth of meromorphic minimal surfaces. (Russian) *Teor. Funktsii Funktsional. Anal. i Prilozhen.* No. 31 (1979), 95-98, 167. (D. Mitrović) **81c:53006** 53A10 (30D35)
- Marčenko, N. A. (with Pergament, A. H.) Some questions of the theory of approximations and problems of filtration. (Russian) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 178* (1979), 20 pp. (Authors' summary) **81a:76045** 76S05
- Marčenko, V. A. The Sturm-Liouville operator and the Korteweg-de Vries equation. (Russian) *Proceedings of an All-Union Conference on Partial Differential Equations (Moscow State Univ., Moscow, 1976)* (Russian), pp. 152-153. *Moskov. Gos. Univ., Meh.-Mat. Fakul'tet, Moscow, 1978.* (See **80f:35002**) 34B25 (35Q20)
- Marčenko, V. O. See *Studies in the theory of operators and their applications*, **81a:00012**
- Marčenko, Vladimir (with Asmykovič, I. K.) On the problem of modal control in linear systems with delay. *Simulation of distributed-parameter and large-scale systems (Proc. IMACS European Simulation Meeting, Univ. Patras, Patras, 1979)*, pp. 73-78. North-Holland, Amsterdam, 1980. (Authors' summary) **81f:93036** 93C05
- (with Asmykovič, I. K.) Modal control of multi-input linear delayed systems. *Automat. i Telemekh.* 1980, no. 1, 5-11 (Russian); translated as *Automat. Remote Control* 41 (1980), no. 1, part 1, 1-5. (Authors' summary) **81h:93005** 93B05 (93C05)
- Marčenko, S. S. A method of constructing maximal subalgebras in algebras of general recursive functions. (Russian) *Algebra i Logika* 17 (1978), no. 5, 581-595, 622. (S. A. Berezin) **81a:03042** 03D20
- Closed classes of self-dual functions of many-valued logic. (Russian) *Problemy Kibernet.* No. 36 (1979), 52-279. (Ágnes Szendrei) **81d:03064** 03G25 (03B50)
- (with Demetrovics, János; Hannák, L.) Some remarks on the structure of P_3 . *C. R. Math. Rep. Acad. Sci. Canada* 2 (1980), no. 4, 215-219. (From the introduction) **81m:03028** 03B50
- A basis with respect to superposition in the class of functions that are elementary in the sense of Kalmár. (Russian) *Mat. Zametki* 27 (1980), no. 3, 321-332, 492. (Roman Murawski) **81c:03039** 03D20 (10N99, 68C30)
- Existence of bases with respect to superposition in countable primitive recursively closed classes of one-place functions. (Russian) *Mat. Zametki* 27 (1980), no. 6, 877-883, 989. (S. A. Berezin) **81f:03067** 03D20
- March, L. J. (with Earl, C. F.) Architectural applications of graph theory. *Applications of graph theory*, pp. 327-355. Academic Press, London, 1979. (See **81h:05050**) 51M20 (05B99)
- Marchal, C. (with Losco, Lucette) Analysis of neighbourhood of triple collisions and of triparabolic escapes in the 3 body-problem. *Astronom. and Astrophys.* 84 (1980), no. 1-2, 1-6. (George Bozias) **81d:70007** 70F07 (85F05)
- Marchand, J. (with Stanley, J. C.; de France, J. F.) A neural population model for the hippocampal theta rhythm. *Proceedings of the First International Conference on Mathematical Modeling (St. Louis, Mo., 1977), Vol. II*, pp. 847-856. Univ.
- Missouri-Rolla, Rolla, Mo., 1977. (Authors' summary) **81j:92009** 92A07
- Marchand, Pierre Construction des algèbres minimales des sous-ensembles des algèbres libres. *Les arbres en algèbre et en programmation (Aime Colloq. Lille, Lille, 1979)*, pp. 134-158. Univ. Lille I, Lille, 1979. (Author's introduction) **81c:08015** 08C05
- Grammaires parenthésées et bilans réguliers. (English summary) *RAIRO Inform. Théor.* 14 (1980), no. 1, 3-38. (B. Zelinka) **81h:68071** 68F05 (05C05)
- Marchenko, Vladimir See Marchenko, Vladimir
- Marchenko, S. S. See Marchenko, S. S.
- Marchesin, Dan (with Glimm, James G.) Subgrid resolution of fluid discontinuities. *Proceedings of the 1979 Army Numerical Analysis and Computers Conference (White Sands Missile Range, White Sands, N.M., 1979)*, pp. 353-360. *ARO Rep.* 79, 3, U. S. Army Res. Office, Research Triangle Park, N.C., 1979. (Authors' summary) **81a:76033** 76L05
- (with Isaacson, David; Isaacson, E. L.; Pao Leme, P. J.) Spectral properties of systems with many degrees of freedom. *Seminar on Numerical Analysis and its Applications to Continuum Physics (Rio de Janeiro, 1980)*, pp. 45-53. Soc. Brasil. Mat., Rio de Janeiro, 1980. (G. Fonte) **81m:81014** 81C05 (65N25)
- (with Glimm, James G.; McBryan, O.) Subgrid resolution of fluid discontinuities. II. *J. Comput. Phys.* 37 (1980), no. 3, 336-354. (Authors' summary) **81h:76041** 76L05 (35L65, 65M05)
- Marchesini, Giovanni (with Fornasini, Ettore) Stability problems in 2-D systems. *Recent developments in variable structure systems, economics and biology (Proc. US-Italy Sem., Taormina, 1977)*, pp. 123-129. *Lecture Notes in Econom. and Math. Systems*, 162, Springer, Berlin, 1978. (Adly T. Fam) **81h:93057** 93D20
- (with Fornasini, Ettore) Stability analysis of 2-D systems. *IEEE Trans. Circuits and Systems* 27 (1980), no. 12, 1210-1217. (Authors' summary) **81h:93051** 93D05
- (with Onofri, E.) Planar limit for SU(N) symmetric quantum dynamical systems. *J. Math. Phys.* 21 (1980), no. 5, 1103-1110. (M. Demuth) **81i:81024** 81C12
- (with Casati, M.; Onofri, E.) A singular integral operator arising from 1/N expansions: analytical and numerical results. *J. Phys. A* 13 (1980), no. 4, 1217-1225. (R. Kotecký) **81f:47050** 47G05 (81E15)
- Marchetti-Spaccamela, A. (with Lucertini, M.) Approximate solutions of an integer linear programming problem with resource variations. *Modelling and optimization of complex systems (Proc. IFIP-TC 7 Working Conf., Novosibirsk, 1978)*, pp. 207-219. *Lecture Notes in Control and Information Sci.*, 18, Springer, Berlin, 1979. (Csaba Fabian) **81d:90078** 90C10
- (with Ausiello, Giorgio; Protasi, M.) Toward a unified approach for the classification of NP-complete optimization problems. *Theoret. Comput. Sci.* 12 (1980), no. 1, 83-96. (Seim G. Akl) **81h:68027** 68C25 (03D15)
- Marchi, Enrico The propagation of flood waves. (Italian. English summary) *Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur.* (8) 64 (1978), no. 6, 594-602. (A. Jami) **81f:76006** 76B15
- Marchi, Ezio (with Millán, Leopoldo) On the exact solution of differential equations of Hodgkin-Huxley model type. *Proceedings of the First International Conference on Mathematical Modeling (St. Louis, Mo., 1977), Vol. I*, pp. 447-458. Univ. Missouri-Rolla, Rolla, Mo., 1977. (Authors' summary) **81h:92015** 92A09 (35K55)
- (with Tarazaga, Pablo) Some studies for a general n-person game arising from a generalization of von Neumann's assignment problem. *J. Math. Anal. Appl.* 74 (1980), no. 1, 152-163. (Mamoru Kaneko) **81f:90125** 90D10
- (with Vila, Jorge) Recursive method in one-dimensional Ising model. *J. Phys. A* 13 (1980), no. 7, 2465-2477. (Authors' summary) **81h:82062** 82A67 (82A05)
- Marchi, Mario Desargues' theorems in S-spaces. (Italian. English summary) *Proceedings of the Brescia Mathematical Seminar, Vol. 3 (Italian)*, pp. 9-17. Univ. Cattolica Sacro Cuore, Milan, 1979. (Stanley E. Payne) **81f:51002** 51A15
- On the group of dilatations of a Desarguesian affine space. (Italian. English summary) *Proceedings of the Brescia Mathematical Seminar, Vol. 4 (Italian)*, pp. 43-64. *Sci. Mat., A, Vita e Pensiero, Milan*, 1980. (E. J. F. Primrose) **81h:51003** 51A30
- Immersion of linear translation S-spaces. (Italian. English summary) *Proceedings of the Brescia Mathematical Seminar, Vol. 4 (Italian)*, pp. 65-83. *Sci. Mat., A, Vita e Pensiero, Milan*, 1980. (Alessandro Bichara) **81j:51008** 51D15 (51D20)
- Marchildon, L. (with Everett, Allen E.; Antipka, Adel F.) Electrodynamics and tachyons. (Italian and Russian summaries) *Nuovo Cimento B* (11) 53 (1979), no. 2, 253-283. (Kenneth Dunn) **81a:83003** 83A05 (78A99)
- Marchionna, Celia Continuity of the solutions of a class of functional equations. (Italian. English summary) *Boll. Un. Mat. Ital. B* (5) 17 (1980), no. 2, 727-739. (I. Fenyő) **81h:39008** 39B70
- Marchionna, Ermanno Giuseppina Masotti Biggiogero. (Italian) *Boll. Un. Mat. Ital. A* (5) 16 (1979), no. 3, 631-635. (Editors) **81h:01041** 01A70
- Marchionna Tibiletti, Cesarina Distance in a group. (Italian. English summary) *Intit. Lombardo Accad. Sci. Lett. Rend. A* 112 (1978), no. 1, 181-191 (1979). (G. Zappa) **81f:20049** 20F99
- Groups with distance $d < 2$. (Italian. English summary) *Boll. Un. Mat. Ital. B* (5) 17 (1980), no. 1, 14-32. (G. Zappa) **81f:20050** 20F99
- Marchioro, C. (with Benfatto, G.; Presutti, E.; Pulvirenti, M.) Superstability estimates for anharmonic systems. *J. Statist. Phys.* 22 (1980), no. 3, 349-362. (Richard S. Ellis) **81c:82028** 82A67 (82A25)
- (with Pellegrinotti, A.; Pulvirenti, M.; Triolo, L.) Erratum: "Velocity of a perturbation in infinite lattice systems" [*J. Statist. Phys.* 19 (1978), no. 5, 499-510; MR 80b:82053]. *J. Statist. Phys.* 22 (1980), no. 6, 743. (From the text) **81h:82042** 82A67
- Marchink, G. I. See Marchuk, G. I.
- Marchilly, Gilbert (with Léauté, Bernard) Sur certaines solutions particulières transcendentes des équations d'Einstein. (English summary) *Ann. Inst. H. Poincaré Sect. A (N.S.)* 31 (1979), no. 4, 363-375 (1980). (Alan Barnes) **81j:83010** 83C15 (58F07)
- New exact cylindrical solutions of the Einstein-Maxwell equations of general relativity. *Phys. Lett. A* 73 (1979), no. 3, 157-158. (Authors' summary) **81j:83011** 83C15
- Marchinkiewicz, Helena (with Żurawska, Lucyna) Some remarks on Galois correspondence. *Demonstratio Math.* 13 (1980), no. 2, 421-425. (Editors) **81m:00001** 08A02 (04A05)
- Marchinkowski, M. J. The differential geometry of surfaces. *Acta Phys. Acad. Sci. Hungar.*

- 46 (1979), no. 4, 263-276. (T. Janssen) **81k:82047** 82A60 (53B50)
The differential geometry of internal surfaces. (Polish and Russian summaries) *Arch. Mech. (Arch. Mech. Stos.)* 31 (1979), no. 6, 763-781. (P. Rudra) **81k:82048** 82A60 (53B50)
- Marcja, Annalisa Boolean products and reduced Boolean products. (Italian) *Matematiche (Catania)* 32 (1977), no. 1, 23-34 (1979). (G. Cherlin) **81m:03041** 03C30 (03C35, 03C40)
(with Mangani, Piero) Shelah rank for Boolean algebras and some application to elementary theories. I. *Algebra Universalis* 10 (1980), no. 2, 247-257. (Daniel Lascar) **81i:03044** 03C45 (06E99)
- Marcu, Dumitru Sur la connexité semi-forte d'un digraphe. *An. Stiint. Univ. "Al. I. Cuza" Iași Sect. I a Mat. (N.S.)* 24 (1978), no. 1, 173-174. (Aldo G. S. Ventre) **81a:05057** 05C20
On certain vector spaces associated to the oriented finite graphs. *An. Stiint. Univ. "Al. I. Cuza" Iași Sect. I a Mat. (N.S.)* 25 (1979), no. 1, 175-181. (H. Kramer) **81i:05078** 05C20
A method for finding the strongly connected components of a digraph. *An. Stiint. Univ. "Al. I. Cuza" Iași Sect. I a Mat. (N.S.)* 25 (1979), no. 2, 417-418. (From the text) **81e:08083** 68E10 (05C40)
On the existence of a kernel in a strong connected digraph. (Romanian summary) *Bul. Inst. Politehn. Iași Sect. I* 25(29) (1979), no. 1-2, 35-37. (From the introduction) **81i:05088** 05C20
A method for finding the strong components of a digraph. (Romanian summary) *Studia Univ. Babeș-Bolyai Math.* 24 (1979), no. 2, 22-24. (Guy Chaty) **81h:05071** 05C20
- Marcu, M. The representations of $\text{spl}(2, 1)$ —an example of representations of basic superalgebras. *J. Math. Phys.* 21 (1980), no. 6, 1277-1283. (Bernard Kolman) **81m:17004** 17A70 (81C40, 81G20)
The tensor product of two irreducible representations of the $\text{spl}(2, 1)$ superalgebra. *J. Math. Phys.* 21 (1980), no. 6, 1284-1292. (Bernard Kolman) **81j:17007** 17A70 (81C40)
- Marcu, G. I. (with Penenko, V. V.; Protasov, A. V.) The variational principle in a small parameter model of atmospheric dynamics. (Russian) *Variational-difference methods in mathematical physics (Proc. All-Union Conf., Novosibirsk, 1977)* (Russian), pp. 213-229. *Akad. Nauk SSSR Sibsk. Otdel., Vychisl. Centr. Novosibirsk*, 1978. (A. K. Guc) **81g:86006** 86A35 (49H05)
(with Saidurov, V. V.) ★Повышение точности решений разностных схем. (Russian) [Increasing the accuracy of solutions of difference schemes] "Nauka", Moscow, 1979. 320 pp. (C. Illo) **81m:65004** 65-02
(with Kordzadze, A. A.; Zalesny, V. B.) Problems of mathematical modeling of sea and ocean currents. (Russian) *Differential and integral equations. Boundary value problems (Russian)*, pp. 195-228. *Tbilis. Gos. Univ., Tbilisi*, 1979. (Jifi Nedoma) **81m:60002** 86A05
(with Asachenkov, A. L.) Mathematical model of a disease and some results of numerical experiments. *Modelling and optimization of complex systems (Proc. IFIP-TC 7 Working Conf., Novosibirsk, 1978)*, pp. 69-78. *Lecture Notes in Control and Information Sci.*, 18, Springer, Berlin, 1979. **81k:92006** 92A07 (92A05)
(with Belyh, L. N.) Chronic forms of a disease and their treatment according to mathematical immune response models. *Modelling and optimization of complex systems (Proc. IFIP-TC 7 Working Conf., Novosibirsk, 1978)*, pp. 79-86. *Lecture Notes in Control and Information Sci.*, 18, Springer, Berlin, 1979. (Zvi Grossman) **81k:92007** 92A07 (34C25, 92A90)
Mathematical models in immunology and their interpretation. *Modelling and optimization of complex systems (Proc. IFIP-TC 7 Working Conf., Novosibirsk, 1978)*, pp. 114-129. *Lecture Notes in Control and Information Sci.*, 18, Springer, Berlin, 1979. (Andris Abakus) **81e:92009** 92A15
(with Bubnov, M. A.) The method of isolation of the barotropic component in ocean dynamic problems. (Russian) *Dokl. Akad. Nauk SSSR* 248 (1979), no. 4, 836-839. (Authors' summary) **81e:86001** 86A05 (80A20)
(with Dymnikov, V. P.; Lyukov, V. N.; Galin, V. Ja.; Bobyleva, I. M.; Perov, V. L.) A global model of the general atmospheric circulation. *Izv. Akad. Nauk SSSR Ser. Fiz. Atmosf. i Okeana* 15 (1979), no. 5 (Russian); translated as *Izv. Acad. Sci. USSR Atmosf. Ocean. Phys.* 15 (1979), no. 5, 321-331 (1980). (Authors' summary) **81e:86010** 86A10
★Методы вычислительной математики. (Russian) [Methods of numerical mathematics] Second edition. "Nauka", Moscow, 1980. 536 pp. (A. G. Ramm) **81m:65003** 65-01
See also Difference and variational-difference methods, **81b:65003a**; Numerical methods in linear algebra, **81b:65003b**; Variational-difference methods in mathematical physics, **81b:65007** and Sultanzhin, U. M., **81h:82056**
- Marcum, Howard J. Fibrations over double mapping cylinders. *Illinois J. Math.* 24 (1980), no. 2, 344-358. (R. M. Vogt) **81j:55011** 55P99 (55R05)
(with Randall, Duane) The homotopy Thom class of a spherical fibration. *Proc. Amer. Math. Soc.* 80 (1980), no. 2, 353-358. (C. S. Hoo) **81k:55026** 55R05 (55Q15, 57R20)
- Marcus, Brian Factors and extensions of full shifts. *Monatsh. Math.* 88 (1979), no. 3, 239-247. (Peter Walters) **81g:28023** 28D20
A note on periodic points for ergodic total automorphisms. *Monatsh. Math.* 89 (1980), no. 2, 121-129. (Manfred Denker) **81f:28016** 28D05 (58F11, 58F20)
- Marcus, Froim On the \mathbb{Q} -correspondence of coincidence surfaces. *Acad. Roy. Belg. Bull. Cl. Sci. (5)* 65 (1979), no. 9, 407-424. (M. Decuyper) **81h:53010** 53A20
On a result of Tzitzeica and a new asymptotic transformation of minimal projective surfaces. *Czechoslovak Math. J.* 30(105) (1980), no. 2, 213-227. (D. Mekero) **81i:53008** 53A20
- Marcus, Leo An expansion of an \mathfrak{u}_q -categorical model. *Fund. Math.* 103 (1979), no. 3, 183-188. (John Rosenthal) **81b:80035** 03C15 (03C35)
The number of countable models of a theory of one unary function. *Fund. Math.* 106 (1980), no. 3, 171-181. (G. Fuhrken) **81m:03039** 03C15
(with Samet, Hanan) Puring in an equality data base. *Inform. Process. Lett.* 10 (1980), no. 2, 89-95. (From the introduction) **81a:68026** 68B15
- Marcus, Marvin (with Filippenko, Ivan) Invariance of the nonvanishing specializations of polynomials. *Linear and Multilinear Algebra* 5 (1977/78), no. 2, 99-105. (Authors' summary) **81e:12022** 12D99
★Introduction to modern algebra. Pure and Applied Mathematics, 47. Marcel Dekker, Inc., New York-Basel, 1978. xii + 489 pp. ISBN 0-8247-6479-X (L. Márki (Zbl 383:00001)) **81k:00001** 00A05
Some combinatorial aspects of numerical range. *Second International Conference on Combinatorial Mathematics (New York, 1978)*, pp. 368-376. *Ann. New York Acad. Sci.*, 319, New York Acad. Sci., New York, 1979. (J. P. Williams) **81g:15028** 15A60 (47A12)
(with Chollet, John) Linear groups defined by decomposable tensor equalities. *Linear and Multilinear Algebra* 8 (1979/80), no. 3, 207-212. (B. N. Moyn) **81g:15007** 15A15 (15A30, 15A72, 20H20)
(with Moore, Kenneth) A subdeterminant inequality for normal matrices. *Linear Algebra Appl.* 31 (1980), 129-143. (A. R. Amir-Moëz) **81g:15008** 15A15 (15A45)
- Marcus, Michael B. (with Pisier, Gilles) Random Fourier series on locally compact abelian groups. *Séminaire de Probabilités, XIII (Univ. Strasbourg, Strasbourg, 1977/78)*, pp. 72-89. *Lecture Notes in Math.*, 721, Springer, Berlin, 1979. (J.-P. Kahane) **81m:60063** 60G15 (43A99)
(with Woyczyński, Wojbor A.) Stable measures and central limit theorems in spaces of stable type. *Trans. Amer. Math. Soc.* 251 (1979), 71-102. (J. Hoffmann-Jorgensen) **81i:60010** 60B12 (60E07)
- Marcus, Moshe (with Mizel, V. J.) A characterization of first order nonlinear partial differential operators on Sobolev spaces. *J. Funct. Anal.* 38 (1980), no. 1, 118-138. (E. A. Catchpole) **81j:47040** 47F05 (35Q10, 35R15)
- Marcus, R. A. (with Noid, D. W.; Koszykowski, M. L.) Semiclassical calculation of eigenvalues for a three-dimensional system. *J. Chem. Phys.* 73 (1980), no. 1, 391-395. (Authors' summary) **81d:81035** 81C99 (34B25, 58F19)
- Marcus, Robert Parabolic Itô equations with monotone nonlinearities. *J. Funct. Anal.* 29 (1978), no. 3, 275-286. (S. I. Rosencrans) **81k:60005** 60H15 (47H15, 81E99)
Stochastic diffusion on an unbounded domain. *Pacific J. Math.* 84 (1979), no. 1, 143-153. (S. I. Rosencrans) **81h:60006** 60H15 (35R60, 60J60, 81E99)
Optimal diffusion in a random environment. *Math. Biosci.* 49 (1980), no. 3-4, 223-233. (Praneshu) **81m:92044** 92A15 (60J70)
- Marcus, Solomon (with Nicolescu, M.; Dinculeanu, Nicolae) ★Analiză matematică. Vol. I. (Romanian) [Mathematical analysis. Vol. I] Fifth edition. *Editura Didactică și Pedagogică, Bucharest*, 1980. 757 pp. (R. G. Bartle) **81k:26002a** 26-01
(with Nicolescu, M.; Dinculeanu, Nicolae) ★Analiză matematică. Vol. II. (Romanian) [Mathematical analysis. Vol. II] Third edition. *Editura Didactică și Pedagogică, Bucharest*, 1980. 414 pp. (R. G. Bartle) **81k:26002b** 26-01
(with Balaban, Alexandru T.; Barasch, Mariana) Picture grammars in chemistry. Generation of acyclic isoprenoid structures. *Match* No. 8 (1980), 193-213. (Authors' summary) **81h:68063** 68F05 (92A40)
(with Calude, Cristian; Toiv, Ionel) Recursive properties of Sudan function. *Rev. Roumaine Math. Pures Appl.* 25 (1980), no. 4, 503-507. (Authors' summary) **81f:03053** 03D20 (01A60, 03-03)
- Marcus, Steven (with Speyer, Jason L.; Krainak, Joseph) A decentralized team decision problem with an exponential cost criterion. *IEEE Trans. Automat. Control* 25 (1980), no. 5, 919-924. (Authors' summary) **81j:90128** 90C40
- Marcus, Steven I. Modeling and analysis of stochastic differential equations driven by point processes. *IEEE Trans. Inform. Theory* 24 (1978), no. 2, 164-172. (Author's summary) **81e:93077** 93E03 (60H10)
(with Liu, Chang Huan) Estimator performance for a class of nonlinear estimation problems. *IEEE Trans. Automat. Control* 25 (1980), no. 2, 299-302. (Authors' summary) **81a:93090** 93E10
- Marcus, Dietrich ★Principles of quantum electronics. Academic Press [Harcourt Brace Jovanovich, Publishers], New York-London-Toronto, Ont., 1980. xvi + 494 pp. ISBN 0-12-471050-6 (Victor Wong) **81k:81193** 81K05 (81G10)
- Marcvitz, Nathan Quasiparticle view of beam propagation in nonlinear media. *Nonlinear Electromagnetics*, pp. 117-132. Academic Press, New York, 1980. (See **81j:78081**) 78A35
- Marczyk, A. Properties of line multigraphs of hypergraphs. *Combinatorics (Proc. Fifth Hungarian Colloq., Keszthely, 1976)*, Vol. II, pp. 1185-1188. *Colloq. Math. Soc. János Bolyai*, 18, North-Holland, Amsterdam, 1978. (Giorgio Balconi) **81c:05071** 05C65
- Mardanzov, I. D. (with Samilov, A. H.; Maksudov, F. G.) Some new conditions for solvability of a boundary value problem for nonlinear differential equations with deviating argument of neutral type. (Russian. Azerbaijani and English summaries) *Izv. Akad. Nauk Azerbaidžan. SSR Ser. Fiz.-Tehn. Mat. Nauk* 1979, no. 2, 26-32. (József Kalinowski) **81d:34058** 34K10
- Mardanzov, M. D. Optimal singular controls in systems of ordinary differential equations. (Russian) *Azerbaidžan. Gos. Univ. Učen. Zap.* 1978, no. 3, 99-104. (V. A. Dyhta) **81e:49015** 49B10
(with Gasanov, K. K.; Jusifov, B. M.) On second-order optimality conditions in delay systems. (Russian. Azerbaijani and English summaries) *Akad. Nauk Azerbaidžan. SSR Dokl.* 35 (1979), no. 12, 7-12. (Stefan Mirică) **81a:49027** 49B34 (34K35)
Optimality conditions for singular controls. (Russian) *Dokl. Akad. Nauk SSSR* 253 (1980), no. 4, 815-818. (Constantin Vărsan) **81i:49015** 49B22
- Marden, Albert (with Earle, C.) Conformal embeddings of Riemann surfaces. *J. Analyse Math.* 34 (1978), 194-203 (1979). (Charles M. Stanton) **81g:30033** 30C70 (30F99)
(with Jørgensen, Troels) Two doubly degenerate groups. *Quart. J. Math. Oxford Ser. (2)* 30 (1979), no. 118, 143-156. (B. Maskit) **81h:30040** 30F40 (30C60)
Geometric relations between homeomorphic Riemann surfaces. *Bull. Amer. Math. Soc. (N.S.)* 3 (1980), no. 3, 1001-1017. (B. Maskit) **81m:30047** 30F40 (32G15)
- Marden, John (with Perlman, Michael D.) Invariant tests for means with covariates. *Ann. Statist.* 8 (1980), no. 1, 25-63. (R. H. Farrell) **81h:62071** 62H15 (62C07)
- Marden, Morris (with Fryant, Allan J.) Green's function with ring pole and applications to interpolation. *Pure Appl. Math. Sci.* 12 (1980), no. 1-2, 101-112. (Ü. Kuran) **81k:31010** 31B05 (31B20)
- Mardellic, Silbe (with Keesling, James) A shape fibration with fibers of different shape. *Pacific J. Math.* 84 (1979), no. 2, 319-331. (L. S. Husch) **81e:56024** 55R65 (55P55)

- Shape theory. *Proceedings of the International Congress of Mathematicians (Helsinki, 1978)*, pp. 481-489, Acad. Sci. Fennica, Helsinki, 1980. (Ross Geoghegan) **81c:57013** 57N25 (55P55)
- Mardia, Kamal Varikand** (with Kent, John T.; Bibby, John M.) ★Multivariate analysis. Probability and Mathematical Statistics: A Series of Monographs and Textbooks. Academic Press [Harcourt Brace Jovanovich, Publishers], London-New York-Toronto, Ont., 1979. xv + 521 pp. ISBN 0-12-471250-9 (A. W. Davis) **81h:62003** 62-01 (62Hxx)
- (with Jupp, P. E.) Maximum likelihood estimators for the matrix von Mises-Fisher and Bingham distributions. *Ann. Statist.* **7** (1979), no. 3, 599-606. (Stanley L. Sclove) **81h:62008** 62H12
- (with Rao, J. S.) Pitman efficiencies of some two-sample nonparametric tests. *Recent developments in statistical inference and data analysis (Proc. Internat. Conf., Inst. Statist. Math., Tokyo, 1979)*, pp. 247-254, North-Holland, Amsterdam, 1980. (V. Susarla) **81m:62078** 62G10
- de Maré, Jacques** Optimal prediction of catastrophes with applications to Gaussian processes. *Ann. Probab.* **8** (1980), no. 4, 841-850. (A. M. Hasofer) **81m:60071** 60G25 (60G35, 62M20)
- Maréchal, O.** (with Fack, Thierry) On the classification of the symmetries of U.H.F. C^* -algebras. (French summary) *Algèbres d'opérateurs et leurs applications en physique mathématique (Proc. Colloq., Marseille, 1977)*, pp. 275-284, Colloques Internat. CNRS, 274, CNRS, Paris, 1979. (Richard I. Loeb) **81e:46039** 46L05
- (with Fack, Thierry) Application de la K -théorie algébrique aux C^* -algèbres. *Algèbres d'opérateurs (Sém., Les Plans-sur-Bex, 1978)*, pp. 144-169, *Lecture Notes in Math.*, 725, Springer, Berlin, 1979. (Jerome Kaminker) **81e:46093** 46M15 (18F25, 46L35, 55N15)
- (with Fack, Thierry) Sur la classification des symétries des C^* -algèbres UHF. *Canad. J. Math.* **31** (1979), no. 3, 496-523. (Dorte Olesen) **81d:46065** 46L40 (46L05)
- Marek, Ivo** Homogenization in problems with oscillating data. *Proceedings of the Fourth Symposium on Basic Problems of Numerical Mathematics (Pleš, 1978)*, pp. 133-139, Charles Univ., Prague, 1978. (V. M. Isakov) **81k:65077** 46N05 (65J99, 82A77)
- See also *Proceedings: Symposium on Basic Problems of Numerical Mathematics*, **81a:65008**
- Marek, Mihoš** (with Schreiber, Igor; Kubiček, Milan) On coupled cells. *New approaches to nonlinear problems in dynamics (Proc. Conf., Pacific Grove, Calif., 1979)*, pp. 496-508, SIAM, Philadelphia, Pa., 1980. (Aubrey B. Poore) **81m:34050** 34C15 (58F13, 80A30, 92A40)
- (with Kubiček, Milan) Patterns of spatial organization in growth. *Z. Naturforsch. A* **35** (1980), no. 5, 556-563. (Authors' summary) **81e:92008** 92A09 (35K55, 58F14)
- Marek, Wiktor** (with Zbiński, Paweł) On a class of models of the n th order arithmetic. *Higher set theory (Proc. Conf., Math. Forschungsinst., Oberwolfach, 1977)*, pp. 361-374, *Lecture Notes in Math.*, 669, Springer, Berlin, 1978. (Authors' introduction) **81i:03104** 03H15
- See also *Musowski, Andrzej Włodzimierz*, **81i:01018**
- Mareš, C.** (with Mareš, Ileana) The integration of the hydrodynamic primitive equations by the spectral method. *Proceedings of the International Symposium on Applications of Mathematics in System Theory (Univ. Braşov, Braşov, 1978)*, I, pp. 193-198, Univ. Braşov, Braşov, 1979. (See **81j:93006a**) 76C99 (65M99)
- Mareš, Ileana** (with Mareš, C.) The integration of the hydrodynamic primitive equations by the spectral method. *Proceedings of the International Symposium on Applications of Mathematics in System Theory (Univ. Braşov, Braşov, 1978)*, I, pp. 193-198, Univ. Braşov, Braşov, 1979. (See **81j:93006a**) 76C99 (65M99)
- Mareš, Milan** Strong solution of general coalition-game. *Transactions of the Eighth Prague Conference on Information Theory, Statistical Decision Functions, Random Processes (Prague, 1978)*, Vol. B, pp. 29-34, Reidel, Dordrecht, 1978. (See **80d:62004b**) 90D12
- Margaria, I.** (with Zacchi, M.) Tree-manipulation in an algorithm for maximizing parallelism. *Les arbres en algèbre et en programmation (Troisième Colloq. de Lille, Lille, 1978)*, pp. 207-232, Univ. Sci. Tech. Lille, Villeneuve d'Ascq, 1978. (Karel Čulík) **81c:68012** 68B10 (68E10)
- (with Meo, A. R.; Zacchi, M.) Determinacy and maximal parallelism in a structured model of parallel computation. *Calcolo* **16** (1979), no. 3, 305-333 (1980). (Authors' summary) **81g:68041** 68B20
- Margenau, Henry** Wolfgang Youngrau (1908-1979). *Found. Phys.* **10** (1980), no. 1-2, 3-6. (Editors) **81k:01042** 01A70
- Mărgineanu, Ioan** (with Dan, Ştefan) Realizability of automatic system in distributions scattering formalism. *Proceedings of the International Symposium on Applications of Mathematics in System Theory (Univ. Braşov, Braşov, 1978)*, II, pp. 345-350, Univ. Braşov, Braşov, 1979. (See **81j:93006b**) 94C99
- (with Dan, Ştefan) Realizability of automatic systems in distributions admittance formalism. *Proceedings of the International Symposium on Applications of Mathematics in System Theory (Univ. Braşov, Braşov, 1978)*, II, pp. 351-356, Univ. Braşov, Braşov, 1979. (See **81j:93006b**) 94C99
- Margiocco, Marco** The maximum symmetrisation of a category. (Italian) *Matematiche (Catania)* **32** (1977), no. 1, 106-118 (1979). (Giuseppe Conte) **81g:18005** 18B10
- Margolin, A. A.** (with Calenko, M. Š.) Schreier's theorem in categories with involution. (Russian) *Math. Nachr.* **91** (1979), 401-412. (A. Wiegner) **81f:18013** 18B10
- Margolis, D. L.** Bond graphs for distributed system models admitting mixed causal inputs. *Trans. ASME Ser. G J. Dynamic Systems Measurement Control* **102** (1980), no. 2, 94-100. (Authors' summary) **81h:73044** 73K99
- Dynamical models for multidimensional structures using bond graphs. *Trans. ASME Ser. G J. Dynamic Systems Measurement Control* **102** (1980), no. 3, 180-187. (Authors' summary) **81j:73067** 73K99
- Margolis, Stephen B.** An analytical solution for the multidimensional degradation of a packed bed thermocline. *J. Franklin Inst.* **307** (1979), no. 1, 39-58. (Authors' summary) **81g:80005** 80A20 (76S05)
- Theoretical analysis of steady nonadiabatic premixed laminar flames. *Quart. Appl. Math.* **38** (1980/81), no. 1, 61-89. (K. S. Harinath) **81e:80013** 80A30 (34E05)
- Margrave, Geoffrey** Special arithmetic subgroups of Chevalley groups. *Amer. J. Math.* **101** (1979), no. 6, 1285-1301. (Gopal Prasad) **81k:22011** 22E40 (10D07, 20C99)
- Margulis, G. A.** (with Soifer, G. A.) Nonfree maximal subgroups of infinite index of the group $SL_n(\mathbb{Z})$. (Russian) *Uspehi Mat. Nauk* **34** (1979), no. 4(208), 203-204. (James E. Humphreys) **81k:20064** 20H05 (22E40)
- Multiplicative groups of a quaternion algebra over a global field. (Russian) *Dokl. Akad. Nauk SSSR* **252** (1980), no. 3, 542-546. (P. M. Cohn) **81k:12018** 12A80 (16A39)
- See also *Raghunathan, M. S.*, **81f:01035a**
- Marichev, G.** Expression of the resolvent of a kernel-sum in terms of the resolvents of the summands. (Russian) *Differentsial'nye Uravneniya* **16** (1980), no. 5, 944-946, 959. (S. N. Krackovskii) **81k:45002** 45D05
- Mariano, Roberto S.** (with McDonald, James B.) A note on the distribution functions of LIML and 2SLS structural coefficient in the exactly identified case. *J. Amer. Statist. Assoc.* **74** (1979), no. 368, 847-848. (Authors' summary) **81a:62111** 62P20
- (with Hale, C.; Ramage, J. G.) Finite sample analysis of misspecification simultaneous equation models. *J. Amer. Statist. Assoc.* **75** (1980), no. 370, 418-427. (V. K. Srivastava) **81j:62201** 62P20 (62F11)
- Marias, Michel** Transformations canoniques linéaires dans les espaces de Hilbert. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **289** (1979), no. 13, A641-A642. (Gerhard Hegerfeldt) **81c:46057** 46N05 (81E99)
- Marik, Nebojsa** (with Graybill, Franklin A.) Small samples confidence intervals on common mean of two normal distributions with unequal variances. *Comm. Statist. A—Theory Methods* **8** (1979), no. 13, 1255-1269. (Arthur Cohen) **81b:62044** 62F25
- Marik, Vojtěch** (with Tomić, Miodrag) Asymptotics of solutions of a generalized Thomas-Fermi equation. *J. Differential Equations* **35** (1980), no. 1, 36-44. (T. G. Hallam) **81j:34100** 34E05
- Marik, Z.** (with Popović-Božić, M.) Coefficients of fractional parentage for the states of an arbitrary number of $j=1$ bosons. *J. Phys. A* **13** (1980), no. 9, 2881-2888. (Authors' summary) **81h:81167** 81G50 (22E70)
- Marica, Carmen** (with Rusu, I.; Viaşu, Maria; Borş, Maria; Eftimescu, Cornelia) Central projections onto B_2 . (Romanian. French summaries) *Bul. Inst. Politehn. Iaşi Sect. I* **25**(29) (1979), no. 1-2, 91-94. (L. Bitay) **81i:51020** 51N05
- Marichev, O. I.** An integral representation of the solutions of a generalized biaxially symmetric Helmholtz equation and formulas for its inversion. (Russian) *Differentsial'nye Uravneniya* **14** (1978), no. 10, 1824-1831, 1917. (B. P. Panejah) **81c:35024** 35C15
- Marie, Raymond** (with Stewart, William J.) A numerical solution for the $\lambda(n)/C_k/r/n$ queue. *European J. Oper. Res.* **5** (1980), no. 1, 56-68. (R. Bergmann) **81m:60171** 60K25 (65U05)
- Märis, V. A.** Numerical method for the determination of the magnetic induction produced by symmetry sources. (French and German summaries) *Rev. Roumaine Sci. Tech. Sér. Electrotech. Énergét.* **25** (1980), no. 1, 17-33, ii, iii. (P. M. Gupta) **81j:65135** 65R20 (78-04)
- Marik, Jan** Linear differential equations of second order with discontinuous coefficients. *Real Anal. Exchange* **5** (1979/80), no. 2, 274-284. (A. I. Perov) **81i:34005** 34A30
- guin Mariani, Joseph V.** See *Guin Mariani, Joseph V.*
- Martin, S. P.** (with MacCamy, Richard C.) A finite element method for exterior interface problems. *Internat. J. Math. Math. Sci.* **3** (1980), no. 2, 311-350. (Georges A. Lebaud) **81h:65113** 65N30
- Marina Borghesani, Maria Erminia** Some nonlinear elliptic variational inequalities of second order. (Italian. English summary) *Ann. Mat. Pura Appl.* (4) **117** (1978), 297-310. (M. Biroli) **81h:49005** 49A29 (35J60, 47H15)
- An extension of a theorem of Leray and Lions to unbounded sets. (Italian. English summary) *Ann. Mat. Pura Appl.* (4) **121** (1979), 77-89. (M. Biroli) **81c:35048** 35J60 (49A29)
- The convergence of a sequence of nonlinear operators, and its perturbation by variational inequalities. (Italian. English summary) *Rend. Sem. Mat. Univ. Padova* **61** (1979), 155-175 (1980). (Lucio Boccardo) **81e:49010** 49A29 (35J60, 47H15, 49D50)
- Marinari, M. G.** (with Raimondo, Mario) Vector bundles over algebraic varieties defined over algebraically nonclosed fields. (Italian. English summary) *Boll. Un. Mat. Ital. A* (5) **16** (1979), no. 1, 128-136. (A. Tognoli) **81a:14005** 14F05 (14G30)
- (with Niesi, G.) On the locus where the Cohen-Macaulay type has a fixed bound. *J. London Math. Soc.* (2) **21** (1980), no. 3, 413-418. (Ulrich Orbanz) **81i:13007** 13H10 (14M05)
- Marinero, M.** (with Grella, G.) $1/N$ expansion of $O(N)$ symmetric theories in terms of static ultralocal solutions. (Italian and Russian summaries) *Nuovo Cimento A* (11) **55** (1980), no. 2, 227-239. (Authors' summary) **81e:81097** 81E99
- Marinich, M. A.** Ljapunov periodic motions of a heavy rigid body with a fixed point. (Russian. English summary) *Vestnik Moskov. Univ. Ser. I Mat. Meh.* **1979**, no. 5, 75-79, 89. (I. A. Galiullin) **81b:70003** 70E15 (58F40)
- Marinescu, Daniela** A universal Turing machine with three tapes for normal algorithms. (Romanian. French summary) *Bul. Univ. Braşov Ser. C* **20** (1978), 87-100. (D. Simovici) **81a:03040** 03D10 (68C40)
- Marinescu, Paul V.** A method for determining the velocity and temperature distribution in incompressible jet flow. (Romanian. English summary) *Bul. Inst. Politehn. Bucureşti Ser. Mec.* **42** (1980), no. 1, 73-83. (Authors' summary) **81m:76027** 76F99 (76D25)
- Marino, Antonio** (with Scolozzi, Donato) Homological properties of the sublevels of some even functions on Hilbert spaces. (Italian. English summary) *Boll. Un. Mat. Ital. B* (5) **15** (1978), no. 2, 436-469. (U. D'Ambrosio) **81c:58025** 58E05
- Marino, E. C.** (with Swica, J. A.) Order, disorder and generalized statistics. *Nuclear Phys. B* **170** (1980), no. 1 FS 1, 175-186. (Authors' summary) **81f:81061** 81E99 (81E15, 82A25, 82A67)
- Marino, T.** (with Di Piazza, L.; Maniscalco, C.) Heredity of Carathéodory measures. (Italian. English summary) *Rend. Circ. Mat. Palermo* (2) **28** (1979), no. 1, 134-142. (A. Revuz) **81j:28002** 28A12
- Marinov, Corneliu** Comments on: "Some theorems on the dynamic response of nonlinear transistor networks" [Bell System Tech. J. **48** (1969), 35-54; MR **38** #6860] by I. W. Sandberg. (French and German summaries) *Rev. Roumaine Sci. Tech. Sér. Electrotech. Énergét.* **24** (1979), no. 2, 295-296, vii, viii. (From the text) **81m:94028** 94C05
- Marinov, M. S.** Analytic bicategories. (Bulgarian. Russian and English summaries) *Godišnik Visi. Učebn. Zaved. Prilozna Mat.* **14** (1978), no. 1, 85-92. (Editors) **81g:18012**

- 18D05 (32B10)
(with Terent'ev, M. V.) Dynamics on the group manifold and path integral. *Fortschr. Phys.* 27 (1979), no. 11-12, 511-545. (J. S. Joel) **81e:81049** 81C35 (58D20, 58D30, 58G40)
- Invariant volumes of compact groups. *J. Phys. A* 13 (1980), no. 11, 3357-3366. (Kurt Bernardo Wolf) **81m:53053** 53C20 (22E15, 22E30, 43A77, 81C40)
- Path integrals in quantum theory: an outlook of basic concepts. *Phys. Rep.* 60 (1980), no. 1, 57 pp. (E. Wiczeorek) **81e:81050** 81C35 (58D20, 58D25)
- Markov, P. On the second law of thermodynamics for a singular surface. (Russian and Bulgarian summaries) *Teoret. Prilož. Meh.* 10 (1979), no. 2, 32-37. (J. Meixner) **81h:80002** 80A10
- Mário, Figueira (with Dias, João-Paulo) Décroissance à l'infini de la solution d'une équation non linéaire du type Schrödinger-Hartree. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 19, A889-A892. (Jesús Hernández) **81m:35122** 35Q20 (35B40)
- Marion, Jerry B. (with Heald, Mark A.) ★Classical electromagnetic radiation. Second edition. Academic Press [Harcourt Brace Jovanovich, Publishers], New York-London, 1980. xvii+488 pp. ISBN 0-12-472257-1 (Editors) **81e:78001** 78-01 (78A40)
- Maritz, J. S. On Theil's method in distribution-free regression. *Austral. J. Statist.* 21 (1979), no. 1, 30-35. (James N. Adichie) **81h:62065** 62J05 (62G10)
- (with Lwin, T.) A note on the problem of statistical calibration. *J. Roy. Statist. Soc. Ser. C* 29 (1980), no. 2, 135-141. (Authors' summary) **81e:62065** 62F99 (62J02)
- Marvella, K. H. Relativity of paths: applications to mechanics and cosmology. *Proceedings of the Conference on Mathematical Methods in Physics (Mysore, 1978)*, Part A, pp. 284-310, *Matscience Rep.*, 96, *Inst. Math. Sci., Madras*, 1979. (From the introduction) **81g:83070** 83F05 (53C80)
- Uniqueness of classical and relativistic systems. *Phys. Lett. A* 79 (1980), no. 2-3, 143-146. (From the text) **81h:83012** 83C05
- Mark, Franz (with Rosicky, Franz) Analytical relativistic Hartree-Fock equations within scalar basis sets. *Chem. Phys. Lett.* 74 (1980), no. 3, 562-567. (Authors' summary) **81h:81118** 81G55
- Markatos, N. C. (with Koosinlin, M. L.; Mout, A.; Spalding, D. Brian) Mathematical models for the prediction of thermal pollution in rivers. *Simulation of systems '79 (Proc. Ninth IMACS Congress, Sorrento, 1979)*, pp. 633-643, North-Holland, Amsterdam, 1980. (Authors' summary) **81h:90038** 90A30 (92A17)
- Markaver, A. P. (with Sokol'skii, A. G.) Method of studying periodic motions of Ljapunov and Hamiltonian systems and its realization on computer. (Russian. English summary) *Trudy Inst. Teoret. Astronom.* No. 17 (1978), 62-68. (Ė. G. Al'breht) **81h:70011** 70H15 (34C25, 70J15)
- Markaver, B. M. On isothermal gas flow between parallel planes with arbitrary tangential momentum accommodation. *Prikl. Mat. Meh.* 41 (1977), no. 4, 660-666 (Russian); translated as *J. Appl. Math. Mech.* 41 (1977), no. 4, 674-680 (1978). (Simona Popp) **81d:76076** 76N15 (35Q99)
- Markel, John D. (with Buzo, Andrés; Gray, Augustine H., Jr.; Gray, Robert M.) Speech coding based upon vector quantization. *IEEE Trans. Acoust. Speech Signal Process.* 28 (1980), no. 5, 562-574. (Authors' summary) **81h:68126** 68G10
- Markellos, Vasilis Periodic orbits with and without symmetry in the three-dimensional general three-body problem. *Instabilities in dynamical systems (Proc. NATO Adv. Study Inst., Cortina d'Ampezzo, 1978)*, pp. 243-250, NATO Adv. Study Inst. Ser., Ser. C: Math. and Phys. Sci., 47, Reidel, Dordrecht, 1979. (George Contopoulos) **81a:70009** 70F07 (with Robin, I. A.) Numerical determination of three-dimensional periodic orbits generated from vertical self-resonant satellite orbits. *Celestial Mech.* 21 (1980), no. 4, 395-434. (Authors' summary) **81a:70030** 70M10 (70M05)
- Markenscoff, Xanthippi Fourth-order elastic constants: general method for determination and applications. (French summary) 8th International Symposium on Nonlinear Acoustics (École Nat. Supérieure de Chimie de Paris, Paris, 1978). *J. Physique* 40 (1979), no. 11 suppl. Colloque C-8, C8-213-C8-215. (A. J. M. Spencer) **81e:73030** 73D99 (82A60)
- The transient motion of a nonuniformly moving dislocation. (French summary) *J. Elasticity* 10 (1980), no. 2, 193-201. (From the introduction) **81d:73093** 73S05
- Markett, C. (with Görlich, E.) On approximation by Cesàro means of the Laguerre expansion and best approximation. *Resulante Math.* 2 (1979), no. 2, 124-150. (Walter Trebel) **81f:42024** 42C10 (33A65, 41A10)
- Marković, V. E. See Liebocher, Dierrick-Ekhehard, **81h:83009b**
- Markham, Thomas L. (with Carlson, David H.) Schur complements of diagonally dominant matrices. *Czechoslovak Math. J.* 29(104) (1979), no. 2, 246-251. (Emilie V. Haynsworth) **81h:15005** 15A15
- Two properties of M-matrices. *Linear Algebra Appl.* 28 (1979), 131-134. (Mituhiro Araki) **81h:15019** 15A45 (15A57)
- Marki, L. (with Kaiser, H. K.) Remarks on a paper of L. Szabo and Á. Szendrei: "Almost all algebras with triply transitive automorphism groups are functionally complete" [Acta Sci. Math. (Szeged) 41 (1979), no. 3-4, 391-402; MR 81j:08006a]. *Acta Sci. Math. (Szeged)* 42 (1980), no. 1-2, 95-98. (H. Peter Gumm) **81g:08066** 08A35 (20B27)
- (with Miltz, R.; Strecker, Reinhard) Strict radicals of monoids. *Semigroup Forum* 21 (1980), no. 1, 27-66. (J. K. Luedeman) **81h:20095** 20M11 (16A21)
- Markiewicz, Teresa Sur l'approximation des fonctions par les moyennes de Nörlund des séries de Fourier et leurs conjuguées. *Funct. Approx. Comment. Math.* 8 (1980), 77-83. (R. K. Beaton) **81k:42008** 42A24 (40G05)
- Markley, Nelson G. (with Paul, Michael E.) Almost automorphic symbolic minimal sets without unique ergodicity. *Israel J. Math.* 34 (1979), no. 3, 259-272 (1980). (Pierre Michel) **81f:28024** 28D20 (54H20)
- (with De Raggi, Dennis F.) The structure of codimension one distal flows with nontrivial isotropy. *Rocky Mountain J. Math.* 9 (1979), no. 4, 601-616. (Gustav A. Hedlund) **81a:58044** 58F25 (22D40, 54H20)
- Marko, V. F. (with Maksymiv, E. M.; Pustomel'nikov, I. P.) Nonlinear Taylor-Aitken formulas. (Russian) *Vestnik L'vov. Politehn. Inst. No. 141 Differentsial'nye Uravneniya i ih Priłożen.* 60-62, 120. (Authors' summary) **81h:65017** 65D15
- Markov, A. A. See Markov, Andrei Andreievich
- Markov, A. I. (with Egorov, V. N.) Ádám's conjecture for graphs with circulant adjacency matrices. (Russian) *Dokl. Akad. Nauk SSSR* 249 (1979), no. 3, 529-532. (A. Ádám)
- 81h:05051** 05C20 (05C25, 20B25)
- Markov, A. I. The problem of localization of information in the mathematical theory of time codes. (Russian) *Problemy Kibernet.* No. 36 (1979), 55-63, 279. (V. A. Zinov'ev) **81i:94020** 94B60
- Markov, Andrei Andreievich See *Studies in the theory of algorithms and mathematical logic*, **81h:03003**
- Markov, I. A. (with Kel'man, I. A.; Krupnikov, G. P.; Rabinovič, S. I.) A model approach to the study of scanning systems of image processing in a real time scale. (Russian) *Automation, analysis and pattern recognition*, 1 (Russian), pp. 5-19, 261, "Zinatne", Riga, 1979. (Authors' summary) **81f:68165** 68G10
- Markov, Ju. G. Application of Poincaré periodic solutions to the study of the Moon's rotational motion. *Astronom. Zh.* 57 (1980), no. 2, 397-405 (Russian); translated as *Soviet Astronom.* 24 (1980), no. 2, 228-232. (C. Marchal) **81m:70013** 70E15 (70F15)
- Markov, K. On the inhomogeneity problem in micropolar elasticity. (Bulgarian and Russian summaries) *Teoret. Prilož. Meh.* 10 (1979), no. 3, 4, 7, 52-59. (From the text) **81g:73115** 73S99
- Markov, P. E. Infinitesimal bendings of certain multidimensional surfaces. (Russian) *Mat. Zametki* 27 (1980), no. 3, 469-479, 495. (V. T. Fomenko) **81h:53065** 53C45
- Markov, S. M. Existence and uniqueness of solutions of the interval differential equation $X' = F(t, X)$. *C. R. Acad. Bulgare Sci.* 31 (1978), no. 12, 1519-1522. (R. D. Driver) **81j:34024** 34A99 (93C05)
- Markov, S. N. Sufficient conditions for absence of essentially singular points. (Russian) *Izv. Akad. Nauk Kazah. SSR Ser. Fiz.-Mat.* 1980, no. 3, 75-77, 90. (Nicolae Luca) **81m:34005** 34A20 (34D20)
- Markov, V. A. (with Lici, N. A.) Lobačevskii and Einstein. Sources of the general theory of relativity. (Russian) *Latvijas PSR Zināt. Akad. Vēstis* 1979, no. 12(389), 18-32. (H. Treder) **81m:01036** 01A55 (83-03)
- Markov, V. T. Systems of generating T-ideals of finitely generated free algebras. (Russian) *Algebra i Logika* 18 (1979), no. 5, 587-598, 632-633. (Horst Reichel) **81k:16004** 16A06
- Markov, Yu. G. See Markov, Ju. G.
- Markova, V. P. Logical synthesis using a Fourier transform of Boolean functions. (Russian) *Vychisl. Sistemy No. 73 Voprosy Teorii i Prilozheniya Vychislitel'nykh Sistem* (1978), 80-92, 169. (Jürgen Dassow) **81e:94049** 94C10
- (with Bandman, O. L.) Analysis of properties of hypergraphs and graphs by means of their Fourier transforms. (Russian) *Vychisl. Sistemy No. 77* (1978), 3-19, 114. (Pavel Tomasta) **81f:05126** 05C65 (43A99)
- Marković, O. F. Investigation of a singular sum in systems of Waring type by the elementary smoothing method. (Russian) *Kulbyšev. Gos. Ped. Inst. Naučn. Trudy* 215 (1978), *Issled. po Additional Teor. Čisl.* 30-37. (M. I. Israilov) **81k:10078** 10J06
- Markovičev, A. S. Lower nil-radical of rings of type (γ, δ) . (Russian) *Algebra i Logika* 17 (1978), no. 3, 287-302, 358. (G. V. Dorofeev) **81h:17003** 17A30
- Nilpotency of the associator ideal of a (γ, δ) -ring. (Russian) *Sibirsk. Mat. Zh.* 21 (1980), no. 3, 228-230, 239. (Harry F. Smith) **81j:17003** 17A30
- Markovski, Smile Imbeddings of n-groups in an n-quasigroup. (Macedonian. English summary) *Prirod.-Mat. Fak. Univ. Kiril Metodij Skopje Godišen Zb.* 28 (1977), 27-31. (Author's summary) **81d:20065** 20N15
- On a class of semigroups. (Macedonian. English summary) *Mat. Bilten* 28 (1978), no. 2, 29-36. (Editors) **81d:20052** 20M10 (20N15)
- Markowitz, Michael J. Holomorphic affine and projective connections of hyperbolic type. *Math. Ann.* 245 (1979), no. 1, 55-62. (A. L. Vitter, III) **81d:32017** 32C10 (32H15, 32H20, 53B10)
- Markowsky, George Diagnosing single faults in fanout-free combinational circuits. *IEEE Trans. Comput.* 28 (1979), no. 11, 863-864. (A. J. Tosser) **81d:94037** 94C10
- The representation of posets and lattices by sets. *Algebra Universalis* 11 (1980), no. 2, 173-192. (R. P. Dilworth) **81h:06003** 06A10 (05A05, 06A23)
- The level polynomials of the free distributive lattices. *Discrete Math.* 29 (1980), no. 3, 275-285. (D. J. Kleitman) **81e:05054** 05B35 (06D05)
- Markozavil', N. I. (with Kuprava, T. K.) Necessary optimality conditions for a periodic optimal control problem with lag. (Russian. Georgian and English summaries) *Sobšč. Akad. Nauk Gruz. SSR* 96 (1979), no. 1, 41-44. (Jiri V. Outrata) **81e:49021** 49B27
- Markus, A. S. (with Parilis, E. Ė.) Change of the Jordan structure of a matrix under small perturbations. (Russian) *Linear operators. Mat. Issled.* No. 54 (1980), 98-109, 167. (Jaroslav Zemánek) **81j:47013** 47A55 (15A21)
- (with Fel'dman, I. A.) The relation between certain properties of an operator matrix and its determinant. (Russian) *Linear operators. Mat. Issled.* No. 54 (1980), 110-120, 167. (Ju. I. Ljubič) **81j:47004** 47A05
- Markus, Lawrence Extension and interpolation of catastrophes. *Bifurcation theory and applications in scientific disciplines (Papers, Conf., New York, 1977)*, pp. 134-149, *Ann. New York Acad. Sci.*, 316, New York Acad. Sci., New York, 1979. (James Callahan) **81m:58021** 58C28 (57R45)
- Jets and genericity in qualitative dynamics. *New approaches to nonlinear problems in dynamics (Proc. Conf., Pacific Grove, Calif., 1979)*, pp. 418-430, SIAM, Philadelphia, Pa., 1980. (Michael J. Field) **81k:58040** 58F10 (34C35, 70K20)
- (with Meyer, Kenneth R.) Periodic orbits and solenoids in generic Hamiltonian dynamical systems. *Amer. J. Math.* 102 (1980), no. 1, 25-92. (Clark Robinson) **81g:58013** 58F05 (34C25, 58F22)
- Markus, T. See *Problems of numerical analysis and systems programming*, **81j:65010**
- Markusëvič, A. I. ★Введение в классическую теорию абелевых функций. (Russian) [Introduction to the classical theory of abelian functions] "Nauka", Moscow, 1979. 239 pp. (Reinhard Bölling) **81e:14024** 14Kxx (14K20, 32G20)
- Some questions of the history of the theory of analytic functions in the 19th century. (Russian) *Proceedings of the International Congress of Mathematicians (Helsinki, 1978)*, pp. 1015-1020, *Acad. Sci. Fennica, Helsinki*, 1980. (I. Grattan-Guinness) **81m:01037** 01A55 (30-03)
- See also *Obituary: Markusëvič, A. I.*, **81k:01056** and Kolmogorov, A. N.; et al., **81m:01059**
- Markusëvič, L. A. A generalized Robin problem. (Russian) *Questions in the metric theory of mappings and its application (Proc. Fifth Colloq. Quasiconformal Mappings, Generalizations Appl., Donetsk, 1976)* (Russian), pp. 95-99, 184, "Naukova Dumka",

- Kiev, 1978. (E. M. Saak) **81d:31010** 31B20 (35J20)
The generalized Robin problem and a variational method of solving it. (Russian)
Trudy Moskov. Orden. Lenin. Energet. Inst. No. 412 (1979), 93-97, 160. (Erich Miersemann) **81k:59047** 35J20 (31B35)
- Marland, L. G. (with Betts, D. D.) Ground state properties of the $S = \frac{1}{2}XY$ ferromagnet on the triangular lattice. *Phys. Lett. A* **76** (1980), no. 3-4, 271-273. (Authors' summary) **81m:82043** 82A67 (82A25)
(with Oitmas, J.; Betts, D. D.) Susceptibilities of the $S = \frac{1}{2}XY$ model on the square lattice at $T = 0$. *Phys. Lett. A* **79** (1980), no. 2-3, 193-195. (Authors' summary) **81i:82071** 82A67
- Marie, C. M. Action de groupes et séparation de variables pour les systèmes hamiltoniens. (English summary) *J. Math. Pures Appl.* (9) **59** (1980), no. 1, 133-144. (K. R. Meyer) **81h:58031** 58F05 (34C35)
- Marlow, A. R. An extended quantum mechanical embedding theorem. *Quantum theory and gravitation* (Proc. Sympos., Loyola Univ., New Orleans, La., 1979), pp. 71-77. Academic Press, New York, 1980. (S. Gudder) **81f:06004** 06A10 (81B10)
Empirical topology: topologies from partially ordered sets. *Internat. J. Theoret. Phys.* **19** (1980), no. 7, 515-521. (S. Gudder) **81h:06003** 06A10 (54A05, 83C45)
See also *Quantum theory and gravitation*, **81d:83003**
- Marmo, G. (with Balachandran, A. P.) When does a zero field tensor imply a quantized topological charge? *Lett. Nuovo Cimento* (2) **27** (1980), no. 1, 13-16. (Kishore Marathe) **81g:81062** 81E99 (53C05, 81C99)
- Marnelius, Robert (with Nilsson, Bengt) Manifestly conformally covariant field equations and a geometrical understanding of mass. *Phys. Rev. D* (3) **22** (1980), no. 4, 830-838. (Authors' summary) **81i:81049** 81D25 (81E99)
- Marras, Thomas Limit-metrizability of limit spaces and uniform limit spaces. *Categorical topology* (Proc. Internat. Conf., Free Univ. Berlin, Berlin, 1978), pp. 234-242. *Lecture Notes in Math.*, 719, Springer, Berlin, 1979. (Jerry F. Williams) **81b:54030** 54E99
- Maroznik, L. S. (with Naselskii, P. D.; Pelihov, N. V.) Turbulence in cosmology. IV. Asymptotic influence of long-wave disturbances on the expansion of a homogeneous and, on average, isotropic universe close to the cosmological singularity. *Astrophys. and Space Sci.* **67** (1980), no. 2, 261-272. (A. Raychaudhuri) **81f:85005** 85A40
The chaotic universe, Friedmannian on the average. I, II. *Astrophys. and Space Sci.* **69** (1980), no. 1, 3-29, 31-43. (Kenneth Dunn) **81d:83057** 83F05
- Maronna, Ricardo (with Bustos, Oscar; Yohai, Victor) Bias and efficiency-robustness of general M-estimators for regression with random carriers. *Smoothing techniques for curve estimation* (Proc. Workshop, Heidelberg, 1979), pp. 91-116. *Lecture Notes in Math.*, 757, Springer, Berlin, 1979. (A. I. Khuri) **81c:62060** 62F35 (62J05)
- Marošník, Jozef (with Rupańska, Maria) ★Computer networks—terminology. With Polish, Russian and Czech summaries. *Państwowe Wydawnictwo Naukowe (PWN), Warsaw*, 1980. 75 pp. (loose errata). ISBN 83-01-01179-3 (From the summary) **81f:68009** 68A05 (00A20)
- Marasca, Paolo Topological properties of some classes of G-domains. (Italian summary) *Boll. Un. Mat. Ital. A* (5) **15** (1978), no. 3, 688-698. (Douglas L. Costa) **81c:13020** 13G05 (13A17, 14A05)
- Marot, Jean La classe des anneaux excellents est-elle fermée par limite inductive noethérienne plate? *Séminaire d'Algèbre Paul Dubreil 31ème année* (Paris, 1977-1978), pp. 198-204. *Lecture Notes in Math.*, 740, Springer, Berlin, 1979. (Gerhard Pfister) **81d:13005** 13B20 (13E05)
About Nagata rings. *Manuscripta Math.* **33** (1980/81), no. 1, 27-35. (L. J. Ratliff, Jr.) **81m:13005** 13B20 (13J10)
- Marotto, Frederick R. Perturbations of stable and chaotic difference equations. *J. Math. Anal. Appl.* **72** (1979), no. 2, 716-729. (L. A. Bunimovich) **81c:58033** 58F12 (39A11, 58F15, 58F30)
- Maroulas, John (with Barnett, Stephen) Continued-fraction expansions for ratios of generalized polynomials. *Appl. Math. Comput.* **6** (1980), no. 3, 229-249. (H.-J. Runkel) **81d:41014** 41A21 (65D15)
- Marquardt, Donald W. See Smith, Gary; et al., **81m:62131**
- Marques, M. C. A. M. (with Duarte, J. A. M. S.) An approach to the isoperimetric problem on some lattices. (Italian and Russian summaries) *Nuovo Cimento B* (11) **54** (1979), no. 2, 508-516. (John L. Challifour) **81a:82012** 82A15 (52A40)
- Marques de Sá, E. On the diagonals of integral matrices. With a loose Russian summary. *Czechoslovak Math. J.* **30(165)** (1980), no. 2, 207-212. (J. D. Dixon) **81c:15021** 15A42
- Marr, G. I. (with Džaparidze, K. O.) Estimation of the spectral parameters of a stochastic process on the basis of observations distorted by noise. (Russian) *Problemy Peredachi Informacii* **14** (1978), no. 1, 37-49. (Jifi Anděl) **81c:62101** 62M10
- Marr, J. M. (with Muenzenberger, T. B.) Betweenness in ordered spaces. *J. Indian Math. Soc. (N.S.)* **42** (1978), no. 1-4, 157-172 (1979). (H. A. Priestley) **81a:54028** 54F05 (06A10, 54F15)
- Marra, R. (with De Angelis, G. F.; de Falco, Diego; Guerra, Francesco) Gauge fields on a lattice (selected topics). *Facts and prospects of gauge theories* (Proc. XVII. Internat. Universitätswochen für Kernphysik, Schladming, 1978), pp. 205-247. *Acta Phys. Austriaca Suppl.*, XIX, Springer, Vienna, 1978. (M. Carmeli) **81i:81067** 81E99 (82A25)
- Marras, R. Characterization of the inverse of a particular circulant matrix by means of a continued fraction. *Discrete Appl. Math.* **2** (1980), no. 2, 163-165. (Ronald L. Smith) **81f:15009** 15A09 (15A57, 90C10)
- Marrero, Osvaldo A conjecture concerning the existence of certain combinatorial designs. *Rev. Colombiana Mat.* **14** (1980), no. 2, 95-100. (From the text) **81k:05016** 05B05
- Marris, A. W. (with Stallybrass, M. P.) A class of fluid motions obtained by superposition. *Atti Accad. Sci. Torino Cl. Sci. Fis. Mat. Natur.* **113** (1979), no. 1-2, 53-60. (William H. H. Banks) **81c:76015** 76D05
- Marmaglia, George Generating random variables with a t -distribution. *Math. Comp.* **34** (1980), no. 149, 235-236. (Authors' summary) **81a:65015** 65C10
- Marikál, A. The rate of convergence of the method of discrete ordinates in the case of Gaussian quadratures. (Russian. English summary) *Tartu Riikl. Ül. Toimetised No. 500 Trudy Mat. i Meh. i Meh. no. 25* (1979), 92-104. (Gheorghe Coman) **81h:65024** 65D32
- Marudén, Jerrold E. (with Abraham, Ralph) ★Foundations of mechanics. A mathematical exposition of classical mechanics with an introduction to the qualitative theory of dynamical systems and applications to the three-body problem. Second edition, revised and enlarged. With the assistance of Tudor Rațiu and Richard Cushman. Benjamin/Cummings Publishing Co., Inc., Advanced Book Program, Reading, Mass., 1978. xxii + m-xvi + 806 pp. ISBN 0-8053-0102-X (D. L. Rod) **81c:58025** 58Fxx (70-02, 70F07)
(with Holmes, Philip J.) Bifurcations to divergence and flutter in flow-induced oscillations: an infinite-dimensional analysis. *Control of distributed parameter systems* (Proc. Second IFAC Symposium, Coventry, 1977), pp. 133-145, IFAC, Düsseldorf, 1978. (Authors' summary) **81j:73047** 73J10 (58F14, 73H05)
(with Hughes, Thomas J. R.) Topics in the mathematical foundations of elasticity. *Nonlinear analysis and mechanics: Heriot-Watt Symposium, Vol. II*, pp. 30-285, *Re. Notes in Math.*, 27, Pitman, London, 1978. (C.-C. Wang) **81j:73004** 73A05
(with Holmes, Philip J.) Bifurcations of dynamical systems and nonlinear oscillations in engineering systems. *Nonlinear partial differential equations and applications* (Proc. Special Sem., Indiana Univ., Bloomington, Ind., 1976-1977), pp. 163-206. *Lecture Notes in Math.*, 648, Springer, Berlin, 1978. (S. Ju. Pilugin) **81j:58062** 58F14 (35B32, 73J10)
(with Chorin, Alexandre Joel) ★A mathematical introduction to fluid mechanics. Springer-Verlag, New York-Heidelberg, 1979. viii + 205 pp. ISBN 0-387-90406-9 (B. Szafirski) **81m:76001** 76-02 (35Qxx, 58-01)
(with Holmes, Philip J.) Qualitative techniques for bifurcation analysis of complex systems. *Bifurcation theory and applications in scientific disciplines* (Papers, Conf., New York, 1977), pp. 608-622, *Ann. New York Acad. Sci.*, 316, New York Acad. Sci., New York, 1979. (G. R. Sell) **81h:34052** 34C35 (58F14, 73J10)
(with Fischer, Arthur E.) The initial value problem and the dynamical formulation of general relativity. *General relativity*, pp. 138-211, Cambridge Univ. Press, Cambridge, 1979. (See **81i:83002**) 83C05
On the geometry of the Liapunov-Schmidt procedure. *Global analysis* (Proc. Biennial Sem. Canad. Math. Congr., Univ. Calgary, Calgary, Alta., 1978), pp. 77-82. *Lecture Notes in Math.*, 755, Springer, Berlin, 1979. (R. A. Plastock) **81c:58028** 58E07 (47H15)
(with Holmes, Philip J.) Dynamical systems and invariant manifolds. *New approaches to nonlinear problems in dynamics* (Proc. Conf., Pacific Grove, Calif., 1979), pp. 3-25, SIAM, Philadelphia, Pa., 1980. (W. R. Utz) **81k:34042** 34D40 (58F15, 58F40, 73J10)
See also *Global analysis*, **81a:58001**
- Martens, Martin J. Operator norm bounds and error bounds for quadratic spline interpolation. *Approximation theory* (Papers, Vth Semester, Stefan Banach Internat. Math. Center, Warsaw, 1975), pp. 159-175, Banach Center Publ., 4, PWN, Warsaw, 1979. (From the introduction) **81f:41010** 41A15 (65D07)
(with Usmani, Riaz A.) Convergence of a numerical procedure for the solution of a fourth order boundary value problem. *Proc. Indian Acad. Sci. Sect. A Math. Sci.* **80** (1979), no. 1, 21-30. (Authors' summary) **81j:65093** 65L10
- Marsh, A. B., III (with Cunningham, William H.) A primal algorithm for optimum matching. Polyhedral combinatorics. *Math. Programming Stud.* **8** (1978), 50-72. (L. E. Trotter, Jr.) **81a:68067** 68E10 (05C99, 90C10)
- Marsh, James E. (with Eastep, Franklin E.) Analysis of a symmetric transonic aeroloid with the finite element method: a new upwinding technique. *Internat. J. Numer. Methods Engrg.* **16** (1980), Special Issue, 137-148. (Authors' summary) **81m:76028** 76H05 (65N30)
- Marshall, E. R. Microscopic foundation for the particle-vibrator model. *Phys. Lett. B* **93** (1980), no. 3, 245-248. (Authors' summary) **81d:81116** 81G35
- Marshall, Albert W. (with Olkin, Ingram) ★Inequalities: theory of majorization and its applications. Mathematics in Science and Engineering, 143. Academic Press [Harcourt Brace Jovanovich, Publishers], New York-London-Toronto, Ont., 1979. xx + 569 pp. ISBN 0-12-473750-1 (Michael O. Albertson) **81h:00002** 00A05 (05-02, 15A42, 15A45, 52A40, 60E15, 65-02)
- Marshall, Bernard (with Strauss, Walter Alexander; Wainger, Stephen) Estimates from L^1 to its dual for the Klein-Gordon equation. *Harmonic analysis in Euclidean spaces* (Proc. Sympos. Pure Math., Williams Coll., Williamstown, Mass., 1978), Part 2, pp. 175-177. *Proc. Sympos. Pure Math.*, XXXV, Part 2, Amer. Math. Soc., Providence, R.I., 1979. (Gustavo Perla Menzala) **81a:35053** 35L05 (35C20)
(with Strauss, Walter Alexander; Wainger, Stephen) L^p - L^q estimates for solutions of the Klein-Gordon equation. *Fourier analysis* (Proc. Sem., El Escorial, 1979), pp. 193-200, *Asoc. Mat. Española*, 1, Asoc. Mat. Española, Madrid, 1980. (Editor) **81m:35080** 35L05
- Marshall, Donald E. Painlevé null sets. *Colloque d'Analyse Harmonique et Complexe*, 5 pp. (not consecutively pagged), Univ. Aix-Marseille I, Marseille, 1977. (V. I. Gavrlov) **81j:30036** 30C85 (30D99)
- Marshall, E. A. On the exact analytical solution of the Poisson-Boltzmann equation. *J. Theoret. Biol.* **81** (1979), no. 3, 613-616. (H. A. DeKleine) **81d:34024** 34B30 (92A15)
- Marshall, Guillermo (with Menendez, Angel) Numerical solution of a nonconservation form in shallow water theory. *Boundary and interior layers—computational and asymptotic methods* (Proc. Conf., Trinity College, Dublin, 1980), pp. 365-369, *Boole, Dublin*, 1980. (See **81j:76001**) 76B15
- Marshall, J. E. ★Control of time-delay systems. *IEEE Control Engineering Series*, 10. Peter Peregrinus, Ltd., Stevenage; on behalf of the Institution of Electrical Engineers (IEE), London, 1979. xii + 225 pp. ISBN 0-906048-12-5 (Publisher's description) **81k:93040** 93C50
- Marshall, John T. (with Carriere, Edward W.) Systematic procedure for the calculation of energy eigenvalues for many-boson systems, with application to the polaron problem. *Phys. Rev. B* (3) **21** (1980), no. 10, 4264-4268. (Authors' summary) **81g:81114** 81Hxx
- Marshall, Murray Spaces of orderings. IV. *Canad. J. Math.* **32** (1980), no. 3, 603-627. (Thomas C. Craven) **81m:10035** 10C04 (10C05)
The Witt ring of a space of orderings. *Trans. Amer. Math. Soc.* **258** (1980), no. 2, 505-521. (Thomas C. Craven) **81b:10012** 10C05 (12D15)
- Marshall, R. J. Autocorrelation estimation of time series with randomly missing observations. *Biometrika* **67** (1980), no. 3, 567-570. (Authors' summary) **81m:62172** 62M10
- Marshall, Trevor W. On the sums of a family of Kapteyn series. (French summary) *Z. Angew. Math. Phys.* **30** (1979), no. 6, 1011-1016. (R. K. Saxena) **81f:81099** 81L05 (33A70, 78A40)

- (with Claverie, P.) Stochastic electrodynamics of nonlinear systems. I. Particle in a central field of force. *J. Math. Phys.* 21 (1980), no. 7, 1819-1825. (S. C. Lim) **81c:81026** 81C20
- A naive remark concerning the Bohm-Aharonov experiment. *Phys. Lett. A* 79 (1980), no. 2-3, 147-149. (Author's summary) **81b:81009** 81B05
- Martineau, B. J. (with Wainwright, J.) Some exact cosmological models with gravitational waves. *Phys. Lett. A* 72 (1979), no. 4-5, 275-276. (Authors' summary) **81c:83022** 83C35 (53B50, 83F05)
- Martineau, F. R. Sur les systèmes non holonomes. *Rev. Roumaine Math. Pures Appl.* 24 (1979), no. 7, 1075-1084. (Mineo Ikeda) **81c:70006** 70F25 (53B99)
- Martens, Roy E. (with Shephardson, Fred) A Lagrangean relaxation algorithm for the two duty period scheduling problem. *Management Sci.* 26 (1980), no. 3, 274-281. (Authors' summary) **81j:90073** 90B35
- (with Muller, Michael R.) A mixed-integer programming approach to air cargo fleet planning. *Management Sci.* 26 (1980), no. 11, 1096-1107. (Authors' summary) **81c:90051** 90B35 (90C35)
- Martens, J. M. Packing smooth curves in \mathbb{R}^n . *Mathematika* 26 (1979), no. 1, 1-12. (M. Stoka) **81d:52009** 52A45 (53C65)
- Packing planes in \mathbb{R}^3 . *Mathematika* 26 (1979), no. 2, 180-183 (1980). (K. J. Falconer) **81f:28007** 28A75
- Martens-Marzani, Y. See Baran-Marzani, Y.
- Martel, Julian (with Leszczyński, Hieronim) A system of algebraic equations with a sparse matrix for the shield problem using the variational finite difference method. (Polish, Russian and English summaries) *Zeszyty Nauk. Politech. Śląsk. Mat.-Fiz.* No. 29 (1979), 119-130. (S. Matysiak) **81b:73041** 73K30 (65N05)
- Martelli, Mario A note on boundary value problems at resonance. (Italian summary) *Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur.* (8) 64 (1978), no. 4, 356-362. (P. Waltman) **81c:34037** 34C25 (34B15)
- (with Bebernes, J.) Periodic solutions for Liénard systems. (Italian summary) *Boll. Un. Mat. Ital. A* (5) 16 (1979), no. 2, 398-405. (H. O. Tejumola) **81f:34046** 34C25
- Nonrepulsive fixed point theorems and applications to fixed point theory. *Riv. Mat. Univ. Parma* (4) 5 (1979), part 1, 43-53 (1980). (Heinrich Steinlein) **81c:47083** 47H10
- (with Schmitt, Klaus; Smith, Hal) Periodic solutions of some nonlinear delay-differential equations. *J. Math. Anal. Appl.* 74 (1980), no. 2, 494-503. (Ch. G. Philos) **81c:34056** 34K15
- (with Schuur, Jerry D.) Periodic solutions of Liénard type second order ordinary differential equations. *Tōhoku Math. J.* (2) 32 (1980), no. 2, 201-207. (Jean Mawhin) **81b:34046** 34C25
- Martelli, Maurizio Observable effects of foam-like structure of space time. I, II. *Hadronic J.* 3 (1979/80), no. 2, 794-803, 804-813. (Author's summary) **81a:81090** 81G05
- (with Reina, C.; Sodano, P.) A first order system of differential equations for covariant σ models. *J. Math. Phys.* 20 (1979), no. 12, 2619-2620. (Authors' summary) **81f:81065** 81E99 (53C05, 58E20)
- Dynamics of quantum gravity. (Italian and Russian summaries) *Nuovo Cimento B* (11) 54 (1979), no. 1, 1-20. (S. G. Mamaev) **81a:83016** 83C45
- Quantization about Kerr-Schild's gravitational fields. (Italian and Russian summaries) *Nuovo Cimento B* (11) 54 (1979), no. 1, 21-35. (S. G. Mamaev) **81a:83017** 83C45 (58D30)
- (with Sodano, P.) Free quantum gravity in Carmeli's theory. *Phys. Rev. D* (3) 22 (1980), no. 6, 1325-1332. (M. J. Perry) **81f:83044** 83D05 (53B50, 83C45)
- Martello, Silvano (with Toth, Paolo) Optimal and canonical solutions of the change making problem. *European J. Oper. Res.* 4 (1980), no. 5, 322-329. (Authors' summary) **81i:90148** 90C10 (05A05)
- (with Toth, Paolo) A note on the Ingargiola-Korsh algorithm for one-dimensional knapsack problems: "A general algorithm for one-dimensional knapsack problems" [Operations Res. 25 (1977), no. 5, 752-759; MR 58 #15140] by G. P. Ingargiola and J. F. Korsh. *Oper. Res.* 28 (1980), no. 5, 1226-1227. (Editors) **81i:90149** 90C10
- Martensen, Erich The Routh method for the wave equation in several space dimensions. *Proc. Roy. Soc. Edinburgh Sect. A* 84 (1979), no. 1-2, 1-18. (Sean McKee) **81d:65070** 65P05
- Martenson, A.-M. (with Wilets, L.; Henley, E. M.) A variational approach to two-body correlations in atoms. *J. Phys. B* 13 (1980), no. 12, 2335-2348. (Authors' summary) **81c:81161** 81G45
- Martí, Jürg T. An algorithm recursively computing the exact Fourier coefficients of B -splines with nonequidistant knots. (German summary) *Z. Angew. Math. Phys.* 29 (1978), no. 2, 301-305. (Author's summary) **81f:65010** 65D07 (41A15)
- On the numerical stability in solving ill-posed problems. *Numerical treatment of integral equations (Workshop, Math. Res. Inst., Oberwolfach, 1979)*, pp. 171-182. *Internat. Ser. Numer. Math.*, 53, Birkhäuser, Basel, 1980. (From the summary) **81m:65201** 65R20
- Martí, K. On approximative solutions of stochastic programming problems by means of stochastic dominance and stochastic penalty methods. *Survey of mathematical programming (Proc. Ninth Internat. Math. Programming Sympos., Budapest, 1976)*, Vol. 2, pp. 117-127. North-Holland, Amsterdam, 1979. (Wolf-Rüdiger Heilmann) **81h:90112** 90C15
- Marić, Branklav Group manifolds. I. (Serbo-Croatian) *Mat. Vesnik* 31(6)(31) (1979), no. 1, 33-39. (Author's summary) **81f:20042** 20E99
- On some interpolating inequalities. *Publ. Inst. Math. (Beograd) (N.S.)* 26(40) (1979), 171-173. (William N. Everitt) **81c:26011** 26D15
- On a sequence of inequalities. (Serbo-Croatian summary) *Akad. Nauka Umjet. Bosne Hercegov. Rad. Odjeli. Prirod. Mat. Nauka* No. 19 (1980), 129-132. (R. N. Mohapatra) **81m:26012** 26D15
- A note on two inequalities. (Serbo-Croatian summary) *Akad. Nauka Umjet. Bosne Hercegov. Rad. Odjeli. Prirod. Mat. Nauka* No. 19 (1980), 151-154. (R. N. Mohapatra) **81m:26013** 26D15
- Martinkainen, A. I. Necessary and sufficient conditions for the strong law of large numbers. (Russian, English summary) *Teor. Veroyatnost. i Primenen.* 24 (1979), no. 4, 814-820. (P. Révész) **81g:60030** 60F15
- Martin, A. (with Alarcón, E.; Paris, F.) Some minor problems with B.E.M. *Applied numerical modelling (Proc. Second Internat. Conf., Madrid Polytech. Univ., Madrid, 1978)*, pp. 591-600. Pentech, London, 1979. (From the summary) **81d:65062** 65N30
- galaíra Martin, Alfonso See Galaíra Martin, Alfonso
- Martin, Alvin Frank Multiplications on cohomology theories with coefficients. *Trans. Amer. Math. Soc.* 253 (1979), 91-120. (A. Lulevicius) **81c:58008** 55N20 (55N45)
- Martin, André (with Glaser, V.; Grosse, H.) Bounds on the number of eigenvalues of the Schrödinger operator. *Comm. Math. Phys.* 59 (1978), no. 2, 197-212. (Authors' summary) **81a:35081** 35P20 (81C05)
- (with Chadan, Khosrow) Une condition suffisante pour l'existence d'états liés dans un potentiel sans symétrie particulière. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 7, B151-B153. (Authors' summary) **81a:81018** 81C05
- (with Bertmann, R. A.) Inequalities on heavy quark-antiquark systems. *Nuclear Phys. B* 168 (1980), no. 1, 111-136. (G. R. Alcock) **81c:81122** 81G05 (81C05)
- (with Grosse, H.) Exact results on potential models for quarkonium systems. *Phys. Rep.* 60 (1980), no. 6, 341-392. (M. Combes) **81c:10027** 81C05 (81G05)
- Martin, Benjamin J. On a new integral equation arising in the theory of radiative transfer. *Black mathematicians and their works*, pp. 141-151. Dorrance, Ardmore, Pa., 1980. (See **81c:00004**) 65R20
- Martin, C. (with Codina, J. M.; Graells, J.) Electromagnetic phenomena induced by weak gravitational fields. Foundations for a possible gravitational wave detector. *Phys. Rev. D* (3) 21 (1980), no. 10, 2731-2735. (Authors' summary) **81d:83010** 83B05 (83C35)
- Martin, Clarence H. (with Balas, Egon) Pivot and complement-a heuristic for 0-1 programming. *Management Sci.* 26 (1980), no. 1, 86-96. (J. K. Lenstra) **81f:90068** 90C10 (68C25)
- Martin, D. H. (with Jacobson, D. H.; Pachter, Meir; Geveci, T.) ★Extensions of linear-quadratic control theory. Lecture Notes in Control and Information Sciences, 27. Springer-Verlag, Berlin-New York, 1980. xi + 288 pp. ISBN 3-540-10069-5 (S. P. Bhattacharyya) **81g:93001** 93-02
- Prediction sensitivity to functional perturbations in modelling with ordinary differential equations. *Appl. Math. Optim.* 6 (1980), no. 2, 123-137. (Lieuwe Sytse de Jong) **81c:34039** 34D10 (53C21, 58F30, 92A15)
- Martin, David F. (with Chirica, Laurian M.) An order-algebraic definition of Knuthian semantics. *Math. Systems Theory* 13 (1979/80), no. 1, 1-27. (Josef Delink) **81b:68102** 68F20
- Martin, Donald A. (with Mitchell, W.) On the ultrafilter of closed, unbounded sets. *J. Symbolic Logic* 44 (1979), no. 4, 503-506. (M. M. Richter) **81a:03051** 03E35 (03E55, 03E60)
- Infinite games. *Proceedings of the International Congress of Mathematicians (Helsinki, 1978)*, pp. 269-273. Acad. Sci. Fennica, Helsinki, 1980. (Jacques Stern) **81i:04003** 04A15 (90D13)
- Martin, Donald R. Universal source coding of finite alphabet sources via composition classes. *IEEE Trans. Inform. Theory* 25 (1979), no. 5, 549-557. (Gur Dial) **81c:94014** 94A29 (94A34)
- Martin, Gregory D. (with Goodson, R. Eugene) Mapping stability regions in planar slices. *IEEE Trans. Automat. Control* 25 (1980), no. 2, 324-328. (From the introduction) **81a:93079** 93D99
- Martin, Harold W. A Stone-Čech ultrafuzzy compactification. *J. Math. Anal. Appl.* 73 (1980), no. 2, 453-456. (Ying Ming Liu) **81c:54007** 54A40 (54D35)
- Martin, Herbert (with Büninger, Helmut; Schriever, Karl-Heinz) ★Nonparametric sequential selection procedures. *Birkhäuser, Boston, Mass.*, 1980. xi + 488 pp. ISBN 3-7643-3021-X (P. K. Sen) **81c:62069** 62G99 (62F07, 62L99)
- Martin, J. L. (with Gaunt, D. S.; Ord, G.; Torrie, G. M.; Whittington, S. G.) Restricted valence site animals on the simple cubic lattice. *J. Phys. A* 13 (1980), no. 5, 1791-1797. (C. A. Hurst) **81g:82073** 82A67
- Martin, John N. Some misconceptions in the critique of semantic presupposition. *Theoret. Linguist.* 6 (1979), no. 2-3, 235-282. (Author's summary) **81c:03008** 03A05
- Martin, John R. (with Tymchatyn, E. D.) Fixed point sets of 1-dimensional Peano continua. *Pacific J. Math.* 89 (1980), no. 1, 147-149. (Krishna M. Das) **81m:54078** 54H25 (54F20)
- Fixed point sets of LC^∞ , C^∞ continua. *Proc. Amer. Math. Soc.* 81 (1981), no. 2, 325-328. (L. E. Ward, Jr.) **81m:54060** 54F20 (54H25)
- Martin, L. (with Reischer, C.; Rosenberg, Ivo G.) Completeness problems for switching circuits constructed from delayed gates. *Proceedings of the Eighth International Symposium on Multiple-Valued Logic (Rosenmont, Ill., 1978)*, pp. 142-148. IEEE, Long Beach, Calif., 1978. (Authors' summary) **81h:94069** 94C10
- Martin, Maria See Dictionary: Russian-Polish, 81m:90012
- matilla Martin, Miguel See Matilla Martin, Miguel
- Martín, Mirccea (with Nicolescu, Liviu) Einige Bemerkungen über die Deformationsalgebra zweier linearer Zusammenhänge. *Abh. Math. Sem. Univ. Hamburg* 49 (1979), 244-253. (V. Wünsch) **81a:53017** 53B05 (53C25)
- Almost product structures and subcharacteristic algebras. *An. Ştiinţ. Univ. "Al. I. Cuza" Iaşi Sect. I a Mat. (N.S.)* 25 (1979), no. 2, 389-392. (I. Vaisman) **81h:53031** 53C15
- (with Nicolescu, Liviu) On the (∇, F, S) -subpaths. *Bull. Math. Soc. Sci. Math. R. S. Roumaine (N.S.)* 23(71) (1979), no. 2, 177-182. (R. Miron) **81m:53047** 53C15
- Invariant and quasi-invariant deformation algebras. *Rev. Roumaine Math. Pures Appl.* 24 (1979), no. 8, 1219-1227. (J. Vandura) **81f:53020** 53C05
- Martin, Nigel Some homology 3-spheres which bound acyclic 4-manifolds. *Topology of low-dimensional manifolds (Proc. Second Sussex Conf., Chelwood Gate, 1977)*, pp. 85-92. *Lecture Notes in Math.*, 722, Springer, Berlin, 1979. (Lee Rudolph) **81j:57007** 57N10
- Martin, Philippe A. ★Modèles en mécanique statistique des processus irréversibles. (French) [Models of irreversible processes in statistical mechanics] Course organized by the Troisième Cycle de la Physique en Suisse Romande. Lecture Notes in Physics, 103. Springer-Verlag, Berlin-New York, 1979. iv + 134 pp. ISBN 3-540-09509-8 (Steven M. Moore) **81c:82002** 82-02 (47A55, 82A35)
- (with Gruber, Ch.) Equilibrium properties of classical systems with long range forces. *Mathematical problems in theoretical physics (Proc. Internat. Conf. Math. Phys., Lausanne, 1979)*, pp. 156-159. *Lecture Notes in Phys.*, 116, Springer, Berlin, 1980. (From the text) **81b:82005** 82A05

- (with Gruber, Ch.; Lagrin, Ch.) Equilibrium properties of classical systems with long-range forces. BBGKY equation, neutrality, screening, and sum rules. *J. Statist. Phys.* 22 (1980), no. 2, 193-236. (Nicolaes Angelescu) 81m:82006 82A05
- (with Yalcin, T.) The charge fluctuations in classical Coulomb systems. *J. Statist. Phys.* 22 (1980), no. 4, 435-463. (Carlo Cercignani) 81f:82025 82A45 (82A05)
- (with Gruber, Ch.) Can classical statistical mechanics describe an infinite crystal? *Phys. Rev. Lett.* 45 (1980), no. 11, 853-855. (Authors' summary) 81g:82005 82A05
- Martin, R. Douglas Robust estimation for time series autoregressions. *Robustness in statistics (Proc. Workshop, Army Res. Office, Research Triangle Park, N.C., 1978)*, pp. xiv-xv, 147-176. Academic Press, New York, 1979. (See 81e:62032) 62M10
- Approximate conditional-mean type smoothers and interpolators. *Smoothing techniques for curve estimation (Proc. Workshop, Heidelberg, 1979)*, pp. 117-143. *Lecture Notes in Math.*, 757. Springer, Berlin, 1979. (Jifi Andel) 81f:62062 62F35 (62M10)
- (with Kleiner, B.; Thomson, D. J.) Robust estimation of power spectra. With discussion. *J. Roy. Statist. Soc. Ser. B* 41 (1979), no. 3, 313-351. (V. J. Yohai) 81f:62168 62M15 (62F35)
- Martin, R. J. A subclass of lattice processes applied to a problem in planar sampling. *Biometrika* 66 (1979), no. 2, 209-217. (Peter M. Robinson) 81f:62017 62D05 (62M99)
- Martin, R. M. Of servants, lovers, and benefactors: Peirce's algebra of relatives of 1870. *J. Philos. Logic* 7 (1978), no. 1, 27-48. (Joseph W. Dauben) 81j:01024 01A55 (03-03)
- See also Eisele, Carolyn, 81j:01047
- Martin, Robert H., Jr. Invariant sets and a mathematical model involving semilinear differential equations. *Nonlinear equations in abstract spaces (Proc. Internat. Sympos., Univ. Texas, Arlington, Tex., 1977)*, pp. 135-148. Academic Press, New York, 1978. (J. A. Goldstein) 81a:47059 47H15 (35K40)
- Martiniak, Wallace S., III Generalized identities and rings with involution. *Ring theory (Proc. Antwerp Conf. (NATO Adv. Study Inst.), Univ. Antwerp, Antwerp, 1978)*, pp. 153-167. *Lecture Notes in Pure and Appl. Math.*, 51. Dekker, New York, 1979. (Charles Lanski) 81d:16009 16A28 (16A38)
- Martinez, Ivan A combinatorial method for the solution of the travelling salesman problems. (Czech. English summary) *Ekonom.-Mat. Obzor* 15 (1979), no. 3, 320-341. (Author's summary) 81a:90084 90B10 (05C20, 90C35)
- Martinielli, Enzo See Tung, Chia Chi, 81c:23036
- panella Martinielli, Luigia See Panella Martinielli, Luigia
- Martinielli, Maria Renata The error in the approximate solution of eigenvalue problems for ordinary differential equations. (Italian. English summary) *Rend. Mat.* (6) 12 (1979), no. 1, 167-179. (Todd Dupont) 81g:65116 65L15
- Martinez, Chisara (with Roggero, Margherita) The divisor class group of certain Krull rings. (Italian. English summary) *Boll. Un. Mat. Ital. A* (5) 17 (1980), no. 1, 167-173. (W. V. Vasconcelos) 81e:13008 13F20 (14C22)
- Martinez, Marija, D. Solutions of elliptic systems in multiply connected domains with apertures. (Ukrainian. Russian summary) *Visnik L'viv. Derz. Univ. Ser. Meh.-Mat.* No. 12 (1977), 19-25, 94. (Author's summary) 81g:35034 35J55
- Martinet, Jacques Petits discriminants. (English summary) *Ann. Inst. Fourier (Grenoble)* 29 (1979), no. 1, xv, 159-170. (J. C. Lagarias) 81h:12006 12A50
- monari Martinez, Elisabetta See Monari Martinez, Elisabetta
- Martinez, Gaston (with Rössler, Jaime) Short-range order effects on the electronic properties of a binary linear chain. *Phys. Rev. B* (3) 21 (1980), no. 12, 5511-5520. (Authors' summary) 81d:82039 82A42 (82A60)
- Martinez, Jorge Nilpotent lattice-ordered groups. *Algebra Universalis* 9 (1979), no. 3, 329-338. (S. J. Bernau) 81a:06021 06F15 (20E10)
- The fundamental theorem on torsion classes of lattice-ordered groups. *Trans. Amer. Math. Soc.* 259 (1980), no. 1, 311-317. (Stephen H. McCleary) 81f:06019 06F15
- Martinez, José Mario Generalized methods of Brown type for the numerical solution of nonlinear systems. (Spanish) *Proceedings of the Eleventh Brazilian Mathematical Colloquium (Poços de Caldas, 1977)*, Vol. II (Portuguese), pp. 819-823. *Inst. Mat. Pura Apl., Rio de Janeiro*, 1978. (See 80c:00010b) 65H10
- A bound for the Moore-Penrose pseudoinverse of a matrix. *Comment. Math. Univ. Carolin.* 20 (1979), no. 2, 357-360. (R. Kala) 81f:15028 15A60 (15A09, 65F20)
- arias de reyna Martinez, Juan See Arias de Reyna Martinez, Juan
- Martinez Alonso, L. (with Guil Guerrero, F.) Generalised variational derivatives in field theory. *J. Phys. A* 13 (1980), no. 2, 689-700. (J. D. Logan) 81e:49025 49C10 (58F07, 58F35, 81E10)
- (with Guil Guerrero, F.) The Jauch-Miodes transformation is canonical. *Lett. Nuovo Cimento* (2) 27 (1980), no. 3, 85-88. (Francesco Calogero) 81h:35044 35Q20 (35A22, 58F07, 70H15)
- Martinez-Amores, Pedro Periodic solutions for coupled systems of differential-difference and difference equations. *Ann. Mat. Pura Appl.* (4) 121 (1979), 171-186. (M. K. Grammatikopoulos) 81c:34057 34K15 (39A10)
- (with Cañada, A.) Bifurcation in the Mathieu equation with three independent parameters. *Quart. Appl. Math.* 37 (1979/80), no. 4, 431-441. (Hans Kaper) 81f:34031 34B30 (34C25, 58F14)
- Martinez Calvo, Maria Cristina (with Pérez de Vargas, Alberto) Note on the notion of adherence. (Spanish. French summary) *Proceedings of the First Spanish-Portuguese Mathematical Conference (Madrid, 1973)* (Spanish), pp. 333-337. *Consejo Sup. Inv. Cient., Madrid*, 1977. (B. J. Pearson) 81m:54006 54A05
- Topologie faible et topologie compacte-ouverte dans le cadre de l'algèbre des fonctions réelles continues sur un espace topologique. (English summary) *Gaceta Mat.* (1) (Madrid) 30 (1978), no. 5-6, 136-138. (Sergio Salbany) 81c:54019 54C30 (54C35)
- Martinez-Echevarria, Miguel A. Influence of the "substitution effect" on the bias of the Laspeyres price index. (Spanish. English summary) *Estadist. Española* No. 82-83 (1979), 125-133. (Author's summary) 81a:90045 90A12
- Entropy as a measure of the "goodness of prediction" in dynamic situations. (Spanish) *Estadist. Española* No. 84-85 (1979), 63-75. (Gur Dial) 81f:94012 94A17 (62B10)
- Martinez Gadea, Pedro On normal $\varphi(4,2)$ -structures. (Spanish) *Proceedings of the First Spanish-Portuguese Mathematical Conference (Madrid, 1973)* (Spanish), pp. 259-265. *Consejo Sup. Inv. Cient., Madrid*, 1977. (J. L. Rosendo) 81m:53048 53C15
- (with Oubiña, José A.) Une connexion caractérisant l'intégrabilité d'une
- $\varphi(4, \pm 2)$ -structure. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 286 (1978), no. 11, A523-A525. (Authors' summary) 81e:53022 53C15
- Sur l'existence de structures presque-tangentes. *Tensor (N.S.)* 34 (1980), no. 1, 30-34. (F. Brickell) 81f:53034 53C15
- Martinez Naveira, Antonio (with Ramirez, A.) A classification of a family of naturally reductive homogeneous spaces. *Proceedings of the IV International Colloquium in Differential Geometry (Univ. Santiago de Compostela, Santiago de Compostela, 1978)*, pp. 216-224. *Cursos Congr. Univ. Santiago de Compostela*, 15. Univ. Santiago de Compostela, Santiago de Compostela, 1979. (Gordon W. Lukesh) 81g:53037 53C30
- (with Miquel, Vicente) Sur la relation entre la fonction volume de certaines boules géodésiques et la géométrie d'une variété riemannienne. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 8, A379-A381. (Haruo Kitahara) 81f:53029 53C20
- Martinez Villa, Roberto Almost projective modules over Artin algebras and almost split sequences. *Ring theory (Proc. Antwerp Conf. (NATO Adv. Study Inst.), Univ. Antwerp, Antwerp, 1978)*, pp. 495-511. *Lecture Notes in Pure and Appl. Math.*, 51. Dekker, New York, 1979. (Ronald S. Irving) 81e:16025 16A64
- Almost projective modules and almost split sequences with indecomposable middle term. *Comm. Algebra* 8 (1980), no. 12, 1123-1150. (Idun Reiten) 81f:16031 16A46 (16A64)
- Martini, Rodolfo See Geometrical approaches to differential equations, 81f:35002
- Martins, M. (with Mikelić, A.) Solution of a relativistic quasipotential wave equation for a two-body bound state. *Phys. Rev. C* (3) 22 (1980), no. 2, 878-883. (Authors' summary) 81e:81147 81G35
- Martiniuk, A. A. A theorem of the type of N. N. Bogolubov's first averaging theorem. (Russian) *Dokl. Akad. Nauk SSSR* 241 (1978), no. 2, 279-281. (S. D. Miluleva) 81b:34040 34C29
- Generalization of the second theorem of N. N. Bogolubov's averaging principle. (Russian) *Dokl. Akad. Nauk SSSR* 249 (1979), no. 1, 46-48. (D. Balinov) 81b:34041 34C29
- The averaging principle in nonlinear mechanics. (Russian) *Prikl. Meh.* 15 (1979), no. 8, 80-86, 142. (Author's summary) 81g:70022 70K15 (34C29)
- Development of the method of Ljapunov functions in the theory of stability of motion of complex systems. (Russian) *Prikl. Meh.* 15 (1979), no. 10, 3-23, 141. (L. Reizig) 81a:34044 34D20 (01A60, 93D05)
- The Čaplygin-Ljapunov comparison principle in nonlinear mechanics. (Russian. English and Serbo-Croatian summaries) *Teor. Primen. Meh.* No. 5 (1979), 85-90. (È. G. Al'breht) 81f:70020 70K20 (93D05, 93D20)
- (with Matvičuk, K. S.) Comparison principle for a system of differential equations with a rapidly rotating phase. (Russian) *Ukrain. Mat. Ž.* 31 (1979), no. 5, 498-505, 618. (A. I. Kir'janen) 81a:34045 34D20 (34C10)
- Martiniuk, D. I. Periodic solutions of a functional equation. (Russian) *Analytic and qualitative methods for the study of differential and differential-difference equations* (Russian), pp. 121-126. *Inst. Mat., Akad. Nauk Ukrain. SSR, Kiev*, 1977. (B. Choczewski) 81f:39007 39A12
- (with Mitropol'skii, Ju. O.) ★Периодические и квазипериодические колебания систем с запаздыванием. (Russian) [Periodic and quasiperiodic oscillations of systems with lag] *Golosc. Izdatel'stvo Izdatel'skogo Ob'ed.* "Višča Škola", Kiev, 1979. 247 pp. (A. Halanay) 81c:34064 34K15 (34C15)
- (with Cyganovskii, N. S.) Invariant manifolds of systems with lag subjected to impulse action. (Russian) *Differencial'nye Uravnenija* 15 (1979), no. 10, 1783-1795, 1917. (M. Iolov) 81b:34064 34K15
- (with Danilov, V. Ja.) Reducibility of systems of linear difference equations to the diagonal form. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* 1980, no. 4, 21-22, 98. (A. Haimovici) 81f:39002 39A10
- (with Mitropol'skii, Ju. O.; Dankanić, V. A.) Galerkin's method in the theory of quasiperiodic solutions of nonlinear differential equations with lag. (Russian) *Ukrain. Mat. Ž.* 32 (1980), no. 4, 553-557. (W. S. Loud) 81j:34124 34K15 (65L99)
- Martin-Lof, Anders (with von Bahr, Bengt) Threshold limit theorems for some epidemic processes. *Adv. in Appl. Probab.* 12 (1980), no. 2, 319-349. (Andrew D. Barbour) 81b:60097 60J20 (92A15)
- di Martino, Lino See Di Martino, Lino
- Martinson, Nikola I. On outerplanar graphs. *C. R. Acad. Bulgare Sci.* 31 (1978), no. 3, 265-267. (From the text) 81f:05101 05C35
- Minimal triangulations of a polygon with prescribed odd vertices. (Russian) *Serika* 5 (1979), no. 2, 97-102. (Author's summary) 81b:05097 05C99
- Martinoval, M. K. Imbedding of graphs into planar lattices. (Bulgarian. Russian and English summaries) *Godišnik Visš. Učebn. Zaved. Plozha* No. 13 (1977), no. 4, 165-174 (1978). (Author's summary) 81b:05038 05C10
- Martinić, Milivoje (with Jarić, Jovo P.) Conservation laws in linear thermoelasticity. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Tech.* 27 (1979), no. 5-6, 415-424. (Alok Nath Chakrabarti) 81f:73102 73U05 (49H05)
- Martinić, T. L. (with Kibalkikova, S. I.) Solution of the plane problem of static thermoelasticity for an anisotropic solid with a cavity, when there is convective heat exchange with the environment. *Izv. Akad. Nauk SSSR Meh. Tverd. Tela* 14 (1979), no. 6, 136-144. (Russian); translated as *Mech. Solids* 14 (1979), no. 6, 115-121. (Authors' summary) 81f:73056 73U05
- Martins, L. C. (with Podio-Guidugli, P.) A variational characterization of vorticity. (Italian. English summary) *Rend. Sem. Mat. Univ. Padova* 61 (1979), 313-317 (1980). (L. G. Chambers) 81d:76021 76C05 (49H05)
- (with Podio-Guidugli, P.) An elementary proof of the polar decomposition theorem. *Amer. Math. Monthly* 87 (1980), no. 4, 288-290. (R. Merris) 81b:15002 15A04
- Martins, Roberto Vieira Sur la classification des orbites périodiques instables d'après Poincaré. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 286 (1978), no. 22, A1071-A1074. (Author's summary) 81f:70012 70F15 (58E15, 70H99)
- Martins-Camelo, Luis F. (with Sengupta, Dipak L.) Theory of dielectric-filled edge-dot antennas. *IEEE Trans. Antennas and Propagation* 28 (1980), no. 4, 481-490. (From the summary) 81e:78040 78A50
- Martinsoc, F. (with Cimilita, A.; Fadini, B.) An optimal "E-digraph" program model. *Simulation of systems '79 (Proc. Ninth IMACS Congress, Sorrento, 1979)*, pp. 1129-1137.

- North-Holland, Amsterdam, 1980. (Authors' summary) **81m:68015** 68B10
- Martin, O. Continuation of quasiconformal mappings. *Complex analysis Joensuu 1978 (Proc. Colloq., Univ. Joensuu, Joensuu, 1978), pp. 278-280, Lecture Notes in Math., 747, Springer, Berlin, 1979. (T. Kusaalo) 81b:30836* 30C60
- Capacity and measure densities. *Ann. Acad. Sci. Fenn. Ser. A I Math.* **4** (1979), no. 1, 109-118. (W. P. Ziemer) **81b:31007** 31B15
- (with Sarvas, Jukka) Injectivity theorems in plane and space. *Ann. Acad. Sci. Fenn. Ser. A I Math.* **4** (1979), no. 2, 383-401. (H. M. Reimann) **81b:30839** 30C60 (30C45, 54C99)
- (with Srebro, Uri) On the local behavior of quasiregular maps and branched covering maps. *J. Analyse Math.* **36** (1979), 198-212 (1980). (P. T. Church) **81k:57001** 57M12 (30C60)
- Martiojan, D. G. Periodic Gibbs states for classical lattice models. (Russian. Armenian and English summaries) *Izv. Akad. Nauk Armjan. SSR Ser. Mat.* **14** (1979), no. 1, 21-41, 72. (G. A. Skorobogatov) **81d:82006** 82A05 (82A67)
- Domain of operation of boundary conditions in the model of the classical Ising ferromagnet. (Russian) *Uspehi Mat. Nauk* **34** (1979), no. 5(209), 225-226. (Vladimir Šipka) **81d:82002** 82A05 (82A67)
- Martiojan, V. A. Uniform approximation in the complex plane by polynomials with gaps. (Russian. Armenian summary) *Akad. Nauk Armjan. SSR Dokl.* **68** (1979), no. 3, 129-136. (Pet'r Rusev) **81c:30044** 30E10
- Uniform approximations by quasipolynomials with integral coefficients. (Russian) *Mat. Zametki* **27** (1980), no. 2, 237-244, 318. (Paul Nevai) **81c:42019** 42A65 (41A29)
- Martiojan, V. M. The closure and basis property of some biorthogonal systems and the solution of a multiple interpolation problem in angular domains. (Russian. Armenian and English summaries) *Izv. Akad. Nauk Armjan. SSR Ser. Mat.* **13** (1978), no. 5-6, 490-531, 543. (V. I. Gavrilov) **81c:30007** 30B60 (30D55, 30E05)
- Closure and the basis property of certain biorthogonal systems and the solution of a multiple interpolation problem in $H_p(\alpha; \omega)$. (Russian) *Dokl. Akad. Nauk SSSR* **245** (1979), no. 1, 24-27. (G. Godini) **81c:30049** 30E05 (30B60)
- Martini, Charles A. (with Gallian, Joseph A.) Reorienting regular n -gons. *Aequationes Math.* **20** (1980), no. 1, 97-103. (H. S. M. Coxeter) **81f:20045** 20F32 (05C25, 20F05, 51F15)
- Martynenko, M. A. On the investigation of the stressed state of an elastic space weakened by a paraboloid slit. (Russian) *Theoretical and applied questions of differential equations and algebra (Russian), pp. 181-184, 268, "Naukova Dumka", Kiev, 1978. (M. O. Boleščevilii) 81c:73079* 73M05
- Martynenko, M. D. (with Boiko, L. F.) The solvability of problems without initial conditions for systems that are parabolic in the sense of I. G. Petrovskii. (Russian) *Dokl. Akad. Nauk SSSR* **243** (1978), no. 1, 30-32. (R. Kodnar) **81c:35071** 35K55
- (with Šipka, I. G.) Fundamental solutions of metaharmonic equations in a finite-sheeted Riemann space. (Russian. English summary) *Vesci Akad. Nauk BSSR Ser. Fiz.-Mat. Nauk* **1979**, no. 3, 20-24, 140. (M. A. Atahodžev) **81b:30079** 30F15 (31D05)
- Martynuk, M. S. Determination of the capture band of a second-order system of automatic phase frequency control. (Russian. English summary) *Teor. Elektrotehn.* **10** (1980), 96-102, 170. (Authors' summary) **81m:94018** 94A34 (58F14, 94A40)
- Martynuk, A. A. See Martynjuk, A. A.
- Martynuk, D. I. See Martynjuk, D. I.
- Martynova, T. A. The groupoid of 0-reduced varieties of semigroups. (Russian) *Ural. Gos. Univ. Mat. Zap.* **11** (1979), no. 3 Issled. po Sovremen. Algebre, 96-115, 211. (G. Pollák) **81k:20083** 20M07
- Martynovich, T. L. See Martinovich, T. L.
- Martuyazaki, Hidetoshi (with Nishida, Kenji) Overrings of Krull orders. *Osaka J. Math.* **16** (1979), no. 3, 843-851. (William D. Blair) **81f:16006** 16A08 (16A18)
- Polynomial rings over Krull orders in simple Artinian rings. *Hokkaido Math. J.* **9** (1980), no. 1, 63-78. (L. Fuchs) **81j:16008** 16A18
- Masah, J. (with Hess, P. O.; Seiwert, M.; Greiner, Walter) General collective model and its application to ^2He . *J. Phys. A* **296** (1980), no. 2, 147-163. (Authors' summary) **81f:81088** 81G35
- Masumoto, Toshio (with Hayashi, Akihisa; Tomoda, Toshiaki; Kuriyama, Atsushi; Maskawa, Toshihide) Concept of a collective subspace associated with the invariance principle of the Schrödinger equation. A microscopic theory of the large amplitude collective motion of soft nuclei. *Progr. Theor. Phys.* **63** (1980), no. 5, 1576-1598. (Authors' summary) **81d:81117** 81G35
- Masumoto, Yoshihiko Higher dimensional ribbon and slice knots. *Math. Sem. Notes Kobe Univ.* **7** (1979), no. 2, 351-362. (C. Kearton) **81b:57021** 57Q45
- Maszczyk, I. Best approximate positive solution of a nonlinear system. *Systems theory (Proc. Nat. Conf., Univ. Braşov, Braşov, 1977) (Romanian), pp. 58-64, Univ. Braşov, Braşov, 1978. (Author's summary) 81a:90140* 90C30
- Generalized polynomials of the best L_p -approximation subject to interpolatory constraints. *Romanian-Finnish Seminar on Complex Analysis (Proc., Bucharest, 1976), pp. 292-300, Lecture Notes in Math., 743, Springer, Berlin, 1979. (Shimshon Berkovits) 81d:41025* 41A29 (30E10)
- Masuda, M. N. On convergence to the Poisson law for sums of independent random variables. (Russian) *Ukrain. Mat. Ž.* **30** (1978), no. 6, 818-823, 862. (Author's summary) **81j:60028** 60F05
- An equality for the moments of values obtained as a result of symmetrization of an inhomogeneous Markov chain with two states. (Russian. English summary) *Teor. Veroyatnost. i Mat. Statist.* **21** (1979), 117-123, 167. (B. Kroufelf) **81g:60068** 60J10
- Masurjak, A. G. (with Kurpel', M. S.) Periodic solutions of systems of ordinary differential equations. (Russian) *Approximate and qualitative methods in the theory of differential and functional-differential equations (Russian), pp. 25-32, 108, Akad. Nauk Ukrain. SSR, Inst. Mat., Kiev, 1979. (K. R. Schneider) 81c:34031* 34C25 (65L10)
- (with Kurpel', M. S.) A multipoint boundary value problem for differential equations with parameters. (Russian) *Ukrain. Mat. Ž.* **32** (1980), no. 2, 223-226, 285. (L. J. Grimm) **81j:34027** 34B10
- Masurhachian, C. (with Sambandham, M.) On the number of real zeros of a random trigonometric polynomial. *J. Indian Math. Soc. (N.S.)* **42** (1978), no. 1-4, 143-156 (1979). (J. E. A. Dunnage) **81c:60063** 60G99 (60G15)
- Masuyama, Masaki Boundedness of semistable sheaves of small ranks. *Nagoya Math. J.* **78** (1980), 65-94. (P. E. Newstead) **81h:14015** 14F05 (14D20)
- Masuyama, Toru An extension of the Aumann-Perles' variational problem. *Proc. Japan Acad. Ser. A Math. Sci.* **55** (1979), no. 9, 348-352. (Zvi Arstein) **81a:49009** 49A34 (90A16)
- Integration of correspondences and a variational problem with operator constraint. *Proc. Japan Acad. Ser. A Math. Sci.* **56** (1980), no. 5, 225-230. (S. Rolewicz) **81i:46048** 46G10 (49A27, 90C48)
- Marx, D. L. (with Hocking, Ronald R.) Estimation with incomplete data: an improved computational method and the analysis of nested data. *Comm. Statist. A—Theory Methods* **8** (1979), no. 12, 1155-1181. (Michael Titterton) **81a:62043** 62H12
- Marx, Egou Quantum electrodynamics of one scalar particle. *Internat. J. Theoret. Phys.* **18** (1979), no. 11, 819-834 (1980). (Tuan W. Chen) **81g:81117** 81L05 (81G10)
- Marx, Karl See Kennedy, Hubert, 81a:00015
- Marx, Morris L. (with Ezell, Cloyd L.) Branched extensions of curves in orientable surfaces. *Trans. Amer. Math. Soc.* **259** (1980), no. 2, 515-532. (George K. Francis) **81i:57004a** 57M12 (30C15)
- Marxen, Donald Uniform quotients of metric spaces. *Fund. Math.* **108** (1980), no. 1, 67-75. (H. H. Wicke) **81m:54051** 54E15 (54B15)
- März, R. ★Parametric multistep methods. With Russian and German summaries. *Seminarberichte [Seminar Reports], 18. Humboldt Universität, Sektion Mathematik, Berlin, 1979. iv + 104 pp. (Henning Esser) 81c:65055* 65L05 (65L07)
- Marzec, C. J. (with Spiegel, E. A.) Ordinary differential equations with strange attractors. *SIAM J. Appl. Math.* **38** (1980), no. 3, 403-421. (P. J. Holmes) **81j:34045** 34Cxx (58F13)
- Marzullo, Angelo (with Pascoletti, A.; Serafini, P.) Genericity and singularities in vector optimization. *Recent developments in variable structure systems, economics and biology (Proc. US-Italy Sem., Taormina, 1977), pp. 201-213, Lecture Notes in Economics and Math. Systems, 162, Springer, Berlin, 1978. (Carl P. Simon) 81j:58034* 58E17 (58C27, 90C31)
- (with Ukovich, Walter) An introduction to some basic concepts and techniques in the theory of computable functions. *Topics in artificial intelligence, pp. 11-45, CISM Courses and Lectures, 256, Springer, Vienna, 1978. (See 80a:68102)* 03Dxx
- Marzulli, Amalia (with Catenacci, Roberto; Salmistraro, Franco) A note on Killing vectors in algebraically special vacuum space-times. *Gen. Relativity Gravitation* **12** (1980), no. 7, 575-580. (Alan Barnes) **81k:83022** 83C40 (53B50, 83C20)
- Mas, Luis (with Comellas, Francesc) Étude des métriques intérieures recordables à la métrique de Kerr. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **298** (1980), no. 20, B453-B456. (Authors' summary) **81g:83018** 83C20
- Masani, Pesi Rustom See Wiener, Norbert, 81d:91029 and Dollard, John D.; et al., 81c:34003
- Maslanov, V. I. Two-dimensional solutions of a not completely integrable Pfaff equation. (Russian) *Differential geometry of homogeneous spaces (Russian), pp. 67-69, Irkutsk. Gos. Univ., Irkutsk, 1979. (H. Kılıp) 81m:58011* 58A17 (35F05, 53A15)
- Masanta, M. L. (with Ghosh, N. L.) On the behaviour of vortices in the flow past a cylinder. Series A (perfect fluids). I. Case of a single vortex. *Bull. Calcutta Math. Soc.* **69** (1977), no. 3, 103-116. (Authors' introduction) **81a:76015a** 76C05
- (with Ghosh, N. L.) On the behaviour of vortices in the flow past a cylinder. Series A (perfect fluids). III. Case of any number of arbitrary vortices. *Bull. Calcutta Math. Soc.* **69** (1977), no. 5, 279-296. (Authors' introduction) **81a:76015c** 76C05
- (with Ghosh, N. L.) On the behaviour of vortices in the flow past a cylinder. Series A (perfect fluids). II. Case of two vortices. *Bull. Calcutta Math. Soc.* **70** (1978), no. 3, 125-137. (Authors' introduction) **81a:76015b** 76C05
- Masarelli Rodino, Maria Certain special functions that arise in the study of hypoellipticity. (Italian. English summary) *Rend. Sem. Mat. Univ. Politec. Torino* **36** (1977/78), 343-349 (1979). (Author's summary) **81i:35035** 35H05 (33A70)
- Masari, Giovanni Francesco (with Ausiello, Giorgio) On the design of algebraic data structures with the approach of abstract data types. *Symbolic and algebraic computation (EUROSAM '79, Internat. Sympos., Marseille, 1979), pp. 514-530, Lecture Notes in Comput. Sci., 72, Springer, Berlin, 1979. (Authors' summary) 81g:68056* 68C20 (68B15)
- Mascart, H. Bornologies. (French) *Proceedings of the Seventh National Mathematics Conference (Dept. Math., Azarabadegan Univ., Tabriz, 1976), pp. 221-241, Azarabadegan Univ., Tabriz, 1977. (H. Jarchow) 81a:46009* 46A09
- Maschenko, I. P. (with Čurikov, F. S.) Solution of an integral equation encountered in plasticity theory. (Russian) *Mat. Zametki* **27** (1980), no. 3, 411-413, 494. (Petr Procházka) **81g:73045** 73E99 (45D05)
- Masch, Victor V. The cyclic method of solving the transshipment problem with an additional linear constraint. *Networks* **10** (1980), no. 1, 17-31. (Author's summary) **81a:90114** 90C08 (90C10)
- Maschke, Hans-Joachim Stochastic models of turbulence. *Seminar on Numerical Methods for Solving Balance Equations (Berlin, 1980) (Russian), pp. 57-63, Rep. 1980, 5, Akad. Wiss. DDR, Berlin, 1980. (See 81j:65013)* 76F05
- Maschler, M. (with Peleg, Bezalel; Shapley, Lloyd S.) Geometric properties of the kernel, nucleolus, and related solution concepts. *Math. Oper. Res.* **4** (1979), no. 4, 303-338. (G. Owen) **81b:90169** 90D12
- Mas-Colell, Andreu A note on the core equivalence theorem. How many blocking coalitions are there? *J. Math. Econom.* **5** (1978), no. 3, 207-215. (Authors' introduction) **81i:90039** 90A14
- On revealed preference analysis. *Rev. Econom. Stud.* **45** (1978), no. 1, 121-131. (Anjan Mukherji) **81g:90006** 90A06 (06A99, 90A10)
- A refinement of the core equivalence theorem. *Econom. Lett.* **3** (1979), no. 4, 307-310. (Author's summary) **81a:90026** 90A07
- (with Gale, David) Corrections to: "An equilibrium existence theorem for a general model without ordered preferences" [J. Math. Econom. **2** (1975), 9-15; MR **52** #2542]. *J. Math. Econom.* **6** (1979), no. 3, 297-298. (Hildegard Dieker) **81c:90007** 90A06
- Mascolo, Elvira (with Giachetti, Daniela) Quasi-elliptic problems in Sobolev weighted spaces. (Italian. English summary) *Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur.* **63** (1977), no. 5, 360-367 (1978). (Authors' summary) **81i:35060** 35J65
- (with Giachetti, Daniela) Spectral properties of a class of quasi-elliptic operators.

- (Italian. English summary) *Ann. Univ. Ferrara Sez. VII (N.S.)* 25 (1979), 27-46. (Jesús Hernández) 81c:35102 35P99 (47F05)
- (with Giachetti, Daniela; Schianchi, Rosanna) Higher order nonlinear partial differential equations in unbounded domains of \mathbb{R}^n . *Comment. Math. Univ. Carolin.* 20 (1979), no. 3, 583-595. (Sadakazu Aizawa) 81b:35033 35J65 (47H05)
- (with Giachetti, Daniela) Quasilinear problems in Sobolev spaces with a weight. (Italian) *Ricerche Mat.* 28 (1979), no. 1, 3-37. (O. John) 81a:35029 35J40 (46E35)
- Masck, William J. (with Paterson, Michael S.) A faster algorithm computing string edit distances. *J. Comput. System Sci.* 20 (1980), no. 1, 18-31. (Authors' summary) 81c:68050 68C25
- Maierich, G. I. Identities in Brandt semigroups. (Russian) *Semigroup varieties and semigroups of endomorphisms* (Russian), pp. 126-137, Leningrad. Gos. Ped. Inst., Leningrad, 1979. (St. Schwarz) 81j:20083 20M05
- di Masi, Giovanni B. See Di Masi, Giovanni B.
- Masiero, A. (with Costa, G.; D'Anna, M.) Massless neutrinos in left-right symmetric gauge models. *Nuovo Cimento A (11)* 53 (1979), no. 4, 455-468. (Lawrence P. Horwitz) 81a:81095 81G15 (22E70)
- On the phenomenological group in the unified SO(10) model. *Phys. Lett. B* 93 (1980), no. 3, 295-298. (Authors' summary) 81e:11135 81G20
- Masilina, N. I. (with Sul'ga, Ju. N.) On the question of optimization of the functioning of a three-dimensional network with moving servicing devices. (Russian) *Akad. Nauk Ukrain. SSR Inst. Kibernet. Preprint* 1978, no. 80. *Modelir. Optimiz. Proizvodst. Proc.*, 3-14, 49. (I. Văduva) 81i:68049 68C15 (60K25, 90B15, 90B22)
- Masilov, V. I. See Differential geometry of homogeneous spaces. 81i:53002
- Masikawa, Toshikide (with Nakajima, Hideo) Structure of the gauge transformation group in the square integrable space and Gribov's ambiguity in the Coulomb gauge. *Progr. Theoret. Phys.* 63 (1980), no. 2, 641-655. (R. Delbourgo) 81b:81020 81E10 (22E70, 53C05, 81C40)
- (with Marumori, Toshio; Hayaishi, Akihisa; Tomoda, Toshiaki; Kuriyama, Atsushi) Concept of a collective subspace associated with the invariance principle of the Schrödinger equation. A microscopic theory of the large amplitude collective motion of soft nuclei. *Progr. Theoret. Phys.* 63 (1980), no. 5, 1576-1598. (Authors' summary) 81e:81117 81G35
- Maslin, Eric A. Theorem on utilitarianism. *Rev. Econom. Stud.* 45 (1978), no. 1, 93-96. (From the text) 81c:90015 90A10
- Decision-making under ignorance with implications for social choice. Game theory, social choice and ethics. Part II. *Theory and Decision* 11 (1979), no. 3, 319-337. (J. J. Buckley) 81g:90007 90A05 (90A08, 90D35)
- Maslov, N. M. Some problems in the theory of optimal processes. (Russian) *Current problems of geometry and its applications* (Russian), pp. 68-97, 107, Černol. Gos. Univ., Čebokarsky, 1975. (J. Kučera) 81g:49022 49B10 (93C15)
- Maslovskaya, V. N. Mathematical investigations of the hydromechanics of a rotating fluid. (Russian) *Proceedings of an All-Union Conference on Partial Differential Equations* (Moscow State Univ., Moscow, 1976) (Russian), pp. 153-156. *Moskov. Gos. Univ., Meh.-Mat. Fakul'tet*, Moscow, 1978. (See 80f:35002) 76U05
- (with Bogovitskii, M. E.) The density of compactly supported solenoidal vector fields. (Russian) *Sibirsk. Mat. Ž.* 19 (1978), no. 5, 1092-1108, 1215. (Authors' summary) 81g:46040 46E35 (35B40)
- Maslov, John Myron Where are number fields with small class number? *Number theory, Carbondale 1979* (Proc. Southern Illinois Conf., Southern Illinois Univ., Carbondale, Ill., 1979), pp. 221-242. *Lecture Notes in Math.*, 751, Springer, Berlin, 1979. (T. Metsänkylä) 81i:12004 12A50
- Masiljukova, N. A. Conditions for the applicability of the central limit theorem to homogeneous random fields. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1977, no. 11(186), 77-83. (G. Oprisan (Zbl 394:60021)) 81i:60024 60F05 (60G10)
- Maslov, B. P. Macroscopic variables in the nonlinear theory of elasticity of stochastically inhomogeneous incompressible bodies. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* 1980, no. 8, 47-50, 88. (Authors' summary) 81j:73022 73C50
- Maslov, E. M. On the perturbation theory for solitons in the second approximation. (Russian. English summary) *Theoret. Mat. Fiz.* 42 (1980), no. 3, 362-373. (Woodford W. Zachary) 81m:35127 35Q20 (81C12)
- Maslov, E. V. See Numerical mathematics, programming and processing of an experiment. 81e:00009
- Maslov, S. Ju. Information in a calculus and combinatorial-scan performance. *Kibernetika (Kiev)* 1979, no. 2, 20-26 (Russian); translated as *Cybernetics* 15 (1979), no. 2, 176-183. (From the text) 81a:68035 68C01 (68G05)
- Calculus with monotone deductions and their economic interpretation. (Russian. English summary) *Studies in constructive mathematics and mathematical logic*, VIII. *Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 88 (1979), 90-105, 239-240. (I. Peák) 81g:03030 03B60 (68C99, 90A11)
- Maslov, V. N. A matrix algorithm of dynamic programming as applied to problems of optimization of parametric series. (Russian) *Mathematical methods of solution of economic problems*, No. 8 (Russian), pp. 120-126, "Nauka", Moscow, 1979. (Authors' introduction) 81d:90104 90C39
- Maslov, V. P. (with Šismarev, I. A.) The T-product of hypoelliptic Hamiltonians. (Russian) *Proceedings of an All-Union Conference on Partial Differential Equations* (Moscow State Univ., Moscow, 1976) (Russian), pp. 156-160. *Moskov. Gos. Univ., Meh.-Mat. Fakul'tet*, Moscow, 1978. (See 80f:35002) 47B38 (17B65, 58G15, 81C99)
- (with Mosolov, P. P.) Asymptotic behavior as $N \rightarrow \infty$ of trajectories of N point masses, interacting according to Newton's gravitation law. (Russian) *Izv. Akad. Nauk SSSR Ser. Mat.* 42 (1978), no. 5, 1063-1100, 1183. (R. G. Langebartel) 81b:70005 70F10 (58F05, 76X05)
- (with Čebotarev, A. M.) Processus de sauts et leurs applications dans la mécanique quantique. *Feynman path integrals* (Proc. Internat. Colloq., Marseille, 1978), pp. 58-72. *Lecture Notes in Phys.*, 106, Springer, Berlin, 1979. (J. S. Joel) 81g:81024 81C35 (35Q99, 58G32, 60J75, 81C12)
- (with Cupin, V. A.) δ -shaped solutions of quasilinear equations that are generalized in the sense of Sobolev. (Russian) *Uspehi Mat. Nauk* 34 (1979), no. 1(205), 235-236. (Ju. V. Egorov) 81c:35110 35Q20 (35S05)
- Maslova, G. G. (with Kolmogorov, A. N.; Boltjanskii, V. G.; Verčenko, I. Ja.; Belousov, V. D.; Brovikov, I. S.; Gnedenko, B. V.; Sikorskii, K. P.; Čerkasov, R. S.; Švarčburd, S. I.) Aleksei Ivanovič Markulevič. (Russian) *Mat. e. Škole* 1979, no. 5, 77-78. (Editors) 81m:01059 01A70
- Maslova, N. V. (with Štelik, V. G.) On the problem of optimizing the dates of functioning of capital funds in macroeconomic systems. (Russian. English summary) *Isled. Operacii i ASU* No. 12 (1978), 3-13, 130. (Authors' summary) 81b:90007 90A09
- Maslova, T. M. Bounded m -reducibilities. (Russian) *Probabilistic methods and cybernetics*, No. XV (Russian), pp. 51-60. *Kazan. Univ., Kazan*, 1979. (A. N. Degtev) 81i:03046 03D30
- Maslovskii, Andrzej State estimation for dynamic systems with space-distributed parameters. *Identification and system parameter estimation* (Proc. Fourth IFAC Symp., Tbilisi, 1976), Part 3, pp. 1527-1537. North-Holland, Amsterdam, 1978. (See 80d:93018) 93B35
- Finite elements approximation in state identification of large scale linear space-distributed systems. *Modelling and optimization of complex systems* (Proc. IFIP-TC 7 Working Conf., Novosibirsk, 1978), pp. 264-273. *Lecture Notes in Control and Information Sci.*, 18, Springer, Berlin, 1979. (From the conclusion) 81k:93006 93B50
- dal Maso, Gianni See Dal Maso, Gianni
- Masol, V. I. Invariance limit theorems for a system of random linear equations over a finite field. (Russian) *Mathematical analysis and probability theory* (Russian), pp. 111-114, 216, "Naukova Dumka", Kiev, 1978. (Authors' summary) 81b:60034 60F99 (60H25)
- Mason, A. B., Jr. (with Iwan, W. D.) Equivalent linearization for systems subjected to nonstationary random excitation. (French and German summaries) *Internat. J. Non-Linear Mech.* 15 (1980), no. 2, 71-82. (Authors' summary) 81e:70028 70L05 (34C15)
- Mason, A. L. (with Kitchenside, P. W.; Bullough, R. K.; Caudrey, P. J.) Perturbation theory of the double sine-Gordon equation. *Solitons and condensed matter physics* (Proc. Sympos. Nonlinear (Soliton) Structure and Dynamics in Condensed Matter, Oxford, 1978), pp. 48-51. *Springer Ser. in Solid-State Sci.*, 8, Springer, Berlin, 1978. (See 80b:81002) 81C05 (35Q20)
- Mason, Alan See Problems in the general theory of relativity and theory of group representations. 81i:23004
- Mason, E. A. (with Weinert, U.; Lin, S. L.) Solutions of the nonlinear Boltzmann equation describing relaxation to equilibrium. *Phys. Rev. A* (3) 22 (1980), no. 5, 2262-2269. (K. Kumar) 81k:82028 82A40 (45K05)
- Mason, Geoffrey See Conference: Santa Cruz, Finite Groups. 81m:20004
- Mason, Gordon Strongly regular near-rings. *Proc. Edinburgh Math. Soc.* (2) 23 (1980), no. 1, 27-35. (John D. P. Meldrum) 81i:16047 16A76 (16A30)
- Mason, J. C. Near-best L_1 approximations on circular and elliptical contours. *J. Approx. Theory* 24 (1978), no. 4, 330-343. (O. Shisha) 81d:30069 30E10
- Mason, J. H. (with Orley, James G.) A circuit covering result for matroids. *Math. Proc. Cambridge Philos. Soc.* 87 (1980), no. 1, 25-27. (R. Balakrishnan) 81b:05029 05B35
- Masoud-ul-Haq Order statistics and Fisher's F . *Karachi Univ. J. Sci.* 6 (1978), no. 1, 29-33. (Authors' summary) 81g:62034 62E15
- Masotti Bigliogero, Giuseppe See Marchionna, Ermanno. 81k:01041
- Masper, L. (with Bojanovskii, D.) Field theory with q^4 and q^8 self-interaction. *Phys. Rev. D* (3) 21 (1980), no. 6, 1550-1556. (Authors' summary) 81a:81049 81E10 (82A25)
- Masri, S. F. (with Bekey, G. A.; Safford, F. B.) A global optimization algorithm using adaptive random search. *Appl. Math. Comput.* 7 (1980), no. 4, 353-375. (Authors' summary) 81k:90087 90C30
- Massa, Silvio A remark about multivalued mappings. (Italian summary) *Istit. Lombardo Accad. Sci. Lett. Rend. A* 112 (1978), no. 1, 176-180 (1979). (Ju. G. Borisov) 81b:54046 54H25
- (with Garegnani, Giuseppe) Multivalued mappings of contractive type. (Italian summary) *Istit. Lombardo Accad. Sci. Lett. Rend. A* 112 (1978), no. 2, 283-288 (1979). (R. E. Smithson) 81m:54076 54H25 (54C60)
- Masabò, L. (with Conti, G.; Nistri, P.) Set-valued perturbations of differential equations at resonance. *Nonlinear Anal.* 4 (1980), no. 6, 1031-1041. (V. Lakshmikantham) 81m:34079 34G20 (34A60)
- esteva Massaguer, Francisco See Esteva Massaguer, Francisco
- Massalas, C. V. (with Kafousias, N. G.; Rapis, A. A.; Tzivanidis, G. J.; Georgantopoulos, G. A.; Goudas, C. L.) Free convection effects on the hydromagnetic oscillatory flow in the Stokes problem past an infinite porous vertical limiting surface with constant suction. *I. Astrophys. and Space Sci.* 68 (1980), no. 1, 99-110. (A. K. Singh) 81c:76053 76W05 (76R10)
- Massam, Hélène M. Optimality conditions for a cone-convex programming problem. *J. Austral. Math. Soc. Ser. A* 27 (1979), no. 2, 141-162. (Carl G. Looney) 81b:90122 90C25
- Massaria, C. (with Senigaglia, E.) On the explicit solution of a manpower staffing problem. (Italian) *Proceedings of the First AMASES Meeting* (Pisa, 1977) (Italian), pp. 241-259. *Giappichelli, Turin*, 1979. (Erol Gelenbe) 81j:90044 90B05 (90C10)
- Masé, J. Claude Intégration dans les semi-groupes. *Studia Math.* 66 (1979), no. 1, 57-80. (R. Anantharaman) 81e:28005 28B05 (46G10)
- Masser, David W. Some recent results in transcendence theory. *Journées Arithmétiques de Luminy* (Colloq. Internat. CNRS, Centre Univ. Luminy, Luminy, 1978), pp. 145-154. *Astérisque*, 61, Soc. Math. France, Paris, 1979. (Michel Waldschmidt) 81h:10051 10F35 (10-02)
- (with Bertrand, Daniel) Formes linéaires d'intégrales abéliennes. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 16, A725-A727. (Authors' summary) 81d:10026 10F37 (14K20)
- Sur les fonctions entières à valeurs entières. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 291 (1980), no. 1, A1-A4. (Authors' summary) 81i:10048 10F99 (10H99, 30D20)
- (with Brownawell, W. Dale) Multiplicity estimates for analytic functions. II. *Duke Math. J.* 47 (1980), no. 2, 273-295. (Michel Waldschmidt) 81j:10046 10F35 (30D35)
- (with Bertrand, Daniel) Linear forms in elliptic integrals. *Invent. Math.* 58 (1980), no. 3, 283-288. (Gisbert Wüstholz) 81e:10032 10F37
- (with Brownawell, W. Dale) Multiplicity estimates for analytic functions. I. *J. Reine Angew. Math.* 314 (1980), 200-216. (Michel Waldschmidt) 81j:10046 10F35 (30D35)

- Masey, James L. (with Matt, Hans J.) Determining the burst-correcting limit of cyclic codes. *IEEE Trans. Inform. Theory* 26 (1980), no. 3, 289-297. (Authors' summary) 81b:94042 94B15 (94B20)
- Masey, William S. \star Singular homology theory. Graduate Texts in Mathematics, 70. Springer-Verlag, New York-Heidelberg, 1980. xii+265 pp. ISBN 0-387-90456-5 (J. F. Adams) 81c:55002 55-01
- Completion of link modules. *Duke Math. J.* 47 (1980), no. 2, 399-420. (Sushil Jajodia) 81g:57004 57M25
- Mason, Gerald M. (with Agarwal, Vinod K.) Generic fault characterizations for table look-up coverage bounding. *IEEE Trans. Comput.* 29 (1980), no. 4, 288-299. (A. Thyse) 81c:94040 94C10 (90B25)
- (with Mallela, Sivanarayana) Diagnosis without repair for hybrid fault situations. *IEEE Trans. Comput.* 29 (1980), no. 6, 461-470. (Guy Jumarie) 81f:94051 94C99
- Mason, J. P. (with Duby, Camille) Étude des liaisons statistiques de tests en analyse de variance non orthogonale. (English summary) *Internat. J. Bio-Med. Comput.* 9 (1978), no. 1, 45-71. (Jon Stene) 81g:62126 62J10
- Masouli, Habib (with Durney, Carl H.; Barber, Peter W.; Iskander, Magdy F.) Electromagnetic absorption in multilayered cylindrical models of man. *IEEE Trans. Microwave Theory Tech.* 27 (1979), no. 10, 825-830. (Authors' summary) 81f:78010 78A25 (92A09)
- Mastorovich, Ju. V. (with Nagornyi, Ju. I.) A cylindrical shell with filler under the action of impact loading. (Russian) *Dinamika i Prochnost' Masin* No. 32 (1980), 43-47, 3. (Authors' summary) 81f:73095 73L15
- Masturica, V. S. A cubature formula for a two-dimensional singular integral. (Russian) *Vestnik Beloruss. Gos. Univ. Ser. I* 1979, no. 2, 60-64, 87. (Anton Huf'a) 81b:65023 65D30
- Mastrangelo, Michèle See Mastrangelo-Dehen, Michèle
- Mastrangelo, Victor (with Mastrangelo-Dehen, Michèle) Ordre et informations sur les expériences non disjointes. (English summary) *Ann. Inst. H. Poincaré Sect. A (N.S.)* 32 (1980), no. 3, 257-275. (T. W. Barrett) 81f:94013 94A17
- Mastrangelo-Dehen, Michèle (with Mastrangelo, Victor) Ordre et informations sur les expériences non disjointes. (English summary) *Ann. Inst. H. Poincaré Sect. A (N.S.)* 32 (1980), no. 3, 257-275. (T. W. Barrett) 81f:94013 94A17
- Mastroratti, Giuseppe On the remainders in some linear approximation formulas. (Italian. English summary) *Calcolo* 15 (1978), no. 3, 211-224. (D. D. Stancu) 81h:41027 41A36 (41A63)
- The numerical calculation of improper double integrals. (Italian. English summary) *Calcolo* 15 (1978), no. 4, 331-343. (A. Cojii) 81d:65009 65D30
- (with Occorsio, Mario Rosario) A generalization of the Stancu operator. (Italian. English summary) *Rend. Accad. Sci. Fis. Mat. Napoli* (4) 45 (1978), 495-511 (1979). (D. D. Stancu) 81e:41034 41A36 (41A10)
- On a linear positive operator. (Italian. English summary) *Rend. Accad. Sci. Fis. Mat. Napoli* (4) 46 (1979), 161-176 (1980). (B. N. Sahney) 81f:47023 47A99 (40A99, 41A36)
- Masubuchi, Masami (with Terasaka, Haruo; Kanoh, Hideaki) Approximate dynamic analysis of crossflow heat exchanger by the method of weighted residuals. *Bull. JSME* 23 (1980), no. 177, 432-438. (Authors' summary) 81b:80005 80A20
- Masud, Abu Syed Md. (with Hwang, Ching Lai) \star Multiple objective decision making—methods and applications. A state-of-the-art survey. In collaboration with Sudhakar R. Paidy and Kwangsun Yoon. Lecture Notes in Economics and Mathematical Systems, 164. Springer-Verlag, Berlin-New York, 1979. xii+351 pp. ISBN 3-540-09111-4 (Heinz-Michael Winkels) 81d:90001 90-02 (90C31)
- Masuda, Akira (with Kuo, Yi Yu; Mitsuyasu, Hisashi) On the dispersion relation of random gravity waves. I. Theoretical framework. *J. Fluid Mech.* 92 (1979), no. 4, 717-730. (G. D. Atkinson) 81f:76009a 76B15 (86A05)
- (with Mitsuyasu, Hisashi; Kuo, Yi Yu) On the dispersion relation of random gravity waves. II. An experiment. *J. Fluid Mech.* 92 (1979), no. 4, 731-749. (J. D. Atkinson) 81f:76009b 76B15 (86A05)
- (with Kuo, Yi Yu; Mitsuyasu, Hisashi) Corrigendum: "On the dispersion relation of random gravity waves. I. Theoretical framework". *J. Fluid Mech.* 97 (1980), no. 4, 829. (Editors) 81f:76009c 76B15 (86A05)
- Masuda, Kyoya On the regularity of solutions of the nonstationary Navier-Stokes equations. *Approximation methods for Navier-Stokes problems* (Proc. Sympos., Univ. Paderborn, Paderborn, 1979), pp. 360-370. *Lecture Notes in Math.*, 771, Springer, Berlin, 1980. (Michael Wiegner) 81f:35095 35Q10 (35B65, 76D05)
- Masui, K. (with Wang, P. K. C.) Intermittent phase unlocking in a resonant three-wave interaction with parametric excitation. *Phys. Lett. A* 81 (1981), no. 2-3, 97-101. (Authors' summary) 81b:82038 82A45 (58F13, 70K30, 76W05)
- Masur, Howard The Jenkins-Strebel differentials with one cylinder are dense. *Comment. Math. Helv.* 54 (1979), no. 2, 179-184. (H. H. Martens) 81b:30081 30F30 (14H15, 57R30)
- Masurky, H. (with Davies, M. E.; Abalakin, V. K.; Cross, C. A.; Duncombe, R. L.; Morando, B.; Owen, T. C.; Seidelmann, P. K.; Sinclair, A. T.; Wilkins, G. A.; Tjuffin, Y. S.) Report of the IAU Working Group on Cartographic Coordinates and Rotational Elements of the Planets and Satellites. *Celestial Mech.* 22 (1980), no. 3, 205-230. (Authors' summary) 81j:70009 70F15
- Masuyama, Motosaburo A stochastic model of glucose tolerance test. *TRU Math.* 16 (1980), no. 1, 83-88. (Raphael Zahler) 81m:92010 92A07 (93E99)
- Matagge, R. A propos des pseudo-polynômes. *Bull. Soc. Roy. Sci. Liège* 48 (1979), no. 3-4, 97-99. (S. Łojasiewicz) 81j:26017 26C99 (58C99)
- Matasashi, Tomomi (with Tsutsumi, Masayoshi) Initial value problem for an abstract differential equation in a Hilbert space. *Bull. Sci. Engng. Res. Lab. Waseda Univ. No. 87* (1979), 64-69. (R. E. Showalter) 81c:34056 34G20 (35K70)
- (with Tsutsumi, Masayoshi) A certain class of singular nonlinear pseudoparabolic equations. *Funkcial. Ekvac.* 22 (1979), no. 3, 313-325. (William Rundell) 81j:34114 34G20 (35K70)
- Matkars, A. I. (with Bykov, Ja. V.; Činkaraev, T. C.) Oscillatory properties of a class of systems of first-order differential equations. (Russian) *Izv. Akad. Nauk Kirgiz. SSR* 1979, no. 4, 3-14, 105. (T. Canturia) 81a:34066 34K15
- Matarano, S. (with Infantino, R.; Troisi, M.) Spectral properties for a class of elliptic operators. (Italian. English summary) *Ann. Mat. Pura Appl.* (4) 121 (1979), 109-129. (M. S. Agranovič) 81b:35076 35J99 (35P05)
- Matarano, Giovanni A uniqueness theorem for a nonlinear evolution equation. (Italian. English summary) *Boll. Un. Mat. Ital. A* (5) 16 (1979), no. 3, 536-544. (G. P. Bava) 81c:35066 35L70
- Matashek, M. R. (with Stanković, S. S.) Robust real-time algorithm for identification of nonlinear time-varying systems. *Internat. J. Control* 31 (1980), no. 1, 79-94. (Arunabha Bagchi) 81g:93119 93E12 (93C10)
- Matayoshi, Sotaro Solitons in a magnetic system. (Japanese. English summary) *Bull. College Sci. Univ. Ryukyus No. 28* (1979), 1-7. (Author's summary) 81j:82039 82A67 (35Q20)
- The n -dimensional nonlinear Schrödinger equation and some of its solutions. (Japanese. English summary) *Bull. College Sci. Univ. Ryukyus No. 28* (1979), 9-14. (Author's summary) 81j:82029 82A67 (35Q20)
- (with Shinjo, Tsuneo) Two-magnon bound states in the linear Heisenberg magnet with first and second neighbour anisotropic exchange interactions. (Japanese. English summary) *Bull. College Sci. Univ. Ryukyus No. 28* (1979), 15-26. (Authors' summary) 81j:82031a 82A67 (35Q20)
- (with Shinjo, Tsuneo) Effective Hamiltonian approach to the Heisenberg ferromagnet with uniaxial anisotropy energy. (Japanese. English summary) *Bull. College Sci. Univ. Ryukyus No. 28* (1979), 27-33. (Authors' summary) 81j:82031b 82A67 (35Q20)
- Máté, Attila (with Nevai, Paul G.) Bernstein's inequality in L^p for $0 < p < 1$ and $(C, 1)$ bounds for orthogonal polynomials. *Ann. of Math.* (2) 111 (1980), no. 1, 145-154. (Authors' summary) 81c:42003 42A67 (41A17)
- Aprahamian-Mateescu, Manuella See Aprahamian-Mateescu, Manuella
- Mateev, P. S. (with Maljutov, M. B.) Design of screening experiments with a nonsymmetric response function. (Russian) *Mat. Zametki* 27 (1980), no. 1, 109-127, 159. (H. Bandemer) 81h:62140 62K99
- Mateeva, L. I. (with Petrov, R. R.) New classes of equations representable by nomograms with a wavelike contour. (Bulgarian. Russian and English summaries) *Godinik Vist. Učebn. Zaed. Plovdiv Mat.* 14 (1978), no. 4, 53-60 (1979). (Authors' summary) 81h:65139 65S05
- Matei, Ion Un problème inverse de la théorie de l'élasticité pour une charge optimum d'une barre élastique supportée par un milieu élastique. *Bull. Math. Soc. Sci. Math. R. S. Roumanie (N.S.)* 23(71) (1979), no. 4, 349-358. (Author's introduction) 81h:73036 73K05 (49A21, 49A27)
- Matei, Ioana The interpolation of functions of several variables with the help of a numerical calculator. (Romanian. German summary) *Bul. Ştiinţ. Tehn. Inst. Politehn. "Traian Vuia" Timişoara* 23(37) (1978), no. 2, 111-112 (1979). (D. D. Stancu) 81h:65015 65D05
- Matejčević, Miroslav The isoperimetric inequality and some extremal problems in H^1 . *Analytic functions, Kozubnik 1979* (Proc. Seventh Conf., Kozubnik, 1979), pp. 364-369. *Lecture Notes in Math.*, 798, Springer, Berlin, 1980. (Kenneth Stephenson) 81h:30044 30D55
- Mateos, Juan (with Gomez, César) θ -vacua and confinement in two-dimensional models. *Nuclear Phys. B* 168 (1980), no. 1, 137-146. (Authors' summary) 81g:81067 81E99 (22E70, 81G25)
- Matera, Bertil (with Diggle, Peter J.) On sampling designs for the study of point-event nearest neighbour distributions in \mathbb{R}^2 . *Scand. J. Statist.* 7 (1980), no. 2, 80-84. (Brian D. Ripley) 81h:62170 62M99 (62D05)
- Mateos, John J. (with Whitman, Patrick G.) New method for extracting static equilibrium configurations in general relativity. *Phys. Rev. D* (3) 22 (1980), no. 6, 1270-1275. (Authors' summary) 81h:83012 83C20 (85A15)
- Mathai, A. M. Some results on functions of matrix argument. *Math. Nachr.* 84 (1978), 171-177. (James M. Horner) 81f:33017 33A99 (62H10)
- On the nonnull distribution of Wilks' L_{∞} . *Sankhyā Ser. B* 40 (1978), no. 1-2, 43-48. (Dennis L. Young) 81j:62103 62H15 (62H10)
- (with Katiyar, R. S.) The distribution and the exact percentage points for Wilks' L_{∞} criterion. *Ann. Inst. Statist. Math.* 31 (1979), no. 2, 215-224. (Authors' summary) 81m:62086 62H10
- (with Katiyar, R. S.) Exact percentage points for testing independence. *Biometrika* 66 (1979), no. 2, 353-356. (S. John) 81c:62060 62H15
- (with Rathie, Pushpa N.) On the nonnull distribution of a test criterion for testing equality of populations. *Multivariate analysis, V* (Proc. Fifth Internat. Symp., Univ. Pittsburgh, Pittsburgh, Pa., 1978), pp. 327-335. North-Holland, Amsterdam, 1980. (R. P. Gupta) 81h:62015 62E15
- Moments of the trace of a noncentral Wishart matrix. *Comm. Statist. A—Theory Methods* 9 (1980), no. 8, 795-801. (Minoru Siotani) 81h:62092 62H10
- (with Rathie, Pushpa N.) On the nonnull distribution of Wilks' L_{∞} criterion. (French and Italian summaries) *Statistica (Bologna)* 40 (1980), no. 1, 92-99. (M. S. Srivastava) 81m:62087 62H10 (62E15)
- Mathar, Rudolf (with Kraft, Olaf; Schaefer, Martin) A refined geometric-arithmetic means inequality for integers. *Numerische Methoden bei graphentheoretischen und kombinatorischen Problemen, Band 2* (Tagung, Math. Forschungsinst., Oberwolfach, 1978), pp. 216-223. *Internat. Ser. Numer. Math.*, 46, Birkhäuser, Basel, 1979. (Norbert Schmitz) 81b:26016 26D20 (10E99)
- Matheson, T. H. (with Rubin, David S.) A survey and comparison of methods for finding all vertices of convex polyhedral sets. *Math. Oper. Res.* 5 (1980), no. 2, 167-185. (K. G. Murty) 81h:90039 90C05 (52A25)
- Mathers, C. D. Simplified expressions for the calculation of the viscosity of partly ionized gases. *Phys. Lett. A* 69 (1978/79), no. 2, 119-121. (Author's summary) 81h:76070 76X05 (82A45, 85A30)
- Mathews, J. (with Nadkarni, M. G.) On systems of imprimitivity on locally compact abelian groups with dense actions. (French summary) *Ann. Inst. Fourier (Grenoble)* 28 (1978), no. 2, v, 1-23. (L. Corwin) 81j:22062 22B05 (22D30)
- Mathews, P. M. (with Govindarajan, T. R.; Seetharaman, M.; Prabhakar, J.) Relativistic wave equations coupled to external fields: an algebraic study of the problem of constraints. *J. Math. Phys.* 21 (1980), no. 6, 1495-1505. (Jean Nuyts) 81j:81061 81G10 (81D25)

- Mathias, A. R. D.** Surrealist landscape with figures (a survey of recent results in set theory). *Period. Math. Hungar.* 10 (1979), no. 2-3, 109-175. (A. Lévy) 81b:03057 03E35 (03-02, 04-02)
- Mathieu, Jean** (with Bertoglio, Jean-Pierre; Charnay, Georges; Gence, Jean-Noël) Effet d'une rotation en bloc sur les spectres des corrélations doubles d'une turbulence homogène soumise à des gradients de vitesse. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 286 (1978), no. 15, B167-B170. (Authors' summary) 81e:76045 76F05 (76U05)
- Mathon, R.** (with Ganter, B.; Rosa, Alexander) A complete census of $(10, 3, 2)$ -block designs and of Mendelsohn triple systems of order ten. I. Mendelsohn triple systems without repeated blocks. *Proceedings of the Seventh Manitoba Conference on Numerical Mathematics and Computing* (Univ. Manitoba, Winnipeg, Man., 1977), pp. 383-398, *Congress. Numer., XX, Utilitas Math., Winnipeg, Man., 1978*. (Luc Teirlinck) 81b:05020a 05B05 (05B15)
- (with Ganter, B.; Rosa, Alexander) A complete census of $(10, 3, 2)$ -block designs and of Mendelsohn triple systems of order ten. II. Mendelsohn triple systems with repeated blocks. *Proceedings of the Eighth Manitoba Conference on Numerical Mathematics and Computing* (Univ. Manitoba, Winnipeg, Man., 1978), pp. 181-204, *Congress. Numer., XXII, Utilitas Math., Winnipeg, Man., 1979*. (Luc Teirlinck) 81b:05020b 05B05 (05B15)
- (with Vanstone, S. A.) On the existence of doubly resolvable Kirkman systems and equidistant permutation arrays. *Discrete Math.* 30 (1980), no. 2, 157-172. (L. D. Baumert) 81b:05025 05B05 (05B30)
- Mathon, William** (with Flaherty, Joseph E.) Collocation methods for singularly perturbed boundary value problems. *Boundary and interior layers—computational and asymptotic methods* (Proc. Conf., Trinity College, Dublin, 1980), pp. 77-92, Boole, Din Laoghaire, 1980. (L'udomir Šlahor) 81m:65133 65L10
- Matheson, R. M.** Coincidence of nodes for generalized convex functions. *Canad. Math. Bull.* 23 (1980), no. 3, 317-320. (L. D. Fountain) 81m:26005 26A51
- See also Combinatorics, representation theory and statistical methods in groups, 81b:05003
- Mathur, Asha** (with Singal, M. K.) A note on mildly compact spaces. *Kyungpook Math. J.* 19 (1979), no. 2, 165-168. (C. M. Pareek) 81d:54015 54D30
- Mathur, B. L.** On some results involving Lauricella functions. *Bull. Calcutta Math. Soc.* 70 (1978), no. 4, 221-227. (A. N. Srivastava) 81c:33002 33A30 (05A15, 33A65)
- Integration of certain H -functions of two variables with respect to their parameters. *Pure Appl. Math. Sci.* 10 (1979), no. 1-2, 27-30. (R. G. Buschman) 81c:33006 33A35
- Mathur, K. K.** (with Kumar, Virendra) Convergence of the Lagrange interpolation on the extended Tchebycheff nodes. *Indian J. Pure Appl. Math.* 10 (1979), no. 6, 695-698. (A. K. Varma) 81f:41001 41A05
- (with Kumar, Virendra) Uniform convergence of modified Hermite-Fejér interpolation process omitting derivatives. *J. Approx. Theory* 28 (1980), no. 1, 96-99. (P. Vértési) 81d:41002 41A05
- Mathur, M. N.** (with Ramachandran, P. Subhadra) Heat transfer in the stagnation point flow of a micropolar fluid. (German summary) *Acta Mech.* 36 (1980), no. 3-4, 247-261. (Authors' summary) 81d:76008 76A05 (80A20)
- Mathur, S. N.** (with Sinha, Kishore; Nigam, A. K.) Kronecker sum of incomplete block designs. *Utilitas Math.* 16 (1979), 157-164. (Elizabeth J. Billington) 81f:05029 05B05 (05B20)
- Matkó, S.** (with Furtb, B.) Realization of error-free transmission using microprocessors. *Algebraic coding theory and applications* (Summer School, Internat. Centre Mech. Sci. (CISM), Udine, 1978), pp. 519-527, *CISM Courses and Lectures*, 258, Springer, Vienna, 1979. (See 81k:94026) 94B99
- Matković, M. I.** Fundamental solutions of parabolic systems with discontinuous coefficients, and their applications to boundary value problems. III. (Russian) *Differentsial'nye Uravneniya* 14 (1978), no. 2, 291-303, 388. (Author's introduction) 81f:35059 35K50
- Fundamental solutions of parabolic systems with discontinuous coefficients, and their applications to boundary value problems. IV. (Russian) *Differentsial'nye Uravneniya* 14 (1978), no. 5, 885-899, 958. (Author's summary) 81f:35022 35K50
- Matković, J.** Algorithmic unsolvability of exponential Diophantine equations with three unknowns. (Russian) *Studies in the theory of algorithms and mathematical logic* (Russian), pp. 69-78, 133, "Nauka", Moscow, 1979. (C. Smoryński) 81f:03055 03D35 (10B25, 10N05)
- Matković, Jacob R.** (with Estes, Dennis R.) Matrix factorizations, exterior powers, and complete intersections. *J. Algebra* 58 (1979), no. 1, 117-135. (W. V. Vasconcelos) 81d:13012 13D15 (15A23, 15A75, 16A42)
- (with Estes, Dennis R.) Unique factorization of matrices and Towber rings. *J. Algebra* 59 (1979), no. 2, 387-394. (Marco Fontana) 81b:13006 13F15 (13E05)
- Matilla Martin, Miguel** (with Peral Alonso, Juan) Estimaciones L^p pour l'équation de Klein-Gordon. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 10, A449-A451. (M. H. Protter) 81f:35087 35L05 (81D25)
- Matijević, S. G.** Toward the unification of weak, electromagnetic, and strong interactions: SU(5). *Uspehi Fiz. Nauk* 130 (1980), no. 1, 3-38 (Russian); translated as *Soviet Phys. Uspekhi* 23 (1980), no. 1, 1-20. (Author's summary) 81b:81152 81G20
- Matijević, A. A.** (with Gal'cov, D. V.; Grac, Ju. V.) On the question of bremsstrahlung in gravitational interaction. (Russian) *Izv. Vysš. Učebn. Zaved. Fizika* 1980, no. 5, 40-47. (Authors' summary) 81j:83025 83C50
- Matijević, O. T.** Multiplicative properties of the indeterminacy function of certain composite signals. (Russian) *Trudy Moskov. Orden. Lenin. Energet. Inst. No. 375* (1978), 56-61. (Author's introduction) 81b:94012 94A12 (78A40)
- Matijević, B. D.** (with Gol'denberg, L. M.) Conditions for absolute stability of processes in recursive digital filters. *Avtomat. i Telemekh.* 1979, no. 8, 76-85 (Russian); translated as *Automat. Remote Control* 40 (1979), no. 8, part 1, 1161-1169 (1980). (Authors' summary) 81a:94013 94A12 (93D99, 93E11)
- Matkovskii, A. P.** (with Lopat'ev, A. A.) A study of the effect of thermoelastic scattering on the coefficient of reflection of plane harmonic waves off a plane boundary between a fluid and a solid. (Russian) *Mat. Metody i Fiz.-Meh. Polja* No. 11 (1980), 56-60, 122. (Authors' summary) 81g:73122 73U05 (73D25, 73J05)
- Matkowski, Janusz** (with Węgrzyk, Roman) On equivalence of some fixed point theorems for self-mappings of metrically convex space. (Italian summary) *Boll. Un. Mat. Ital. A* (5) 15 (1978), no. 2, 359-369. (Authors' summary) 81b:54054 54H25
- Fixed point theorems for contractive mappings in metric spaces. (Czech summary) With a loose Russian summary. *Časopis Pěst. Mat.* 105 (1980), no. 4, 341-344, 409. (Sehie Park) 81m:54079 54H25
- Matkovsky, Bernard J.** (with Putnick, Leonard J.; Reiss, Edward L.) Secondary states of rectangular plates. *SIAM J. Appl. Math.* 38 (1980), no. 1, 38-51. (T. J. Mahar) 81a:73026 73H05 (35B32)
- (with Kapila, A. K.; Vega, J.) Reactive-diffusive system with Arrhenius kinetics: peculiarities of the spherical geometry. *SIAM J. Appl. Math.* 38 (1980), no. 3, 382-401. (Mario Primicerio) 81b:80009 80A30 (34B10)
- (with Kapila, A. K.) Reactive-diffusive system with Arrhenius kinetics: the Robin problem. *SIAM J. Appl. Math.* 39 (1980), no. 3, 391-401. (Frederick A. Howes) 81m:80003 80A20 (35K55, 80A30)
- Matlis, Eben** Generalizations of divisible abelian groups to the theory of modules. *Symposia Mathematica, Vol. XXIII (Conf. Abelian Groups and their Relationship to the Theory of Modules, INDAM, Rome, 1977)*, pp. 241-250, Academic Press, London, 1979. (Paul M. Eakin) 81b:13010 13C11
- Matloff, Norman S.** A dissonant voting model: nonergodic case. *Z. Wahrsch. Verw. Gebiete* 51 (1980), no. 1, 63-78. (Richard Holley) 81c:60103 60K35
- de Matos, M. M.** (with Brandi, H. S.; Ferreira, R.) Fractional occupation in the Hartree-Fock method. *Chem. Phys. Lett.* 73 (1980), no. 3, 597-601. (Authors' summary) 81f:81090 81G45
- Matos, Mário C.** On infinite-dimensional convolution operators. *Proceedings of the Eleventh Brazilian Mathematical Colloquium (Poços de Caldas, 1977)*, Vol. I (Portuguese), pp. 227-231, Inst. Mat. Pura Apl., Rio de Janeiro, 1978. (From the text) 81m:58015 58C10 (35A99, 46G20)
- Correction to: "On Malgrange theorem for nuclear holomorphic functions in open balls of a Banach space" [Math. Z. 162 (1978), no. 2, 113-123; MR 58 #30226]. *Math. Z.* 171 (1980), no. 3, 289-290. (Editors) 81e:46028 46G20 (32B05, 58C10)
- Matov, V. I.** Unimodal germs of functions on a manifold with boundary. (Russian) *Funktsional. Anal. i Prilozhen.* 14 (1980), no. 1, 69-70. (Peter Giblin) 81c:32023 32B30
- Matrosov, V. M.** (with Vasil'ev, S. N.; Divakov, O. G.; Tjajukšin, A. I.) On technology of modelling and optimization of complex systems. *Modelling and optimization of complex systems* (Proc. IFIP-TC 7 Working Conf., Novosibirsk, 1978), pp. 220-239, *Lecture Notes in Control and Information Sci.*, 18, Springer, Berlin, 1979. (P. Bertrand) 81c:93011 93A10
- See also Theory of stability and its applications, 81b:34003; Dynamics of control systems, 81c:93003 and Problems of stability of motion, analytical mechanics and control of motion, 81c:93002
- Matrosova, A. Ju.** Generation of a complete test for circuits synthesized by the factorization method. *Avtomat. i Vychisl. Tehn. (Riga)* 12 (1978), no. 5, 42-47 (Russian); translated as *Automat. Control Comput. Sci.* 12 (1978), no. 5, 37-41. (Author's summary) 81c:94050 94C10
- (with Bedrenko, S. V.) Probability approach to checking of sequential circuits. *Avtomat. i Telemekh.* 1980, no. 1, 97-102 (Russian, English summary); translated as *Automat. Remote Control* 41 (1980), no. 1, part 2, 78-82. (Authors' summary) 81g:94044 94C05
- Matrosova, E. I.** Analytic continuation across the boundary of solutions of an elliptic boundary value problem. (Russian) *Boundary value problems for partial differential equations* (Russian), pp. 72-76, 164, "Naukova Dumka", Kiev, 1978. (M. O. Baleshtvil) 81a:35032 35J55
- Matsubara, Yoshihiro** (with Gotō, Masashi) Evaluation of ordinary ridge regression. *Bull. Math. Statist.* 18 (1978/79), no. 3-4, 1-35. (A. I. Khuri) 81d:62066 62J07
- Matsuda, Minoru** A remark on unique Hahn-Banach extensions. *Math. Japon.* 23 (1978/79), no. 5, 551-554. (D. E. Wulbert) 81g:46007 46A22 (41A65, 46B05)
- Some properties of general denting points. *Math. Japon.* 23 (1978/79), no. 6, 581-585. (D. E. Wulbert) 81g:46008 46A22 (46E15)
- Matsuda, Mitsumasa** (with Araki, Hidekazu; Shioya, Shunsuke) On the thermal stresses of an infinite plate with an infinite row of circular inclusions under uniform heat flow. *Bull. JSME* 23 (1980), no. 180, 849-856. (Authors' summary) 81f:73052 73U05 (73C40)
- Matsuda, Ryūki** Notes of Prüfer α -multiplication rings. *Bull. Fac. Sci. Ibaraki Univ. Ser. A* No. 12 (1980), 9-15. (Fazal Mehdji) 81j:13007 13C05
- Matsuda, Takuya** (with Isaka, Hiromu) Response of gas to an ovaly deformed gravitational potential of a disk galaxy. *Progr. Theoret. Phys.* 64 (1980), no. 4, 1265-1279. (Authors' summary) 81k:85002 85A05
- Matsuda, Toshimitsu** On the \mathcal{S}_n -equivariant self-homotopy equivalences of spheres. *J. Fac. Sci. Shinsu Univ.* 13 (1978), no. 1, 43-78. (A. V. Zarelua) 81f:55007 55P10 (57S17)
- Matsuafuji, Hisayoshi** (with Hasegawa, Eiji) Flow induced by an oscillating plate in a particle-fluid mixture. *Bull. JSME* 23 (1980), no. 184, 1618-1624. (Authors' summary) 81j:76085 76T05
- Matsu, Kunihiko** (with Nishida, Kazuo) Notes on the Riemann-Roch theorem on open Riemann surfaces. *J. Math. Kyoto Univ.* 20 (1980), no. 4, 735-748. (Tatsuo Fujie) 81k:30066 30F30
- Matsu, Takashi** On estimating the parameter gap of two populations based on ranked data. *J. Japan Statist. Soc.* 7 (1977), no. 1, 11-17. (Author's summary) 81m:62045 62F10
- Matsuki, Toshihiko** The orbits of affine symmetric spaces under the action of minimal parabolic subgroups. *J. Math. Soc. Japan* 31 (1979), no. 2, 331-357. (S. Murakami) 81a:33049 53C35 (22E46, 32M15)
- (with Ōshima, Toshio) Orbits on affine symmetric spaces under the action of the isotropy subgroups. *J. Math. Soc. Japan* 32 (1980), no. 2, 399-414. (J. A. Wolf) 81f:53043 53C35 (32M15)
- Matsumoto, Hideki** (with Semenov, G.; Umezawa, H.; Tachiki, M.) Quantum electrodynamics in solids. *Fortschr. Phys.* 28 (1980), no. 2, 67-98. (Authors' summary) 81d:81136 81L05 (78A25, 82A55)
- (with Semenov, G.; Umezawa, H.) Renormalization and quantum correction of soliton solutions. *Progr. Theoret. Phys.* 63 (1980), no. 4, 1393-1412. (Authors' summary)

- 81d:81062 81E15**
Matsumoto, Hideya Représentations irréductibles de certains groupes d'automorphismes d'un arbre demi-homogène. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **290** (1980), no. 16, A737-A740. (Author's summary) **81d:22019 22E50**
- Matsumoto, Hiroyuki** (with Nakahara, Ichiro; Shizuya, Mitsutaka) Viscous half-space subjected to impact torsion by a rigid cylinder. *Bull. JSME* **23** (1980), no. 178, 510-515. (Authors' summary) **81g:73053 73F15**
 (with Kawakami, Takashi; Nakahara, Ichiro; Tsuchida, Eiichiro) Stresses in a circular cylinder having an eccentric spherical cavity under tension. *Bull. JSME* **23** (1980), no. 179, 630-636. (From the summary) **81d:73066 73C05**
 (with Nakahara, Ichiro; Okamoto, Yuuji) Thick plate subjected to torsional impact by a rigid circular cylinder. *Bull. JSME* **23** (1980), no. 181, 1081-1085. (Authors' summary) **81g:73073 73K10**
 (with Nakahara, Ichiro; Ito, Akihito) Bifurcation or skew of a rapidly propagating crack (case of mode III crack). *Bull. JSME* **23** (1980), no. 184, 1569-1574. (Authors' summary) **81j:73074 73M05**
- Matsumoto, Kazuo** (with Shirai, Kokio) A note on elimination of function symbols in the intuitionistic predicate calculus. *Rep. Fac. Sci. Shizuoka Univ.* **14** (1979), 13-20 (1980). (Giovanni Criscuolo) **81f:03018 03B20 (03F55)**
- Matsumoto, Keinosuke** (with Nakayama, Hirotaka; Tanino, Tetsuzoh; Matsuo, Hirofumi; Inoue, Koichi; Sawaragi, Yoshikazu) Methodology for group decision support with an application to assessment of residential environment. *IEEE Trans. Systems Man Cybernet.* **9** (1979), no. 9, 477-485. (Authors' summary) **81a:90027 90A07**
- Matsumoto, Keiyun** (with Hosoe, Shigeyuki) On the irreducibility condition in the structural controllability theorem. *IEEE Trans. Automat. Control* **24** (1979), no. 6, 963-966. (Authors' summary) **81a:93016 93B05**
- Matsumoto, Kōzō** (with Satō, Isuke) On P -Sasakian manifolds satisfying certain conditions. *Tensor (N.S.)* **33** (1979), no. 2, 173-178. (S. S. Singh) **81h:53049 53C25**
 On curvature-preserving infinitesimal transformations of a P -Sasakian manifold. *Tensor (N.S.)* **34** (1980), no. 1, 35-38. (V. Mihova-Nehmer) **81f:53037 53C25**
- Matsumoto, Makoto** (with Shimada, Hideo) On Finsler spaces with 1-form metric. II. Berwald-Moor's metric $L = (y^2)^{1/2} \dots (y^n)^{1/2}$. *Tensor (N.S.)* **32** (1978), no. 3, 275-278. (Hassan Akbar-Zadeh) **81m:53035 53B40**
 The length and the relative length of tangent vectors of Finsler spaces. *Rep. Math. Phys.* **15** (1979), no. 3, 375-386. (H. Rund) **81c:53031 53B40**
 (with Numata, Shigeru) On Finsler spaces with a cubic metric. *Tensor (N.S.)* **33** (1979), no. 2, 153-162. (Hideo Izumi) **81h:53024 53B40**
 (with Tamásy, Lajos) Direct method to characterize conformally Minkowski Finsler spaces. *Tensor (N.S.)* **33** (1979), no. 3, 380-384. (Yoshihiro Ichijō) **81h:53026 53B40**
- Matsumoto, Mayumi** Stable homotopy groups of Thom complexes. *Mem. Fac. Sci. Kyushu Univ. Ser. A* **33** (1979), no. 2, 311-334. (David Handel) **81h:55036 55Q10 (57R42)**
- Matsumoto, Shigenori** Topological entropy of circle endomorphisms. *Yokohama Math. J.* **27** (1979), no. 2, 73-76. (D. Newton) **81h:58027 58F11 (28D20)**
- Matsumoto, Takashi** (with Chua, Leon O.; Ichiraku, Shigeo) Geometric properties of resistive nonlinear n -ports: transversality, structural stability, reciprocity, and anti-reciprocity. *IEEE Trans. Circuits and Systems* **27** (1980), no. 7, 577-603. (Zdeněk Ertinger) **81i:58034 58F40 (58F10, 94C05)**
- Matsumura, Akitaka** (with Kawashima, Shuichi; Nishida, Takaaki) On the fluid-dynamical approximation to the Boltzmann equation at the level of the Navier-Stokes equation. *Comm. Math. Phys.* **70** (1979), no. 2, 97-124. (M. Drăganu) **81h:76048 76P05 (76D05, 82A05)**
 (with Nishida, Takaaki) The initial value problem for the equations of motion of viscous and heat-conductive gases. *J. Math. Kyoto Univ.* **20** (1980), no. 1, 67-104. (A. A. Arsen'ev) **81g:35108 35Q20 (35K55, 76N15)**
- Matsumura, Hiromichi** Automorphisms of some surfaces and equivariant line bundles. *Mem. Fac. Sci. Shimane Univ.* **13** (1979), 23-29. (Steven Zucker) **81i:14005 14C20 (14J25)**
- Matsumoto, Koichiro** Nonequilibrium dynamics of dissipative systems and its application to a macroeconomic system. *IEEE Trans. Systems Man Cybernet.* **8** (1978), no. 7, 526-533. (Authors' summary) **81h:90042 90A16 (90A05)**
- Matsumoto, Yoshimasa** Interaction of the Benjamin-Ono solitons. *J. Phys. A* **13** (1980), no. 5, 1519-1536. (Authors' summary) **81d:35072 35Q20 (14K25, 35B30, 76B25, 76C15, 81C05)**
 Solutions of the higher order Benjamin-Ono equation. *J. Phys. Soc. Japan* **48** (1980), no. 3, 1024-1028. (K. K. Puri) **81g:76022 76B25 (35Q20, 76C10)**
- Matsuo, Hirofumi** (with Nakayama, Hirotaka; Tanino, Tetsuzoh; Matsumoto, Keinosuke; Inoue, Koichi; Sawaragi, Yoshikazu) Methodology for group decision support with an application to assessment of residential environment. *IEEE Trans. Systems Man Cybernet.* **9** (1979), no. 9, 477-485. (Authors' summary) **81a:90027 90A07**
- Matsuoka, Masahiro** (with Ikeda, Kensuke; Okada, Jumpei) Theory of cooperative cascade emission. I. Linear stochastic theory. *J. Phys. Soc. Japan* **48** (1980), no. 5, 1636-1645. (Authors' summary) **81i:81120 81K05**
 (with Ikeda, Kensuke; Okada, Jumpei) Theory of cooperative cascade emission. II. Nonlinear evolution. *J. Phys. Soc. Japan* **48** (1980), no. 5, 1646-1654. (Authors' summary) **81i:81120 81K05**
- Matsuoka, Motohisa** (with Shimodaira, Kazuo; Noguchi, Taisuke; Michiaki, Yoshimasa; Matsuzaki, Toshio; Kuwabara, Hideo; Suzuki, Hisao; Takagi, Shigeo; Ōya, Shinichi) Perspective of study of history of mathematics. (Japanese) Special issue on the 20th anniversary of Sūgaku Kenkyū. *Sūgaku Kenkyū* No. 80 (1979), 3-75. (K. Inoue) **81i:01006 01A27**
- Matsuoka, O.** (with Suzuki, N.; Aoyama, T.; Malli, G.) Relativistic self-consistent-field methods for molecules. I. Dirac-Fock multiconfiguration self-consistent-field theory for molecules and a single-determinant Dirac-Fock self-consistent-field method for closed-shell linear molecules. *J. Chem. Phys.* **73** (1980), no. 3, 1320-1328. (Authors' summary) **81h:81173a 81G55**
 (with Aoyama, T.; Yamakawa, H.) Relativistic self-consistent-field methods for molecules. II. A single-determinant Dirac-Fock self-consistent-field method for closed-shell polyatomic molecules. *J. Chem. Phys.* **73** (1980), no. 3, 1329-1333. (Aut. summary) **81h:81173b 81G55**
- Matsuoka, Tadayuki** Reflexivity of the canonical modules of almost complete intersections. (Japanese) *Sūgaku* **31** (1979), no. 3, 261-262. (Chin-Pi Lu) **81j:13023 13H05 (13H10, 14M10)**
- Matsuoka, Takashi** (with Morita, Shigeyuki) On characteristic classes of Kähler foliations. *Osaka J. Math.* **16** (1979), no. 2, 539-550. (C. Albert) **81h:57025 57R30 (53C05)**
- Matsuoka, Yasuhiko** On the values of the Riemann zeta function at half integers. *Tokyo J. Math.* **2** (1979), no. 2, 371-377. (H. L. Montgomery) **81m:10077 10H05**
- Matsuoka, Yousji** (with Koriyama, Akira) On expansive homeomorphisms on certain compact metric spaces. *Proc. Fac. Sci. Tokai Univ.* **15** (1980), 1-6. (K. D. Magill, Jr.) **81g:54011 54C35 (54C15, 58F25)**
- Matsuoka, T.** On polarized varieties of dimension 3. I. *Amer. J. Math.* **101** (1979), no. 1, 212-232. (Daniel Comenetz) **81d:14010 14D20 (14F12)**
- Matsushima, Osamu** The Plancherel formula for the universal covering group of $SL(2, \mathbb{R})$. *Sci. Papers College Gen. Ed. Univ. Tokyo* **29** (1979), no. 2, 105-123. (Jonathan M. Rosenberg) **81e:22023 22E46 (33A75, 43A80)**
- Matsuoka, Kazuo** Nonlinear interactions of counter-travelling waves. *J. Phys. Soc. Japan* **48** (1980), no. 5, 1746-1754. (Authors' summary) **81k:35149 35Q20 (35L70)**
- Matsuura, T.** (with Azumi, M.; Kurita, G.; Takeda, T.; Tanaka, Yutaka; Tsunematsu, T.) A fluid model numerical code system for tokamak fusion research. *Computing methods in applied sciences and engineering (Proc. Fourth Internat. Symp., Versailles, 1979)*, pp. 335-356. North-Holland, Amsterdam, 1980. (Authors' summary) **81h:76006 76X05 (65N30, 76W05)**
- Matsuura, Toshio** (with Taniguchi, Kenichi; Sugiyama, Yuji; Kasami, T.) On equivalence of safe Petri nets. *Fundamentals of computation theory (Proc. Conf. Algebraic, Arith. and Categorical Methods in Comput. Theory, Berlin/Wendisch-Rietz, 1979)*, pp. 430-436. *Math. Research*, 2, Akademie-Verlag, Berlin, 1979. (Dorothy Bollman) **81e:68074 68D90 (68C25)**
- Matsuyama, Akira** (with Takahashi, Hiromitsu) An approximate solution for the Steiner problem in graphs. *Math. Japon.* **24** (1979/80), no. 6, 573-577. (Authors' summary) **81a:68073 68E10 (05C35)**
- Matsuyama, Yoshio** Geometry of submanifolds with constant mean curvature. *Bull. Fac. Sci. Eng. Chuo Univ.* **22** (1979), 23-48. (K. Nomizu) **81h:53052 53C40**
 On a certain hypersurface of \mathbb{R}^{n+1} . *Tensor (N.S.)* **33** (1979), no. 2, 210-212. (Alan West) **81m:53005 53A07 (53A05)**
- Matsuzaiki, Nagi** On the joint measurability of the parametric Markovian transformations. *Bull. Tokyo Gakugei Univ.* **4** **31** (1979), 51-58. (A. G. A. Babiker) **81k:28017 28C15 (60B05)**
- Matsuzaiki, Toshio** (with Shimodaira, Kazuo; Noguchi, Taisuke; Michiaki, Yoshimasa; Kuwabara, Hideo; Suzuki, Hisao; Takagi, Shigeo; Matsuoka, Motohisa; Ōya, Shinichi) Perspective of study of history of mathematics. (Japanese) Special issue on the 20th anniversary of Sūgaku Kenkyū. *Sūgaku Kenkyū* No. 80 (1979), 3-75. (K. Inoue) **81i:01006 01A27**
- Matsuzaue, T.** On a class of stochastic partial differential equations. *J. Math. Anal. Appl.* **78** (1980), no. 1, 161-172. (Robert Marcus) **81m:60117 60H15 (35H05, 35R60)**
- Matt, Hans J.** (with Massey, James L.) Determining the burst-correcting limit of cyclic codes. *IEEE Trans. Inform. Theory* **26** (1980), no. 3, 289-297. (Authors' summary) **81h:94042 94B15 (94B20)**
- Matte, Udo** (with Stämmler, Ludwig) Steigkreitsaussagen zur Diskussion des Schnittverhaltens einer Ovalenschar mit einem Oval. *Beiträge Algebra Geom.* No. 9 (1980), 149-159. (Z. Nádeník) **81h:52007 52A10**
- Mattel, Giulio** Surfaces of discontinuity and waves in an anisotropic plasma with generalized polytropic equations of state. *Ann. Mat. Pura Appl.* **(4)** **122** (1979), 301-313. (Authors' summary) **81a:76052 76X05**
 On the Poincaré-Cartan integral invariant in magnetofluidynamics. (Italian). *English summary. Atti Sem. Mat. Fis. Univ. Modena* **28** (1979), no. 1, 185-188. (E. G. Broadbent) **81j:76094 76W05 (49C10)**
 Cylindrical waves in an anisotropic plasma with generalized polytropic equations of state. *Riv. Mat. Univ. Parma* **(4)** **5** (1979), part 1, 77-84 (1980). (D. ter Haar) **81j:76109 76X05 (82A45)**
 An introduction to the study of models of hydrodynamic type in the mathematical physics of plasmas. (Italian. English summary) *Boll. Un. Mat. Ital. A* **(5)** **17** (1980), no. 1, 1-24. (R. Thibault) **81h:76075 76X05**
- Mattia, Cl.** Théorème de traces pour une classe d'espaces de Sobolev singuliers. *Équations aux dérivées partielles (Proc. Conf., Saint-Jean-de-Monts, 1977)*, pp. 130-156. *Lecture Notes in Math.*, 660, Springer, Berlin, 1978. (Richard Bagby) **81g:46041 46E35**
 (with Bolley, P.; Camus, Jacques) Analyticité microlocale et itérés d'opérateurs. *Séminaire Goulaouic-Schwartz (1978/79)*, Exp. No. 13, 9 pp., École Polytech., Palaiseau, 1979. (Rémi Vaillancourt) **81d:58050 58G15 (35J99)**
 (with Helffer, B.) Analyticité et itérés réduits d'un système de champs de vecteurs. *Comm. Partial Differential Equations* **5** (1980), no. 10, 1065-1072. (Jorge Hounie) **81c:35034 35H05 (35B99)**
- Matthiel, R. M. M.** On approximating smooth solutions of linear singularly perturbed ODE. *Numerical analysis of singular perturbation problems (Proc. Conf., Math. Inst., Catholic Univ., Nijmegen, 1978)*, pp. 457-465. Academic Press, London, 1979. (G. S. Tabizade) **81e:65040 65L05**
 Characterizations of dominant and dominated solution of linear recursions. *Numer. Math.* **35** (1980), no. 4, 421-442. (J. R. Cash) **81m:65190 65Q05**
- Matthews, C. R.** Gauss sums and elliptic functions. I. The Kummer sum. *Invent. Math.* **52** (1979), no. 2, 163-185. (Bruce C. Berndt) **81i:10034 10G05 (10D25)**
 Gauss sums and elliptic functions. II. The quartic sum. *Invent. Math.* **54** (1979), no. 1, 23-52. (Bruce C. Berndt) **81e:10035 10G05 (10D25)**
- Matthews, D.** (with Rotem, D.; Bretholz, E.) Self-organizing doubly linked lists. *Internat. J. Comput. Math.* **8** (1980), no. 2, 99-106. (Clement T. Yu) **81h:68096 68H05**
- Matthews, Laurence R.** Properties of bicircular matroids. (French summary) *Problèmes combinatoires et théorie des graphes (Colloq. Internat. CNRS, Univ. Orsay, Orsay, 1976)*, pp. 289-290. *Colloques Internat. CNRS*, 260, CNRS, Paris, 1978. (M. V. Lomonosov) **81a:05030 05B35**
 Matroids from directed graphs. *Discrete Math.* **24** (1978), no. 1, 47-61. (J. M. S. Simões-Pereira) **81e:05055 05B35 (05C20)**

- Infinite subgraphs as matroid circuits. *J. Combin. Theory Ser. B* 27 (1979), no. 3, 260-273. (J. M. S. Simões-Pereira) **81e:05056** 05B35 (05C99)
- Matthies, R. M. (with Meyer, S. C.) Modular control schemata for parallel asynchronous systems. *Proceedings of a Conference on Theoretical Computer Science (Univ. Waterloo, Waterloo, Ont., 1977)*, pp. 61-69, Univ. Waterloo, Waterloo, Ont., 1978. (Karel Culik) **81c:68036** 68C40 (68B20)
- Matthies, Hermann (with Strang, Gilbert) The solution of nonlinear finite element equations. *Internat. J. Numer. Methods Engrg.* 14 (1979), no. 11, 1613-1626. (Ulrich Eckhardt) **81a:65102** 65N30 (65-04)
- (with Strang, Gilbert) Numerical computations in nonlinear mechanics. *Computing methods in applied sciences and engineering (Proc. Fourth Internat. Sympos., Versailles, 1979)*, pp. 517-525, North-Holland, Amsterdam, 1980. (Authors' summary) **81k:73017** 73C50 (65H10, 73F99)
- della Mattia Maderna, Carla See Della Mattia Maderna, Carla
- Matilla, Pertti (with Rickman, Seppo) Quasiregular mappings and value distribution. *Romanian-Finnish Seminar on Complex Analysis (Proc., Bucharest, 1976)*, pp. 204-211, *Lecture Notes in Math.*, 743, Springer, Berlin, 1979. (Olli Martio) **81c:30037** 30C60 (30D35)
- (with Rickman, Seppo) Averages of the counting function of a quasiregular mapping. *Acta Math.* 143 (1979), no. 3-4, 273-305. (V. Micić) **81k:30037** 30C60
- Differentiation of measures on uniform spaces. *Measure theory, Oberwolfach 1979 (Proc. Conf., Oberwolfach, 1979)*, pp. 261-283, *Lecture Notes in Math.*, 794, Springer, Berlin, 1980. (B. Rodríguez-Salinas) **81k:28004** 28A15 (28C15)
- Matliff, F. Numerical instabilities of the integral approach to the interior boundary value problem for the two-dimensional Helmholtz equation. *Internat. J. Numer. Methods Engrg.* 15 (1980), no. 9, 1303-1313. (Author's summary) **81g:65134** 65N10
- Matlione, R. P. (with Katz, I. N.; Franklin, M. A.) A partitioned parallel Runge-Kutta method for weakly coupled ordinary differential equations. *Internat. J. Numer. Methods Engrg.* 12 (1978), no. 2, 267-278. (Authors' summary) **81k:65059** 65L05
- Matula, David W. Subtree isomorphism in $O(n^{3/2})$. Algorithmic aspects of combinatorics (Conf., Vancouver Island, B.C., 1976). *Ann. Discrete Math.* 2 (1978), 91-106. (Eberhard Lüdde) **81d:05021** 05C05 (68B15, 68C25)
- (with Komerup, Peter) Approximate rational arithmetic systems: analysis of recovery of simple fractions during expression evaluation. *Symbolic and algebraic computation (EUROSAM '79, Internat. Sympos., Marseille, 1979)*, pp. 383-397, *Lecture Notes in Comput. Sci.*, 72, Springer, Berlin, 1979. (Authors' summary) **81k:65007** 65C20 (68C20)
- Matulionis, A. Determination of the hot electron diffusion coefficient from the spread of a narrow spatial distribution. (Russian. Lithuanian and English summaries) *Lietuv. Fiz. Sb.* 20 (1980), no. 2, 65-76, 132-133. (From the summary) **81g:82062** 82A55
- Matsumoto, Yasuo (with Takemitsu, Nobumasa) Unsteady stagnation-point flow impinging obliquely on an oscillating flat plate. *J. Phys. Soc. Japan* 47 (1979), no. 4, 1347-1353. (Claude Demuth) **81k:76022** 76D05 (76Z05)
- Matsum, P. P. (with Abralin, V. N.) Difference schemes for nonlinear hyperbolic equations with piecewise-smooth solutions. II. (Russian) *Differentsial'nye Uravneniya* 15 (1979), no. 7, 1225-1238, 1341-1342. (I. N. Molčanov) **81k:65088** 65N10
- Matsumita, Kameo (with Ohsumi, Noboru) A criterion for choosing the number of clusters in cluster analysis. *Recent developments in statistical inference and data analysis (Proc. Internat. Conf., Inst. Statist. Math., Tokyo, 1979)*, pp. 203-213, North-Holland, Amsterdam, 1980. (See **81j:62009**) 62H30
- See also *Recent developments in statistical inference and data analysis*, **81j:62009**
- Matsumori, V. E. Theorems on fixed points for multivalent compressions and expansions of a cone. (Russian) *Dokl. Akad. Nauk UzSSR* No. 9 (1979), 6-8. (I. K. Marek) **81g:47063** 47H10
- Matusek, Ursula On certain conformal collineations in nearly Sasakian manifolds. *Demonstratio Math.* 12 (1979), no. 3, 599-605. (David Blair) **81f:53038** 53C25 (53C15)
- Matuzewski, A. (with Kowalczyk, Teresa; Kowalski, Adam; Pleszczyńska, Elżbieta) Applications of monotonic dependence functions: descriptive aspects. (Polish summary) *Zastos. Mat.* 16 (1980), no. 4, 579-591. (A. D. Gordon) **81m:62100** 62H20
- Matveenko, V. P. (with Kuznetsov, G. B.; Trojanovskii, I. E.) Forced oscillations of a short viscoelastic cylinder. (Russian) *Problems in the theory of elasticity and viscoelasticity (Russian)*, pp. 34-38, 121, *Akad. Nauk SSSR, Ural. Nauch. Centr. Sverdlovsk*, 1978. (W. Keca) **81m:73031** 73D35
- Matveev, A. S. On the abstract theory of optimal control. (Russian. English summary) *Vestnik Leningrad. Univ. Mat. Meh. Astronom.* 1980, vyp. 2, 20-27, 123. (O. E. Citrickii) **81k:49014** 49B27
- Matveev, P. N. Solution of certain dynamical problems of the theory of viscoelasticity by the operator method. (Russian) *Differentsial'nye Uravneniya* 15 (1979), no. 10, 1904-1906, 1920. (J. Ignaczak) **81f:73019** 73F15
- Operator representations of particular solutions of a class of integro-partial differential equations. (Russian) *Izv. Akad. Nauk Kazah. SSR Ser. Fiz.-Mat.* 1979, no. 5, 79-81, 93. (S. P. Gavelja) **81k:73060** 73K12 (45K05, 73F99)
- (with Lebedev, P. A.; Morozov, A. V.) Equation of motion of a train as a viscoelastic one-dimensional medium and its solution. (Russian) *Moskov. Inst. Inzh. Železnodorozh. Transporta Trudy No. 640 Prikl. Mat. i Zadachi Železnodorozh. Transporta* (1979), 33-37, 151. (W. Keca) **81k:73005** 73F05 (35L20, 70F15)
- Matveev, P. S. (with Maljutov, M. B.) The design of screening experiments with a nonsymmetric response function. (Russian) *Dokl. Akad. Nauk SSSR* 244 (1979), no. 1, 42-46. (H. Bandemer) **81d:62074** 62K99
- Matveev, V. A. (with Bogoljubov, P. N.; Petrov, G. I.; Robaschik, D.) Causality properties of form factors. *Rep. Math. Phys.* 10 (1976), no. 2, 195-202. (Authors' summary) **81i:81006** 81F10
- (with Geyer, B.; Robaschik, D.; Wiecek, E.) Analytical properties of conformal invariant four-point functions. *Rep. Math. Phys.* 10 (1976), no. 2, 203-211. (Charles L. Hammer) **81i:81051** 81E05
- (with Krasnikov, N. V.; Rubakov, V. A.; Tavhelidze, A. N.; Tokarev, V. F.) Double- θ vacuum structure and the functional integral in the Schwinger model. *Phys. Lett. B* 97 (1980), no. 1, 103-106. (Authors' summary) **81j:81049** 81E99 (81C35)
- Matveev, V. B. (with Sall', M. A.) Conditionally periodic solutions of equations of nonlinear filters. (Russian) *Scattering theory. Theory of oscillations (Russian)*, pp. 128-133, 186, *Probl. Mat. Fiz.*, 9, Leningrad. Univ., Leningrad, 1979. (Authors' summary) **81b:94059** 94C05
- (with Yavor, M. I.) Solutions presque périodiques et à N -solitons de l'équation hydrodynamique non linéaire de Kaup. (English summary) *Ann. Inst. H. Poincaré Sect. A (N.S.)* 31 (1979), no. 1, 25-41. (W. Güttinger) **81b:35087** 35Q20 (76B25)
- Some comments on the rational solutions of the Zakharov-Sabat equations. *Let. Math. Phys.* 3 (1979), no. 6, 503-512. (Yvette Kosmann-Schwarzbach) **81j:35100** 35Q20 (58F07)
- Matveev, V. F. (with Ljahu, A. K.) A model of operation of a computer in a time-sharing mode. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* 1979, no. 5, 59-67, 220 (Russian); translated as *Engrg. Cybernetics* 17 (1979), no. 5, 45-53 (1980). (Authors' summary) **81m:68008** 68A05 (68C15)
- Matvčeva, L. V. Estimate of the rate of convergence of a sequence of Gronwall polynomials. (Russian) *Studies in functional analysis (Russian)*, pp. 49-64, ii-iii, *Ural. Gos. Univ., Sverdlovsk*, 1978. (Z. Rubinstein) **81k:30003** 30B10
- Dependence of the convergence rate of Gronwall polynomials on properties of the mapping function. (Russian) *Mat. Zametki* 28 (1980), no. 4, 513-524, 634. (W. H. J. Fuchs) **81k:40013** 40G99 (30B40)
- Matvečuk, M. S. Finite charges in von Neumann algebras. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1980, no. 9, 81-82. (I. Kovács) **81k:46067** 46L10 (46L55)
- Matveyev, V. F. See Matveev, V. F.
- Matvienko, V. T. (with Mazko, A. G.) Optimal modal control of linear systems. (Russian. English summary) *Issled. Operacii i ASU No. 14* (1979), 107-113, 136. (E. G. Albreht) **81f:93041** 93C15
- Matvičuk, G. P. The tenth book of Euclid's *Elements* in medieval Arabic commentaries. (Russian) *Mathematics and astronomy in the works of scientists of the medieval East (Russian)*, pp. 4-81, 139, "Fan", Tashkent, 1977. (E. S. Kennedy) **81j:01007** 01A30
- Arabic encyclopedias of the Middle Ages as sources for the history of mathematics and astronomy of the Near and Middle East. (Russian) *Mathematics in the East in the Middle Ages (Russian)*, pp. 88-96, 194, "Fan", Tashkent, 1978. (E. S. Kennedy) **81d:01003** 01A30
- Matvičuk, K. S. Mathematical description of states of quantum Bose and Fermi systems by the method of partial density matrices of canonical ensemble. (Russian. English summary) *Teoret. Mat. Fiz.* 41 (1979), no. 3, 346-367. (Nicolae Angelescu) **81k:82013** 82A15 (28C20)
- (with Martinkuk, A. A.) Comparison principle for a system of differential equations with a rapidly rotating phase. (Russian) *Ukrain. Mat. Ž.* 31 (1979), no. 5, 498-503, 618. (A. I. Kir'janen) **81a:34045** 34D20 (34C10)
- Matwilszyna, Jarosław A. Unknown Polish documents in the Central Scientific Library of the Academy of Sciences of the Ukrainian SSR in Kiev. (Polish. Russian and French summaries) *Kwart. Hist. Nauk. Tech.* 23 (1978), no. 2, 449-464. (Author's summary) **81a:01050** 01A75 (01A55)
- Matyushkin, B. D. See Matyushkin, B. D.
- Matzen, Michele (with Capuzzo Dolcetta, I.) Some remarks on quasivariational inequalities and fixed points. *Numerical solution of highly nonlinear problems (Sympos. Fixed Point Algorithms and Complementarity Problems, Univ. Southampton, Southampton, 1979)*, pp. 377-385, North-Holland, Amsterdam, 1980. (N. Gass) **81a:49006** 49A29 (47H10)
- (with Vivaldi, Maria Agostina) A dual estimate for the Hamilton-Jacobi function of a continuous and impulsive stochastic control problem. (Italian summary) *Boll. Un. Mat. Ital. B* (5) 17 (1980), no. 2, 458-477. (B. I. Anan'ev) **81i:49004** 49A29 (93E10)
- (with Donati, Flavio) On some evolution problems of implicit type. (Italian summary) *Boll. Un. Mat. Ital. B* (5) 17 (1980), no. 2, 478-491. (Dan Tiba) **81i:47063** 47H15 (35R35, 47H17, 49A29, 58C30)
- (with Capuzzo Dolcetta, I.) Duality for implicit variational problems and numerical applications. *Numer. Funct. Anal. Optim.* 2 (1980), no. 4, 231-265. (Ekkehard W. Sachs) **81m:49007** 49A29 (65K10, 90C25)
- Mauceri, Giancarlo (with Picardello, Massimo A.) Noncompact unimodular groups with purely atomic Plancherel measures. *Proc. Amer. Math. Soc.* 78 (1980), no. 1, 77-84. (Elliot C. Gootman) **81k:22005** 22D35 (43A65)
- Mauceri Del Prete, Vincenza (with Hald, Ole H.) Convergence of vortex methods for Euler's equations. *Math. Comp.* 32 (1978), no. 143, 791-809. (P. C. Jain) **81b:76015** 76C05 (76N99)
- Mauchly, John W. The ENIAC. *A history of computing in the twentieth century*, pp. 541-550, Academic Press, New York, 1980. (See **81i:68002**) 68-03 (01A65)
- Mauchlre, Jean-Loup Sur certaines fonctions arithmétiques. *Séminaire Delange-Pisot-Poitou, 18e année: 1976/77, Théorie des nombres, Fasc. 2, Exp. No. 26, 7 pp., Secrétariat Math., Paris, 1977. (Jean-Marie De Koninck) **81d:10033** 10H20 (10H30)*
- Mauer, H. A. (with Nivat, Maurice) Rational bijection of rational sets. *Acta Inform.* 13 (1980), no. 4, 365-378. (S. Ginsburg) **81k:68072** 68F05
- Maugeri, Antonino A boundary value problem for a class of singular parabolic equations. (Italian. English summary) *Boll. Un. Mat. Ital. B* (5) 17 (1980), no. 1, 325-339. (Jan Prüss) **81g:35044** 35K20
- On variational inequalities of parabolic type. (Italian. English summary) *Boll. Un. Mat. Ital. B* (5) 17 (1980), no. 2, 492-513. (M. Biroti) **81g:35053** 35K55 (49A29)
- On a class of singular parabolic equations. (Italian. English summary) *Rev. Sem. Mat. Univ. Padova* 62 (1980), 65-74. (Klaus Deimling) **81k:35087** 35K65 (35K20)
- Maugin, Gérard A. Nonlinear wave propagation in relativistic continuum mechanics. *Helv. Phys. Acta* 52 (1979), no. 2, 149-170. (M. Carrasi) **81k:73088** 73R05 (76Y05)
- Further comments on the equivalence of Abraham's, Minkowski's, and others' electrodynamics. (French summary) *Canad. J. Phys.* 58 (1980), no. 8, 1163-1170. (Author's summary) **81k:83025** 83C50 (78A25)
- Maugis, Daniel (with Barquins, Michel) Contact adhésif d'un cône de révolution sur un massif élastique. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 291 (1980), no. 6, B161-B164. (Authors' summary) **81m:73076** 73T05
- Mauldin, R. Daniel The set of continuous nowhere differentiable functions. *Pacific J. Math.* 83 (1979), no. 1, 199-205. (K. M. Garg) **81g:46033** 46E15 (26A27)
- (with Erdős, Paul) Rotations of the circle. *Measure theory, Oberwolfach 1979 (Proc.*

- Conf., Oberwolfach, 1979, pp. 53-56, *Lecture Notes in Math.*, 794, Springer, Berlin, 1980. (B. Weiss) **81k:28019** 28D05
- Some selection theorems and problems. *Measure theory, Oberwolfach 1979 (Proc. Conf., Oberwolfach, 1979)*, pp. 160-165, *Lecture Notes in Math.*, 794, Springer, Berlin, 1980. (G. Mager) **81g:28013** 28B20 (03E15, 04A15)
- On the Borel subspaces of algebraic structures. *Indiana Univ. Math. J.* **29** (1980), no. 2, 261-265. (Robert S. Doran) **81i:54027** 54H05 (22A99)
- (with Brechner, Beverly) Positively regular homeomorphisms of Euclidean spaces. *Topology Appl.* **11** (1980), no. 3, 231-242. (Jong P. Lee) **81k:54016** 54C99
- Pham Mau Quan See Pham Mau Quan
- Chaleyat-Maurel, M. See Chaleyat-Maurel, M.
- Maurer, Helmut (with Zowe, Jochem) First and second order necessary and sufficient optimality conditions for infinite-dimensional programming problems. *Math. Programming* **16** (1979), no. 1, 98-110. (K. Swarup) **81e:90093** 90C30 (49B50)
- (with Lempio, F.) Differential stability in infinite-dimensional nonlinear programming. *Appl. Math. Optim.* **6** (1980), no. 2, 139-152. (J. Dancs) **81m:90108** 90C48 (90C30)
- Maurer, Hermann A. (with Ottmann, Th.) Manipulating sets of points—a survey. *Graphs, data structures, algorithms (Proc. Workshop, Graphtheoretic Concepts in Comput. Sci., Erlangen, 1978)*, pp. 9-29, *Applied Comput. Sci.*, 13, Hanser, Munich, 1979. (Authors' summary) **81d:68035** 68B15 (68E99)
- On some developments in cryptography and their applications to computer science. *Mathematical foundations of computer science, 1979 (Proc. Eighth Sympos., Olomouc, 1979)*, pp. 121-130, *Lecture Notes in Comput. Sci.*, 74, Springer, Berlin, 1979. (Authors' summary) **81e:68023** 68B20 (68A05)
- New aspects of homomorphisms. *Theoretical computer science (Fourth GI Conf., Aachen, 1979)*, pp. 10-24, *Lecture Notes in Comput. Sci.*, 67, Springer, Berlin, 1979. (Authors' summary) **81f:68092** 68F05
- (with Ainhirn, W.) On ϵ productions for terminals in EOL forms. *Discrete Appl. Math.* **1** (1979), no. 3, 155-166. (Manfred Armbrust) **81a:68077** 68F05
- (with Bentley, Jon Louis) A note on Euclidean near neighbor searching in the plane. *Inform. Process. Lett.* **8** (1979), no. 3, 133-136. (From the introduction) **81g:68085** 68E05
- (with Culik, Karel, II) On simple representations of language families. (French summary) *RAIRO Inform. Théor.* **13** (1979), no. 3, 241-250. (Authors' summary) **81d:68093** 68F05 (03D05)
- (with Rozenberg, Grzegorz; Salomaa, Arto; Wood, Derrick) Pure interpretations of EOL forms. (French summary) *RAIRO Inform. Théor.* **13** (1979), no. 4, 347-362. (Braniarlov Rovani) **81h:68073** 68F05
- (with Salomaa, Arto; Wood, Derrick) On generators and generative capacity of EOL forms. *Acta Inform.* **13** (1980), no. 1, 87-107. (S. Ginsburg) **81f:68085** 68F05
- (with Bentley, Jon Louis) Efficient worst-case data structures for range searching. *Acta Inform.* **13** (1980), no. 2, 155-168. (Authors' summary) **81a:68021** 68B15 (68E05)
- (with Salomaa, Arto; Wood, Derrick) Pure grammars. *Inform. and Control* **44** (1980), no. 1, 47-72. (Tsuo Takanami) **81d:68103** 68F05 (03D05)
- (with Salomaa, Arto; Wood, Derrick) Synchronized EOL forms. *Theoret. Comput. Sci.* **12** (1980), no. 2, 135-159. (J. Calvert) **81i:68106** 68F05
- (with Rozenberg, Grzegorz) Sub context-free L forms. *Internat. J. Comput. Math.* **9** (1981), no. 1, 25-41. (Authors' summary) **81m:68060** 68F05
- See also Automata, languages and programming, **81c:68002**
- Maurer, Joseph Puiseux expansion for space curves. *Manuscripta Math.* **32** (1980), no. 1-2, 91-100. (Peter Giblin) **81m:32009** 32B10 (14H99)
- Maurer, M. C. (with Habib, M.) On the X-join decomposition for undirected graphs. *Discrete Appl. Math.* **1** (1979), no. 3, 201-207. (Authors' summary) **81a:68069** 68E10 (68C25)
- Maurer, Robert N. (with Wollkind, David J.; Notestine, Ronald D.) A continuum model appropriate for nonlinear analysis of the solidification of a pure metal. *Applied nonlinear analysis (Proc. Third Internat. Conf., Univ. Texas, Arlington, Tex., 1978)*, pp. 657-668, Academic Press, New York, 1979. (E. E. Tarceva) **81a:82025** 82A25 (80A20, 82A65)
- Maurer, Stephen B. (with Cozzens, Margaret) Nearly cycle complete and nearly cocycle complete graphs. *Proceedings of the Tenth Southeastern Conference on Combinatorics, Graph Theory and Computing (Florida Atlantic Univ., Boca Raton, Fla., 1979)*, pp. 325-340, Congress. Numer., XXIII-XXIV, Utilitas Math., Winnipeg, Man., 1979. (D. H. Younger) **81m:05009** 05C38
- (with Slater, Peter J.) Minimally 2-edge-connected graphs. *Second International Conference on Combinatorial Mathematics (New York, 1978)*, pp. 377-382, Ann. New York Acad. Sci., 319, New York Acad. Sci., New York, 1979. (Linda Lesniak-Foster) **81h:05072** 05C40
- The king chicken theorems. A flock of results about pecking orders, describing possible patterns of dominance. *Math. Mag.* **53** (1980), no. 2, 67-80. (L. W. Beineke) **81f:05089** 05C20
- See also Problems: Combinatorial mathematics, **81b:05002**
- Maurer, B. Isomorphismes entre espaces H_1 . *Séminaire d'Analyse Fonctionnelle (1978-1979)*, Exp. No. 19-20, 7 pp., École Polytech., Palaiseau, 1979. (S. V. Hruščev) **81m:46042** 46E15 (60C46, 60J65)
- Maurin, Jacques Towards a theory of chance. I. *Inform. Sci.* **18** (1979), no. 1, 1-45. (Harald Niederreiter) **81k:65011a** 65C10 (60A05)
- Towards a theory of chance. II. *Inform. Sci.* **18** (1979), no. 2, 141-178. (Harald Niederreiter) **81k:65011b** 65C10 (60A05)
- Maurone, P. A. (with Lim, T. K.) Nonexistence of the Efimov effect in two dimensions. *Phys. Rev. B* **3** (22 1980), no. 3, 1467-1469. (Authors' summary) **81h:81115** 81F10
- Mauzy, Guy (with Chamarié, Marc) Un théorème de l'idéal à gauche principal dans les anneaux premiers, noethériens, à identité polynomiale dont le centre est un domaine de Krull. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **286** (1978), no. 14, A609-A611. (Authors' summary) **81e:16013** 16A38
- Un théorème de l'idéal principal dans les R-ordres. *Comm. Algebra* **7** (1979), no. 7, 677-687. (From the introduction) **81i:16010** 16A18
- (with Raynaud, Jacques) ★Ordres maximaux au sens de K. Asano. (French) [Maximal orders in the sense of K. Asano] *Lecture Notes in Mathematics*, 808, Springer-Verlag, Berlin-New York, 1980. viii + 192 pp. ISBN 0-540-10016-4. (I. Reiner) **81m:16002** 16-02 (16A18)
- Ordres maximaux presque-factoriels. *Comm. Algebra* **8** (1980), no. 18, 1711-1720. (Jean-Pierre van Deuren) **81j:16009** 16A18 (16A34)
- Maurys, R. P. (with Prasad, Y. N.) Some finite integrals and Fourier sine series for the H -function of several complex variables. (Turkish summary) *İstanbul Tek. Üniv. Bil. Derg.* (1979), no. 1, 65-71. (P. Anandani) **81h:33005** 33A30 (33A35)
- (with Prasad, Y. N.) Some theorems on a multidimensional integral transformation. *Pure Appl. Math. Sci.* **11** (1980), no. 1-2, 55-60. (S. D. Bajpai) **81g:44008** 44A20
- Maus, Jacques On matching principles. *Asymptotic analysis*, pp. 1-8, *Lecture Notes in Math.*, 711, Springer, Berlin, 1979. (C. C. Rousseau) **81g:41038** 41A60 (26A30)
- (with Bretteville, Jacques) Dérivation et intégration objectives régulières. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **290** (1980), no. 8, B163-B166. (R. R. Huilgol) **81d:73005** 73B99 (34A30)
- Mavrides, Lazaros P. A finite step-size procedure for the F-W method. *J. Comput. System Sci.* **21** (1980), no. 1, 24-29. (Authors' summary) **81j:90105** 90C30 (65K05)
- Mawhin, Jean (with Fučík, Svatopluk) Generalized periodic solutions of nonlinear telegraph equations. *Nonlinear Anal.* **2** (1978), no. 5, 609-617. (C. Bardos) **81i:35014** 35B10 (35L70)
- Periodic solutions of nonlinear dispersive wave equations. *Constructive methods for nonlinear boundary value problems and nonlinear oscillations (Proc. Conf., Math. Res. Inst., Oberwolfach, 1978)*, pp. 102-109, *Internat. Ser. Numer. Math.*, 48, Birkhäuser, Basel, 1979. (James P. Fink) **81h:35003** 35B10 (35L05)
- (with Willem, Michel) Compact perturbations of some nonlinear Hammerstein equations. *Riv. Mat. Univ. Parma* (4) **5** (1979), part 1, 199-213 (1980). (J. Kolomý) **81k:45012** 45G10 (47H15)
- (with Nečas, Jindřich; Novák, Břetislav) In memoriam Professor Svatopluk Fučík. *Czechoslovak Math. J.* **30(105)** (1980), no. 1, 153-162 (1 plate). (Editors) **81m:01067** 01A70
- Two-point boundary value problems for nonlinear second order differential equations in Hilbert spaces. *Tōhoku Math. J.* (2) **32** (1980), no. 2, 225-233. (Sergiu Aizicovici) **81m:34082** 34G20 (34B10)
- Maximov, M. M. See Maksimov, M. M.
- Maximov, V. M. See Maksimov, V. M.
- Maxim-Răileanu, Liliana Manifolds of symplectic structures with prescribed volume element. *Bull. Math. Soc. Sci. Math. R. S. Roumanie (N.S.)* **24(72)** (1980), no. 1, 49-53. (Richard C. Swanson) **81h:58003** 58A10 (58D05)
- Maxson, Carlton J. (with Hartfiel, D. J.) On a definition of connected sets of a matroid. *J. Combin. Theory Ser. B* **25** (1978), no. 2, 130-134. (András Recski) **81j:05043a** 05B35
- (with Smith, Kirby C.) Simple near-ring centralizers of finite rings. *Proc. Amer. Math. Soc.* **75** (1979), no. 1, 8-12. (G. Betsch) **81c:16047** 16A76
- (with Smith, Kirby C.) The centralizer of a set of group automorphisms. *Comm. Algebra* **8** (1980), no. 3, 211-230. (J. J. Malone) **81c:16048** 16A76
- See also Oxley, James G., **81j:05043b**
- Maxwell, J. A. (with Coleman, Bernard D.; Renninger, G. H.) On oscillatory responses of the Limulus retina. *Biol. Cybernet.* **37** (1980), no. 3, 125-129. (From the summary) **81c:92005** 92A09 (92A27)
- Maxwell, J. C. See Mayer, Daniel, **81f:01032**
- Maxwell, James (with Evans, Benny) Quaternion actions on S^3 . *Amer. J. Math.* **101** (1979), no. 5, 1123-1130. (From the text) **81f:57037** 57S25
- Embedding noncompact manifolds. *Rocky Mountain J. Math.* **9** (1979), no. 4, 693-706. (N. Martin) **81a:57019** 57Q35 (57Q30)
- May, Charmaine P. (with Yang, Chao Chih) Algorithms for finding directed graph isomorphisms by finite automata. *Internat. J. Comput. Inform. Sci.* **9** (1980), no. 2, 117-140. (Authors' summary) **81g:68099** 68E10
- May, Coy L. Maximal symmetry and fully wound coverings. *Proc. Amer. Math. Soc.* **79** (1980), no. 1, 23-31. (V. M. Harlamov) **81g:14014** 14H99 (14H30)
- May, J. P. Applications and generalizations of the approximation theorem. *Algebraic topology, Aarhus 1978 (Proc. Sympos., Univ. Aarhus, Aarhus, 1978)*, pp. 38-69, *Lecture Notes in Math.*, 763, Springer, Berlin, 1979. (Frederick Cohen) **81e:55013** 55P47 (55Q40)
- (with Cohen, F. R.; Taylor, Laurence) Splitting of some more spaces. *Math. Proc. Cambridge Philos. Soc.* **86** (1979), no. 2, 227-236. (Stanley Kochman) **81h:55016** 55P10
- Fibrewise localization and completion. *Trans. Amer. Math. Soc.* **258** (1980), no. 1, 127-146. (Joseph Neisendorfer) **81f:55005** 55P60
- May, Kenneth O. Historiography: a perspective for computer scientists. *A history of computing in the twentieth century*, pp. 11-18, Academic Press, New York, 1980. (See **81i:68002**) 01A60 (00A69)
- See also Encyclopedic dictionary of mathematics, **81d:00003**
- May, Robert M. Mathematical aspects of the dynamics of animal populations. *Studies in mathematical biology, Part II*, pp. 317-366, *MAA Studies in Math.*, 16, Math. Assoc. America, Washington, D.C., 1978. (See **80m:92006**) 92A15
- Bifurcations and dynamic complexity in ecological systems. *Bifurcation theory and applications in scientific disciplines (Papers, Conf., New York, 1977)*, pp. 517-529, Ann. New York Acad. Sci., 316, New York Acad. Sci., New York, 1979. (T. G. Hallam) **81f:92031** 92A17 (58F14, 92A10)
- (with Comins, Hugh N.; Hamilton, William D.) Evolutionarily stable dispersal strategies. *J. Theoret. Biol.* **82** (1980), no. 2, 205-230. (Peter D. Taylor) **81j:92030** 92A15 (93E15)
- (with Beddington, J. R.) Maximum sustainable yields in systems subject to harvesting at more than one trophic level. *Math. Biosci.* **51** (1980), no. 3-4, 261-281. (F. Brauer) **81k:92047** 92A15 (90A30)
- May, S. J. An application of Neustadt's abstract maximum principle to probability kinematics. *J. Optim. Theory Appl.* **27** (1979), no. 2, 249-270. (From the summary) **81a:90127** 90C25 (90C50)
- May, Warren Multiplicative groups under field extension. *Canad. J. Math.* **31** (1979), no. 2, 436-440. (James K. Deveney) **81k:12019** 12F05 (20K20)
- Maybee, John S. Sign solvable graphs. *Discrete Appl. Math.* **2** (1980), no. 1, 57-63. (F. Harary) **81g:05063** 05C20

- Mayberry, J. P. (with Jenkins, T. A.) The skeleton of an impartial game and the Nim-function of Moore's Nim_k. *Internat. J. Game Theory* 9 (1980), no. 1, 51-63. (Aviezer S. Fraenkel) **81h:90140** 90D05 (05C99)
- Mayer, Daniel One hundred years have passed since the death of J. C. Maxwell. (Czech. Russian and English summaries) *DVT—Dějiny Věd Tech.* 13 (1980), no. 1, 50-55. (Author's summary) **81f:01032** 01A70 (78-03)
- Mayer, Dieter H. (with Viswanathan, K. S.) On the vacuum structure of an SU(2) Yang-Mills theory. *Rep. Math. Phys.* 16 (1979), no. 2, 281-291. (J. Peetre) **81g:81071** 81E99 (53C05, 58D25)
- On composition operators on Banach spaces of holomorphic functions. *J. Funct. Anal.* 35 (1980), no. 2, 191-206. (A. Pietsch) **81e:47025** 47B10 (46E15, 58C10, 58F20)
- Mayer, I. (with Bars, R.) Model-reference control of systems identified by the Laguerre orthonormal structure. *Identification and system parameter estimation (Proc. Fourth IFAC Symp., Tbilisi, 1976), Part 3*, pp. 1867-1880, North-Holland, Amsterdam, 1978. (See **80d:93010c**) 93Cxx
- Mayer, Jacques Isometries in spaces of analytic functions with bounded derivative. (Russian) *Dokl. Akad. Nauk SSSR* 250 (1980), no. 3, 551-553. (P. Miličević) **81d:46061** 46L15 (30D55)
- Mayer, James A nonlinear programming method for the solution of a stochastic programming model of A. Prékopa. *Survey of mathematical programming (Proc. Ninth Internat. Math. Programming Symp., Budapest, 1976), Vol. 2*, pp. 129-139, North-Holland, Amsterdam, 1979. (A. A. Pervozvanskii) **81k:90088** 90C30 (90C15)
- Mayer-Lindenberg, Fritz Invariante Spuren auf Gruppenalgebren. (English summary) *J. Reine Angew. Math.* 310 (1979), 204-213. (Robert S. Doran) **81b:22008** 22D25 (43A65, 46L05)
- Mayes, Vivienne Some steady state properties of $(\int_0^1 f(t)dt)/f(x)$. *Black mathematicians and their works*, pp. 153-157 (1 plate), Dorrance, Ardmore, Pa., 1980. (See **81e:00004**) 34C99
- Mayhoub, Salah Abbas A. ★Randwertaufgaben zu den Thermoelastizitätsgleichungen mit Hilbertraummethoden. (German) [Boundary value problems for equations of thermoelasticity with Hilbert space methods] Dissertation, Rheinische Friedrich-Wilhelms-Universität, Bonn, 1978. *Bonner Mathematische Schriften [Bonn Mathematical Publications]*, 118. Universität Bonn, Mathematisches Institut, Bonn, 1978. iii + 63 pp. (L. Jentsch) **81j:73084** 73U05 (35J50, 73-02)
- Maynard, R. (with Bieche, L.; Rammal, R.; Uhry, Jean-Pierre) On the ground states of the frustration model of a spin glass by a matching method of graph theory. *J. Phys. A* 13 (1980), no. 8, 2553-2576. (Authors' summary) **81g:82037** 82A42
- Maynard Smith, J. (with Hines, W. G. S.) Games between relatives. *J. Theoret. Biol.* 79 (1979), no. 1, 19-30. (Authors' summary) **81a:90177** 90D99 (92A10)
- Mayne, David Q. On the use of exact penalty functions to determine step length in optimization algorithms. *Numerical analysis (Proc. 8th Biennial Conf., Univ. Dundee, Dundee, 1979)*, pp. 98-109, *Lecture Notes in Math.*, 773, Springer, Berlin, 1980. (Kaj Madsen) **81i:65053** 65K10 (90C30)
- Mayne, G. (with Boulanger, Ph.) Modèles intégréo-différentiels isotropes en viscoélasticité linéaire. (English and German summaries) *Rheol. Acta* 18 (1979), no. 2, 199-209. (P. Villaggio) **81e:73043** 73F99 (73B30)
- Mayoh, Brian H. (with Nystrup, Kristian) Map grammars: cycles and the algebraic approach. *Graph-grammars and their application to computer science and biology (Internat. Workshop, Bad Honnef, 1978)*, pp. 331-340, *Lecture Notes in Comput. Sci.*, 73, Springer, Berlin, 1979. (Authors' summary) **81d:68104** 68F05
- See also Proceedings: Scandinavian Logic Symposium, **81m:03006**
- Mayr, Heinrich C. See Formal model for information systems, **81m:68003**
- Mayr, Ulrich Zur Definition der linearen Abbildung. *Math.-Phys. Semesterber.* 26 (1979), no. 2, 216-222. (A. Lee) **81b:15001** 15A03
- Mays, Michael E. Counting p -nilpotent group orders. *Proc. West Virginia Acad. Sci.* 50 (1978), no. 2-4, 92-94 (1980). (From the text) **81d:20015** 20D15
- A lower bound on the number of finite simple groups. *Internat. J. Math. Math. Sci.* 3 (1980), no. 4, 797-799. (L. Dornhoff) **81k:20027** 20D06 (10A21, 10H25)
- Maynard, Joram A note on Feldstein's criticism of mean-variance analysis. With a reply by Martin S. Feldstein. *Rev. Econom. Stud.* 45 (1978), no. 1, 197-201. (From the introduction and from the reply) **81f:90012** 90A09
- Mayuyama, Toshihiro (with Shibata, Akira; Mizutani, Masahiro; Saitō, Nobuhiko) The nature of chaos in a simple dynamical system. *Z. Naturforsch. A* 34 (1979), no. 11, 1283-1289. (P. J. Holmes) **81a:58037** 58F13 (58F11)
- Mazanik, S. A. Relative rotation for a three-dimensional linear differential system. (Russian) *Vestnik Belorus. Gos. Univ. Ser. I* 1980, no. 2, 53-54, 64. (C. S. Coleman) **81j:34018** 34A30 (53A04)
- Mazanov, Alex Acceptor control in model ecosystems. *J. Theoret. Biol.* 71 (1978), no. 1, 21-38. (Author's summary) **81e:92015** 92A17 (34K35)
- Mazanov, G. A. Geometric properties of two totally commutative nilpotent algebras. (Russian) *Current problems of geometry and its applications (Russian)*, pp. 53-68, 107, *Uspehi. Gos. Univ., Cheboksary*, 1975. (E. J. F. Primeiro) **81a:15026** 15A69 (16A64)
- Mazenko, Gene F. (with Sahni, Parandeep S.) Statistical-mechanical treatment of kinks in a one-dimensional model for displacive phase transitions. *Phys. Rev. B* (3) 18 (1978), no. 11, 6139-6159. (Authors' summary) **81b:82074** 82A25 (47A55, 81E99, 82A65)
- Application of real-space renormalization group approach to critical dynamics. *Dynamical critical phenomena and related topics (Proc. Internat. Conf., Univ. Geneva, Geneva, 1979)*, pp. 97-132, *Lecture Notes in Phys.*, 104, Springer, Berlin, 1979. (See **81i:82002**) 82A25
- Malera, V. V. (with Gordon, V. A.) A method for solving equations of the dynamics of a rod of variable curvature. (Russian) Boundary value problems for nonstationary equations. *Mat. Issled.* No. 58 (1980), 16-25, 141. (N. Cristescu) **81j:73062** 73K12 (73D35)
- Mazet, Edmond (with Gaveau, Bernard) Diffusion et intégration sur les espaces de lacets. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 289 (1979), no. 13, A643-A646. (Jean-Louis Ducourtioux) **81d:58058** 58G32 (60H05, 60J60)
- Mazet, Robert Sur la fonction de mémoire d'un matériau hétéroplastique. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 286 (1978), no. 12, A579-A582. (Author's summary) **81e:73039** 73F05
- Mazlani, I. G. Functional equation of a boundary-contact problem of statics of the moment theory of elasticity. (Russian. Georgian and English summaries) *Sobšč. Akad. Nauk Gruz. SSR* 93 (1979), no. 2, 309-312. (P. P. Teodorescu) **81g:73118** 73T05
- Mazlu, P. (with Păltineanu, Gavril) Semidiscretization method for the numerical solving of Volterra integral equations. *Proceedings of the International Symposium on Applications of Mathematics in System Theory (Univ. Braşov, Braşov, 1978), II*, pp. 245-253, Univ. Braşov, Braşov, 1979. (G. T. Symm) **81m:45004** 45D05 (45L05, 65R20)
- Maz'ja, V. G. (with Plamenevskii, B. A.) Weighted spaces with inhomogeneous norms, and boundary value problems in domains with conical points. (Russian) *Elliptische Differentialgleichungen (Meeting, Rostock, 1977)*, pp. 161-190, *Wilhelm-Pieck-Universität Rostock*, 1978. (P. Szepietycki) **81e:35045** 35J55 (46E35)
- (with Plamenevskii, B. A.) Schauder estimates for the solutions of elliptic boundary value problems in domains with edges on the boundary. (Russian) *Partial differential equations (Russian)*, pp. 69-102, 143, *Trudy Sem. S. L. Soboleva*, No. 2, 1978, *Akad. Nauk SSSR Sibirk. Otdel., Inst. Mat., Novosibirsk*, 1978. (H. Triebel) **81d:35029** 35J40 (46E15, 46E35)
- (with Plamenevskii, B. A.) Elliptic boundary value problems in domains with nonsmooth boundaries. (Russian) *Proceedings of an All-Union Conference on Partial Differential Equations (Moscow State Univ., Moscow, 1976) (Russian)*, pp. 149-152, *Moskoo. Gos. Univ., Meh.-Mat. Fakul'tet, Moscow*, 1978. (See **80f:35002**) 35J40
- An integral inequality. (Russian. Georgian and English summaries) *Sov. Inst. Prikl. Mat. Dokl.* No. 12-13 (1978), 33-36. (S. G. Samko) **81i:46038** 46E35
- (with Plamenevskii, B. A.) Estimates of the Green functions and Schauder estimates of the solutions of elliptic boundary value problems in a two-sided corner. (Russian) *Sibirk. Mat. Ž.* 19 (1978), no. 5, 1065-1082, 1214. (P. A. Mišnevskii) **81b:35026** 35J40
- (with Plamenevskii, B. A.) L_p -estimates of solutions of elliptic boundary value problems in domains with ribs. (Russian) *Trudy Moskov. Mat. Obšč.* 37 (1978), 49-93, 270. (P. A. Mišnevskii) **81b:35027** 35J40
- ★Einbettungssätze für Sobolewsche Räume. Teil I. (German) [Imbedding theorems for Sobolev spaces. Part I] Translated from the Russian by Jürgen Nagel. With English, French and Russian summaries. Teubner-Texte zur Mathematik. [Teubner Texts on Mathematics] BSB B. G. Teubner Verlagsgesellschaft, Leipzig, 1979. 204 pp. (J. Horváth) **81j:46054** 46E35 (31B15)
- (with Plamenevskii, B. A.) Asymptotic behavior of the fundamental solutions of elliptic boundary value problems in domains with conical points. (Russian) *Boundary value problems. Spectral theory (Russian)*, pp. 100-145, 243, *Probl. Mat. Anal.*, 7, *Leningrad. Univ., Leningrad*, 1979. (J. S. Joel) **81e:35042** 35J40 (35J55, 35P15, 58G15, 58G25)
- (with Plamenevskii, B. A.; Stupelis, L.) The three-dimensional problem of the steady-state motion of a fluid with a free surface. (Russian. English and Lithuanian summaries) *Diferencial'nye Uravnenija i Primenenja—Trudy Sem. Procestry Optimal. Upravlenija I Sekcija* No. 23 (1979), 157 pp. (P. C. Fife) **81m:76019** 76D05 (35Q10, 35R35)
- (with Nazarov, S. A.; Plamenevskii, B. A.) Asymptotic behavior of the solutions of elliptic boundary value problems in the case of variation of the domain near conic points. (Russian) *Dokl. Akad. Nauk SSSR* 249 (1979), no. 1, 94-96. (A. M. I'in) **81a:35011** 35B25 (35J99)
- A new integral representation of differentiable functions and its applications. (Russian. Georgian and English summaries) *Sobšč. Akad. Nauk Gruz. SSR* 95 (1979), no. 3, 537-540. (Pavel Doktor) **81e:46042** 46E35
- (with Šapošnikova, T. O.) Multipliers in S. L. Sobolev spaces. (Russian. English summary) *Vestnik Leningrad. Univ. Mat. Meh. Astronom.* 1979, no. 2, 33-40, 119. (I. Kačur) **81a:46037** 46E35
- Summability, with respect to an arbitrary measure, of functions from S. L. Sobolev-L. N. Slobodeckii spaces. (Russian. English summary) *Investigations on linear operators and the theory of functions, IX. Zap. Naučn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 92 (1979), 192-202, 322. (Author's summary) **81b:46047** 46E35
- (with Plamenevskii, B. A.) A problem of the motion of a fluid with a free surface in a faceted vessel. (Russian) *Dokl. Akad. Nauk SSSR* 250 (1980), no. 6, 1315-1317. (Murlu M. Gupta) **81b:76020** 76D05
- (with Šapošnikova, T. O.) On conditions for the boundary in the L_p -theory of elliptic boundary value problems. (Russian) *Dokl. Akad. Nauk SSSR* 251 (1980), no. 5, 1055-1059. (O. John) **81k:35054** 35J40
- An integral representation of functions, satisfying homogeneous boundary conditions, and its applications. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1980, no. 2, 34-44. (J. Musielak) **81f:46044** 46E35
- (with Vainberg, B. R.) A characteristic Cauchy problem for a hyperbolic equation. (Russian) *Uspehi Mat. Nauk* 35 (1980), no. 1(211), 193-194. (Ju. V. Egorov) **81g:35067** 35L30
- (with Plamenevskii, B. A.) On the first boundary value problem for the equations of hydrodynamics in a domain with a piecewise smooth boundary. (Russian) Boundary value problems of mathematical physics and related questions in the theory of functions, 12. *Zap. Naučn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 96 (1980), 179-186, 309. (Miroslav Krčec) **81k:35133** 35Q10 (35B45, 76D05)
- Mazko, A. G. (with Matvienko, V. T.) Optimal modal control of linear systems. (Russian. English summary) *Issled. Operacii i ASU* No. 14 (1979), 107-113, 136. (Ė. G. Al'breht) **81f:93041** 93C15
- Mazo, J. E. Analysis of decision-directed equalizer convergence. *Bell System Tech. J.* 59 (1980), no. 10, 1857-1876. (Author's summary) **81k:94003** 94A05
- Mazukin, V. L. (with Uglov, A. A.; Četveruškin, B. N.) Numerical investigation of the problem of a laser discharge in a dense gas. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 20 (1980), no. 2, 451-460, 551. (W. Rozmus) **81j:76110** 76X05
- Mazumder, B. S. Dispersion of solutes in combined free and forced convective flow through a channel. (German summary) *Acta Mech.* 32 (1979), no. 4, 211-216. (Author's summary) **81e:80008** 80A20
- Mazur, B. See Gross, Benedict H., **81f:10041**
- Mazur, Paul (with Maradudni, Alexei A.) Effects of surface roughness on the van der Waals force between macroscopic bodies. *Phys. Rev. B* (3) 22 (1980), no. 4, 1677-1686.

- (Authors' summary) **81h:82041** 82A55 (78A25, 82A77)
- Mam, Peter (with Bedeaux, D.) An electrothermal instability in a conducting wire: homogeneous and inhomogeneous stationary states for an exactly solvable model. *J. Statist. Phys.* **24** (1981), no. 1, 215–233. (Authors' summary) **81m:82049** 82A70 (94C05)
- Mam, Ryszard (with Treska, Anna) On some classes of β -starlike and of quasi- β -starlike meromorphic k -symmetric functions. *Demonstratio Math.* **11** (1978), no. 3, 735–750. (K. S. Padmanabhan) **81a:30010** 30C45
- Mam, Stanisław See Banach, Stefan, **81i:46001**
- Mazurek, M. Some properties of extremal functions. *Zeszyty Nauk. Univ. Jagielloń. Prace Mat.* **No. 20** (1979), 167–174. (Eric Bedford) **81d:32026** 32D99 (32F05)
- Mazurov, A. P. (with Jagudin, S. V.) Calculation of nonviscous flows in axially symmetric jets without external flow. (Russian) *Učen. Zap. CAGI* **10** (1979), no. 4, 56–65. (Authors' summary) **81j:76068** 76N15
- Mazurov, V. D. See Kourouva notebook: unsolved problems in group theory. **81d:20001**
- Mazurov, V. D. (with Eremin, I. I.) ★Нестационарные процессы математического программирования. (Russian) [Nonstationary processes of mathematical programming] "Nauka", Moscow, 1979. 288 pp. (G. D. Maistrovskii) **81f:90111** 90C39 (68G10, 90A16, 92A05, 93C50)
- (with Eremin, I. I.) Automatic control of the parameters of an iterative process for use in mathematical programming. *Kibernetika (Kiev)* **1979**, no. 6, 41–45. (Russian); translated as *Cybernetics* **15** (1979), no. 6, 816–821 (1980). (Heinz-Michael Winkels) **81j:90077** 90C05 (49A50)
- Method of committees and applications in operations research. (German and Russian summaries) *Math. Operationsforsch. Statist. Ser. Optim.* **10** (1979), no. 3, 365–371. (R. Gordon Cassidy and Edwin H. Neave) **81g:90090** 90C31 (68G10, 90B79)
- (with Eremin, I. I.) Synthesis of nonstationary processes of mathematical programming, containing pattern recognition. *Studies on mathematical programming (Papers, Third Conf. Math. Programming, Mafra/Jüres, 1975)*, pp. 61–68. *Math. Methods Oper. Res.*, **1**, Akad. Kiadó, Budapest, 1980. (Allen Klinger) **81j:68107** 68G10 (90C15)
- Mazzoli, Enrico (with Renno, Pasquale) Wave propagation in a linear viscoelastic system in the presence of mass forces. (Italian. English summary) *Ann. Univ. Ferrara Sez. VII (N.S.)* **25** (1979), 183–195. (M. Misicu) **81i:73041** 73F15 (45K05, 73D10, 73F99)
- Mazzoli, Gerald (with Kőrežlioglu, Hayri; Szpirglas, Jacques) Équations du filtrage non linéaire pour des processus à deux indices. (English summary) *Stochastic control theory and stochastic differential systems (Proc. Workshop, Deutsch. Forschungsgemeinschaft, Univ. Bonn, Bad Honnef, 1979)*, pp. 481–489. *Lecture Notes in Control and Information Sci.*, **16**, Springer, Berlin, 1979. (A. F. Gualtieri) **81g:60043** 60G35 (93E10)
- (with Szpirglas, Jacques) A general nonlinear filtering model and associated stochastic differential equations. *Transactions of the Eighth Prague Conference on Information Theory, Statistical Decision Functions, Random Processes (Prague, 1978)*, Vol. C, pp. 301–309. *Reidel, Dordrecht*, 1979. (O. A. Glonti) **81e:60045** 60G35 (60H15)
- (with Szpirglas, Jacques) Modèle général de filtrage non linéaire et équations différentielles stochastiques associées. *Ann. Inst. H. Poincaré Sect. B (N.S.)* **15** (1979), no. 2, 147–173. (B. L. Rozovskii) **81i:60056** 60G25 (60G35, 60H10, 62M20)
- (with Kőrežlioglu, Hayri) Sur des diffusions multidirectionnelles. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **290** (1980), no. 14, A657–A660. (Authors' summary) **81d:60060** 60H10 (60J60)
- (with Szpirglas, Jacques) Un théorème de séparation pour le contrôle impulsif. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **290** (1980), no. 16, A769–A772. (Authors' summary) **81d:93066** 93E11 (60G35)
- Mazzocco, Francesco (with Olanda, Domenico) Ruled systems in combinatorial spaces. (Italian. English summary) *Rend. Mat.* **(6)** **12** (1979), no. 2, 221–229. (G. Tallini) **81i:05043** 05B25
- (with Bichara, Alessandro; Somma, Clelia) On the classification of generalized quadrangles in a finite affine space $AG(3, 2^n)$. (Italian summary) *Boll. Un. Mat. Ital. B* **(5)** **17** (1980), no. 1, 298–307. (Joseph A. Thas) **81h:51009** 51E30 (51E20)
- Mazzola, Guerino The algebraic and geometric classification of associative algebras of dimension five. *Manuscripta Math.* **27** (1979), no. 1, 81–101. (A. A. Iarrobino, Jr.) **81g:16039** 16A64 (13D10, 14D15, 16A44, 16A48)
- Mazzoli, Piero Existence of a competitive equilibrium in the general theory of the demand for space and of rent. (Italian. English summary) *Riv. Mat. Sci. Econom. Social.* **1** (1978), no. 2, 15–32. (Author's summary) **81i:90040a** 90A14
- Problems of portfolio selection and revision in the presence of transaction costs. (Italian) *Proceedings of the First AMASES Meeting (Pisa, 1977)* (Italian), pp. 261–287. Giappichelli, Turin, 1979. (Giovanni M. Zamburo) **81m:90021** 90A09
- On constrained optimization for convex set functions. *Survey of mathematical programming (Proc. Ninth Internat. Math. Programming Sympos., Budapest, 1976)*, Vol. 1, pp. 273–290. North-Holland, Amsterdam, 1979. (Su-shing Chen) **81h:90119** 90C25
- Errata: "Existence of a competitive equilibrium in the general theory of the demand for space and of rent". (Italian) *Riv. Mat. Sci. Econom. Social.* **2** (1979), no. 1, 76. (Editors) **81i:90040b** 90A14
- A property of monotone operators for problems of vector optimization. (Italian. English summary) *Riv. Mat. Sci. Econom. Social.* **3** (1980), no. 1, 15–33. (F. Giannessi) **81h:90129** 90C30 (47H05, 90C31)
- McAdams, Stephen (with Gilmer, Robert) Ideals contracted from each extension ring. *Comm. Algebra* **7** (1979), no. 3, 287–311. (Douglas L. Costa) **81c:13001** 13A15 (13A17)
- (with Eakin, Paul) The asymptotic Ass. *J. Algebra* **61** (1979), no. 1, 71–81. (Markus Brodmann) **81f:13001** 13A17
- (with Armendariz, Efraim P.) ★Elementary number theory. *Macmillan, Inc., New York; Collier-Macmillan Publishers, London*, 1980. xi + 193 pp. ISBN 0-02-303850-0 (T. M. Apostol) **81a:10001** 10-01
- Asymptotic prime divisors and analytic spreads. *Proc. Amer. Math. Soc.* **90** (1980), no. 4, 555–559. (Markus Brodmann) **81j:13015** 13E05
- McAfee, R. Preston (with Whinston, Andrew B.) A formal model of problem solving. *Internat. J. Policy Anal. Inform. Systems* **4** (1980), no. 3, 285–303. (Authors' summary) **81h:68073** 68G20
- McAfee, Michael (with Fisher, Gordon) On the interpretation of the Cox test in econometrics. *Econom. Lett.* **4** (1979/80), no. 2, 145–150. (Kazuo Sato) **81j:62055** 62F03 (62P20)
- McAllister, D. B. (with Blyth, T. S.) Split orthodox semigroups. *J. Algebra* **51** (1978), no. 2, 491–525. (G. B. Preston) **81a:20068** 20M99
- A random ramble through inverse semigroups. *Semigroups (Proc. Conf., Monash Univ., Clayton, 1979)*, pp. 1–20. Academic Press, New York, 1980. (Author's summary) **81j:20069** 20M10
- Regular semigroups, fundamental semigroups and groups. *J. Austral. Math. Soc. Ser. A* **29** (1980), no. 4, 475–503. (M. Yamada) **81i:20085** 20M10
- Embedding inverse semigroups in coset semigroups. *Semigroup Forum* **20** (1980), no. 3, 255–267. (John W. Hogan) **81j:20090** 20M10
- McAllister, G. T. (with Rohde, S. M.; McAllister, Marihuia N.) Optimal bearing designs for one-dimensional problems with compressible lubricants. *J. Math. Anal. Appl.* **73** (1980), no. 2, 543–560. (Frederick A. Howes) **81h:76045** 76N10
- McAllister, Marihuia N. Sufficiency of resources. *Proceedings of the Second International Conference on Mathematical Modelling (St. Louis, Mo., 1979)*, Vol. I, pp. 1075–1083. Univ. Missouri-Rolla, Rolla, Mo., 1980. (Author's summary) **81m:92052** 92A17
- (with McAllister, G. T.; Rohde, S. M.) Optimal bearing designs for one-dimensional problems with compressible lubricants. *J. Math. Anal. Appl.* **73** (1980), no. 2, 543–560. (Frederick A. Howes) **81h:76045** 76N10
- McAlone, Kenneth Completeness theorems, incompleteness theorems and models of arithmetic. *Trans. Amer. Math. Soc.* **239** (1978), 253–277. (Editors) **81e:03066** 03H15 (03F30)
- See also Colloquium: Logic, **81a:03001** and Models of arithmetic, **81j:03006**
- McBeth, Rod A note on Hardy's persistent numbers. *Z. Math. Logik Grundlag. Math.* **25** (1979), no. 4, 375–378. (Jane E. Kister) **81a:04002** 04A10 (03F15)
- Fundamental sequences for exponential polynomials. *Z. Math. Logik Grundlag. Math.* **26** (1980), no. 2, 115–122. (E. Harzheim) **81f:04004** 04A10 (03E10, 03F15)
- McBride, Adam C. ★Fractional calculus and integral transforms of generalized functions. *Research Notes in Mathematics*, **31**. Pitman (Advanced Publishing Program), San Francisco, Calif.-London, 1979. iv + 179 pp. ISBN 0-273-08415-1 (Hans-Jürgen Gieske) **81d:46045** 46F12 (26A33, 44A05, 44A40)
- Solution of dual integral equations of Titchmarsh type using generalized functions. *Proc. Roy. Soc. Edinburgh Sect. A* **83** (1979), no. 3-4, 263–281. (Philip Heywood) **81i:45007** 45F10
- McBride, R. D. (with Yormark, J. S.) An implicit enumeration algorithm for quadratic integer programming. *Management Sci.* **26** (1980), no. 3, 282–296. (Authors' summary) **81i:90164** 90C20 (90C10)
- (with Yormark, J. S.) Finding all solutions for a class of parametric quadratic integer programming problems. *Management Sci.* **26** (1980), no. 8, 784–795. (From the introduction) **81i:90150** 90C10 (90C20, 90C31)
- McBryan, O. (with Glimm, James G.; Marchesin, Dan) Subgrid resolution of fluid discontinuities. II. *J. Comput. Phys.* **37** (1980), no. 3, 336–354. (Authors' summary) **81h:76041** 76L05 (35L65, 65M05)
- Mc Cabe, George P., Jr. Use of the 27% rule in experimental design. *Comm. Statist. A—Theory Methods* **9** (1980), no. 7, 765–776. (Nariaki Sugura) **81g:62084** 62G30 (62K99)
- McCannan, Richard B. See Statistics and earth sciences—the challenge for the 80's and statistical problems in exploration and resource evaluation of energy fuels. **81j:95001**
- McCann, Roger C. Certain "nonlinear" dynamical systems are linear. *Differential equations (Proc. Eighth Fall Conf., Oklahoma State Univ., Stillwater, Okla., 1979)*, pp. 215–219. Academic Press, New York, 1980. (Russell A. Johnson) **81h:34054** 34C35 (34D05)
- McCarthy, David (with McKay, Brendan D.) Transposable and symmetrizable matrices. *J. Austral. Math. Soc. Ser. A* **29** (1980), no. 4, 469–474. (W. D. Wallis) **81m:15018** 15A57
- See also Proceedings: Southeastern Conference on Combinatorics, Graph Theory and Computing. **81h:05004**; Proceedings: West Coast Conference on Combinatorics, Graph Theory and Computing. **81i:05006**; Tutte, William Thomas, **81h:01059a** and Tutte, William Thomas, **81h:01059b**
- McCarthy, Donald J. Extremal problems for graphs with dihedral automorphism group. *Second International Conference on Combinatorial Mathematics (New York, 1978)*, pp. 383–390. Ann. New York Acad. Sci., **319**, New York Acad. Sci., New York, 1979. (Gary Haggard) **81h:05079** 05C25
- (with Quintas, Louis V.) The construction of minimal-line graphs with given automorphism group. *Topics in graph theory (New York, 1977)*, pp. 144–156. Ann. New York Acad. Sci., **328**, New York Acad. Sci., New York, 1979. (E. M. Palmer) **81c:05050** 05C25
- See also Problems: Combinatorial mathematics, **81h:05002**
- McCarthy, John First order theories of individual concepts and propositions. *Machine intelligence, Vol. 9*, pp. 129–147. Horwood, Chichester, 1979. (Scott K. Lehmann) **81m:03024** 03B45 (03A05, 68G99)
- Circumscription—a form of nonmonotonic reasoning. Special issue on nonmonotonic logic. *Artificial Intelligence* **13** (1980), no. 1-2, 27–39. (N. C. A. da Costa) **81i:03036a** 03B99 (68G20)
- Addendum: circumscription and other nonmonotonic formalisms. Special issue on nonmonotonic logic. *Artificial Intelligence* **13** (1980), no. 1-2, 171–172. (N. C. A. da Costa) **81i:03036b** 03B99 (68G20)
- McCarthy, Patrick J. Some linear Bäcklund transformations. *Lett. Math. Phys.* **4** (1980), no. 1, 39–43. (Mark J. Ablowitz) **81g:35109** 35Q20 (35A30, 58A15, 76B15)
- McCarthy, Paul J. A characterization of strict matching matroids. *Quart. J. Math. Oxford Ser. (2)* **30** (1979), no. 118, 191–196. (From the text) **81m:05059** 05B35
- McCartney, L. N. Extensions of a statistical approach to fracture. (French summary) *Internat. J. Fracture* **15** (1979), no. 5, 477–487. (Author's summary) **81j:73075** 73M05 (73F05)
- McCartney, Philip W. (with O'Brien, Richard C.) A separable Banach space with the Radon-Nikodým property that is not isomorphic to a subspace of a separable dual. *Proc. Amer. Math. Soc.* **78** (1980), no. 1, 40–42. (Fumio Hiai) **81m:46035** 46B22
- McCaughan, D. J. (with Stonehewer, Stewart E.) Finite soluble groups whose subnormal

- subgroups have defect at most two. *Arch. Math. (Basel)* 35 (1980), no. 1-2, 56-60. (H. Bechtel) **81h:20621** 20D10 (20D35)
- McClamroch, N. Harris Control of a linear sampled-data system using round-robin output feedback. *IEEE Trans. Automat. Control* 25 (1980), no. 2, 298-299. (Author's summary) **81h:93047** 93C57 (93C05)
- McClary, John Mod p decompositions of H -spaces; another approach. *Algebraic topology, Aarhus 1978 (Proc. Sympos., Univ. Aarhus, Aarhus, 1978)*, pp. 70-87, *Lecture Notes in Math.*, 1963, Springer, Berlin, 1979. (Francis Clarke) **81c:55014** 55P45 (55S35)
- McClary, Stephen H. Some simple homeomorphism groups having nonsolvable outer automorphism groups. *Comm. Algebra* 6 (1978), no. 5, 483-496. (Author's summary) **81e:20044** 20F28
- Groups of homeomorphisms with manageable automorphism groups. *Comm. Algebra* 6 (1978), no. 5, 497-528. (Author's summary) **81e:20045** 20F28
- (with Glass, A. M. W.; Holland, W. Charles) The structure of l -group varieties. *Algebra Universalis* 10 (1980), no. 1, 1-20. (J. Kist) **81k:06026a** 06F15 (06B20)
- McCluskey, J. F. (with Kruse, D. E.) Homotopy epimorphisms and relative principal fibrations. *Arch. Math. (Basel)* 33 (1979/80), no. 6, 556-558. (John Roy Dennett) **81g:55016** 55R65 (55S40)
- McClellan, Edward F. The minimax theory and expected utility reasoning. *Foundations and applications of decision theory (Papers, Internat. Workshop, Univ. Western Ontario, London, Ont., 1975)*, Vol. 1, pp. 337-367, *Univ. Western Ontario Series in Philos. Sci.*, 13, Reidel, Dordrecht, 1978. (V. N. Burkov) **81h:90152** 90D30
- See also Foundations and applications of decision theory, **81a:90002**
- McCung, R. E. D. The Fokker-Planck-Langevin model for rotational Brownian motion. I. General theory. *J. Chem. Phys.* 73 (1980), no. 5, 2435-2442. (Author's summary) **81g:82055** 82A50
- McCluskey, E. J. Logic design of multivalued l^p logic circuits. *Proceedings of the Eighth International Symposium on Multiple-Valued Logic (Rosemont, Ill., 1978)*, pp. 14-22, *IEEE, Long Beach, Calif.*, 1978. (Author's summary) **81h:94058** 94C05 (03B50)
- Logic design of multi-input quad l^p circuits. *Proceedings of the Ninth International Symposium on Multiple-Valued Logic (Bath, 1979)*, pp. 121-127, *IEEE, Long Beach, Calif.*, 1979. (Author's summary) **81a:94071** 94C30
- McConnell, John C. I -adic completions of noncommutative rings. *Israel J. Math.* 32 (1979), no. 4, 305-310. (Z. Papp) **81l:16015** 16A33
- On the global dimension of some filtered algebras. *J. Pure Appl. Algebra* 18 (1980), no. 1, 75-77. (K. R. Goodearl) **81h:16044** 16A60 (17B35)
- McCool, James On reducible braids. *Word problems, II (Conf. on Decision Problems in Algebra, Oxford, 1976)*, pp. 261-295, *Studies in Logic and Foundations of Math.*, 95, North-Holland, Amsterdam, 1980. (J. A. H. Shepperd) **81m:20058** 20F36
- A counterexample to conjectures of Papayriakopoulos and Swarup. *Proc. Amer. Math. Soc.* 81 (1981), no. 2, 193-194. (R. W. Gatterdam) **81m:20047** 20F05 (20E06, 57M40)
- McCormick, Steve Mesh refinement methods for integral equations. *Numerical treatment of integral equations (Workshop, Math. Res. Inst., Oberwolfach, 1979)*, pp. 183-190, *Internat. Ser. Numer. Math.*, 53, Birkhäuser, Basel, 1980. (L. Collatz) **81m:65202** 65R20
- McCormick, William P. Weak convergence of a method of stationary Gaussian processes using random normalization. *Ann. Probab.* 8 (1980), no. 3, 483-497. (Simeon M. Berman) **81f:60053** 60G10 (60F05, 60G15)
- An extension to a strong law result of Mittal and Ylvisaker for the maxima of stationary Gaussian processes. *Ann. Probab.* 8 (1980), no. 3, 498-510. (Simeon M. Berman) **81f:60054** 60G10 (60F15, 60G15)
- McCoy, Barry M. (with Wu, Tai Tsun) Lattice renormalization of nonperturbative quantum field theory. *Bifurcation phenomena in mathematical physics and related topics (Proc. NATO Advanced Study Inst., Cargèse, 1979)*, pp. 69-90, *NATO Adv. Study Inst. Ser., Ser. C: Math. and Phys. Sci.*, 54, Reidel, Dordrecht, 1980. (See **81f:00012**) **81E15**
- (with Wu, Tai Tsun) Nonlinear partial difference equations for the two-dimensional Ising model. *Phys. Rev. Lett.* 45 (1980), no. 9, 675-678. (Authors' summary) **81m:82044** 82A67 (39A10)
- McCoy, Peter A. Analytical properties of generalized biaxially symmetric potentials. *Applicable Anal.* 8 (1978/79), no. 3, 201-209. (Manfred W. Kracht) **81c:31009** 31A99 (35B05, 35C15)
- Polynomial approximation and growth of generalized axisymmetric potentials. *Canad. J. Math.* 31 (1979), no. 1, 49-59. (Gerhard Jank) **81h:35011** 35C15 (30D15, 30E10, 41A10)
- Polynomial approximation of generalized biaxially symmetric potentials. *J. Approx. Theory* 25 (1979), no. 2, 153-168. (Allan J. Fryant) **81f:35048** 35J99 (33A65, 41A25)
- A mean boundary value problem for a generalized axisymmetric potential on doubly connected regions. *J. Math. Anal. Appl.* 76 (1980), no. 1, 213-221. (D. H. Armitage) **81k:31012** 31B35
- McCoy, R. A. The open-cover topology on function spaces. *Fund. Math.* 104 (1979), no. 2, 69-73. (Jerry F. Williams) **81h:54018** 54C35
- Countability properties of function spaces. *Rocky Mountain J. Math.* 10 (1980), no. 4, 717-730. (C. R. Borges) **81m:54021** 54C35 (54B20, 54E65)
- The evaluation identification in function spaces. *Topology Appl.* 11 (1980), no. 2, 189-197. (Anne K. Steiner) **81j:54023** 54C35
- McCraw, R. J. Metastability in a long range one-dimensional Ising model. *Phys. Lett. A* 75 (1979/80), no. 5, 379-382. (Author's summary) **81k:82063** 82A67
- McCrinnon, Kevin Peirce ideals in Jordan algebras. *Pacific J. Math.* 78 (1978), no. 2, 397-414. (Joseph C. Ferrar) **81l:17011** 17C10
- Peirce ideals in Jordan triple systems. *Pacific J. Math.* 83 (1979), no. 2, 415-439. (Joseph C. Ferrar) **81l:17012** 17C99
- The Zel'manov nilpotence theorem for quadratic Jordan algebras. *J. Algebra* 63 (1980), no. 1, 76-97. (I. P. Šestakov) **81m:17020** 17C10
- McCrory, Clint Zeeman's filtration of homology. *Trans. Amer. Math. Soc.* 250 (1979), 147-166. (Jack Weinstein) **81h:55002** 55M05 (55N10, 55N45, 55T99, 57N80, 57P99, 57T99)
- McCrory, Robert L. (with Orszag, Steven A.) Spectral methods for multidimensional diffusion problems. *J. Comput. Phys.* 37 (1980), no. 1, 93-112. (Authors' summary) **81g:65135** 65N10 (80A20, 82A70)
- McCallagh, Peter Regression models for ordinal data. *J. Roy. Statist. Soc. Ser. B* 42 (1980), no. 2, 109-142. (Graham J. G. Upton) **81j:62107** 62H17 (62J05)
- A rapidly convergent series for computing $\psi(x)$ and its derivatives. *Math. Comp.* 34 (1981), no. 153, 247-248. (J. Gregor) **81m:65028** 65D20 (33A15)
- McCullough, Darryl Finite aspherical complexes with infinitely-generated groups of self-homotopy equivalences. *Proc. Amer. Math. Soc.* 80 (1980), no. 2, 337-340. (Donald W. Kahn) **81h:55006** 55P10
- McDermott, Drew (with Doyle, Jon) Nonmonotonic logic. I. Special issue on nonmonotonic logic. *Artificial Intelligence* 13 (1980), no. 1-2, 41-72. (N. C. A. da Costa) **81j:03045** 03B60 (68G20)
- McDiarmid, Colin Percolation on subsets of the square lattice. *J. Appl. Probab.* 17 (1980), no. 1, 278-283. (John C. Wierman) **81d:60111** 60K35 (05C35)
- Clutter percolation and random graphs. *Combinatorial optimization, II (Proc. Conf., Univ. East Anglia, Norwich, 1979)*, *Math. Programming Stud.* No. 13 (1980), 17-25. (C. C. Rousseau) **81m:05119** 05C99 (05C38, 60K35, 68E10)
- General percolation and random graphs. *Adv. in Appl. Probab.* 13 (1981), no. 1, 40-60. (G. R. Grimmett) **81m:60179** 60K99 (05C99, 82A42)
- McDonald, Alan T. (with Fox, Robert W.) Introduction to fluid mechanics. Second edition. *John Wiley & Sons, New York-Chichester-Brisbane*, 1978. xvi + 684 pp. ISBN 0-471-01909-7 (Editors) **81h:76001** 76-01
- McDonald, B. H. (with Wexler, A.) Mutually constrained partial differential and integral equation field formulations. *Finite elements in electrical and magnetic field problems*, pp. 161-190, Wiley, Chichester, 1980. (R. C. MacCamy) **81m:65186** 65N99
- McDonald, Bernard R. GL₂ of rings with many units. *Comm. Algebra* 8 (1980), no. 9, 869-888. (J. D. Dixon) **81k:20068** 20H25 (15A33, 20G35, 20H05)
- See also Ring theory and algebra, **81h:16001**
- McDonald, David Ergodic behaviour of nonstationary regenerative processes. *Trans. Amer. Math. Soc.* 255 (1979), 135-152. (Allan Gut) **81d:60095** 60K05
- McDonald, Gary C. Some algebraic properties of ridge coefficients. *J. Roy. Statist. Soc. Ser. B* 42 (1980), no. 1, 31-34. (William D. Ray) **81c:62080** 62J07
- McDonald, J. F. Some mathematically simple ensembles of random matrices which represent Hamiltonians with a small time-reversal-noninvariant part. (Italian and Russian summaries) *Nuovo Cimento B* (11) 57 (1980), no. 1, 95-124. (Author's summary) **81c:82075** 82A99 (15A52)
- McDonald, James B. (with Mariano, Roberto S.) A note on the distribution functions of LIML and 2SLS structural coefficient in the exactly identified case. *J. Amer. Statist. Assoc.* 74 (1979), no. 368, 847-848. (Authors' summary) **81a:62111** 62P20
- McDonald, John (with Fisher, Lloyd) Probability and mathematical statistics. *Academic Press [Harcourt Brace Jovanovich, Publishers], New York-London*, 1978. xiii + 177 pp. ISBN 0-12-257350-1 (Klaus Hinkelmann) **81h:62123** 62J10 (62F03)
- On the relationship between the optimal extrapolative and other expectations generating methods. *Austral. J. Statist.* 20 (1978), no. 2, 126-135. (G. Tintner) **81d:62115** 62P20
- McDonald, John N. Some operators on $L^2(dm)$ associated with finite Blaschke products. *Hilbert space operators (Proc. Conf., Calif. State Univ., Long Beach, Calif., 1977)*, pp. 125-132, *Lecture Notes in Math.*, 693, Springer, Berlin, 1978. (J. V. Ryff) **81c:4703** 47B38 (30D50, 47D20)
- Approximation by quotients of rational inner functions. *Proc. Amer. Math. Soc.* 74 (1979), no. 2, 299-300. (W. J. Kotzé) **81b:41036** 41A20 (30E10)
- McDonald, M. (with Armitage, D. J.) The roundabout: a series of linked priority junctions. *Bull. Inst. Math. Appl.* 15 (1979), no. 11-12, 274-278. (J. Černý) **81i:9000** 90B20
- McDonald, Roderick P. (with Krane, William R.) Scale invariance and the factor analysis of correlation matrices. *British J. Math. Statist. Psych.* 31 (1978), no. 2, 218-228. (G. Della Riccia) **81h:62075** 62H25
- (with Mulaik, Stanley A.) The effect of additional variables on factor indeterminacy in models with a single common factor. *Psychometrika* 43 (1978), no. 2, 177-192. (Authors' summary) **81k:62082** 62H25
- The simultaneous estimation of factor loadings and scores. *British J. Math. Statist. Psych.* 32 (1979), no. 2, 212-228. (J. K. Ord) **81d:62053** 62H25
- (with Torii, Yukihiko; Nishisato, Shizuhiko) Some results on proper eigenvalues and eigenvectors with applications to scaling. *Psychometrika* 44 (1979), no. 2, 211-227. (C. Hayashi) **81h:62078** 62H99 (62-07)
- McDonald, Steven W. (with Kaufman, Allan N.) Ray and wave optics of integrable and stochastic systems. *Intrinsic stochasticity in plasmas (Internat. Workshop, Inst. Étude Sci. Cargèse, Cargèse, 1979)*, pp. 83-92, *École Polytech., Palaiseau*, 1979. (V. H. Weston) **81h:78002** 78A05
- (with Drobot, V.) Approximation properties of polynomials with bounded integer coefficients. *Pacific J. Math.* 86 (1980), no. 2, 447-450. (J. B. Kelly) **81m:12003** 12A15
- McDonald-Schlichting, U. Note on simply calculating chi-square for a $r \times c$ -contingency table. *Biometrical J.* 21 (1979), no. 8, 787-789. (Author's summary) **81e:62047** 62H17
- McDonough, J. M. (with Yao, L. S.; Catton, I.) Asymmetric boundary layer on a nonisothermally heated cone. *Trans. ASME Ser. E J. Appl. Mech.* 47 (1980), no. 3, 467-474. (Authors' summary) **81g:76095** 76R10 (76E99, 76R05)
- McDowell, D. G. A characterization of the minimizer of a function. *J. Optim. Theory Appl.* 25 (1978), no. 1, 1-9. (Author's summary) **81f:90094** 90C30 (58C15, 65K05)
- McDowell, K. (with Bulman-Fleming, Sydney) Flat distributive lattices are trivial. *Algebra Universalis* 9 (1979), no. 3, 400-401. (From the text) **81e:06017** 06D05
- (with Bulman-Fleming, Sydney) Flatness in varieties of normal bands. *Semigroup Forum* 19 (1980), no. 2, 139-149. (K. S. S. Nambooripad) **81e:20066** 20M07
- (with Bulman-Fleming, Sydney) Flatness and projectivity in commutative regular semigroups. *Semigroup Forum* 19 (1980), no. 3, 247-259. (K. S. S. Nambooripad) **81e:20067** 20M07 (18B99)
- McDowell, R. (with Freiwald, Ronald C.; McHugh, E. F., Jr.) Borel sets of exact class. *Colloq. Math.* 41 (1979), no. 2, 187-191. (Bhramidi V. Rao) **81k:04002** 04A15 (54H05)

- McDuff, Dusa** On the classifying spaces of discrete monoids. *Topology* 18 (1979), no. 4, 313–320. (J. Stasheff) **81d:55020** 55R35 (20M99, 58D99)
- The homology of some groups of diffeomorphisms. *Comment. Math. Helv.* 55 (1980), no. 1, 97–129. (D. Burghela) **81j:57018** 57R40 (58D05)
- On the group of volume-preserving diffeomorphisms of \mathbb{R}^n . *Trans. Amer. Math. Soc.* 261 (1980), no. 1, 103–113. (Michael Handel) **81k:58019** 58D05
- McDunnough, Philip** Estimating an interaction parameter of an infinite particle system. *Ann. Inst. Statist. Math.* 31 (1979), no. 3, 435–443. (John P. Lehoczky) **81f:62143** 62M99 (60K35)
- (with Wolfson, David B.) On some sampling schemes for estimating the parameters of a continuous time series. *Ann. Inst. Statist. Math.* 31 (1979), no. 3, 487–497. (A. Morris Walker) **81k:62122** 62M05 (62M10)
- The estimation of an autocorrelation parameter of a Gaussian vector process. *J. Roy. Statist. Soc. Ser. B* 41 (1979), no. 2, 203–209. (E. J. Hannan) **81c:62096** 62M09 (with Wolfson, David B.) Fixed versus random sampling of certain continuous parameter processes. *Austral. J. Statist.* 22 (1980), no. 1, 40–49. (R. L. Tweedie) **81j:62170** 62M05
- (with Kubat, Peter) Estimating the precision of a bivariate population. *Comm. Statist. A—Theory Methods* 9 (1980), no. 5, 489–500. (Authors' summary) **81g:62093** 62H12
- McEliece, Robert J.** The bounds of Delsarte and Lovász, and their applications to coding theory. *Algebraic coding theory and applications (Summer School, Internat. Centre Mech. Sci. (CISM), Udine, 1978)*, pp. 107–178. *CISM Courses and Lectures*, 258, Springer, Vienna, 1979. (See **81k:94026**) 94B99
- (with Baumert, Leonard D.; Rodemich, Eugene R.; Rumsey, Howard, Jr.) A probabilistic version of Sperner's theorem. *Ars Combin.* 9 (1980), 91–100. (Charles M. Grinstead) **81j:05001** 05A05 (04A20)
- (with Rodemich, Eugene R.) The Constantin-Rao construction for binary asymmetric error-correcting codes. *Inform. and Control* 44 (1980), no. 2, 187–196. (Bart Rice) **81f:94028** 94B60
- Correlation properties of sets of sequences derived from irreducible cyclic codes. *Inform. and Control* 45 (1980), no. 1, 18–25. (Author's summary) **81j:94022** 94B15
- McEneaney, Brian W.** Shifts on indefinite inner product spaces. *Pacific J. Math.* 81 (1979), no. 1, 113–130. (J. Bognár) **81c:47040** 47B50
- Characteristic functions and dilations of noncontractions. *J. Operator Theory* 3 (1980), no. 1, 71–87. (D. N. Clark) **81c:47014** 47A45 (47A20)
- McFadden, Daniel** (with Mitra, Tapan; Majumdar, Mukul) Pareto optimality and competitive equilibrium in infinite horizon economies. *J. Math. Econom.* 7 (1980), no. 1, 1–26. (Authors' summary) **81a:90052** 90A14 (90A16)
- McFadden, R.** Partially ordered semigroups as semigroups. *Semigroups (Proc. Conf., Monash Univ., Clayton, 1979)*, pp. 177–189. *Academic Press, New York*, 1980. (Author's summary) **81c:06025** 06F05 (20M10)
- McFaden, H. H.** See **Bockarev, S. V.**, **81m:42021**
- McFall, J. D.** Chromatic enumeration for triangulations. *Graph theory and related topics (Proc. Conf., Univ. Waterloo, Waterloo, Ont., 1977)*, pp. 305–314. *Academic Press, New York*, 1979. (Ioan Tomescu) **81e:05069** 05C15 (05C30)
- McGee, William J.** (with Szebehely, Victor; Lundberg, John) Potential in the central bar structure. *Astrophys. J.* 239 (1980), no. 3, part 1, 880–881. (Authors' summary) **81h:85004** 85A05
- McGehee, O. Carruth** (with Graham, Colin C.) ★ *Essays in commutative harmonic analysis*. Grundlehren der Mathematischen Wissenschaften [Fundamental Principles of Mathematical Sciences], 238. Springer-Verlag, New York-Heidelberg, 1979. xxi + 464 pp. ISBN 0-387-90426-3 (K. A. Ross) **81c:43001** 43-02 (42A63, 43A10)
- McGehee, Richard** (with Aronson, D. G.; Chory, M. A.; Hall, G. R.) A discrete dynamical system with subtly wild behavior. *New approaches to nonlinear problems in dynamics (Proc. Conf., Pacific Grove, Calif., 1979)*, pp. 339–359. *SIAM, Philadelphia, Pa.*, 1980. (Leo Jonker) **81j:58054** 58F13 (92A17)
- Singularities in classical celestial mechanics. *Proceedings of the International Congress of Mathematicians (Helsinki, 1978)*, pp. 827–834. *Acad. Sci. Fennica, Helsinki*, 1980. (George Contopoulos) **81j:70006** 70F10 (58F05)
- McGibbon, Charles A.** Which group structures on S^2 have a maximal torus? *Geometric applications of homotopy theory (Proc. Conf., Evanston, Ill., 1977)*, I, pp. 353–360. *Lecture Notes in Math.*, 657, Springer, Berlin, 1978. (T. Y. Lin) **81g:55011** 55P45
- McGiffin, P. B.** (with Murthy, D. N. P.) Parameter estimation for autoregressive systems with missing observations. *Internat. J. Systems Sci.* 11 (1980), no. 9, 1021–1034. (Authors' summary) **81k:93065** 93E10 (62M10, 90A20)
- McGlechrist, C. A.** (with Gleason, A. C.) An introduction to relationship algebras. *Comm. Statist. A—Theory Methods* 7 (1978), no. 11, 1053–1078. (A. Hedayat) **81b:62093** 62K99 (16A42)
- (with Gleason, A. C.) Estimation of interplant dependence in a linear planting scheme. *Biometrical J.* 21 (1979), no. 6, 527–538. (P. W. A. Dayananda) **81j:62197** 62P10
- (with Sandland, R. L.) Recursive estimation of the general linear model with dependent errors. *J. Roy. Statist. Soc. Ser. B* 41 (1979), no. 1, 65–68. (Andrew Harvey) **81c:62073** 62J05
- McGilroy, L. See Tonnelat, Marie Antoinette**, **81m:01080**
- McGinley, W. G.** A note on dissociatedness and order statistics. *J. Roy. Statist. Soc. Ser. B* 41 (1979), no. 1, 111–112. (Paul Deheuvels) **81h:62085** 62G30 (60F15)
- McGinn, Robert J.** (with Kammler, David W.) Local conditioning of parametric forms used to approximate continuous functions. *Amer. Math. Monthly* 86 (1979), no. 10, 841–845. (Hans-Jürgen Albrand) **81g:65019** 65D10 (65G05)
- McGrath, S. A.** Local ergodic theorems for noncommuting semigroups. *Proc. Amer. Math. Soc.* 79 (1980), no. 2, 212–216. (U. Krengel) **81k:28022** 28D10 (47A35)
- McGuinness, Brian** See **Frege, Gottlob**, **81d:03001**
- McGuinness, Mark J.** The conserved densities of the Korteweg-de Vries equation. *J. Math. Phys.* 19 (1978), no. 11, 2285–2288. (Alexander A. Pankov) **81f:35108** 35Q20 (58F07)
- (with Gibbon, J. D.) A derivation of the Lorenz equations for some unstable dispersive physical systems. *Phys. Lett. A* 77 (1980), no. 5, 295–299. (Authors' summary) **81m:35124** 35Q20 (34B25, 58F13, 76E20, 86A05)
- McGuire, J. E.** Newton on place, time, and God: an unpublished source. *British J. Hist. Sci.* 11 (1978), no. 38, part 2, 114–129. (N. Swerdlow) **81m:01016** 01A45
- McGuire, James B.** (with Thompson, Colin J.) Distribution of iterates of first order difference equations. *Bull. Austral. Math. Soc.* 22 (1980), no. 1, 133–143. (Leo Jonker) **81m:58048** 58F11 (28C10, 39A10, 82A05, 92A17)
- McHugh, E. F., Jr.** (with Freiwald, Ronald C.; McDowell, R.) Borel sets of exact class. *Colloq. Math.* 41 (1979), no. 2, 187–191. (Bhramidi V. Rao) **81k:94092** 04A15 (54H05)
- McHugh, Richard B.** (with Reed, George F.) The estimation of dental caries incidence in the presence of diagnostic error. *Biometrics* 35 (1979), no. 2, 473–478. (Authors' summary) **81c:62110** 62P10
- McIlroy, D. K.** An enzyme theory of nervous conduction. *Mathematical modelling in biology and ecology (Proc. Sympos., Pretoria, 1979)*, pp. 56–96. *Lecture Notes in Biomath.*, 33, Springer, Berlin, 1980. (See **81i:92001**) 92A09
- McInnis, Bayless** (with Cheng, Yuen Yee M.) An algorithm for multiple attribute, multiple alternative decision problems based on fuzzy sets with application to medical diagnosis. *IEEE Trans. Systems Man Cybernet.* 10 (1980), no. 10, 645–650. (Authors' summary) **81k:90001** 90A05 (90C31, 92A07)
- McIntosh, Alan** Second-order properly elliptic boundary value problems on irregular plane domains. *J. Differential Equations* 34 (1979), no. 3, 361–392. (G. Albinus) **81a:35026** 35J25
- McIntosh, C. B. G.** Symmetries and exact solutions of Einstein's equations. *Gravitational radiation, collapsed objects and exact solutions (Proc. Einstein Centenary Summer School, Perth, 1979)*, pp. 469–476. *Lecture Notes in Phys.*, 124, Springer, Berlin, 1980. (Brian O. J. Tupper) **81m:83025** 83C40 (53B20)
- (with Carminati, J.) A nonstatic Einstein-Maxwell solution. *J. Phys. A* 13 (1980), no. 3, 953–959. (B. K. Datta) **81c:83030** 83C50 (53B50)
- McIntyre, David R.** A maximum column partition for finite element linear systems ordered by an implementation of the minimum degree ordering algorithm. *Proceedings of the Ninth Manitoba Conference on Numerical Mathematics and Computing (Univ. Manitoba, Winnipeg, Man., 1979)*, pp. 301–303. *Congress. Numer., XXVII, Utilitas Math., Winnipeg, Man.*, 1980. (R. P. Tewarson) **81m:65061** 65F99 (05C50)
- McIntyre, M. E.** Towards a Lagrangian-mean description of stratospheric circulations and chemical transports. *Philos. Trans. Roy. Soc. London Ser. A* 296 (1980), no. 1418, 129–148. (Author's summary) **81h:86008** 86A35 (80A20)
- McIntosh, Paul R.** A general reciprocity theorem. *IEEE Trans. Microwave Theory Tech.* 27 (1979), no. 4, 340–342. (Author's summary) **81k:78003** 78A25 (78A45)
- McKane, A. J.** Reformulation of $n \rightarrow 0$ models using anticommuting scalar fields. *Phys. Lett. A* 76 (1980), no. 1, 22–24. (Author's summary) **81k:82033** 82A42 (81E99)
- McKay, Brendan D.** Computing automorphisms and canonical labelings of graphs. *Combinatorial mathematics (Proc. Internat. Conf. Combinatorial Theory, Australian Nat. Univ., Canberra, 1977)*, pp. 223–232. *Lecture Notes in Math.*, 686, Springer, Berlin, 1978. (P. K. Stockmeyer) **81b:05003** 05-04 (05C25, 68E10)
- (with Godsil, C. D.) A new graph product and its spectrum. *Bull. Austral. Math. Soc.* 18 (1978), no. 1, 21–28. (Authors' summary) **81h:05099** 05C50
- (with Stanton, Ralph G.) The current status of the generalised Moore graph problem. *Combinatorial mathematics, VI (Proc. Sixth Austral. Conf., Univ. New England, Armidale, 1978)*, pp. 21–31. *Lecture Notes in Math.*, 748, Springer, Berlin, 1979. (Bernard M. E. Moret) **81i:05085** 05C30 (05C38)
- Hadamard equivalence via graph isomorphism. *Discrete Math.* 27 (1979), no. 2, 213–214. (Jennifer Seberry) **81c:05047** 05B20 (05C50)
- (with Stanton, Ralph G.) Some graph-isomorphism computations. *Ars Combin.* 9 (1980), 307–313. (M. L. Chandak) **81i:05029** 05B05
- (with McCarthy, David) Transposable and symmetrizable matrices. *J. Austral. Math. Soc. Ser. A* 29 (1980), no. 4, 469–474. (W. D. Wallis) **81m:15018** 15A57
- (with Godsil, C. D.) The dimension of a graph. *Quart. J. Math. Oxford Ser. (2)* 31 (1980), no. 124, 423–427. (Larry Basenpiller) **81i:05091** 05C99
- McKay, John** Cartan matrices, finite groups of quaternions, and Kleinian singularities. *Proc. Amer. Math. Soc.* 81 (1981), no. 1, 153–154. (Author's summary) **81j:20018** 20C15 (32B30, 57R45)
- McKay, M. D.** See **Iman, Ronald L.; et al.**, **81m:65012**
- McKeen, H. P.** Integrable systems and algebraic curves. *Global analysis (Proc. Biennial Sem. Canad. Math. Congr., Univ. Calgary, Calgary, Alta., 1978)*, pp. 83–200. *Lecture Notes in Math.*, 755, Springer, Berlin, 1979. (M. F. Atiyah) **81g:58017** 58F07 (14H99, 35Q20, 76B15, 81C99)
- Algebraic curves of infinite genus arising in the theory of nonlinear waves. *Proceedings of the International Congress of Mathematicians (Helsinki, 1978)*, pp. 777–783. *Acad. Sci. Fennica, Helsinki*, 1980. (Alexander A. Pankov) **81d:50035** 58F07 (14H40, 14H99, 35Q20)
- (with van Moerbeke, Pierre) Hill and Toda curves. *Comm. Pure Appl. Math.* 33 (1980), no. 1, 23–42. (P. A. Kučment) **81b:14016** 14H45 (35Q20, 58F07)
- McKeen, Joseph W.** (with Schrader, Ronald M.) The geometry of robust procedures in linear models. *J. Roy. Statist. Soc. Ser. B* 42 (1980), no. 3, 366–371. (A. I. Khuri) **81m:62061** 62F35 (62J05)
- McKee, S.** (with Pitcher, N.) On the convergence of advanced linear multistep methods. *BIT* 19 (1979), no. 4, 476–481. (Joseph Oliver) **81g:65104** 65L07 (65L05)
- McKee, Terry A.** Generalized equivalence and the foundations of quasigroups. *Notre Dame J. Formal Logic* 21 (1980), no. 1, 135–140. (P. Štěpánek) **81b:03007** 03B10 (20N05)
- Generalized equivalence and the phraseology of configuration theorems. *Notre Dame J. Formal Logic* 21 (1980), no. 1, 141–147. (P. Štěpánek) **81b:03008** 03B10 (51A30)
- Monadic characterizations in nonstandard topology. *Z. Math. Logik Grundlagen Math.* 26 (1980), no. 5, 395–397. (Frank Wattenberg) **81m:03074** 03H05 (54J05)
- McKellar, A. C.** (with Wong, C. K.) Dynamic placement of records in linear storage. *J. Assoc. Comput. Mach.* 25 (1978), no. 3, 421–434. (Authors' summary) **81c:68021** 68B15 (68C25)
- McKellar, R. J.** A connection approach to the Einstein-Maxwell field equations. *Gen. Relativity Gravitat.* 10 (1979), no. 6, 467–488. (Author's summary) **81b:83006** 83C50 (53B50)

- McKelvey, J. P. (with Thomchick, John; Elliott, Claud F., Jr.) Exactly soluble anharmonic potential models. *Phys. Lett. A* 66 (1978), no. 2, 86-90. (Authors' summary) 81m:81017 81C05
- A density of states-frequency theorem for general one-dimensional oscillator systems. *Amer. J. Phys.* 48 (1980), no. 6, 458-460. (Koichiro Matsuno) 81e:82008 82A05
- McKelvey, Richard D. (with Niemi, Richard G.) A multistage game representation of sophisticated voting for binary procedures. *J. Econom. Theory* 18 (1978), no. 1, 1-22. (Mamoru Kaneko) 81b:90017a 90A08 (90D45)
- (with Niemi, Richard G.) Erratum: "A multistage game representation of sophisticated voting for binary procedures". *J. Econom. Theory* 19 (1978), no. 2, 568. (Mamoru Kaneko) 81b:90017b 90A08 (90D45)
- McKenma, P. J. Discontinuous perturbations of elliptic boundary value problems at resonance. *Nonlinear equations in abstract spaces (Proc. Internat. Sympos., Univ. Texas, Arlington, Tex., 1977)*, pp. 375-386, Academic Press, New York, 1978. (R. Kannan) 81j:47051 47H15
- (with Shaw, Howard) The structure of the solution set of some nonlinear problems. (Italian summary) *Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur.* (8) 65 (1978), no. 6, 239-243 (1979). (J. Daneš) 81k:47087 47H15
- Existence of solutions across resonance in the large for semilinear problems. (Italian summary) *Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur.* (8) 65 (1978), no. 6, 247-251 (1979). (J. Kolomoj) 81e:47065 47H17
- (with Rauch, Jeffrey) Strongly nonlinear perturbations of nonnegative boundary value problems with kernel. *J. Differential Equations* 28 (1978), no. 2, 253-265. (Frederick A. Howes) 81m:35032 35G30
- (with Lazer, Alan C.) On multiple solutions of a nonlinear Dirichlet problem. *Differential equations (Proc. Eighth Fall Conf., Oklahoma State Univ., Stillwater, Okla., 1979)*, pp. 199-214, Academic Press, New York, 1980. (J.-P. Gossez) 81k:35062 35J65 (35P30, 58E07)
- McKennon, Kelly The multiplication functions of Kučera. *Czechoslovak Math. J.* 29(104) (1979), no. 2, 169-177. (Keith Rowlands) 81e:46032 46F10 (42A38, 47B38)
- A family of Kučera spaces. *Czechoslovak Math. J.* 29(104) (1979), no. 4, 503-513. (J. Horváth) 81e:46003 46A12 (46E35, 46F12)
- Sobolev multipliers. *Czechoslovak Math. J.* 30(105) (1980), no. 1, 1-6. (A. Kufner) 81m:47043 47B38 (42B15, 46E35)
- (with Kučera, J.) Dieudonné-Schwartz theorem on bounded sets in inductive limits. *Proc. Amer. Math. Soc.* 78 (1980), no. 3, 366-368. (H. Hogbe-Nlend) 81d:46007 46A12 (46A09)
- (with Lau, Anthony To Ming) Isomorphisms of locally compact groups and Banach algebras. *Proc. Amer. Math. Soc.* 79 (1980), no. 1, 55-58. (G. V. Wood) 81b:43004 43A22 (43A15)
- McKenzie, B. J. (with Grant, I. P.) The transverse electron-electron interaction in atomic structure calculations. *J. Phys. B* 13 (1980), no. 14, 2671-2681. (Authors' summary) 81e:81156 81G45
- McKenzie, D. R. (with Perrins, W. T.; McPhedran, R. C.) Transport properties of regular arrays of cylinders. *Proc. Roy. Soc. London Ser. A* 369 (1979), no. 1737, 207-225. (Authors' summary) 81e:82033 82A70 (78A25)
- McKenzie, Dan P. (with Jarvis, Gary T.) Convection in a compressible fluid with infinite Prandtl number. *J. Fluid Mech.* 96 (1980), no. 3, 515-583. (From the summary) 81a:76023 76E15
- McKenzie, Lionel See General equilibria, growth, and trade. 81m:90004
- McKeon, Gerry A Hamiltonian for nonabelian phase factors. (French summary) *Canad. J. Phys.* 58 (1980), no. 5, 664-665. (Author's summary) 81k:81062 81E10
- A string-like equation for a $U(N)$ gauge theory. *Phys. Lett. B* 95 (1980), no. 1, 56-58. (Author's summary) 81h:81101 81E99
- McKeown, J. J. Large-residual nonlinear least-squares problems. *Nonlinear optimization (Proc. Internat. Summer School, Univ. Bergamo, Bergamo, 1979)*, pp. 107-121, Birkhäuser, Boston, Mass., 1980. (V. V. Kolbin) 81m:65106 65K10
- Aspects of parallel computation in numerical optimization. *Numerical techniques for stochastic systems (Conf., Gargano, 1979)*, pp. 297-327, North-Holland, Amsterdam, 1980. (S. E. Aidarous) 81j:60041 68B20 (65K99)
- McKeown, Patrick G. Solving incremental quantity discounted transportation problems by vertex ranking. *Naval Res. Logist. Quart.* 27 (1980), no. 3, 437-445. (Author's summary) 81h:90049 90B05 (90B10)
- (with Sinha, Prabhakant) An easy solution for a special class of fixed charge problems. *Naval Res. Logist. Quart.* 27 (1980), no. 4, 621-624. (Authors' summary) 81m:90078 90C10
- McKiernan, M. A. General Fokker-Planck equations. I. Existence of injective solutions. *Pacific J. Math.* 82 (1979), no. 2, 499-502. (R. A. Rosenbaum) 81f:39009a 39B20 (39B50)
- General Fokker-Planck equations. II. An application of the theory of webs. *Pacific J. Math.* 82 (1979), no. 2, 503-514. (R. A. Rosenbaum) 81f:39009b 39B20 (39B50)
- McKinley, John M. Relativistic transformation of solid angle. *Amer. J. Phys.* 48 (1980), no. 8, 612-614. (Author's summary) 81e:83005 83A05 (85A99)
- McLachlan, G. J. (with Byth, K.) Expected error rates for logistic regression versus normal discriminant analysis. *Biometrical J.* 21 (1979), no. 1, 47-56. (D. G. Kabe) 81g:62107 62H30
- (with Byth, K.) Logistic regression compared to normal discrimination for nonnormal populations. *Austral. J. Statist.* 22 (1980), no. 2, 188-196. (Margaret P. Gessaman) 81m:62106 62H30
- On the mean square error associated with adaptive generalized ridge regression. *Biometrical J.* 22 (1980), no. 2, 125-129. (William D. Ray) 81j:62120 62J07
- McLain, D. H. Interpolation methods for erroneous data. *Mathematical methods in computer graphics and design (Proc. Conf., Univ. Leicester, Leicester, 1978)*, pp. 87-104, Academic Press, London, 1980. (See 81i:68010) 68K05
- McLarnan, Timothy See Vorobiov, M. M. 81f:10001
- McLaughlin, D. W. (with Flachka, H.; Forest, M. G.) Multiphase averaging and the inverse spectral solution of the Korteweg-de Vries equation. *Comm. Pure Appl. Math.* 33 (1980), no. 6, 739-784. (H. P. McKean, Jr.) 81k:35142 35Q20 (58F07, 76B15)
- McLaughlin, John B. (with Orszag, Steven A.) Evidence that random behavior is generic for nonlinear differential equations. *Phys. D* 1 (1980), no. 1, 68-79. (P. J. Holmes) 81d:58041 58F13 (34C30, 58F11, 70J20)
- McLaughlin, Joyce R. (with Handelman, George H.) Sturm-Liouville inverse eigenvalue problems. *Mechanics today, Vol. 5*, pp. 281-295, Pergamon, Oxford, 1980. (H. Hochstadt) 81m:34024 34B25 (34A55)
- McLean, Robin A. (with Wathen, A. Alistair) Numerical methods for nonlinear discrete L_1 approximation problems. *Numerical methods of approximation theory, Vol. 5 (Conf. Math. Res. Inst., Oberwolfach, 1979)*, pp. 169-183, Internat. Ser. Numer. Math., 52, Birkhäuser, Basel, 1980. (J. Albrecht) 81h:65012 65D10 (41A25)
- McLeavey, Dennis W. (with McLeavey, Janet A.) Optimizing standby reliability systems having nondecreasing failure rates. *Management Sci.* 25 (1979/80), no. 6, 577-582. (Authors' summary) 81a:90095 90B25
- McLeavey, Janet A. (with McLeavey, Dennis W.) Optimizing standby reliability systems having nondecreasing failure rates. *Management Sci.* 25 (1979/80), no. 6, 577-582. (Authors' summary) 81a:90095 90B25
- McLeish, D. L. Variations of the Robbins-Monro procedure for estimating $ED(p)$ in the logit model. *J. Statist. Comput. Simulation* 8 (1978/79), no. 1, 13-24. (Sami Abdelhamid) 81a:62087 62L20 (62P10)
- Central limit theorem for absolute deviations from the sample mean and applications. *Canad. Math. Bull.* 22 (1979), no. 4, 391-396. (Adhir K. Basu) 81d:60021 60F05
- McLeish, Mary On the existence of ternary quasigroups with two or eight conjugacy classes. *J. Combin. Theory Ser. A* 29 (1980), no. 2, 199-211. (V. Havel) 81k:05038 05B99 (20N05, 20N10, 51E10)
- McLenaghan, Raymond G. (with Debever, Robert) Repères symétriques de solutions de type D des équations de Maxwell-Einstein avec constante cosmologique. (English summary) *Acad. Roy. Belg. Bull. Cl. Sci.* (5) 66 (1980), no. 3, 204-222. (J. D. Zund) 81m:83031 83C50 (53B50, 83C20)
- McLennan, Andrew Randomized preference aggregation: additivity of power and strategy proofness. *J. Econom. Theory* 22 (1980), no. 1, 1-11. (From the text) 81b:90010 90A06
- McLeod, A. Ian Distribution of the residual cross-correlation in univariate ARMA time series models. *J. Amer. Statist. Assoc.* 74 (1979), no. 368, 849-855. (G. Banon) 81e:62104 62M10
- McLeod, J. B. (with Hastings, Stuart) A boundary value problem associated with the second Painlevé transcendent and the Korteweg-de Vries equation. *Arch. Rational Mech. Anal.* 73 (1980), no. 1, 31-51. (Richard Brown) 81k:34024 34B30 (35Q20)
- McLeod, R. J. Y. The Steiner surface revisited. *Proc. Roy. Soc. London Ser. A* 369 (1979), no. 1737, 157-174. (Eugene L. Wachspress) 81k:52027 52A99 (65N30, 73K25)
- (with Lambert, J. D.) Numerical methods for phase-plane problems in ordinary differential equations. *Numerical analysis (Proc. 8th Biennial Conf., Univ. Dundee, Dundee, 1979)*, pp. 83-97, Lecture Notes in Math., 773, Springer, Berlin, 1980. (Abbas I. Abdel-Karim) 81h:65092 65L99
- McLerran, Larry D. (with Svetitsky, Benjamin) A Monte Carlo study of $SU(2)$ Yang-Mills theory at finite temperature. *Phys. Lett. B* 98 (1981), no. 3, 195-198. (Authors' summary) 81k:81063 81E10 (81-04)
- McLinden, L. The complementarity problem for maximal monotone multifunctions. *Variational inequalities and complementarity problems (Proc. Internat. School, Erics, 1978)*, pp. 251-270, Wiley, Chichester, 1980. (Christian Malivert) 81h:90137 90C30 (47H05, 49A29)
- McLaughlin, Aileen M. The covering radius of the $(m-3)$ rd order Reed-Muller codes and a lower bound on the $(m-4)$ th order Reed-Muller codes. *SIAM J. Appl. Math.* 37 (1979), no. 2, 419-422. (Author's summary) 81a:94034 94B05 (94B15)
- McMahon, Thomas A. (with Mochoen, Simon) Ballistic walking: an improved model. *Math. Biosci.* 52 (1980), no. 3-4, 241-260. (Authors' summary) 81j:92013 92A0 (70B99)
- McMeeking, R. M. (with Lee, E. H.) Concerning elastic and plastic components of deformation. *Internat. J. Solids and Structures* 16 (1980), no. 8, 715-721. (Authors' summary) 81e:73038 73E99
- McMillan, D. R., Jr. (with Thickett, T. L.) Open three-manifolds and the Poincaré conjecture. *Topology* 19 (1980), no. 3, 313-320. (G. Burde) 81g:57007 57M40 (57N30)
- McMillan, J. (with Manning, R.) Public goods in optimal economic growth. *Z. Nationalökonom.* 39 (1979), no. 3-4, 351-364. (From the introduction) 81a:90068 90A16
- McMullen, J. R. An algebraic theory of hypergroups. *Bull. Austral. Math. Soc.* 20 (1979), no. 1, 35-55. (Author's summary) 81f:20105 20N99 (20A99, 20C99)
- (with Price, John F.) Duality for finite abelian hypergroups over splitting fields. *Bull. Austral. Math. Soc.* 20 (1979), no. 1, 57-70. (Authors' summary) 81f:20106 20N99 (20C99)
- McMullen, P. Transforms, diagrams and representations. *Contributions to geometry (Proc. Geom. Sympos., Siegen, 1978)*, pp. 92-130, Birkhäuser, Basel, 1979. (G. Ewald) 81i:52007 52A20
- Continuous translation invariant valuations on the space of compact convex sets. *Arch. Math. (Basel)* 34 (1980), no. 4, 377-384. (P. R. Goodey) 81m:52013 52A20 (with Gardner, R. J.) On Hammer's X-ray problem. *J. London Math. Soc.* (2) 21 (1980), no. 1, 171-175. (K. J. Falconer) 81m:52009 52A20 (68G10)
- McNabb, A. (with Weir, G. J.) Heat losses from an insulated pipe. *J. Math. Anal. Appl.* 77 (1980), no. 1, 270-277. (L. N. Tao) 81m:80005 80A20
- McNair, James N. A stochastic foraging model with predator training effects. I. Functional response, switching, and run lengths. *Theory. Population Biol.* 17 (1980), no. 2, 141-164. (K. Gopalsamy) 81j:92039 92A15 (92A17)
- McNamara, John (with Houston, Alasdair) The application of statistical decision theory to animal behavior. *Theory. Biol.* 85 (1980), no. 4, 673-690. (Andris Abakals) 81h:92002 92A05 (62L15)
- McNeil, Don See Interactive statistics. 81f:62003
- McNeil, K. J. (with Drummond, P. D.; Walls, D. F.) Nonequilibrium transitions in sub/second harmonic generation. I. Semiclassical theory. *Optica Acta* 27 (1980), no. 1, 321-335. (Authors' summary) 81e:78003 78A05 (82A25)
- (with Drummond, P. D.; Walls, D. F.) Statistical properties of an incoherently driven nonlinear interferometer. *Phys. Rev. A* (3) 22 (1980), no. 4, 1672-1679. (Authors' summary) 81e:27010 27D05 (27F05, 47D05)

- summary) **81h:81189** 81K05
- McNeil, Phillip E. Group extensions of null semigroups. *Black mathematicians and their works*, pp. 159–165 (1 plate). Dorrance, Ardmore, Pa., 1980. (See **81e:00004**) 20M10
- McNickle, D. C. (with de Kluyver, C. A.) Parameter estimation and objective definition in mean-variance media scheduling. *European J. Oper. Res.* **6** (1981), no. 1, 80–83. (Authors' summary) **81j:90067** 90B35
- McNulty, George F. (with Bean, Dwight R.; Ehrenfeucht, Andrzej) Avoidable patterns in strings of symbols. *Pacific J. Math.* **85** (1979), no. 2, 261–294. (B. M. Schein) **81i:20075** 20M05 (20M35, 68F05)
- McOwen, Robert C. The behavior of the Laplacian on weighted Sobolev spaces. *Comm. Pure Appl. Math.* **32** (1979), no. 6, 783–795. (Pavel Doktor) **81m:47069** 47F05 (46E35)
- On elliptic operators in \mathbb{R}^n . *Comm. Partial Differential Equations* **5** (1980), no. 9, 913–933. (Ja. A. Roitberg) **81k:35058** 35J45 (47F05)
- McPhail, J. G. Rank completeness of rings of measurable operators affiliated with von Neumann algebras. *Abh. Math. Sem. Univ. Hamburg* **50** (1980), 95–100. (Richard I. Loeb) **81k:46066** 46L10 (46L50)
- McPhedran, R. C. (with Perrins, W. T.; McKenzie, D. R.) Transport properties of regular arrays of cylinders. *Proc. Roy. Soc. London Ser. A* **369** (1979), no. 1737, 207–225. (Authors' summary) **81c:82033** 82A70 (78A25)
- McQuarrie, Donald A. (with Croxton, Thomas L.) A theory of the electrical double layer through the Born-Green-Yvon equation. *Chem. Phys. Lett.* **68** (1979), no. 2-3, 489–494. (Authors' summary) **81d:78007** 78A25
- McQueen, David M. (with Peskin, Charles S.) Modeling prosthetic heart valves for numerical analysis of blood flow in the heart. *J. Comput. Phys.* **37** (1980), no. 1, 113–132. (Authors' summary) **81g:92011** 92A09 (76Z05, 92A07)
- McQuillan, Donald L. On prime ideals in ring extensions. *Arch. Math. (Basel)* **33** (1979/80), no. 2, 121–126. (David E. Dobbs) **81a:13003** 13A17 (13B02)
- McRobbie, Michael A. (with Belnap, Michael D., Jr.) Relevant analytic tableaux. *Studia Logica* **38** (1979), no. 2, 187–200. (Nuel D. Byrd) **81e:03015** 03B45
- (with Meyer, Robert K.) A note on the admissibility of cut in relevant tableau systems. *Z. Math. Logik Grundl. Math.* **25** (1979), no. 6, 511–512. (Michael Byrd) **81e:03016** 03B45
- McVay, Francis E. (with Monroe, Robert J.) Gertrude Mary Cox (1900–1978). *Amer. Statist.* **34** (1980), no. 1, 48. (Editors) **81a:01039** 01A70
- McVay, K. W. See Theoretical methods in medium-energy and heavy-ion physics, **81h:81036**
- Međunarović, V. V. (with Tavazde, R. U.) Principle of mapping nonlinear stochastic control systems. (Russian. Georgian and English summaries) *Soobšč. Akad. Nauk Gruz. SSR* **94** (1979), no. 1, 157–160. (D. M. Sudakov) **81h:93064** 93E03
- Mead, C. Alden. The molecular Aharonov-Bohm effect in bound states. *Chem. Phys.* **49** (1980), no. 1, 23–32. (Author's summary) **81m:81080a** 81G55
- Electronic spin-orbit interaction and the molecular Aharonov-Bohm effect. *Chem. Phys.* **49** (1980), no. 1, 33–38. (Author's summary) **81m:81080b** 81G55
- Mead, J. (with Nelson, G. C.) Model companions and k -model completeness for the complete theories of Boolean algebras. *J. Symbolic Logic* **45** (1980), no. 1, 47–55. (Annalisa Marcja) **81f:03047** 03C60 (03G05, 06E99)
- Mead, R. (with Smith, R. H.) The dynamics of discrete-time stochastic models of population growth. *J. Theoret. Biol.* **86** (1980), no. 4, 607–627. (Authors' summary) **81k:92051** 92A15 (58F13)
- Meakin, John (with Byelen, Karl; Pastijn, Francis) Building bisimple idempotent-generated semigroups. *Proceedings of the Conference on Semigroups in Honor of Alfred H. Clifford (Tulane Univ., New Orleans, La., 1978)*, pp. 143–147, Tulane Univ., New Orleans, La., 1979. (John M. Howie) **81f:20079** 20M10
- Constructing bordered sets. *Semigroups (Proc. Conf., Monash Univ., Clayton, 1979)*, pp. 67–84, Academic Press, New York, 1980. (K. S. S. Nambooripad) **81k:20067** 20M10 (06A12)
- (with Nambooripad, K. S. S.) Coextensions of pseudo-inverse semigroups by rectangular bands. *J. Austral. Math. Soc. Ser. A* **30** (1980/81), no. 1, 73–86. (K. D. Magill, Jr.) **81j:20091** 20M10
- The partially ordered set of \mathcal{F} -classes of a semigroup. *J. London Math. Soc.* (2) **21** (1980), no. 2, 244–256. (V. S. Krishnan) **81f:20084** 20M10 (06A10)
- (with Byelen, Karl; Pastijn, Francis) The double four-spiral semigroup. *Simon Stevin* **54** (1980), no. 2, 75–105. (John M. Howie) **81f:20080** 20M10
- Meecham, William J. (with Thomas, Gerald F.) On the time dependence of a degenerate two-level system interacting with a pulse of radiation. *Phys. Lett. A* **70** (1979), no. 5-6, 396–398. (Authors' summary) **81h:81021** 81C05
- (with Khanwar, B. L.) Evaluation of the dipole polarizability for hydrogen-like atoms in arbitrary bound states. *Molecular Phys.* **40** (1980), no. 3, 713–721. (Authors' summary) **81d:81119** 81G45
- Meikhanov, Zoghran. The Poincaré-Serre-Verdier duality. *Algebraic geometry (Proc. Summer Meeting, Univ. Copenhagen, Copenhagen, 1978)*, pp. 396–416, Lecture Notes in Math., 732, Springer, Berlin, 1979. (C. Bănică) **81f:32016** 32C37 (32C36)
- Sur le problème de Hilbert-Riemann. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **290** (1980), no. 9, A415–A417. (Authors' summary) **81j:32014** 32C36 (58G07)
- Molotay, V. S. The identification of multidimensional objects in statics. (Russian. English summary) *Vychisl. Prikl. Mat. (Kiev)* **40** (1980), 140–146, 161. (Author's summary) **81f:93023** 93B30
- Mecklenburg, W. Aspects of seven-dimensional relativity. *Phys. Rev. D* (2) **21** (1980), no. 8, 2149–2166. (Elhanan Leibowitz) **81g:83054** 83E15 (53B50)
- Medanić, J. V. (with Khalil, Hassan K.) Closed-loop Stackelberg strategies for singularly perturbed linear quadratic problems. *IEEE Trans. Automat. Control* **25** (1980), no. 1, 66–71. (Y. C. Ho) **81a:93032** 93C05 (49B50, 90D25)
- de Medeiros, Alton von Sothen. Stability of integrable p -forms. (Portuguese) *Proceedings of the Eleventh Brazilian Mathematical Colloquium (Poços de Caldas, 1977)*, Vol. II (Portuguese), pp. 543–553, Inst. Mat. Pura Apl., Rio de Janeiro, 1978. (See **80c:90010b**) 58A10
- Structural stability of differential forms. (Portuguese) *Proceedings of the Tenth Brazilian Colloquium (Poços de Caldas, 1975)*, Vol. II (Portuguese), pp. 519–524, Cons. Nac. Desenvolvimento Ci. Tec., Inst. Mat. Pura Apl., Rio de Janeiro, 1978. (From the text) **81m:58003** 58A10
- Medeiros, L. A. On a class of nonlinear PDE of mathematical physics. *4th Latin-American School of Mathematics (Lima, 1978)*, pp. 300–306, IV ELAM, Lima, 1979. (E. C. Zachmanoglou) **81i:35032** 35G25
- Medhi, J. Further results on waiting time distribution in a Poisson queue under a general bulk service rule. *Cahiers Centre Études Rech. Opér.* **21** (1979), no. 2, 183–189. (J. G. C. Templeton) **81b:60096** 60K25
- Medina, A., Rodrigo. The time-dependent susceptibility of spin glasses. *Phys. Lett. A* **70** (1979), no. 3, 227–230. (Author's summary) **81i:82053** 82A55
- Medina, L. P. A method for solving linear equations with functional derivatives. (Russian) *Vestnik L'vov. Politehn. Inst. No. 141 Differentsial'nye Uravneniya i ik Prilozhen.* (1980), 62–63, 120. (Editors) **81i:65044** 65J10
- Meditch, James S. On the representation of optimal fixed-lag smoothers for continuous-time random processes. *Internat. J. Control* **30** (1979), no. 3, 447–458. (Naohiro Ishii) **81c:93094** 93E20 (94A05)
- Medjanik, A. I. A problem on the tiling of Euclidean space. (Russian) *Ukrain. Geom. Sb.* **20** (1979), 109–114, 5. (E. Hertel) **81e:51028** 51M20 (52A40)
- Mednikov, L. E. b -spaces and bistable homeomorphisms. (Russian) *Topological spaces and their mappings* (Russian), pp. 95–101, 153, Latv. Gos. Univ., Riga, 1979. (H. Rostanec) **81m:54026** 54C99
- Medrano, M. Ramon (with Dixon, J. A.) Anomalies of higher-dimension composite fields. *Phys. Rev. D* (3) **22** (1980), no. 2, 429–436. (Authors' summary) **81i:81091** 81E99
- Medved', Milan. Generic bifurcations of second order ordinary differential equations near closed orbits. *J. Differential Equations* **37** (1980), no. 1, 98–107. (J. K. Hale) **81k:58051** 58F14 (34C35, 58F10)
- Medvedev, A. V. Adaptation under conditions of nonparametric indeterminacy. (Russian) *Adaptive systems and their applications (Russian)*, pp. 4–34, 185, "Nauka" Sibirsk. Otdel., Novosibirsk, 1978. (Author's summary) **81m:93048** 93C40 (68G05)
- (with Il'in, E. V.; Novikov, N. F.) On nonparametric algorithms of optimization. *Modelling and optimization of complex systems (Proc. IFIP-TC 7 Working Conf., Novosibirsk, 1978)*, pp. 198–206, Lecture Notes in Control and Information Sci., 18, Springer, Berlin, 1979. (Authors' introduction) **81a:90121** 90C15
- Nonparametric algorithms for identification of nonlinear dynamical systems. (Russian) *Stochastic control systems (Russian)*, pp. 15–22, 101, "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. (Author's summary) **81m:93081** 93E12
- See also Adaptive systems and their applications, **81j:62010** and Stochastic control systems, **81j:62010**
- Medvedev, Ju. A. Local finiteness of periodic subloops of an alternative PI-ring. (Russian) *Mat. Sb. (N.S.)* **103**(145) (1977), no. 2, 309–315, 320. (Author's summary) **81i:17013** 17D05 (16A38, 20N05)
- Medvedev, Ju. T. Transformations of information and calculi that describe them: types of information and their possible transformations. (Russian) *Semiotics and information science*, No. 13 (Russian), pp. 109–141, Akad. Nauk SSSR, Vsesojuz. Inst. Nauch. i Tehn. Informacii, Moscow, 1979. (P. Štěpánek) **81j:03041a** 03B55
- Medvedev, N. G. (with Litvinov, V. G.) Some questions of the stability of shells of revolution. (Russian) *Mat. Fiz. No. 26* (1979), 101–109, 129. (Z. Kączyński) **81d:73047** 73H05 (73L10)
- (with Pantelev, A. D.) Coercivity of the operator of the theory of three-layered plates. (Russian) *Mat. Fiz. No. 26* (1979), 121–124, 130. (Z. Kączyński) **81d:73054** 73K10
- Medvedev, S. B. (with Petrov, V. V.; Ageev, V. M.; Kort'ev, A. V.; Zaporozec, A. V.; Lebedev, G. N.; Poljakov, I. N.) Informational theory of adaptive systems. (Russian) *Engineering cybernetics, Vol. 12 (Russian)*, pp. 149–211, 239, Akad. Nauk SSSR, Vsesojuz. Inst. Nauch. i Tehn. Informacii, Moscow, 1980. (Authors' summary) **81h:93080** 93C40
- Medvedev, S. Ju. (with Saichev, A. I.) An exact derivation of the diffusion coefficient of phase of a synchronized oscillator. *Radiotekhn. i Elektron.* **24** (1979), no. 10, 2058–2061 (Russian); translated as *Radio Engng. Electron. Phys.* **24** (1979), no. 10, 79–82 (1980). (Authors' summary) **81g:78041** 78A55
- Medvedev, S. N. Problem of integral geometry for a family of curves in a circular annulus. (Russian) *Ž. Vychisl. Mat. i Mat. Fiz.* **20** (1980), no. 2, 531–538, 554. (V. G. Romanov) **81i:53052** 53C65 (35R30)
- Medvedev, S. V. (with Kunicyn, A. L.; Thal, V. N.) The development of an algorithm and the compiling of a program for the computer solution of some resonance problems in the stability of dynamical systems. (Russian) *Problems of stability of motion, analytical mechanics and control of motion (Third All-Union Četvero Conf., Irkutsk, 1977)* (Russian), pp. 56–63, 321, "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. (Authors' summary) **81g:93090** 93D99
- Medvedev, S. Yu. See Medvedev, S. Ju.
- Medvedev, V. A. Interpolational expansions of the solutions of second-order elliptic differential equations. (Russian) *Ž. Vychisl. Mat. i Mat. Fiz.* **20** (1980), no. 1, 84–96, 260. (L. Berg) **81h:65008** 65D05 (35J15)
- Medvedev, V. S. (with Popov, E. P.; Leskov, A. G.; Jul'chenko, A. S.) Semi-automatic and interactive control systems for manipulation robots. (Russian) *Dynamics of control systems (Third All-Union Četvero Conf., Irkutsk, 1977)* (Russian), pp. 224–236, 342, "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. (Authors' summary) **81c:93003** 93A10 (93D99)
- (with Umanskii, Ju. L.) Decomposition of n -dimensional manifolds into simple manifolds. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* **1979**, no. 1, 46–50. (W. Kuperberg) **81h:57012** 57N15
- Medvinskaja, I. B. Theorems on the existence of a nonnegative solution of the Dirichlet and Neumann problems for quasilinear systems of differential equations of elliptic type. I. (Russian) *Izv. Severo-Kavkaz. Nauch. Centra Vychisl. Školy Ser. Estestv. Nauk.* **1980**, no. 1, 18–24, 108. (V. Lakshmikantham) **81g:35035** 35J55
- Medynskii, L. P. See Medina, L. P.
- van der Mee, C. V. M. Spectral analysis of the transport equation. I. Nondegenerate and multigroup case. *Integral Equations Operator Theory* **3** (1980), no. 4, 529–573. (Brian DeFazio) **81m:47075** 47G05 (82A70)
- Meecham, W. C. (with Tavis, M. T.) Theoretical pressure correlation functions in turbulent boundary layers. *Phys. Fluids* **23** (1980), no. 6, 1119–1131. (Authors'

- summary) **81d:76059** 76F10 (76D10)
- Meeden, Glen** Comparing two probability appraisers. *J. Amer. Statist. Assoc.* **74** (1979), no. 366, part 1, 299-302. (James M. Dickey) **81a:62006** 62A15
(with Arnold, Barry C.) The admissibility of a preliminary test estimator when the loss incorporates a complexity cost. *J. Amer. Statist. Assoc.* **74** (1979), no. 368, 872-874. (Arthur Cohen) **81h:62031** 62F10 (62C15)
- Meek, D. S.** A mean value theorem for linear functionals. *Math. Comp.* **35** (1980), no. 151, 797-802. (David R. Hill) **81f:41033** 41A58 (65G99)
- The inverses of some matrices deviating slightly from a symmetric, tridiagonal, Toeplitz form. *SIAM J. Numer. Anal.* **17** (1980), no. 1, 39-43. (Author's summary) **81a:65040** 65F05 (15A57)
(with Stanton, Ralph G.) A combinatorial power identity. *Utilitas Math.* **18** (1980), 289-290. (Editors) **81m:05018** 05A19
- Meeker, L. D.** Measurement stability of third-order time-optimal control systems. *J. Differential Equations* **36** (1980), no. 1, 54-65. (Sahendra N. Singh) **81m:93061** 93D20 (34H05)
- See also **Older, Geert Jan**, **81g:93066**
- Meeks, William H., III** (with Yau, Shing Tung) The classical Plateau problem and the topology of 3-manifolds. *Minimal submanifolds and geodesics (Proc. Japan-United States Sem., Tokyo, 1977)*, pp. 101-102, North-Holland, Amsterdam, 1979. (F. J. Almgren, Jr.) **81e:49034** 49F10 (53A10, 57M35)
- Meenakshi, Ar.** On EP, matrices with entries from an arbitrary field. *Linear and Multilinear Algebra* **9** (1980), no. 2, 159-164. (J. J. Buoni) **81k:15024** 15A48 (15A09, 15A33)
- van der Meer, H. A.** Induced representations of finite groups. *Representations of locally compact groups with applications (Colloq., Math. Centre, Amsterdam, 1977/78)*, pp. 221-242, MC Syllabus, 38, Math. Centrum, Amsterdam, 1979. (See **81k:22001**) 22C15
(with Koornwinder, Tom H.) Induced representations of locally compact groups. *Representations of locally compact groups with applications (Colloq., Math. Centre, Amsterdam, 1977/78)*, pp. 329-376, MC Syllabus, 38, Math. Centrum, Amsterdam, 1979. (See **81k:22001**) 22D30
- Infinite imprimitivity and localizability in quantum mechanics. *Representations of locally compact groups with applications (Colloq., Math. Centre, Amsterdam, 1977/78)*, pp. 377-400, MC Syllabus, 38, Math. Centrum, Amsterdam, 1979. (See **81k:22001**) 81D05
- Representations of semidirect products. *Representations of locally compact groups with applications (Colloq., Math. Centre, Amsterdam, 1977/78)*, pp. 401-434, MC Syllabus, 38, Math. Centrum, Amsterdam, 1979. (See **81k:22001**) 22D30 (22D45)
- Meersma, Alexander** (with Bisschop, Johannes) Selected aspects of a general algebraic modeling language. *Optimization techniques (Proc. Ninth IFIP Conf., Warsaw, 1979)*, Part 2, pp. 223-233, *Lecture Notes in Control and Information Sci.*, 23, Springer, Berlin, 1980. (See **81j:49011b**) 68J10 (90A30)
- Meerov, Semyon M.** Principle of vibrational control: theory and applications. *IEEE Trans. Automat. Control* **25** (1980), no. 4, 755-762. (Author's summary) **81h:93037** 93C15
- Meerov, M. V.** (with Vailman, I. A.; Litvak, M. L.) The problem of optimal control for multiply connected systems with distributed parameters. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* **1978**, no. 5, 158-166, 223 (Russian); translated as *Engng. Cybernetics* **16** (1978), no. 5, 122-130. (Authors' summary) **81m:49022** 49B22 (93C20)
(with Kulibanov, V. N.; Litvak, M. L.; Fleisman, I. V.) Solution of some problems of optimal design of oil fields. (Russian) *Investigation and optimization of multiply connected systems (Russian)*, pp. 88-100, 144, "Nauka", Moscow, 1979. (Authors' summary) **81h:90062** 90B05
- Methods of constructing multiply-connected systems that have two-time scales. (Russian) *Investigation and optimization of multiply connected systems (Russian)*, pp. 116-122, 144, "Nauka", Moscow, 1979. (Author's summary) **81a:93080** 93D99
(with Krasnosel'skii, M. A.) Absolute positivity of linear systems. *Avtomat. i Telemekh.* **1979**, no. 6, 42-48 (Russian); translated as *Automat. Remote Control* **40** (1979), no. 6, part 1, 814-819. (Ettore Santi) **81e:45012** 45F05 (45A05)
(with Berčanskii, Ja. M.; Litvak, M. L.) Optimization methods for one class of linear multivariable systems. *Internat. J. Control* **31** (1980), no. 2, 239-270. (Authors' summary) **81a:93047** 93C35 (93C05)
- Mees, A. I.** On using the circle criterion to predict existence of solutions. With discussion. *Recent theoretical developments in control (Proc. Conf., Univ. Leicester, Leicester, 1976)*, pp. 175-190, Academic Press, London, 1978. (Author's summary) **81i:93018** 93C25
(with Atherton, D. P.) The Popov criterion for multiple-loop feedback systems. *IEEE Trans. Automat. Control* **25** (1980), no. 5, 924-928. (Authors' summary) **81k:93054** 93D10
- Meeweus, Wim** (with van den Broek, Julien; Førsund, Finn R.; Hjalmarsson, Lennart) On the estimation of deterministic and stochastic frontier production functions. A comparison. Specification and estimation of frontier production, profit and cost functions. *J. Econometrics* **13** (1980), no. 1, 117-138. (See **81k:62157**) 62P20
- Megan, M.** (with Topuz, P.) On the space of infinite-dimensional linear controllable systems. *Systems theory (Proc. Nat. Conf., Univ. Braşov, Braşov, 1977) (Romanian)*, pp. 65-70, Univ. Braşov, Braşov, 1978. (G. Anichini) **81c:93021** 93B05 (93C05)
- van Megen, W. J.** (with Gaylor, K. J.; Snook, I. K.; Watts, R. O.) Dynamics of colloidal systems: time-dependent structure factors. *J. Phys. A* **13** (1980), no. 7, 2513-2520. (Authors' summary) **81e:82045** 82A50
- Megiddo, Nimrod** (with Galil, Zvi) Cyclic ordering is NP-complete. *Theoret. Comput. Sci.* **5** (1977/78), no. 2, 179-182. (Authors' summary) **81e:68046** 68C25
- Combinatorial optimization with rational objective functions. *Conference Record of the Tenth Annual ACM Symposium on Theory of Computing (San Diego, Calif., 1978)*, pp. 1-12, ACM, New York, 1978. (See **80b:68003**) 68C05 (90C32)
(with Kalai, Ehud) Path independent choices. *Econometrica* **48** (1980), no. 3, 781-784. (Editors) **81c:90010** 90A08
- Abdel-Megied, M.** See **Abdel-Megied, M.**
- Megyesi, L.** (with Csáky, Béla) Varieties of idempotent medial n -quasigroups. *Colloq. Math.* **42** (1979), 45-52. (Ferenc Fenyes) **81i:20106** 20N15 (08B99)
- nouï-Mehidi, Samir** See **Nouï-Mehidi, Samir**
- Mehl, J. W.** (with Blasen, M. W.; Astrahan, M. M.; Chamberlin, D. D.; Gray, James N.; King, W. F.; Lindsay, B. G.; Lorie, R. A.; Price, T. G.; Putzolu, G. R.; Schkolnick, M.; Selinger, P. G.; Slutz, D. R.; Strong, H. R.; Traiger, I. L.; Wade, B. W.; Yost, R. A.) System R: An architectural overview. *IBM Systems J.* **20** (1981), no. 1, 41-62. (Authors' summary) **81m:68079** 68H05
- Mehlbörn, Kurt** Dynamic data structures. *Foundations of computer science, III (Third Adv. Course, Amsterdam, 1978)*, Part 1, pp. 71-96, Math. Centre Tracts, 108, Math. Centrum, Amsterdam, 1979. (Eberhard Lüdde) **81h:68097** 68H05 (68B15, 68E05)
(with Tsagarakis, Marcos) On the isomorphism of two algorithms of Hu/Tucker and Garsia/Wachs. *Les arbres en algèbre et en programmation (4ème Colloq., Lille, 1979)*, pp. 159-172, Univ. Lille I, Lille, 1979. (From the summary) **81d:68077** 68E05 (68C05)
- Searching, sorting and information theory. *Mathematical foundations of computer science, 1979 (Proc. Eighth Sympos., Olomouc, 1979)*, pp. 131-145, *Lecture Notes in Comput. Sci.*, 74, Springer, Berlin, 1979. (Author's summary) **81d:68078** 68E05 (68H05)
- Some remarks on Boolean sums. *Mathematical foundations of computer science, 1979 (Proc. Eighth Sympos., Olomouc, 1979)*, pp. 375-380, *Lecture Notes in Comput. Sci.*, 74, Springer, Berlin, 1979. (Author's summary) **81d:94038** 94C10 (68C25)
(with Blum, Norbert) Mittlere Anzahl von Rebalancierungsoperationen in gewichtbalancierten Bäumen. (English summary) *Theoretical computer science (Fourth GI Conf., Aachen, 1979)*, pp. 67-78, *Lecture Notes in Comput. Sci.*, 67, Springer, Berlin, 1979. (P. van Emde Boas) **81k:68045** 68E10
- Pebbling mountain ranges and its application to DCLF recognition. *Automata, languages and programming (Proc. Seventh Internat. Colloq., Noordwijkerhout, 1980)*, pp. 422-435, *Lecture Notes in Comput. Sci.*, 85, Springer, Berlin, 1980. (Author's summary) **81k:68062** 68F05 (68C25)
(with Blum, Norbert) On the average number of rebalancing operations in weight-balanced trees. *Theoret. Comput. Sci.* **11** (1980), no. 3, 303-320. (G. Berman) **81j:68076** 68E10 (05C05)
- Mehmann, Alexander** An approach to optimal recruitment and transition strategies for manpower systems using dynamic programming. *J. Oper. Res. Soc.* **31** (1980), no. 11, 1009-1015. (Author's introduction) **81j:90045** 90B05 (90C39)
- Mehra, A. L.** Static charged gas spheres in general relativity. *Gen. Relativity Gravitation* **12** (1980), no. 3, 187-193. (Author's summary) **81d:83017** 83C15 (83C50)
- Mehra, Mohan Lal** ★ Zur asymptotischen Verteilung der Eigenwerte des Maxwell'schen Randwertproblems. (German) [On the asymptotic distribution of eigenvalues of Maxwell's boundary value problem] Dissertation, Rheinische Friedrich-Wilhelms-Universität, Bonn, 1978. *Rheinische Friedrich-Wilhelms-Universität, Bonn*, 1978. 90 pp. (Volker Vogelsang) **81c:35099** 35P20 (47A10, 78A25)
- Mehra, R. K.** Some recent advances in system identification. *Identification and system parameter estimation (Proc. Fourth IFAC Sympos., Tbilisi, 1976)*, Part 1, pp. 1-14, North-Holland, Amsterdam, 1978. (See **80d:93010a**) 93B30
- Mehrez, Abraham** (with Carbone, Robert) The single facility minimax distance problem under stochastic location of demand. *Management Sci.* **26** (1980), no. 1, 113-115. (Authors' summary) **81i:90061** 90B05
- Mehri, B.** (with Hamedani, G. G.) A nonlinear periodic boundary value problem for a system of equations of the second order. *Studia Sci. Math. Hungar.* **10** (1975), no. 3, 339-342 (1978). (From the text) **81j:34029** 34B15
(with Emami, H. A.) On the existence of periodic solutions for autonomous second-order systems. *Nonlinear Anal.* **3** (1979), no. 5, 577-582. (H. O. Tejumola) **81j:34047** 34C25
(with Amir-Ardjomand, S.) Forced nonlinear oscillation for certain nonlinear second order differential equations. (Serbo-Croatian summary) *Akad. Nauka Umjet. Bosne Hercegov. Rad. Odlj. Prirod. Mat. Nauka No. 19* (1980), 155-160. (V. Lakshmikantham) **81m:34051** 34C25 (34C15)
- Mehrotra, Kishan G.** (with Johnson, Richard A.; Bhattacharyya, G. K.) Exact Fisher information for censored samples and the extended hazard rate functions. *Comm. Statist. A—Theory Methods* **8** (1979), no. 15, 1493-1510. (I. A. Melamed) **81h:62010** 62B10
- Mehta, C. L.** (with Mukunda, N.; Sudarshan, E. C. G.; Sharma, J. K.) Representations and properties of para-Bose oscillator operators. I. Energy position and momentum eigenstates. *J. Math. Phys.* **21** (1980), no. 9, 2386-2394. (F. R. Halpern) **81k:81033** 81C40 (17B10, 22E70, 81D05)
(with Kumar, Sunil) Theory of the interaction of a single-mode resonant radiation field with N two-level atoms. *Phys. Rev. A* (3) **21** (1980), no. 5, 1573-1588. (From the summary) **81a:81110** 81G45
- Mehta, Cyrus R.** (with Patel, Nitin R.) A network algorithm for the exact treatment of the $2 \times k$ contingency table. *Comm. Statist. B—Simulation Comput.* **9** (1980), no. 6, 649-664. (Authors' summary) **81m:62098** 62H17 (90C35)
- Mehta, F. C.** (with Kambo, N. S.) Truncation error for band-limited nonstationary processes. *Inform. Sci.* **20** (1980), no. 1, 35-39. (Authors' summary) **81a:94003** 94A05
(with Kambo, N. S.) An upper bound on the mean-square error in the sampling expansion for non-band-limited processes. *Inform. Sci.* **21** (1980), no. 1, 69-73. (Authors' summary) **81d:94001** 94A05
- Mehta, Jatinder S.** (with Narasimham, Gorti V. L.; Swamy, Paravastu A. V. B.) Estimation of a dynamic demand function for gasoline with different schemes of parameter variation. *J. Econometrics* **7** (1978), no. 3, 263-279. (Peter M. Robinson) **81a:62112** 62P20
(with Swamy, Paravastu A. V. B.) Estimation of common coefficients in two regression equations. *J. Econometrics* **10** (1979), no. 1, 1-14. (K. R. Shah) **81i:62118** 62J05
- Mehta, Madan Lal** On a relation between torsion numbers and Alexander matrix of a knot. (French summary) *Bull. Soc. Math. France* **108** (1980), no. 1, 81-94. (Author's summary) **81j:57005** 57M25
- Mehta, O. P.** (with Bhatnagar, Veena Lata; Das, Ghansham) n -job, 2-machine flow job shop scheduling problem having minimum total waiting time for all jobs. *Pure Appl. Math. Sci.* **10** (1979), no. 1-2, 81-88. (N. B. Lebedinskaja) **81c:90047** 90B35
- Mehta, R. D.** A note on point derivations. *J. Indian Math. Soc. (N.S.)* **42** (1978), no. 14,

- 229-233 (1979). (G. M. Leibowitz) **81a:46059** 46J10
(with Vasavada, M. H.) Wada's type result for a Banach function algebra. *Math. Japon.* **24** (1979/80), no. 1, 25-27. (I. Glicksberg) **81b:46073** 46J15
- Melita, V. B.** (with Seshadri, C. S.) Moduli of vector bundles on curves with parabolic structures. *Math. Ann.* **248** (1980), no. 3, 205-239. (Klaus Hulek) **81i:14010** 14F05 (14D20)
- Melicher, A. A.** Existence and uniqueness of the solution of a class of nonlinear singular integral equations. (Russian) *Azerbaidžan. Gos. Univ. Učen. Zap.* **1977**, no. 4, 53-59. (C. Avramescu) **81h:45015** 45G05
- Mel, Chiang C.** Grazing incidence of short elastic waves on a slender cavity. *Wave Motion* **1** (1979), no. 2, 113-122. (Author's summary) **81a:73018** 73D25 (73D15)
(with Yue, Dick K. P.) Forward diffraction of Stokes waves by a thin wedge. *J. Fluid Mech.* **99** (1980), no. 1, 33-52. (Authors' summary) **81g:76019** 76B15
(with Tuck, E. O.) Forward scattering by long thin bodies. *SIAM J. Appl. Math.* **39** (1980), no. 1, 178-191. (D. L. Colton) **81m:76006** 76B15 (35J05, 76Q05, 78A45)
- Mel, Kenneth K.** (with Chang, Shu Kong) Generalized Sommerfeld integrals and field expansions in two-medium half-spaces. *IEEE Trans. Antennas and Propagation* **28** (1980), no. 4, 504-512. (Authors' summary) **81e:70011** 78A25 (78A45)
- Melina, Reuben** (with Glasser, D.; Horn, F. J. M.) Properties of certain zero column-sum matrices with applications to the optimization of chemical reactors. *J. Math. Anal. Appl.* **73** (1980), no. 2, 315-337. (Frederick A. Howes) **81b:90194** 90D40
Hilbert spaces of functionals associated with nonlinear operators. *Questiones Math.* **4** (1980/81), no. 1, 41-53. (M. M. Rao) **81e:60041** 60G20 (47H05)
- Meier, Michael** ★Reguläre und singuläre Lösungen quasilinearer elliptischer Gleichungen und Systeme. (German) [Regular and singular solutions of quasilinear elliptic equations and systems] Dissertation, Rheinische Friedrich-Wilhelms-Universität, Bonn, 1978. Bonner Mathematische Schriften [Bonner Mathematical Publications], 108. Universität Bonn, Mathematisches Institut, Bonn, 1978. v+197 pp. (Wolf von Wahl) **81a:35036** 35J60
- Meier, Paul** (with Zabell, Sandy) Benjamin Peirce and the Howland will. *J. Amer. Statist. Assoc.* **75** (1980), no. 371, 497-506. (Joseph W. Dauben) **81j:01025** 01A55
- Meier, Willi** Acyclic maps and knot complements. *Math. Ann.* **243** (1979), no. 3, 247-259. (Richard Porter) **81i:55020** 55B45 (57Q45)
(with Huber, Martin) Linearly compact groups. *J. Pure Appl. Algebra* **16** (1980), no. 167-182. (V. P. Snaith) **81e:55005** 55N05 (22A99, 55P05)
- Meijer, Henk** (with Akl, Selim G.) The design and analysis of a new hybrid sorting algorithm. *Inform. Process. Lett.* **10** (1980), no. 4-5, 213-218. (From the introduction) **81h:68052** 68E05
- Meißner, T. K.** (with Škil', M. I.) Asymptotic representation of solutions of a system of second-order linear differential equations with a small parameter multiplying the highest derivative. (Russian) *Asymptotic methods in the theory of nonlinear oscillations* (Proc. All-Union Conf. Asymptotic Methods in Nonlinear Mech., Kazislovi, 1977) (Russian), pp. 262-269, 278. "Naukova Dumka", Kiev, 1979. (M. Švec) **81j:34019** 34A30 (34E05)
- Construction of asymptotic solutions of second-order equations with a small parameter multiplying the derivative. (Russian) *Asymptotic methods of nonlinear mechanics* (Russian), pp. 92-96, 196. *Akad. Nauk Ukrain. SSR, Inst. Mat., Kiev*, 1979. (M. Švec) **81h:34005** 34A25 (34E05)
(with Škil', M. I.) Construction of the asymptotic solution for a system of second-order linear integro-differential equations of fractional rank. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A No. 9* (1979), 714-717, 777. (Erwin Kozakiewicz) **81c:45020** 45J05
- Meijlsson, Isaac** (with Nádás, Arthur) Convex majorization with an application to the length of critical paths. *J. Appl. Probab.* **16** (1979), no. 3, 671-677. (Yosef Rinott) **81c:60019** 60E15 (90B15)
- Melardus, Günter** (with Merz, Gerhard) Zur periodischen Spline-Interpolation. II. *Numerische Methoden der Approximationstheorie, Band 4* (Meeting, Math. Forschungsinst., Oberwolfach, 1977), pp. 204-221. *Internat. Schriftenreihe Numer. Math.*, 42. Birkhäuser, Basel, 1978. (S. D. Riemenschneider) **81g:41021** 41A15
Segmentielle Approximation und H-Mengen. *Numerical mathematics* (Sympos., Inst. Appl. Math., Univ. Hamburg, Hamburg, 1979), pp. 125-129. *Internat. Ser. Numer. Math.*, 49. Birkhäuser, Basel, 1979. (Wolfgang Wetterling) **81g:41033** 41A50 (41A63)
Periodic splines. *Polynomial and spline approximation* (Proc. NATO Ado. Study Inst., Univ. Calgary, Calgary, Alta., 1978), pp. 137-146. *NATO Ado. Study Inst. Ser. C: Math. and Phys. Sci.*, 49. Reidel, Dordrecht, 1979. (Gheorghe Micula) **81b:41015** 41A15
Periodic splines and Fourier analysis. *Polynomial and spline approximation* (Proc. NATO Ado. Study Inst., Univ. Calgary, Calgary, Alta., 1978), pp. 147-154. *NATO Ado. Study Inst. Ser. C: Math. and Phys. Sci.*, 49. Reidel, Dordrecht, 1979. (Author's summary) **81j:42006** 42A10 (41A15, 42A38)
Computation of the norms of some spline interpolation operators. *Polynomial and spline approximation* (Proc. NATO Ado. Study Inst., Univ. Calgary, Calgary, Alta., 1978), pp. 155-161. *NATO Ado. Study Inst. Ser. C: Math. and Phys. Sci.*, 49. Reidel, Dordrecht, 1979. (L. L. Schumaker) **81c:41045** 41A30 (41A15)
(with Merz, Gerhard) Hermite-Interpolation mit periodischen Spline-Funktionen. (English summary) *Numerical methods of approximation theory, Vol. 5* (Conf., Math. Res. Inst., Oberwolfach, 1979), pp. 200-210. *Internat. Ser. Numer. Math.*, 52. Birkhäuser, Basel, 1980. (Gheorghe Micula) **81g:41005** 41A05 (41A15, 65D07)
(with Taylor, G. D.) Optimal partitioning of Newton's method for calculating roots. *Math. Comp.* **35** (1980), no. 122, 1221-1230. (Derek W. Arthur) **81j:65069** 65H05 (41A30)
- See also Approximation in Theorie und Praxis, **81a:41002** and Numerical methods of approximation theory, **81d:65002**
- Melisset, Jean** A convolution approach to multivariate representation formulas. *Multivariate approximation theory* (Proc. Conf., Math. Res. Inst., Oberwolfach, 1979), pp. 198-210. *Internat. Ser. Numer. Math.*, 51. Birkhäuser, Basel, 1979. (J. W. Jerome) **81c:41076** 41A63 (41A17, 46F05, 65D99)
- Basic mathematical aspects of surface spline interpolation. *Numerische Integration* (Tagung, Math. Forschungsinst., Oberwolfach, 1978), pp. 211-220. *Internat. Ser. Numer. Math.*, 45. Birkhäuser, Basel, 1979. (Frederick N. Fritsch) **81j:41018** 41A15 (65D07)
- Multivariate interpolation at arbitrary points made simple. (French summary) *Z. Angew. Math. Phys.* **30** (1979), no. 2, 292-304. (Derek W. Arthur) **81e:41014** 41A15 (65D05)
- Melhardt, Jehuda Roberto** (with Leibowitz, Elhanan) Generation of metrics for charged rotating bodies. *Phys. Lett. A* **66** (1978), no. 1-2. (Authors' summary) **81k:83023** 83C40 (83C20)
- Meir, A.** (with Moon, J. W.; Pounder, J. R.) On the order of random channel networks. *SIAM J. Algebraic Discrete Methods* **1** (1980), no. 1, 25-33. (A. K. Dewdney) **81k:05042a** 05C05
(with Moon, J. W.; Pounder, J. R.) Acknowledgment of priority: "On the order of random channel networks". *SIAM J. Algebraic Discrete Methods* **1** (1980), no. 4, 462. (Editors) **81k:05042b** 05C05
- Meirmanov, A. M.** (with Antonev, S. N.) Mathematical questions on the correctness of a model of the simultaneous motion of surface and underground water. (Russian) *Dinamika Splošn. Sredy No. 31 Dinamika Židkosti so Scobod. Granicami* (1977), 5-51, 168. (Olavi Hellman) **81f:76042** 76S05 (35K50)
Classical solvability of the multidimensional Stefan problem. (Russian) *Dokl. Akad. Nauk SSSR* **249** (1979), no. 6, 1309-1312. (L. I. Rubinstein) **81a:35042** 35K05 (35R35)
The classical solution of a multidimensional Stefan problem for quasilinear parabolic equations. (Russian) *Mat. Sb. (N.S.)* **112(154)** (1980), no. 2(6), 170-192. (L. I. Rubinstein) **81j:35055** 35K05
- Melrovich, L.** (with Öz, H.) Control of large-order discretized systems. *Thirteenth Allislar Conference on Circuits, Systems and Computers* (Pacific Grove, Calif., 1979), pp. 193-197. *IEEE, New York*, 1980. (See **81m:93004**) 93C20
Control of selfadjoint systems. *Thirteenth Allislar Conference on Circuits, Systems and Computers* (Pacific Grove, Calif., 1979), pp. 604-605. *IEEE, New York*, 1980. (See **81m:93004**) 93C05 (93C35)
(with Öz, H.) Optimal modal-space control of flexible gyroscopic systems. *J. Guidance Control* **3** (1980), no. 3, 218-226. (Authors' summary) **81d:70023** 70M05 (70E05, 90D26)
(with Ryland, G. II) Response of vibrating systems with perturbed parameters. *J. Guidance Control* **3** (1980), no. 4, 298-303. (Authors' summary) **81d:70017** 70J05
- Meine, Reinhold** (with Bierstedt, Klaus-Dieter) Aspects of inductive limits in spaces of germs of holomorphic functions on locally convex spaces and applications to a study of $(H(U), \tau_{\text{loc}})$. *Advances in holomorphy* (Proc. Sem. Univ. Fed. Rio de Janeiro, Rio de Janeiro, 1977), pp. 111-178. *North-Holland Math. Studies*, 34. North-Holland, Amsterdam, 1979. (Martin Schottenloher) **81k:46052** 46G20 (32A10, 46E10, 58B12)
Spaces of differentiable functions and the approximation property. *Approximation theory and functional analysis* (Proc. Internat. Sympos. Approximation Theory, Univ. Estadual de Campinas, Campinas, 1977), pp. 263-307. *North-Holland Math. Studies*, 35. North-Holland, Amsterdam, 1979. (Richard M. Aron) **81h:46021** 46E10 (41A65, 58C20)
(with Colombeau, J. F.; Perrot, B.) A density result in spaces of Silva holomorphic mappings. *Pacific J. Math.* **84** (1979), no. 1, 35-42. (Richard M. Aron) **81h:46050** 46G20 (32E30, 46A12)
- Nicht-Nuklearität von Räumen beliebig oft differenzierbarer Funktionen. *Arch. Math. (Basel)* **34** (1980), no. 2, 143-148. (A. Pietsch) **81m:46039** 46E10 (58C25)
- Meisels, Amnon** (with Bekenstein, Jacob D.) Is the cosmological singularity compulsory? *Astrophys. J.* **237** (1980), no. 1, part 1, 342-348. (Authors' summary) **81a:83042** 83F05
(with Bekenstein, Jacob D.) Conformal invariance, microscopic physics, and the nature of gravitation. *Phys. Rev. D* **32** (1980), no. 6, 1313-1324. (Authors' summary) **81h:83035** 83D05 (83B05)
- Melmer, Morris** (with Kushner, H. B.) Eigenfunctions of expected value operators in the Wishart distribution. *Ann. Statist.* **8** (1980), no. 5, 977-988. (Authors' summary) **81f:62091** 62H10 (45C05)
- Melster, E.** (with Speck, F.-O.) Some multidimensional Wiener-Hopf equations with applications. *Trends in applications of pure mathematics to mechanics, Vol. II* (Second Sympos., Kozubnik, 1977), pp. 217-262. *Monographs and Studies in Math.*, 5. Pitman, London, 1979. (N. K. Karapetjan) **81c:45004** 45E10 (78A45)
(with Speck, F.-O.) Wiener-Hopf operators on three-dimensional wedge-shaped regions. *Applicable Anal.* **10** (1980), no. 1, 31-45. (Gustaf Gripenberg) **81e:45011** 45E10 (47B35)
- Melster, H.** Complementarity problems and von Neumann equilibria. *Game theory and related topics* (Proc. Sem., Bonn and Hagen, 1978), pp. 353-363. North-Holland, Amsterdam, 1979. (Mamoru Kaneko) **81c:90020** 90A14
Zum Fixpunktverhalten nichtexpansiver Abbildungen. *Comment. Math. Univ. Carolin.* **21** (1980), no. 2, 319-331. (H. Amann) **81f:70060** 47H10 (54H25)
- Melster, T. F.** (with Felderhof, B. U.) Current density and electric and magnetic multipole-moment operators in quantum mechanics. *J. Phys. A* **13** (1980), no. 1, 129-139. (Authors' summary) **81d:81137** 81L05
(with Felderhof, B. U.) Cluster expansion for fluids with long-range interactions. *Phys. A* **102** (1980), no. 1, 145-160. (Authors' summary) **81f:82029** 82A50
- Meisters, G. H.** Principal vertices, exposed points, and ears. *Amer. Math. Monthly* **87** (1980), no. 4, 284-285. (J. F. Rigby) **81m:51025** 51H99 (57N05)
- Melxner, Th.** (with Hartley, Brian) Periodic groups in which the centralizer of an involution has bounded order. *J. Algebra* **64** (1980), no. 1, 285-291. (D. F. Holt) **81i:20049** 20F50
- Melzer, D.** (with Gentina, J. C.) New aspects on linear and nonlinear single-input single-output systems. *Internat. J. Control* **30** (1979), no. 6, 1043-1060. (Ronald Hirschorn) **81b:93040** 93C45
- Mejlho, Lars C.** Some fundamental theorems about real numbers and their history. (Danish. English summary) *Nordisk Mat. Tidsskr.* **25/26** (1978), no. 2, 57-69, 111. (Kirsti Andersen) **81j:01026a** 01A55 (26-03, 40-03)
Addendum to: "Some fundamental theorems about real numbers and their history". (Danish. English summary) *Nordisk Mat. Tidsskr.* **25/26** (1978), no. 3-4, 120, 208. (Kirsti Andersen) **81j:01026b** 01A55 (26-03, 40-03)
- Mejran, Zdzisław** Error analysis in the fast Fourier transform algorithm for real data. (Polish) *Mat. Stos.* **3** (1978), 73-79. (From the text) **81g:65187** 65T05 (94A11)

- Mejza, Stanisław** (with Ceranka, Bronisław) Construction of equi-replicated balanced block designs with block sizes exceeding the number of treatments. *Biometrical J.* 21 (1979), no. 3, 293–296. (M. N. Daa) **81j:62151** 62K10
(with Calinski, Tadeusz; Ceranka, Bronisław) On the notion of efficiency of a block design. *Mathematical statistics and probability theory* (Proc. Sixth Internat. Conf., Włsa, 1978), pp. 47–62, *Lecture Notes in Statistics*, 2, Springer, New York, 1980. (Sanpei Kageyama) **81j:62129** 62K05 (62K10)
- Méla, Jean-François** Le calcul sur les caractères de l'algèbre $M(G)$ et le problème " $\mu \cdot L'$ fermé T' " [d'après les travaux de B. Host et F. Parreau]. *Séminaire Bourbaki* (1978/79), Exp. No. 534, pp. 151–169, *Lecture Notes in Math.*, 770, Springer, Berlin, 1980. (William Moran) **81k:43067** 43A10 (43A25)
- Meladze, G. V.** (with Kuz'min, A. V.; Makarov, V. L.) Completely conservative three-layer difference schemes for gas dynamics equations in Euler variables. (Russian. Georgian and English summaries) *Sem. Inst. Prikl. Mat. Dokl. No. 12-13* (1978), 37–39. (L. Berg) **81j:76067** 76N15 (65M05)
(with Kuz'min, A. V.; Makarov, V. L.) A completely conservative difference scheme for equations of gas dynamics in Euler variables. (Russian) *Ž. Vychisl. Mat. i Mat. Fiz.* 20 (1980), no. 1, 171–181, 262. (Authors' summary) **81h:76043** 76L05 (65M10)
- Melamed, Benjamin** Deterministic system theory applied to simplifications of stochastic systems. *Methodology in systems modelling and simulation* (Proc. Sympos., Weizmann Inst. Sci., Rehovot, 1978), pp. 495–506, North-Holland, Amsterdam, 1979. (Author's summary) **81c:68079** 68J05 (60K25, 68C15, 93E03)
- Melamed, I. A.** (with Klebanov, L. B.) The stability of characterization of normal and gamma distributions by the properties of Fisher information. (Russian. Georgian and English summaries) *Sobbič. Akad. Nauk Gruzin. SSR* 91 (1978), no. 3, 537–539. (Authors' summary) **81i:62027** 62E10 (62B10)
- Melamed, I. I.** (with Gabovič, E. Ja.) Computational complexity of routing problems. (Russian) *Moskoo. Inst. Inž. Železnodorozh. Transporta Trudy No. 640 Prikl. Mat. i Zadachi Železnodorozh. Transporta* (1979), 87–94, 155. (Authors' summary) **81f:90053** 90B35 (68C25)
(with Gabovič, E. Ja.) On constant discrete programming problems. *Discrete Appl. Math.* 2 (1980), no. 3, 193–205. (Authors' summary) **81h:90098** 90C10 (05A05, 20B05)
- Méland, Guy** (with Kiehm, Jean-Luc) Approximation d'ordre 2 dans les modèles MA(1) dont le coefficient est une fonction exponentielle du temps. *Cahiers Centre Études Rech. Opér.* 22 (1980), no. 2, 183–192. (Roch Roy) **81m:62171** 62M10 (93E10)
- McI'eer, M. M.** Classification of von Neumann J -algebras. (Russian) *Funkcional. Anal. i Priložen.* 13 (1979), no. 4, 83–84. (G. Arzene) **81e:46052** 46L10 (47B50)
- Meldrum, J. D. P.** (with Lyons, C. G.) Characterizing series for faithful d.g. near-rings. *Proc. Amer. Math. Soc.* 72 (1978), no. 2, 221–227. (G. Betsch) **81c:16049** 16A76
On the structure of morphism near-rings. *Proc. Roy. Soc. Edinburgh Sect. A* 81 (1978), no. 3–4, 287–298. (G. Betsch) **81c:16050** 16A76
(with Oswald, A.) Near-rings of mappings. *Proc. Roy. Soc. Edinburgh Sect. A* 83 (1979), no. 3–4, 213–223. (J. J. Malone) **81j:16042** 16A76 (20F28)
(with Fong, Yüan) The endomorphism near-rings of the symmetric groups of degree at least five. *J. Austral. Math. Soc. Ser. A* 30 (1980/81), no. 1, 37–49. (J. J. Malone) **81j:16043** 16A76
(with Lyons, C. G.) Reduction theorems for endomorphism near-rings. *Monatsh. Math.* 89 (1980), no. 4, 301–313. (J. J. Malone) **81j:16044** 16A76
Presentations of faithful d.g. near-rings. *Proc. Edinburgh Math. Soc.* (2) 23 (1980), no. 1, 49–56. (Günter Pilz) **81i:16048** 16A76
- Melillo, I. N.** Approximate calculation of some Cauchy-type integrals. (Russian. English summary) *Vesti Akad. Nauk BSSR Ser. Fiz.-Mat. Nauk* 5 (1979), no. 5, 51–56, 140. (A. Cojtu) **81d:65025** 65D30 (65E05)
- Melillo, V. L.** Some properties of regularized recurrent statistical estimates. (Russian) *Mathematical methods of cybernetics* (Russian), pp. 3–18, *Inst. Kibernet. Akad. Nauk Ukrain. SSR, Kiev*, 1978. (Vladimir Katkovnik) **81a:62062** 62J05 (93E10)
Statistical estimation on the basis of L_p -pseudoinverse operators. (Russian) *Akad. Nauk Ukrain. SSR Inst. Kibernet. Preprint No. 33* (1978), 39 pp. (R. Kodnár) **81i:65045** 65J10 (47A05)
(with Evdokimov, A. G.) Effective second-order methods of minimizing of unimodal functions. (Russian) *Operations research (models, systems, solutions)*, No. 7 (Russian), pp. 100–111, 2, *Akad. Nauk SSSR, Vychisl. Centr, Moscow*, 1979. (Authors' summary) **81e:90088** 90C30 (65K05)
Properties of pseudo-inverse operators in Banach spaces. (Russian) *Dokl. Akad. Nauk SSSR* 249 (1979), no. 5, 1055–1059. (C. Ilioi) **81a:47004** 47A05 (47A50)
Properties of solution estimates for stochastic algebraic equations. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A No. 6* (1979), 471–474, 495. (Author's summary) **81f:65096** 65U05 (65F05)
Estimates of the solutions of ill-posed stochastic algebraic equations. (Russian) *Dokl. Akad. Nauk SSSR* 250 (1980), no. 2, 280–284. (Jüri Süstal) **81j:60072** 60H25 (62F35, 65F99)
Iterative perturbed pseudoinverse operator methods for calculation of general solutions of nonlinear equations. (Russian) *Ž. Vychisl. Mat. i Mat. Fiz.* 20 (1980), no. 3, 573–585, 811. (P. S. Milojević) **81j:47057** 47H17 (65J15)
- Melillo, V. P.** (with Šnerov, B. E.; Švec, Marko; Dmitrieva-Arrago, L. R.; Paršina, G. V.; Julina, E. P.; Magazenzov, L. N.; Bogačenko, S. V.; Šeinin, D. A.) A hydrodynamic model of the general circulation of the atmosphere. (Russian) *Trudy Glavn. Geofiz. Observator. No. 410 Dinamika Global. Atmosfer. Processoi i Prognoz Pogody* (1980), 3–33, 142. (Authors' summary) **81h:86006** 86A10 (76R05)
- Meliluk, P. N.** (with Kolparėnok, V. N.; Šestopalov, V. P.) Helmholtz resonators in electrodynamics. (Russian) *Dokl. Akad. Nauk SSSR* 250 (1980), no. 2, 344–346. (Authors' summary) **81k:78014** 78A45
(with Kolparėnok, V. N.; Poedincuk, A. E.; Šestopalov, V. P.) A rigorous method for the study of electromagnetic interaction of a system of several resonance scatterers. (Russian) *Dokl. Akad. Nauk SSSR* 252 (1980), no. 2, 328–331. (N. D. Kazarinoff) **81e:78038** 78A50
- Melikhov, A. N.** (with Berstein, L. S.) Operations on hypergraphs and their properties. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* 1977, no. 4, 142–149 (Russian); translated as *Engng. Cybernetics* 15 (1977), no. 4, 106–113 (1978). (R. C. Mullin) **81h:05087** 05C65
- Melija, V. I.** Mappings of nonclosed sets on spheres. (Russian) *International Topology Conference* (Moscow State Univ., Moscow, 1979). *Uspehi Mat. Nauk* 35 (1980), no. 3(213), 201–203. (From the text) **81f:55015** 55Q55
- Melikhov, A. N.** See Melikhov, A. N.
- Melikhidze, G. I.** (with Pataraia, A. D.) Modulational instability of nonlinear waves in a relativistic plasma, with account taken of nonlinear Landau damping. (Russian) *Astrophys. and Space Sci.* 68 (1980), no. 1, 49–59. (Authors' summary) **81d:76121** 76X05 (78A20, 82A45)
- Melikhjan, A. A.** (with Černous'ko, F. L.) The choice of instants of observation in a linear game of approach. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* 1979, no. 1, 11–16, 218 (Russian); translated as *Engng. Cybernetics* 17 (1979), no. 1, 6–11 (1980). (Authors' summary) **81c:90119** 90D25
- Melikhjan, G. M.** Simple Lie algebras of characteristic 5. (Russian) *Uspehi Mat. Nauk* 35 (1980), no. 1(211), 203–204. (K. Strambach) **81d:17011** 17B50
- Melikhsetjan, E. P.** The Dirichlet problem for weakly connected elliptic systems of second-order differential equations with two independent variables. (Russian. Armenian summary) *Akad. Nauk Armanj. SSR Dokl.* 68 (1979), no. 4, 198–202. (M. A. Atahodžev) **81b:35028** 35J55
The Dirichlet problem for elliptic systems of second-order differential equations in the upper half-plane. (Russian. Armenian and English summaries) *Izv. Akad. Nauk Armanj. SSR Ser. Mat.* 14 (1979), no. 5, 391–402, 404. (E. M. Saak) **81c:35043** 35J45 (35C10)
- Melknyan, A. A.** See Melikhjan, A. A.
- Mella, C.** See Derese, I.; et al. **81h:93022**
- Meljanac, S.** (with Pallua, S.) Quark masses and Cabibbo angles in an $SU(2)_c \times SU(2)_L \times U(1)$ gauge model with permutation symmetry. *Phys. Lett. B* 90 (1980), no. 1–2, 138–142. (E. Wiczorek) **81c:81070** 81G25 (20C35, 81D20)
- Melkman, Avraham A.** n -widths of octahedra. *Quantitative approximation* (Proc. Internat. Sympos., Bonn, 1979), pp. 209–216, Academic Press, New York, 1980. (P. Woźniak) **81j:41041** 41A46 (46B20)
- Mellander, Ingvar** (with Aronson, Gunnar) A deterministic model in biomathematics. Asymptotic behavior and threshold conditions. *Math. Biosci.* 49 (1980), no. 3–4, 207–222. (Hal Leslie Smith) **81i:92016** 92A15 (34C25)
- Mellein, Bernhard** ★ Der kritische Galton-Watson Prozess mit Immigration—lokale Grenzwertsätze und approximierende Diffusionen. (German) [The critical Galton-Watson process with immigration—local limit theorems and approximating diffusions] Dissertation, Johannes Gutenberg Universität, Mainz. *Johannes-Gutenberg-Universität, Fachbereich Mathematik, Mainz*, 1979. ii + 84 pp. (Author's summary) **81b:60084** 60J80
- Mello, P. A.** (with French, J. B.; Pandey, Akhilesh) Statistical properties of many-particle spectra. II. Two-point correlations and fluctuations. *Ann. Physics* 113 (1978), no. 2, 277–293. (Authors' summary) **81h:82004a** 82A05 (81F20)
(with de los Reyes, J.; Seligman, Thomas H.) Analyticity and ergodicity in the maximum-entropy approach to statistical nuclear reactions. *Z. Phys. A* 295 (1980), no. 3, 247–249. (From the summary) **81c:81114** 81F15
- Mel'nik, Ju. V.** p -adic analogue of W. Schmidt's metric theorem. (Russian) *Mathematical analysis and probability theory* (Russian), pp. 123–126, 217, "Naukova Dumka", Kiev, 1978. (S. V. Kotov) **81g:10053** 10F45
Diophantine approximations on the circle and Hausdorff dimension. (Russian) *Mat. Zametki* 26 (1979), no. 3, 347–354, 492. (F. Schweiger) **81c:10069** 10K15 (10K50)
Hausdorff dimension in Diophantine approximations of p -adic numbers. (Russian) *Ukrain. Mat. Ž.* 32 (1980), no. 1, 118–124, 144. (F. Schweiger) **81c:10070** 10K40 (10K50)
- Mel'nik, I. M.** (with Jučenko, S. I.; Spinko, L. I.) A nonlinear Riemann problem with discontinuous coefficients on a Riemann surface. (Russian) *Differencial'nye Uravnenija* (Ryazan) No. 14 (1979), 160–170. (Ju. L. Rodin) **81c:30051** 30E25 (30F99)
- Mel'nik, Ju. I.** Conditions for the convergence of Dirichlet series which represent regular functions. (Russian) *Mathematical analysis and probability theory* (Russian), pp. 120–123, 217, "Naukova Dumka", Kiev, 1978. (A. V. Brašičev) **81h:30005** 30B50
On a universal system of exponents. (Russian) *Ukrain. Mat. Ž.* 31 (1979), no. 2, 192–196, 223. (W. H. J. Fuchs) **81b:30007** 30B50
Constructive construction of Dirichlet series of regular functions. (Russian) *Mat. Zametki* 27 (1980), no. 3, 391–397, 493. (Shlomo Strelitz) **81h:30006** 30B50
- Mel'nik, O. M.** Semicalar equivalence of polynomial matrices. (Russian) *Mat. Metody i Fiz.-Meh. Polja* No. 11 (1980), 17–21, 120. (Valeriu Prepelita) **81k:15018** 15A21 (15A54)
- Mel'nik, V. I.** Mercer theorems on classes of sequences. (Russian) *Mathematical analysis and probability theory* (Russian), pp. 114–117, 216, "Naukova Dumka", Kiev, 1978. (O. A. Ziza) **81e:40007a** 40E15 (40E05)
Inverse theorems for the Laplace transform and corollaries of them. (Russian) *Mathematical analysis and probability theory* (Russian), pp. 117–120, 217, "Naukova Dumka", Kiev, 1978. (B. S. Rubin) **81f:44005** 44A10
Mercer theorems on classes of sequences. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1978, no. 9(196), 58–68. (O. A. Ziza) **81e:40007b** 40E15 (40E05)
General Tauberian theorems for absolute summability. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1979, no. 11, 84–87. (M. S. Rangachari) **81h:40013** 40E05
Tauberian theorems for summability methods of the type of Abel's method. (Russian) *Ukrain. Mat. Ž.* 31 (1979), no. 2, 142–148, 221. (O. A. Ziza) **81e:40005** 40E05
Ineffectiveness of matrices constructed on the basis of a matrix of weighted arithmetic means. (Russian) *Teor. Funkcii Funkcional. Anal. i Priložen.* No. 33 (1980), 93–99, iii. (M. S. Rangachari) **81h:40006** 40D09
Ineffectiveness and reversibility of matrices close to one another. (Russian) *Teor. Funkcii Funkcional. Anal. i Priložen.* No. 34 (1980), 74–80, iii. (E. Jürimäe) **81k:40006** 40C05
- Mel'nik, V. S.** (with Mokin, B. I.) On the question of the reconstruction of correlation functions in problems of identification and control of dynamical objects. (Russian) *Adaptive control systems* (Russian), pp. 48–54, *Akad. Nauk Ukrain. SSR, Inst. Kibernet.*

- Klee, 1978. (From the text) **81c:93089** 93E12
(with Andr  ev, M. V.) Control of systems described by quasilinear partial differential equations. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* No. 2 (1980), 72-75, 97. (Authors' summary) **81b:49011** 49B22
- Mei'nik, Z. O. Example of a nonclassical boundary value problem for the vibrating string equation. (Russian) *Ukrain. Mat.  . 32* (1980), no. 5, 671-674. (A. V. Per  an) **81m:35081** 35L05
- Mei'nik, A. V. On the theory of stochastic equations with respect to components of semimartingales. (Russian) *Mat. Sb. (N.S.)* **110**(152) (1979), no. 3, 414-427, 471. (Dominique Lepingle) **81f:60089** 60H20
Strong solutions of stochastic differential equations with nonsmooth coefficients. (Russian. English summary) *Teor. Veroyatnost. i Primenen.* **24** (1979), no. 1, 146-149. (Author's summary) **81m:60109** 60H10
- Mei'nik, B. G. Synthesis of a multidimensional filter in a state space, optimal on the criterion of the maximum of the probability of a hit. (Russian) *Mathematical methods of optimization and structuring of systems (Russian)*, pp. 3-11, 181, Kaliningrad. Gos. Univ., Kaliningrad, 1979. (Author's summary) **81k:93072** 93E11
- Mei'nik, G. I. Estimates of the stability of motion in an annular domain. (Russian) *Mat. Fiz. No. 26* (1979), 62-65, 128. (A. Solomolov) **81a:34046** 34D20
- Mei'nik, L. G. Wachaw Sierpi  ski. (Russian) *Istor.-Mat. Issled. No. 24* (1979), 361-365, 389. (Esther R. Phillips) **81a:01038a** 01A70
- Mei'nik, L. S. (with Aks  ov, V. A.) Some counterexamples associated with the three-color problem. *J. Combin. Theory Ser. B* **28** (1980), no. 1, 1-9. (H. Sachs) **81d:05027** 05C15
- Mei'nik, O. L. (with Safranski  , Ja. M.) Parametric problem in scheduling theory. *Kibernetika (Kiev)* **1979**, no. 3, 53-57, 122 (Russian); translated as *Cybernetics* **15** (1979), no. 3, 352-357 (1980). (From the text) **81b:90091** 90B35
- Mei'nik, V. N. (with Orlov, S. V.) Nonsingular cosmology as a quantum vacuum effect. *Phys. Lett. A* **70** (1979), no. 4, 263-265. (Authors' summary) **81h:83033** 83C99
(with Zaicev, N. A.) Theories of gravitation with variable masses and gravitational relation. (Russian) *Problemy Teor. Gravitacii i   lement.   stic No. 10* (1979), 131-141. (M. C. Chaki) **81c:83037** 83D05
- Mei'nikova, I. V. The connection between the Dirichlet and Cauchy problems. (Russian) *Differentsial'nye Uravneniya* **16** (1980), no. 2, 311-316, 381. (Hans Kaper) **81f:35029** 35J05 (34G10, 47D05)
- Melnyk, Theodor W. (with Smith, William R.) Perturbation theories for molecular fluids. I. The RAM and BLIP function theories for hard dumbbells. *Molecular Phys.* **40** (1980), no. 2, 317-331. (Authors' summary) **81k:82041** 82A50
- de Melo, Wellington Vector fields on the plane. (Portuguese) *Proceedings of the Eleventh Brazilian Mathematical Colloquium (Po  os de Caldas, 1977)*, Vol. I (Portuguese), pp. 67-85, Inst. Mat. Pura Apl., Rio de Janeiro, 1978. (See **80c:00010a**) **58F10**
Moduli of stability of two-dimensional diffeomorphisms. *Topology* **19** (1980), no. 1, 9-21. (Clark Robinson) **81c:58047** 58F10 (58F09)
- Melrose, Nicola (with Biondi, Paola) Projective generation of symmetric correspondences, with nonnegative valency, of an algebraic curve into itself. (Italian) *Ricerche Mat.* **28** (1979), no. 2, 333-345. (Ciro Ciliberto) **81i:14020** 14H35
- Meloni, Gian Carlo (with Cagnoni, Donatella) Free adjunction and a natural calculus for a general logical operator. (Italian. English summary) *Istit. Lombardo Accad. Sci. Lett. Rend. A* **112** (1978), no. 1, 131-138 (1979). (Anna Labella) **81f:03077** 03G30 (18A15)
- Melrose, Richard B. Differential boundary value problems of principal type. *Seminar on Singularities of Solutions of Linear Partial Differential Equations (Inst. Adv. Study, Princeton, N.J., 1977/78)*, pp. 81-112, *Ann. of Math. Studies*, 91, Princeton Univ. Press, Princeton, N.J., 1979. (V. Ja. Ivrii) **81i:58043** 58G16 (35L20)
(with Uhlmann, G. A.) Lagrangian intersection and the Cauchy problem. *Comm. Pure Appl. Math.* **32** (1979), no. 4, 483-519. (Bent E. Petersen) **81d:58052** 58G17 (35S05, 47G05)
(with Uhlmann, G. A.) Microlocal structure of involutive conical refraction. *Duke Math. J.* **46** (1979), no. 3, 571-582. (A. Hirschowitz) **81h:58044** 58G16 (35G05, 35S05)
Singularities of solutions to boundary value problems. *Proceedings of the International Congress of Mathematicians (Helsinki, 1978)*, pp. 785-790, *Acad. Sci. Fennica, Helsinki*, 1980. (Vesselin M. Petkov) **81m:35145** 35S15 (35B99, 58G16)
Forward scattering by a convex obstacle. *Comm. Pure Appl. Math.* **33** (1980), no. 4, 461-499. (V. M. Babic) **81k:35126** 35P25 (35B40, 58G25, 78A45)
- Mel'nik, T. (with Vard'ja, Ju.) A new family of measures of statistical dependence and an application of it. (Russian) *Trudy Vys  l. Centra Tartu. Gos. Univ. No. 44* (1980), 24-35. (J  ri And  l) **81h:62105** 62H20
- Melzer, R. A. (with Rudeanu, Sergiu) Generalized inverses of Boolean functions. *Rev. Roumaine Math. Pures Appl.* **25** (1980), no. 6, 891-897. (A. Thyse) **81m:06036** 06E99 (03G05, 94C10)
- Melzer, Bernard Proof, abstraction and semantics in mathematics and artificial intelligence. *Topics in artificial intelligence*, pp. 1-9, *CISM Courses and Lectures*, 256, Springer, Vienna, 1978. (See **80a:68102**) **68G15**
- Melville, P. H. Effect of reflected stress waves in finite specimens on the dynamic stress intensity factor of a propagating mode III crack. *Internat. J. Solids and Structures* **16** (1980), no. 10, 945-955. (Author's summary) **81g:73108** 73M05 (73D99)
- Menni, Jean Espaces de semi martingales et changement de probabilit  . *Z. Wahrsch. Verw. Gebiete* **52** (1980), no. 1, 9-39. (Ju. M. Kabanov) **81h:60076** 60H05 (60G44)
- Menni, G  rard Notion de dualit   et de sym  trie dans les r  seaux de P  tri. (English summary) *Semantics of concurrent computation (Proc. Internat. Sympos., Evian, 1979)*, pp. 91-108, *Lecture Notes in Comput. Sci.*, 70, Springer, Berlin, 1979. (Author's summary) **81f:68016** 68B05
(with Roucairol, G.) Linear algebra in net theory. *Net theory and applications (Proc. Adv. Course General Net Theory Processes Systems, Hamburg, 1979)*, pp. 213-223, *Lecture Notes in Comput. Sci.*, 84, Springer, Berlin, 1980. (Tadao Murata) **81h:68089** 68D90 (15A45)
- Menes, C. D. Energy transmission by surface waves through an opening. *J. Fluid Mech.* **97** (1980), no. 3, 557-568. (Author's summary) **81g:76016** 76B15
- Mena, R. A. (with Bridges, W. G.) Rational circulant with rational spectra and cyclic strongly regular graphs. *Ars Combin.* **8** (1979), 143-161. (R. A. Brualdi) **81h:05022** 05B20 (15A30)
(with Bridges, W. G.) Multiplicative designs. I. The normal and reducible cases. *J. Combin. Theory Ser. A* **27** (1979), no. 1, 69-84. (J. B. Kelly) **81f:05021a** 05B05 (05B30)
(with Bridges, W. G.) Multiplicative designs. II. Uniform normal and related structures. *J. Combin. Theory Ser. A* **27** (1979), no. 3, 269-281. (J. B. Kelly) **81f:05021b** 05B05
- Menabde, M. A. (with Begia  vili, G. A.) A regularized method of solving Fredholm integral equations of the first kind by means of cubic splines. (Russian. Georgian and English summaries) *Soob  . Akad. Nauk Gruzin. SSR* **94** (1979), no. 1, 41-44. (Gheorghe Micula) **81h:65122** 65R20 (41A15, 45B05)
- Menabde, M. G. (with Bui  vili, L. L.) Use of averaging method in problems of high-resolution nuclear magnetic resonance in solids. * .   ksper. Teoret. Fiz.* **77** (1979), no. 6, 2435-2442 (Russian); translated as *Soviet Phys. JETP* **50** (1979), no. 6, 1176-1180 (1980). (Authors' summary) **81c:81143** 81G35 (82A55)
- Menal, Pere Remarks on the GL₂ of a ring. *J. Algebra* **61** (1979), no. 2, 335-359. (G. E. Wall) **81g:20068** 20G35 (16A05, 16A39)
On π -regular rings whose primitive factor rings are Artinian. *J. Pure Appl. Algebra* **29** (1981), no. 1, 71-78. (K. R. Goodearl) **81k:16015** 16A30
- Mendel, J. M. (with Washburn, H. D.) Minimum-variance state estimation for uniform causal functional equations. *Proceedings of the 1978 IEEE Conference on Decision and Control including the 17th Symposium on Adaptive Processes (San Diego, Calif., 1979)*, pp. 715-724, IEEE, New York, 1979. (Ivar Gustavsson) **81c:93081** 93E10
(with Washburn, H. D.) Multistage estimation of dynamical and weakly coupled states in continuous-time linear systems. *IEEE Trans. Automat. Control* **25** (1980), no. 1, 71-76. (Authors' summary) **81c:93095** 93E10
- Mendelssohn, D. A. (with Achenbach, J. D.; Keer, L. M.) Elastodynamic analysis of an edge crack. *Trans. ASME Ser. E. J. Appl. Mech.* **47** (1980), no. 3, 551-556. (From the introduction) **81j:73073** 73M05
- Mendelssohn, Eric Every (finite) group is the group of automorphisms of a (finite) strongly regular graph. *Ars Combin.* **6** (1978), 75-86. (F. Harary) **81a:05065** 05C25 (20F38)
(with Rosa, Alexander) On some properties of 1-factorizations of complete graphs. *Proceedings of the Tenth Southeastern Conference on Combinatorics, Graph Theory and Computing (Florida Atlantic Univ., Boca Raton, Fla., 1979)*, pp. 739-752, Congress. Numer., XXIII-XXIV, Utilitas Math., Winnipeg, Man., 1979. (W. D. Wallis) **81c:05075** 05C70 (05B30)
(with Bennett, F. E.) Extended (2,4)-designs. *J. Combin. Theory Ser. A* **29** (1980), no. 1, 74-86. (A. E. Brouwer) **81k:05033** 05B30 (05B40)
- Mendelssohn, N. S. (with Bennett, F. E.) On the existence of extended triple systems. *Utilitas Math.* **14** (1978), 249-267. (Editors) **81c:05038** 05B30
(with Bennett, F. E.) Conjugate orthogonal Latin square graphs. *Proceedings of the Tenth Southeastern Conference on Combinatorics, Graph Theory and Computing (Florida Atlantic Univ., Boca Raton, Fla., 1979)*, pp. 179-192, Congress. Numer., XXIII-XXIV, Utilitas Math., Winnipeg, Man., 1979. (Charles C. Lindner) **81c:05034** 05B15 (05C99)
(with Bennett, F. E.) On the spectrum of Stein quasigroups. *Bull. Austral. Math. Soc.* **21** (1980), no. 1, 47-63. (D. A. Robinson) **81g:20129** 20N05 (05B05)
- Mendelson, Haim (with Yechiali, Uri) A new approach to the analysis of linear probing schemes. *J. Assoc. Comput. Mach.* **27** (1980), no. 3, 474-483. (H. P. Kriegel) **81c:68016** 68B15 (68H05)
(with Pliskin, Joseph S.; Yechiali, Uri) A stochastic allocation problem. *Oper. Res.* **28** (1980), no. 3, part 2, 687-693. (Authors' summary) **81d:90056** 90B30 (90B05)
- Mendelssohn, Roy A systematic approach to determining mean-variance tradeoffs when managing randomly varying populations. *Math. Biosci.* **50** (1980), no. 1-2, 75-84. (Author's summary) **81h:92021** 92A17 (90A30)
- Mendelzon, Alberto O. (with Beeri, Catriel; Sagiv, Yehoshua; Ullman, Jeffrey D.) Equivalence of relational database schemes. *Conference Record of the Eleventh Annual ACM Symposium on Theory of Computing (Atlanta, Ga., 1979)*, pp. 319-329, ACM, New York, 1979. (Du  an Ondru  ) **81f:68026** 68B15
- Mendes, P. Ω -stability in open manifolds. (Portuguese) *Proceedings of the Ninth Brazilian Mathematical Colloquium (Po  os de Caldas, 1973)*, Vol. II (Portuguese), pp. 329-332, Inst. Mat. Pura Apl., S  o Paulo, 1977. (J. S. Joel) **81h:58024** 58F10
- Mend  s France, Michel Le th  or  me de van der Corput. *S  minaire de Th  orie des Nombres* 1977-1978, Exp. No. 4, 6 pp., CNRS, Talence, 1978. (Editors) **81k:10083** 10K05
   propos de la suite de Morse. *S  minaire de Th  orie des Nombres*, 1978-1979, Exp. No. 13, 11 pp., CNRS, Talence, 1979. (G  rard Letac) **81f:12001** 12A10 (10K10, 28D20)
- Mendez, J. P. (with Isidro, J. M.) Topological duality on the function space $(\mathcal{C}(U, F), \tau_0)$. *J. Math. Anal. Appl.* **67** (1979), no. 1, 239-248. (S. Dineen) **81a:46049** 46G20 (32A99, 46E99)
- Meneses, Angel (with Marshall, Guillermo) Numerical solution of a nonconservation form in shallow water theory. *Boundary and interior layers—computational and asymptotic methods (Proc. Conf., Trinity College, Dublin, 1980)*, pp. 365-369, Boole, D  n Laoghaire, 1980. (See **81j:76001**) **76B15**
- Meng, S. Y. (with Cheng, H. K.) The oblique wing as a lifting-line problem in transonic flow. *J. Fluid Mech.* **97** (1980), no. 3, 531-556. (Authors' summary) **81c:76030** 76H05
- Menga, G. (with Canuto, E.; Villa, A.) Lower order model representation of multivariable systems by factorization techniques. *Numerical techniques for stochastic systems (Conf., Gargnano, 1979)*, pp. 187-204, North-Holland, Amsterdam, 1980. (See **81f:93067**) **93C35**
- Mengersen, Ingrid Die Maximalzahl von kreuzungsfreien Kanten in Darstellungen von vollst  ndigen n -geteilten Graphen. *Math. Nachr.* **85** (1978), 131-139. (J. Sedl  cek) **81a:05045** 05C10
(with Harborth, Heiko) Ein Extremalproblem f  r Matrizen aus Nullen und Einsen. *J. Reine Angew. Math.* **309** (1979), 149-155. (L. Carlitz) **81h:05023** 05B20 (05A20)
- Menges, G. (with Kofler, E.; Fahrion, Roland; Huchens, S.; Ku  , Uwe) Stochastische partielle Information (SPI). *Statist. Hefte (N.F.)* **21** (1980), no. 2, 160-167. (A. L. Rukhin) **81c:62009** 62B10
- Mengziyev, B. (with Salakhidinov, M. S.) A boundary value problem with conformal derivative for an equation of mixed type with two lines of degeneration. (Russian)

- Differential equations and their applications (Russian), pp. 3-14, 166, "Fan", Tashkent, 1979. (A. Dzurnev) **81i:35123** 35M05
- Menhies, L. D. Conditions for linear and finite-dimensional linear regularizability. (Russian) *Studies in functional analysis* (Russian), pp. 65-70, iii, Ural. Gos. Univ., Sverdlovsk, 1978. (Author's summary) **81i:47014** 47A50 (65J10)
- Linear regularizability of mappings inverse to linear operators. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1979, no. 12, 35-38. (A. S. Silbergleit) **81i:47005** 47A05 (47G05)
- Menikoff, A. Hypocoelliptic operators with double characteristics. *Seminar on Singularities of Solutions of Linear Partial Differential Equations* (Inst. Adv. Study, Princeton, N.J., 1977/78), pp. 65-79, Ann. of Math. Studies, 91, Princeton Univ. Press, Princeton, N.J., 1979. (Vesselin M. Petkov) **81i:35036** 35H05 (35P20)
- Menikoff, Ralph (with Zemach, Charles) Methods for numerical conformal mapping. *J. Comput. Phys.* 36 (1980), no. 3, 366-410. (D. Gaier) **81i:30012** 30C30
- Menini, C. (with Orsatti, A.) Duality over a quasi-injective module and commutative S -reflexive rings. *Symposia Mathematica*, Vol. XXIII (Conf. Abelian Groups and their Relationship to the Theory of Modules, INDAM, Rome, 1977), pp. 145-179, Academic Press, London, 1979. (David W. Sharpe) **81i:13009** 13C10
- Menjailov, A. I. (with Dimentberg, M. F.) Response of a single-mass vibroimpact system to white-noise random excitation. (German and Russian summaries) *Z. Angew. Math. Mech.* 59 (1979), no. 12, 709-716. (Authors' summary) **81i:70027** 70L05
- ten Men Jan See Ten Men Jan
- Mennicke, Jens L. (with Grunewald, Fritz J.; Helling, H.) SL_2 over complex quadratic number fields. I. *Algebra i Logika* 17 (1978), no. 5, 512-580, 622. (A. M. Macbeath) **81i:10021** 10C30 (10D07, 14G20, 22E40)
- Eine Pflasterung des dreidimensionalen hyperbolischen Raumes. *Math.-Phys. Semesterber.* 27 (1980), no. 1, 55-68. (J. M. Wills) **81i:52008** 52A45 (10E45, 20H15, 51M10)
- See also Burnside groups, **81i:20002**
- Mennicken, R. (with Sagraloff, Boris) On Banach's closed range theorem. *Arch. Math. (Basel)* 33 (1979/80), no. 5, 461-465. (Robert F. Wheeler) **81i:47005** 47A05 (46A30)
- (with Sagraloff, Boris) Characterizations of nearly-openness. *J. Reine Angew. Math.* 313 (1980), 105-115. (N. Adasch) **81i:46004** 46A30 (47A05)
- Mennig, G. Zur Strömung wandgleitender Flüssigkeiten zwischen zwei Platten. (English summary) *Rheol. Acta* 19 (1980), no. 2, 262-267. (Author's summary) **81i:76033** 76D05
- Menon, P. R. (with Levendel, Ytzhak) Unknown signal values in fault simulation. *FTCS-9 (Ninth Annual Internat. Sympos. Fault-Tolerant Comput., Madison, Wis., 1979)*, pp. 125-128, IEEE, New York, 1979. (See **81i:94001**) 94C99
- Menon, V. V. (with Sharma, V. D.) Correction to a paper of R. Ram concerning the behaviour of the solution of the Bernoulli equation: "A modification in the theorem of Bailey and Chen" [Nuovo Cimento B (11) 48 (1978), no. 1, 9-14; MR 80b:80008]. (Italian and Russian summaries) *Nuovo Cimento B* (11) 58 (1980), no. 1, 64-72. (Authors' summary) **81i:76009** 76N15
- Menon, Siga. Famille mesurable d'opérateurs maximaux monotones. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 16, A741-A744. (Author's summary) **81i:47042** 47H05 (49A27, 90C25)
- Mench, Roy Fisher and the method of moments. *R. A. Fisher: an appreciation*, pp. 67-74, *Lecture Notes in Statist.*, 1, Springer, New York, 1980. (See **81i:01024**) 62E10 (01A65)
- Menching, J. (with Garstka, S.; Morton, T.) Protective planning-horizon procedures for a deterministic cash balance problem. *Oper. Res.* 26 (1978), no. 4, 637-652. (J. A. E. E. van Nunen) **81i:90013** 90A05
- Menne, A. T. (with Emmert, G. A.; Wieland, R. M.; Davidson, J. N.) Electric sheath and presheath in a collisionless, finite ion temperature plasma. *Phys. Fluids* 23 (1980), no. 4, 803-812. (L. F. Oster) **81i:76061** 76W05 (45J05, 76X05)
- Menshik, M. B. (with Bragin'skiĭ, V. B.; Gričuk, L. P.; Dorolkevič, A. G.; Novikov, I. D.; Sažin, M. V.; Zel'dovič, Ja. B.) On the electromagnetic detection of gravitational waves. *Gen. Relativity Gravitation* 11 (1979), no. 6, 407-409 (1980). (Authors' summary) **81i:83026** 83C35
- (with Karmanov, O. Ju.) Application of the propagator method to pair production in the Robertson-Walker metric. *Gen. Relativity Gravitation* 12 (1980), no. 4, 267-277. (Authors' summary) **81i:81001** 81E99 (83C99)
- (with Karmanov, O. Ju.) Particle production near a cosmological singularity. (Russian. English summary) *Teoret. Mat. Fiz.* 42 (1980), no. 1, 23-36. (Authors' summary) **81i:83043** 83F05
- Men'sov, D. E. On limits of indeterminacy of partial sums of universal trigonometric series. *Amer. Math. Soc. Transl. (2)* 111 (1978), pp. 1-33, *Amer. Math. Soc., Providence, R.I.*, 1978. (See **80c:00006**) 42A20
- On limit functions of trigonometric series. *Amer. Math. Soc. Transl. (2)* 111 (1978), pp. 35-79, *Amer. Math. Soc., Providence, R.I.*, 1978. (See **80c:00006**) 42A20 (28A20)
- Universal sequences of functions. *Amer. Math. Soc. Transl. (2)* 111 (1978), pp. 81-116, *Amer. Math. Soc., Providence, R.I.*, 1978. (See **80c:00006**) 28A20 (42A20)
- Limits of indeterminacy in measure of T -means of subseries of a trigonometric series. (Russian) *Trudy Mat. Inst. Steklov.* 149 (1978), 59 pp. (A. Lupas) **81i:42010** 42A24 (40C05)
- A relationship between the convergence of series of partial sums of a numerical series and its summability by (C, α) and Abel methods. (Russian. English summary) *Anal. Math.* 6 (1980), no. 1, 3-50. (O. A. Ziza) **81i:40009** 40G05 (40G10)
- Properties of subsequences of partial sums of function series. (Russian) *Dokl. Akad. Nauk SSSR* 252 (1980), no. 3, 550-552. (V. Totik) **81i:40009** 40D05
- Menyailov, A. I. See Menyailov, A. I.
- Menzala, Gustavo Perla On global solutions of a quasilinear hyperbolic equation. *4th Latin-American School of Mathematics (Lima, 1978)*, pp. 318-325, IV ELAM, Lima, 1979. (C. Bardos) **81i:35081** 35L60 (35L05)
- On classical solutions of a quasilinear hyperbolic equation. *Nonlinear Anal.* 3 (1979), no. 5, 613-627. (V. Ju. Ljapidevskij) **81i:35075** 35L25 (35L75)
- On global classical solutions of a nonlinear wave equation. *Applicable Anal.* 10 (1980), no. 3, 179-195. (R. Glassey) **81i:35075** 35L60 (35L30)
- Meinel, Reinhard Ein implementierbarer Algorithmus zur Lösung nichtlinearer Gleichungssysteme bei schwach singulärer Einbettung. (English summary) *Beiträge Numer. Math.* 8 (1980), 99-111. (John B. Kioustelidis) **81i:65050** 65H10
- Menzer, H. (with Krätzel, E.) Asymptotische Entwicklung von Integralen mit zwei Parametern. *Acta Math. Acad. Sci. Hungar.* 35 (1980), no. 3-4, 311-333. (J. Albricht) **81i:41033** 41A60
- Menzer, Hartmut Transformation spezieller Dirichletscher Reihen. III. (Russian and English summaries) *Wiss. Z. Friedrich-Schiller-Universität Jena Math.-Natur. Reihe* 29 (1980), no. 2, 351-356. (J. Spilker) **81i:30001** 30B50
- Meo, A. R. (with Margaria, I.; Zacchi, M.) Determinacy and maximal parallelism in a structured model of parallel computation. *Calcolo* 16 (1979), no. 3, 305-333 (1980). (Authors' summary) **81i:68041** 68B20
- Mercer, A. McD. On a class of functions of Volterra operators. *Bull. Calcutta Math. Soc.* 70 (1978), no. 3, 163-172. (G. D. Allen) **81i:47026** 47B44 (47A60)
- An approximation to the Fourier transform. *Acta Math. Acad. Sci. Hungar.* 34 (1979), no. 3-4, 293-296 (1980). (G. Sunouchi) **81i:42014** 42A38
- Approximation on the semi-infinite interval. *Internat. J. Math. Math. Sci.* 3 (1980), no. 4, 793-796. (William A. Light) **81i:41011** 41A10
- Merches, I. (with Agop, M.) Remarks on the relativistic invariant magnetofluid dynamics. (Romanian summary) *Bul. Inst. Politehn. Iași Sect. I* 25(29) (1979), no. 3-4, 93-96. (Ilija Lukačević) **81i:76113** 76Y05 (76W05, 83C55)
- " Λ " constrained minimum energy problem in relativistic magnetofluid dynamics. (French summary) *Rev. Roumaine Phys.* 25 (1980), no. 3, 317-323. (Ilija Lukačević) **81i:83005** 83A05 (49H05, 76Y05)
- Mercier, André Birth and rôle of the GRG-organization and the cultivation of international relations among scientists in the field. *Albert Einstein: his influence on physics, philosophy and politics*, pp. 177-188, Vieweg, Braunschweig, 1979. (See **81i:01039**) 01A70
- Mercier, Arnel Somme de fonctions multiplicatives restreinte à une progression arithmétique. *Ann. Sci. Math. Québec* 3 (1979), no. 2, 265-272. (B. Garrison) **81i:10028** 10H25
- Sommes de fonctions additives restreintes à une classe de congruence. *Canad. Math. Bull.* 22 (1979), no. 1, 59-73. (Ted Chinburg) **81i:10009** 10A20
- Identité pour $\sum_{n=1, \text{ mod } k}^{\infty} (f(n)/n^s)$. *Canad. Math. Bull.* 22 (1979), no. 3, 317-325. (Gilles Lachaud) **81i:10083** 10H25
- Somme de fonctions additives restreinte à une suite particulière. *Ann. Sci. Math. Québec* 4 (1980), no. 1, 27-33. (W. Schwarz) **81i:10058** 10H25
- Mercier, B. (with Lions, Pierre-Louis) Splitting algorithms for the sum of two nonlinear operators. *SIAM J. Numer. Anal.* 16 (1979), no. 6, 964-979. (D. Pascali) **81i:47070** 47H17 (35K55, 35R35, 49D25, 65J15)
- ★Inéquations variationnelles de la mécanique. (French) [Variational inequalities of mechanics] Publications Mathématiques d'Orsay 80 [Mathematical Publications of Orsay 80], I. Université de Paris-Sud, Département de Mathématique, Orsay, 1980. 98 pp. (N. Gass) **81i:49014** 49A29 (35Q20, 65P05, 73E05)
- Meredov, B. On the asymptotic distribution of a sum of independent random variables. (Russian. English summary) *Izv. Akad. Nauk Turkm. SSR Ser. Fiz.-Tehn. Him. Geol. Nauk* 1980, no. 1, 7-12. (Š. A. Ismatullaev) **81i:60029** 60F05
- Meredov, H. M. (with Embergenov, A.) A variational-difference method for obtaining upper bounds for the eigenvalues of the Helmholtz operator. (Russian. English summary) *Vychisl. Prikl. Mat. (Kiev) No. 39* (1979), 52-60, 172. (Authors' summary) **81i:65078** 65N25
- Mereuca, I. V. The decomposition into factors of a polynomial operator pencil. (Russian) Operators in Banach spaces. *Mat. Issled.* 47 (1978), 101-119, 138. (E. R. Cekanovskij) **81i:47018** 47A68 (47A10)
- Mergenthaler, Wolfgang A sufficient criterion for particles performing a diffusive motion with state-dependent death rate to die with probability one. *Adv. in Appl. Probab.* 11 (1979), no. 3, 510-526. (Charles J. Mode) **81i:92025** 92A15 (60J70)
- A state-dependent lifetime process of individuals subject to external perturbations. *J. Appl. Probab.* 17 (1980), no. 4, 922-938. (Pragneshu) **81i:92050** 92A15
- Merino Rubio, J. (with Acha, J. I.; Solana Quirós, J. M.; Huertas, J. L.) Synchronous counters composed entirely of J-K bistables. *Internat. J. Electron.* 48 (1980), no. 2, 175-188. (Authors' summary) **81i:94047** 94C15 (68D50)
- Merker, Renate Beitrag zur Theorie stochastischer zellulärer Systeme. *Wiss. Z. Tech. Univ. Dresden* 29 (1980), no. 1, 227-234. (Author's summary) **81i:92002** 92A05 (68D20, 93E03)
- Merkles, E. P. Partial sum subordination of univalent functions. *Houston J. Math.* 6 (1980), no. 1, 77-83. (M. S. Robertson) **81i:30009** 30C45
- Merkin, J. H. Mixed convection boundary layer flow on a vertical surface in a saturated porous medium. *J. Engng. Math.* 14 (1980), no. 4, 301-313. (Author's summary) **81i:76081** 76S05 (76D15)
- (with Ingham, D. B.) Unsteady mixed convection from an isothermal circular cylinder. *Acta Mech.* 38 (1981), no. 1-2, 55-69. (Authors' summary) **81i:76039** 76R99
- Merkov, A. B. Some properties of smooth mappings. (Russian. English summary) *Vestnik Moskov. Univ. Ser. I Mat. Meh.* No. 2 (1979), 63-69, 103. (Ju. Ju. Trohimčuk) **81i:26009** 26B99 (58C05)
- Merkur'ev, A. S. Exact sequences in the Galois theory of rings. (Russian) Rings and modules. *2. Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 94 (1979), 104-111, 151. (Chr. U. Jensen) **81i:13005** 13B05 (13B02)
- Merkur'ev, S. P. (with Buslaev, V. S.; Salikov, S. P.) Diffraction characteristics of scattering in a quantum system of three one-dimensional particles. (Russian) Scattering theory. *Theory of oscillations* (Russian), pp. 14-30, 183, *Probl. Mat. Fiz.* 9, Leningrad. Univ., Leningrad, 1979. (M. Demuth) **81i:81092** 81F15 (35P25, 47A40)
- Merlin, Philip M. Specification and validation of protocols. *IEEE Trans. Comm.* 27 (1979), no. 11, 1671-1680. (S. E. Aidarous) **81i:94051** 94C99
- Merlina, N. I. On the question of approximating continuous functions by linear approximation methods. (Russian. English summary) *Vestnik Leningrad. Univ. Mat. Meh. Astronom.* 1978, vyp. 4, 60-67, 151. (N. T. Anisimova) **81i:41024** 41A17 (42A05)

- Merrin, N. D. The homotopy groups of condensed matter physics. *J. Math. Phys.* 19 (1978), no. 6, 1457-1462. (Author's summary) **81e:82853** 82A60 (55Q99)
(with Ho, Tin Lun) Equilibrium order parameters and chemical potentials in rotating superfluids. *Phys. Rev. B* (3) 21 (1980), no. 11, 5190-5197. (Authors' summary) **81d:81131** 81J05 (76Y05)
Quantum mechanics vs. local realism near the classical limit: a Bell inequality for spin s . *Phys. Rev. D* (3) 22 (1980), no. 2, 356-361. (Author's summary) **81i:81008** 81B10
- Merrill, David The maximum permanent in A_n^+ . *Linear and Multilinear Algebra* 9 (1980), no. 2, 81-91. (R. A. Brualdi) **81j:15009** 15A15 (05B20)
- Merris, Russell Applications of spherical functions in multilinear algebra. *Linear Algebra Appl.* 20 (1978), no. 1, 77-86. (Author's introduction) **81f:20010** 20C15 (15A15, 15A69)
Derivatives of induced operators on symmetry classes of tensors. *Tamkang J. Math.* 9 (1978), no. 2, 229-235. (J. de Pillis) **81e:15006** 15A04 (15A69)
On the pseudocharacteristic polynomial of K. Bogart and J. Gordon. *Linear and Multilinear Algebra* 7 (1979), no. 3, 237-239. (E. Keith Lloyd) **81d:05037b** 05C30 (05C65, 15A15)
Pattern inventories associated with symmetry classes of tensors. *Linear Algebra Appl.* 29 (1980), 225-230. (Eugene Levner) **81e:15015** 15A72 (05A15, 90B10)
Manifestations of Pólya's counting theorem. *Linear Algebra Appl.* 32 (1980), 209-232. (S. G. Williamson) **81g:05014** 05A15 (15A99, 20C99)
- Mersenne, Marin See Targosz, Karolina, **81c:01017**
- Mertes, K. Semi-iteration in connection with the numerical solution of nonlinear elliptic boundary value problems. *Boundary and interior layers—computational and asymptotic methods* (Proc. Conf., Trinity College, Dublin, 1980), pp. 370-374. Boole, Din Laoghaire, 1980. (Author's summary) **81m:65163** 65N20
- Mertens, H. J. (with Nessel, Rolf Joachim) Über Multiplikatoren starker Konvergenz für Fourier-Entwicklungen in Banach-Räumen. *Math. Nachr.* 84 (1978), 185-194. (J. Peetre) **81a:42018** 42A45 (42B15)
- Mertens, P. (with Backert, K.) Vergleich und Auswahl von Prognoseverfahren für betriebswirtschaftliche Zwecke—Übersichtsarbeitsk. (English summary) *Z. Oper. Res. Ser. A-B* 24 (1980), no. 2, B1-B27. (Authors' summary) **81c:90029** 90A20
- Mertz, Donald W. On Galileo's method of causal proportionality. *Stud. Hist. Philos. Sci.* 11 (1980), no. 3, 229-242. (William R. Shea) **81j:01016** 01A45
- van der Merwe, A. J. (with Groenewald, P. C. N.) Asymptotic distributions for the Stein estimator in multiple regression. *South African Statist. J.* 13 (1979), no. 2, 139-152. (Pi-Erh Lin) **81j:62133** 62J07 (62C20, 62E20)
(with Jánosy, L.; Youngrau, Wolfgang) On the mode of propagation of light. (German summary) *Astronom. Nachr.* 301 (1980), no. 1, 1-7. (Authors' summary) **81f:83007** 83B05 (78A10, 83A05)
- van der Merwe, P. du T. A Bäcklund transformation in physical space-time. *Lett. Nuovo Cimento* (2) 28 (1980), no. 7, 253-255. (From the text) **81i:81018** 81C05 (35A25, 35Q20)
- Mers, Gerhard (with Meinardus, Günter) Zur periodischen Spline-Interpolation. II. *Numerische Methoden der Approximationstheorie, Band 4* (Meeting, Math. Forschungsinst., Oberwolfach, 1977), pp. 204-221. Internat. Schriftenreihe Numer. Math., 42, Birkhäuser, Basel, 1978. (S. D. Riemschneider) **81g:41021** 41A15
(with Meinardus, Günter) Hermite-Interpolation mit periodischen Spline-Funktionen. (English summary) *Numerical methods of approximation theory, Vol. 5* (Conf. Math. Res. Inst., Oberwolfach, 1979), pp. 200-210. Internat. Ser. Numer. Math., 52, Birkhäuser, Basel, 1980. (Gheorghe Micula) **81g:41005** 41A05 (41A15, 65D07)
- Mertzanov, V. Ju. (with Alekseev, O. G.) Problem of optimal distribution of resources. *Kibernetika (Kiev)* 1979, no. 6, 67-72. (Russian); translated as *Cybernetics* 15 (1979), no. 6, 848-854 (1980). (Authors' summary) **81j:90060** 90B30 (90C35)
- Mierzach, Ely Une remarque sur les martingales à deux indices et leurs mesures de Doléans associées. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 9, A435-A438. (Author's summary) **81b:60043** 60C44
- Mertzanov, V. Yu. See Mertzanov, V. Ju.
- Merzljakov, Ju. I. See Kouravka notebook: unsolved problems in group theory, **81d:20001**
- Merkajakov, Ju. P. On the question of constructing difference grids by the geometric method. (Russian) *Čisl. Metody Meh. Splōn. Sredy* 10 (1979), no. 2. *Mat. Modelirovanie*, 105-116. (V. D. Glushenkov) **81h:65093** 65L99
- Mescheder, Bernhard On the number of active \ast -operations needed to compute the discrete Fourier transform. *Acta Inform.* 13 (1980), no. 4, 383-408. (Author's summary) **81f:68069** 68C25 (94A11)
- Meslari, Mauro Images of regular homogeneous convex cones. (Italian. English summary) *Atti Sem. Mat. Fis. Univ. Modena* 27 (1978), no. 2, 297-314 (1979). (S. Kaneyuki) **81g:53038** 53C30 (32M10)
- Meschkowski, Herbert ★ Problemgeschichte der Mathematik. I. (German) [Problem history of mathematics. I.] *Bibliographisches Institut, Mannheim*, 1979. 206 pp. ISBN 3-411-01568-3 (M. Folkerts) **81i:01001** 01-01
- Mesinger, F. Dependence of vorticity analogue and the Rossby wave phase speed on the choice of horizontal grid. *Bull. Acad. Serbe Sci. Arts Cl. Sci. Math. Natur. (N.S.)* No. 10 (1979), 5-15. (Author's summary) **81m:86006** 86A35 (65P05, 76C20)
- Mesmer, Dale M. (with Kramer, Earl S.) A special 52 \times 52 Room-type design. *Ars Combin.* 9 (1980), 39-42. (Authors' summary) **81e:05044** 05B15
(with Kramer, Earl S.; Kreher, Donald L.; Magliveras, Spyros S.) Coherent Room rectangles from permutation groups. *Ars Combin.* 9 (1980), 101-111. (Bhagwandas) **81j:05032** 05B15
(with Kramer, Earl S.; Magliveras, Spyros S.) Some resolutions of $S(8, 8, 24)$. *J. Combin. Theory Ser. A* 29 (1980), no. 2, 166-173. (Peter Hammond) **81j:05039** 05B30 (05B15)
- Mess, G. (with Haggman, B. C.; Horndeski, Gregory Walter) Properties of a covering space defined by Hawking. *J. Math. Phys.* 21 (1980), no. 9, 2412-2416. (Authors' summary) **81i:83036** 83C99 (57M10, 58D25)
- Messa, Kenneth (with Fuchs, László) On reflections in abelian categories. *Comm. Algebra* 8 (1980), no. 1, 53-77. (L. S. Ioffe) **81e:16041** 16A63
- Messner, P. J. On the existence of periodic solutions of Poincaré's second sort in the general problem of three bodies moving in plane. *Proceedings of the Sixth Conference on Mathematical Methods in Celestial Mechanics* (Math. Forschungsinst., Oberwolfach, 1978), Part I. *Celestial Mech.* 21 (1980), no. 1, 55-61. (Author's summary) **81j:70007** 70F07 (70F15)
- Messerschmitt, David G. Accumulation of distortion in tandem communication links. *IEEE Trans. Inform. Theory* 25 (1979), no. 6, 692-698. (Author's summary) **81a:94005** 94A05
- Messiah, Albert ★ Квантовая механика. Том 2. (Russian) [Quantum mechanics. Vol. 2] Translated from the French by P. P. Kulik. "Nauka", Moscow, 1979. 584 pp. (P. Roman) **81g:81001** 81-01
- Messick, Roger E. (with Napolitano, Michele) On strong slot injection into a subsonic laminar boundary layer. Special issue: computational methods in nonlinear fluid mechanics. *Comput. & Fluids* 8 (1980), no. 2, 199-212. (Authors' summary) **81d:76038** 76D10 (76G99)
- Messiter, A. F. (with Adamson, T. C., Jr.) Analysis of two-dimensional interactions between shock waves and boundary layers. *Annual review of fluid mechanics, Vol. 12*, pp. 103-138. *Annual Reviews, Palo Alto, Calif.*, 1980. (Rishi Ram Sharma) **81h:76039** 76L05 (76X05)
- Mestre, Jean-François Points rationnels de la courbe modulaire $X_0(169)$. *Ann. Inst. Fourier (Grenoble)* 30 (1980), no. 2, v, 17-27. (M. A. Kenku) **81h:10036** 10D12 (10B10, 14K07)
- Mestvirilvi, M. A. (with Logunov, A. A.; Rëulidvil, G. L.; Samohin, A. P.) Contribution of distant singularities in the cos θ -plane to the scattering amplitude and distribution function of inclusive processes. (Russian. English summary) *Teoret. Mat. Fiz.* 43 (1980), no. 3, 291-308. (V. S. Ofhovskij) **81i:81088** 81F20
- Metakides, G. (with Nerode, Anil) Recursion theory on fields and abstract dependence. *J. Algebra* 65 (1980), no. 1, 36-59. (Viggo Stoltenberg-Hansen) **81k:03041** 03D45
- Metcalf, C. (with Bazzoni, Silvana) On abelian torsion-free separable groups and their endomorphism rings. *Symposia Mathematica, Vol. XXIII* (Conf. Abelian Groups and their Relationship to the Theory of Modules, INDAM, Rome, 1977), pp. 259-285. Academic Press, London, 1979. (B. Goldsmith) **81f:20068** 20K30 (16A65)
- Metel'skii, A. V. (with Minjuk, S. A.) On the theory of the complete observability of systems with lag. (Russian) *Differentsial'nye Uravneniya* 14 (1978), no. 4, 624-633, 764. (F. M. Kirillova) **81i:93008** 93B07
- Metel'skii, N. N. (with Kornienko, N. M.) Normalizer of a representation of a symmetric group and a quadratic choice problem. (Russian. English summary) *Vest. Akad. Nauk BSSR Ser. Fiz.-Mat. Nauk* 1979, no. 4, 5-9, 139. (A.-A. A. Jucys) **81h:80009** 05A05 (20B25)
- Méthvier, Guy Une caractérisation des opérateurs elliptiques autoadjoints. *Séminaire Goulaouic-Schwartz 1977/1978: Équations aux dérivées partielles, Exp. No. 2*, 15 pp. École Polytech., Palaiseau, 1978. (From the text) **81i:35167** 35S05
Valeurs propres d'opérateurs définis par la restriction de systèmes variationnels à des sous-espaces. *J. Math. Pures Appl.* (9) 57 (1978), no. 2, 133-156. (Joel Spruck) **81c:35100** 35P20 (47A70)
Hypoellipticité analytique sur des groupes nilpotents de rang 2. *Duke Math. J.* 47 (1980), no. 1, 195-221. (David S. Tartakoff) **81i:35037** 35H05 (22E30, 58G05)
- Méthvier, M. (with Pellaumail, Jean) On a stopped Doob's inequality and general stochastic equations. *Ann. Probab.* 8 (1980), no. 1, 96-114. (Philip Protter) **81h:60067** 60H20 (60G44)
- Metrikis, V. S. (with Butenin, N. V.; Butenina, N. N.; Zemskov, P. A.) On the theory of stability of self-oscillations of a stand with an automatic pilot. (Russian) *Theory of stability and its applications* (Russian), pp. 88-94, 299. "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. (Authors' summary) **81c:93068** 93D99 (34C15, 58F13)
- Metropolis, N. The MANIAC. *A history of computing in the twentieth century*, pp. 457-464. Academic Press, New York, 1980. (See **81i:68002**) 68-03 (01A65, 83-03)
(with Worlton, J.) A trilogy on errors in the history of computing. *Ann. Hist. Comput.* 2 (1980), no. 1, 49-59. (Authors' summary) **81a:68003** 68-03 (01A55)
See also *History of computing in the twentieth century*, **81i:68002**
- Metten, St. (with Bauer, H. F.; Siekmann, J.) Dynamic behavior of distensible fluid lines carrying a pulsating incompressible liquid. (German and Russian summaries) *Z. Angew. Math. Mech.* 60 (1980), no. 5, 221-234. (Authors' summary) **81j:73055** 73J05 (76Z05)
- Mettke, Holger Quadratische Splineinterpolation bei zusammenfallendem Interpolations- und Splinegitter. *Beiträge Numer. Math.* 8 (1980), 113-119. (J. W. Schmidt) **81i:65010** 65D07 (41A15)
- Mettler, Dieter See Leibniz in Paris, **81m:01022a** and Leibniz in Paris, **81m:01022b**
- Metwalli, S. M. (with Elzoughby, A. A.; Shawki, G. S. A.) Linearized ridge-path method for function minimization. *J. Optim. Theory Appl.* 30 (1980), no. 2, 161-179. (K. G. Murty) **81e:90087** 90C30 (65K10)
- Metze, Gernot (with Reynolds, Dennis A.) Fault detection capabilities of alternating logic. *IEEE Trans. Comput.* 27 (1978), no. 12, 1093-1098. (Authors' summary) **81g:94062** 94C10
See also Oberman, R. M. M., **81c:94053**
- Metzger, Thomas A. The kernel of the Poincaré series operator. *Proc. Amer. Math. Soc.* 76 (1979), no. 2, 289-292. (G. M. Ljan) **81c:30083** 30F35
- Metzler, Wolfgang Äquivalenzklassen von Gruppenbeschreibungen, Identitäten und einfacher Homotopietyp in niedrigen Dimensionen. *Homological group theory* (Proc. Sympos., Durham, 1977), pp. 291-326. *London Math. Soc. Lecture Note Ser.* 36, Cambridge Univ. Press, Cambridge, 1979. (Donald W. Kahn) **81h:57001** 57M05 (57M20)
Two-dimensional complexes with torsion values not realizable by self-equivalences. With an appendix by C. T. C. Wall. *Homological group theory* (Proc. Sympos., Durham, 1977), pp. 327-337. *London Math. Soc. Lecture Note Ser.* 36, Cambridge Univ. Press, Cambridge, 1979. (Donald W. Kahn) **81h:55003** 55P10 (18F25, 57M20)
- Meunargija, O. V. (with Vyenskii, S. V.) Asymptotics of the pion electromagnetic form-factor in a new phase representation. (Russian. English summary) *Teoret. Mat. Fiz.* 43 (1980), no. 1, 100-106. (Authors' summary) **81i:81096** 81G05 (81F20)
- Meunargija, T. V. (with Zgenti, V. S.; Giunter, A. F.; Chadaja, F. G.) Solution of problems of the theory of plates and shells by I. N. Vekua's method. *Theory of shells* (Proc. Third IUTAM Sympos., Tbilisi, 1978), pp. 669-684. North-Holland, Amsterdam,

1980. (Vadim Komkov) **81e:73073** 73L99
- de Mey, G. See De Mey, G.
- von Meyema, Karl Einsteins Dialog mit den Kollegen. *Einstein Symposium, Berlin* (1979), pp. 464-489, *Lecture Notes in Phys.*, 100, Springer, Berlin, 1979. (H. Tredter) **81m:01068** 01A70 (01A60)
- See also Paull, Wolfgang. **81c:01034**
- de Meyer, A. See De Meyer, A.
- Meyer, Albert R. (with Bruss, Anna R.) On time-space classes and their relation to the theory of real addition. *Conference Record of the Tenth Annual ACM Symposium on Theory of Computing (San Diego, Calif., 1978)*, pp. 233-239, ACM, New York, 1978. (Authors' summary) **81i:68056** 68C25 (03B25, 03D15)
- (with Winkmann, K.) The fundamental theorem of complexity theory (preliminary version). *Foundations of computer science, III (Third Adu. Course, Amsterdam, 1978)*, Part 1, pp. 97-112, *Math. Centre Tracts*, 108, Math. Centrum, Amsterdam, 1979. (From the introduction) **81h:68053** 68C25 (03D15)
- (with Parikh, Rohit) Definability in dynamic logic. *Conference Proceedings of the Twelfth Annual ACM Symposium on Theory of Computing (Los Angeles, Calif., 1980)*, pp. 1-7, ACM, New York, 1980. (See **81i:68006**) **03B60** (68B10)
- (with Rivest, Ronald L.; Kleitman, Daniel J.; Winkmann, K.) Coping with errors in binary search procedures. *J. Comput. System Sci.* **20** (1980), no. 3, 396-404. (Authors' summary) **81i:68092** 68E05 (68C25)
- Meyer, Bernd E. See Formal model for information systems. **81m:68003**
- Meyer, Carl D., Jr. An alternative expression for the mean first passage matrix. *Linear Algebra Appl.* **22** (1978), 41-47. (Author's summary) **81i:60060** 60J10
- The condition of a finite Markov chain and perturbation bounds for the limiting probabilities. *SIAM J. Algebraic Discrete Methods* **1** (1980), no. 3, 273-283. (Dean Isaacson) **81m:60127** 60J10
- Meyer, Carol V. Approximation filtrante de diagrammes finis par Pro-C. *Ann. Sci. Math. Québec* **4** (1980), no. 1, 35-57. (Timothy Porter) **81f:18006** 18A35
- Meyer, D. (with Veselić, K.) On some new inclusion theorems for the eigenvalues of partitioned matrices. *Numer. Math.* **34** (1980), no. 4, 431-437. (Petr Lieb) **81j:15019** 15A42 (65F15)
- Meyer, Donald L. (with Hartz, Mary A.) The Bayesian analysis of a nonadditive model. *J. Amer. Statist. Assoc.* **74** (1979), no. 366, part 1, 383-388. (Joaquin Diaz Saiz) **81d:62028** 62F15 (62J99)
- de Meyer, H. E. See De Meyer, H. E.
- Meyer, Harold D. (with Nelson, Paul, Jr.) Error analysis and convergence for the spectral synthesis method with interfaces. (German summary) *Z. Angew. Math. Phys.* **30** (1979), no. 6, 901-912. (Edward W. Larsen) **81a:82060** 82A70 (65N30)
- Meyer, Kenneth R. (with Markus, Lawrence) Periodic orbits and solenoids in generic Hamiltonian dynamical systems. *Amer. J. Math.* **102** (1980), no. 1, 25-92. (Clark Robinson) **81g:58013** 58F05 (34C25, 58F22)
- Meyer, M. Eugene (with Fertig, K. W.; Mann, Nancy R.) On constructing prediction intervals for samples from a Weibull or extreme value distribution. *Technometrics* **22** (1980), no. 4, 567-573. (Authors' summary) **81k:62139** 62N05
- Meyer, Michel Pragmatique, présupposition et référence. *Internat. Logic Rev.* **17** (1978), 84-95. (John Bacon) **81d:03006** 03A05
- Fonctions propositionnelles et assumption ontologique. *Logique et Anal. (N.S.)* **22** (1979), no. 85-86, 181-189. (Siegfried Gottwald) **81h:03012** 03A05
- Meyer, P. A. (with Dellacherie, C.) À propos du travail de Yor sur le grossissement des tribus. *Séminaire de Probabilités, XII (Univ. Strasbourg, Strasbourg, 1976/1977)*, pp. 70-77, *Lecture Notes in Math.*, 649, Springer, Berlin, 1978. (E. Lenglart) **81g:60047** 60G44
- Correction à: "Caractérisation de BMO par un opérateur maximal" [*Séminaire de Probabilités, XI (Univ. Strasbourg, Strasbourg, 1975/1976)*, pp. 470-475, *Lecture Notes in Math.*, 581, Springer, Berlin, 1977; MR **58** #18722d]. *Séminaire de Probabilités, XII (Univ. Strasbourg, Strasbourg, 1976/1977)*, p. 739, *Lecture Notes in Math.*, 649, Springer, Berlin, 1978. (Editors) **81m:60095** 60H05 (60G44)
- Correction à: "Retour sur la représentation de BMO" [*Séminaire de Probabilités, XI (Univ. Strasbourg, Strasbourg, 1975/1976)*, pp. 476-477, *Lecture Notes in Math.*, 581, Springer, Berlin, 1977; MR **58** #18722e]. *Séminaire de Probabilités, XII (Univ. Strasbourg, Strasbourg, 1976/1977)*, p. 739, *Lecture Notes in Math.*, 649, Springer, Berlin, 1978. (Editors) **81m:60096** 60H05 (60G44)
- Correction à: "Démonstration probabiliste de certaines inégalités de Littlewood-Paley, IV" [*Séminaire de Probabilités, X (Première partie, Univ. Strasbourg, Strasbourg, année universitaire 1974/1975)*, pp. 175-183, *Lecture Notes in Math.*, 511, Springer, Berlin, 1976; MR **58** #18751e]. *Séminaire de Probabilités, XII (Univ. Strasbourg, Strasbourg, 1976/1977)*, p. 741, *Lecture Notes in Math.*, 649, Springer, Berlin, 1978. (Editors) **81m:60147** 60J65 (42A61, 60G46)
- Convergence faible et compacité des temps d'arrêt d'après Baxter et Chacon. *Séminaire de Probabilités, XII (Univ. Strasbourg, Strasbourg, 1976/1977)*, pp. 411-423, *Lecture Notes in Math.*, 649, Springer, Berlin, 1978. (M. Iosifescu (Zbl 378:60022)) **81m:60009** 60B10 (60G40)
- La formule d'Itô pour le mouvement brownien d'après G. Brosamer. *Séminaire de Probabilités, XII (Univ. Strasbourg, Strasbourg, 1976/1977)*, pp. 763-769, *Lecture Notes in Math.*, 649, Springer, Berlin, 1978. (A. D. Wentzell (Ventcel)) **81i:60071** 60J55
- Martingales locales fonctionnelles additives. I. *Séminaire de Probabilités, XII (Univ. Strasbourg, Strasbourg, 1976/1977)*, pp. 775-785, *Lecture Notes in Math.*, 649, Springer, Berlin, 1978. (Nicole El Karoui) **81j:60039a** 60G44 (60J55)
- Martingales locales fonctionnelles additives. II. *Séminaire de Probabilités, XII (Univ. Strasbourg, Strasbourg, 1976/1977)*, pp. 786-803, *Lecture Notes in Math.*, 649, Springer, Berlin, 1978. (Nicole El Karoui) **81j:60059b** 60G44 (60J55)
- Une remarque sur le calcul stochastique dépendant d'un paramètre. *Séminaire de Probabilités, XIII (Univ. Strasbourg, Strasbourg, 1977/78)*, pp. 199-203, *Lecture Notes in Math.*, 721, Springer, Berlin, 1979. (Joseph Horowitz) **81h:60042** 60G07
- Représentations multiplicatives de sousmartingales (d'après J. Azéma). *Séminaire de Probabilités, XIII (Univ. Strasbourg, Strasbourg, 1977/78)*, pp. 240-249, *Lecture Notes in Math.*, 721, Springer, Berlin, 1979. (Michael Sharpe) **81h:60043** 60G07
- (with Doléans-Dade, C.) Inégalités de normes avec poids. *Séminaire de Probabilités, XIII (Univ. Strasbourg, Strasbourg, 1977/78)*, pp. 313-331, *Lecture Notes in Math.*, 721, Springer, Berlin, 1979. (Norihiko Kazamaki) **81a:60060** 60G46
- Caractérisation des semimartingales, d'après Dellacherie. *Séminaire de Probabilités, XIII (Univ. Strasbourg, Strasbourg, 1977/78)*, pp. 620-623, *Lecture Notes in Math.*, 721, Springer, Berlin, 1979. (M. M. Rao) **81c:60064** 60G44
- Meyer, P. R. (with Wilson, Richard G.) Cardinal functions on topological spaces satisfying order conditions. *Topology (Proc. Fourth Colloq., Budapest, 1978)*, Vol. II, pp. 839-847, *Colloq. Math. Soc. János Bolyai*, 23, North-Holland, Amsterdam, 1980. (O. T. Alsas) **81m:54013** 54A25
- Meyer, Pascal Local calculation of black hole radiance. *Phys. Lett. A* **65** (1978), no. 4, 369-370. (Author's summary) **81k:83034** 83C99 (83F05)
- The temperature of a gravitational field. *Phys. Lett. A* **72** (1979), no. 6, 398-400. (From the summary and text) **81j:81029** 81C99 (81C05)
- Meyer, Ph. Liberté asymptotique. (English summary) *Problèmes théoriques liés aux nouvelles particules (Montpellier, 1977)*, pp. 111-141, *Colloques Nat. CNRS*, 937, CNRS, Paris, 1978. (Author's summary) **81g:81095** 81G05
- Meyer, R. H. (with Gerace, W. J.; Walker, J. F., Jr.) The effective Hamiltonian approach for the two-nucleon distribution function. *Nuclear Phys. A* **331** (1979), no. 2, 464-476. (Authors' summary) **81a:81108** 81G35
- Meyer, R. R. (with Mangasarian, O. L.) Nonlinear perturbation of linear programs. *SIAM J. Control Optim.* **17** (1979), no. 6, 745-752. (A. G. Azpeitia) **81i:90134** 90C30
- (with Thakkar, M. V.; Hallman, W. P.) Rational mixed-integer and polyhedral union minimization models. *Math. Oper. Res.* **5** (1980), no. 1, 135-146. (M. Mafas) **81c:90061** 90C11
- Meyer, Richard E. On the meaning of the Boussinesq and Korteweg-de Vries equations. *Bull. Calcutta Math. Soc.* **71** (1979), no. 3, 121-130. (Author's summary) **81g:76017** 76B15 (35Q20)
- Exponential asymptotics. *SIAM Rev.* **22** (1980), no. 2, 213-224. (F. W. J. Olver) **81c:41070** 41A60 (34E20)
- See also Singular perturbations and asymptotics. **81m:34001**
- Meyer, Robert K. (with McRobbie, Michael A.) A note on the admissibility of cut in relevant tableau systems. *Z. Math. Logik Grundlag. Math.* **25** (1979), no. 6, 511-512. (Michael Byrd) **81c:03016** 03B45
- Career induction for quantifiers. *Notre Dame J. Formal Logic* **21** (1980), no. 3, 539-548. (Stephen Read) **81i:03022** 03B45
- (with Giambone, Steve) R_+ is contained in T_+ . *Polish Acad. Sci. Inst. Philos. Sociol. Bull. Sect. Logic* **9** (1980), no. 1, 30-32. (John R. Chidgey) **81f:03027** 03B45
- Sentential constants in relevant implication (abstract). *Polish Acad. Sci. Inst. Philos. Sociol. Bull. Sect. Logic* **9** (1980), no. 1, 33-38. (Editors) **81f:03028** 03B45
- Meyer, S. C. (with Mattheyses, R. M.) Modular control schemata for parallel asynchronous systems. *Proceedings of a Conference on Theoretical Computer Science (Univ. Waterloo, Waterloo, Ont., 1977)*, pp. 61-69, Univ. Waterloo, Waterloo, Ont., 1978. (Karel Čulík) **81c:68036** 68C40 (68B20)
- Meyer, Sybille Eine asymptotische Zerlegung der Lösung einer Randwertaufgabe für eine entartete gewöhnliche Differentialgleichung der Ordnung 2m mit einem kleinen Parameter bei der höchsten Ableitung. *Wiss. Z. Tech. Hochsch. Karl-Marx-Stadt* **20** (1978), no. 6, 673-681. (A. Elbert) **81d:34012** 34B05
- Zur Theorie der entarteten Gleichungen mit kleinem Parameter bei den höchsten Ableitungen. *Wiss. Z. Tech. Hochsch. Karl-Marx-Stadt* **21** (1979), no. 7, 865-871. (L. A. Ivanov) **81c:35015** 35G05
- Meyer, Werner (with Perlis, Robert) On the genus of norm forms. *Math. Ann.* **246** (1979/80), no. 2, 117-119. (Ezra Brown) **81f:10031** 10C99 (12A50, 12A55)
- Meyer, Wilfried (with Werner, Hans-Joachim) A quadratically convergent multiconfiguration-self-consistent field method with simultaneous optimization of orbitals and CI coefficients. *J. Chem. Phys.* **73** (1980), no. 5, 2342-2356. (C. R. Garibotti) **81m:81081** 81G55 (81Hxx)
- Meyer, Yves (with Coifman, Ronald R.) ★Au delà des opérateurs pseudo-différentiels. (French) [Beyond pseudodifferential operators] With an English summary. *Astérisque*, 57, Société Mathématique de France, Paris, 1978. i + 185 pp. (S. G. Gindikin) **81h:47061** 47G05 (35S05, 42B20, 58G15)
- (with Coifman, Ronald R.) Commutators of singular integrals. *Fourier analysis and approximation theory (Proc. Colloq., Budapest, 1976)*, Vol. I, pp. 265-273, *Colloq. Math. Soc. János Bolyai*, 19, North-Holland, Amsterdam, 1978. (Kenneth F. Andersen) **81d:42016** 42A50 (42B20)
- (with Hartman, S.) Interpolation harmonique sur les compacts. *Colloq. Math.* **40** (1978/79), no. 2, 265-276. (J.-P. Kahane) **81h:42019** 42B25
- Produits de Riesz généralisés. *Séminar on Harmonic Analysis, 1978-1979 (French)*, pp. 38-48, *Publ. Math. Orsay* **79**, 7, Univ. Paris XI, Orsay, 1979. (Alberto Torchinsky) **81m:42011** 42A55
- (with Coifman, Ronald R.) Le théorème de Calderón par les "méthodes de variable réelle". (English summary) *Séminar on Harmonic Analysis, 1978-1979 (French)*, pp. 49-55, *Publ. Math. Orsay* **79**, 7, Univ. Paris XI, Orsay, 1979. (A. B. Aleksandrov) **81m:42009** 42A50 (30E20)
- (with Coifman, Ronald R.) Fourier analysis of multilinear convolutions, Calderón's theorem, and analysis of Lipschitz curves. *Euclidean harmonic analysis (Proc. Sem. Univ. Maryland, College Park, Md., 1979)*, pp. 104-122, *Lecture Notes in Math.*, 779, Springer, Berlin, 1980. (John A. Gosselin) **81g:42021** 42B20 (42B10, 42B15)
- Meyer-König, W. (with Jakimovski, A.) Uniform convergence of power series expansions on the boundary. *J. Reine Angew. Math.* **318** (1980), 126-136. (C. L. Bena) **81f:30081** 30B30
- Meyer-Nieberg, Peter Ein elementarer Beweis einer Charakterisierung von M-Räumen. *Math. Z.* **161** (1978), no. 1, 95-96. (Ju. A. Abramovitch) **81c:46017** 46B30 (46A32)
- Meyerov, M. V. See Meorov, M. V.
- Meyers, William James Topological sorting and well-formed strings. *Fund. Inform.* **(4)** **2** (1978/79), no. 2, 199-209. (Stephen Soule) **81c:05029** 05C05 (68E05)
- Meyerson, Mark D. (with Jerrard, Richard) Homotopy with m-functions. *Pacific J. Math.* **84** (1979), no. 2, 305-318. (M. Arkowitz) **81c:55018** 55P99 (55N40)
- Meys, Klaus-Hermann (with Werner, Bodo) Maximum and monotonicity principles for elliptic boundary value problems in partitioned domains. *Applicable Anal.* **11** (1980/81), no. 1, 1-12. (J.-P. Gossez) **81k:35063** 35J65

- Meynuel, Henri** (with Duchet, Pierre) A note on kernel-critical graphs. *Discrete Math.* 33 (1981), no. 1, 103–105. (From the introduction) **81k:05052** 05C20
- Meystre, Pierre** (with Bonifacio, Rodolfo; Moore, Gerald T.; Scully, Marlan O.) Coherent dynamics of a free-electron laser with arbitrary magnet geometry. II. Conservation laws, small-signal theory, and gain-spread relations. *Phys. Rev. A* 3 (1980), no. 6, 2009–2019. (Authors' summary) **81k:81183b** 81K05
- Mesencev, A. V.** (with Gusiatnikov, P. B.) An evasion problem with integral constraints. (Russian) *Differentsial'nye Uravneniya* 14 (1978), no. 6, 994–1001, 1147. (Authors' summary) **81f:90140** 90D26
- (with Gusiatnikov, P. B.; Cvetkova, N. V.) Evasion in a differential game with integral constraints and nonconvex control sets. (Russian) *Vestnik Moskov. Univ. Ser. XV Vyčisl. Mat. Kibernet.* 1979, no. 2, 38–45, 71. (Authors' summary) **81i:90229** 90D26
- Métière, Y.** Quotients de Rayleigh et de Timoshenko en dynamique. *Mech. Res. Comm.* 7 (1980), no. 2, 65–70. (From the introduction) **81k:73035** 73K12
- Militarjan, A. G.** (with Gevorkjan, D. N.) Classes of codes that correct single asymmetric errors. (Russian. Armenian summary) *Akad. Nauk Armjan. SSR Dokl.* 70 (1980), no. 4, 216–218. (A. Pethő) **81m:94023** 94B60
- Miah, Sirajul Haque** On group algebras of groups of order q^2 . *Bull. Soc. Math. Belg.* 28 (1976), no. 3, 217–228. (I. B. S. Passi) **81c:20006** 20C05 (16A26)
- Mimame, A. G.** (with Salehi, H.) On the prediction of periodically correlated stochastic processes. *Multivariate analysis, V* (Proc. Fifth Internat. Sympos., Univ. Pittsburgh, Pittsburgh, Pa., 1978), pp. 167–179, North-Holland, Amsterdam, 1980. (J. B. Robertson) **81c:60054** 60G25 (62M20)
- Miao, Lang Chi** (with Tseng, Chun Hung) On generalized Dedekind functions. *Chinese J. Math.* 7 (1979), no. 1, 15–21. (J. Lehner) **81c:10026** 10D99
- de Mistello, Isabel Doti** Extension of actions on Stiefel manifolds. *Pacific J. Math.* 84 (1979), no. 1, 155–169. (R. M. Vogt) **81c:57042** 57S25
- Mistello, Roberto J.** On the asymptotic expansion of the trace of the heat kernel. *Proceedings of the Eleventh Brazilian Mathematical Colloquium* (Poços de Caldas, 1977), Vol. I (Portuguese), pp. 261–277, Inst. Mat. Pura Apl., Rio de Janeiro, 1978. (David L. DeGeorge) **81k:58068** 58G25 (22E46, 58G11)
- The Minakshisundaram-Pleijel coefficients for the vector-valued heat kernel on compact locally symmetric spaces of negative curvature. *Trans. Amer. Math. Soc.* 260 (1980), no. 1, 1–33. (H. D. Fegan) **81c:58033** 58G11 (10D40, 22E40, 43A85, 53C35, 58G25)
- Micali, Arithano** (with Revoy, Ph.) Modules quadratiques. *Bull. Soc. Math. France Mém.* No. 63 (1979), 144 pp. (1980). (Maurice Flamant) **81f:15035** 15A63 (10C05)
- (with Paques, Antonio) Sur le groupe des extensions cycliques. (English summary) *J. Algebra* 63 (1980), no. 1, 268–278. (James Hein) **81h:13001** 13B02
- Micali, Silvio** (with Vazirani, Vijay V.) An $O(\sqrt{|V|} \cdot |E|)$ algorithm for finding maximum matching in general graphs. *21st Annual Symposium on Foundations of Computer Science* (Syracuse, N.Y., 1980), pp. 17–27, IEEE, New York, 1980. (See **81c:68006**) **68E10** (68C25)
- (with Böhm, Corrado) Minimal forms in λ -calculus computations. *J. Symbolic Logic* 45 (1980), no. 1, 165–171. (Gerd Mitschke) **81h:03030** 03B40
- Michell, Charles A.** Infinite spline interpolation. *Approximation in Theorie und Praxis* (Proc. Sympos., Siegen, 1979), pp. 209–238, Bibliographisches Inst., Mannheim, 1979. (Jean Tzimbalario) **81c:41022** 41A15
- On a numerically efficient method for computing multivariate B-splines. *Multivariate approximation theory* (Proc. Conf., Math. Res. Inst., Oberwolfach, 1979), pp. 211–248, Internat. Ser. Numer. Math., 51, Birkhäuser, Basel, 1979. (Derek W. Arthur) **81g:65017** 65D07 (41A15)
- (with Cavaretta, Alfred S., Jr.; Sharma, Ambikeshwar) Multivariate interpolation and the Radon transform. II. Some further examples. *Quantitative approximation* (Proc. Internat. Sympos., Bonn, 1979), pp. 49–62, Academic Press, New York, 1980. (L. L. Schumaker) **81m:41037** 41A63 (41A05, 44A15)
- Some positive Cotes numbers for the Chebyshev weight function. *Aequationes Math.* 21 (1980), no. 1, 105–109. (Jean Tzimbalario) **81k:41021** 41A55 (65D32)
- (with Cavaretta, Alfred S., Jr.; Sharma, Ambikeshwar) Multivariate interpolation and the Radon transform. *Math. Z.* 174 (1980), no. 3, 263–279. (L. L. Schumaker) **81m:41036** 41A63 (41A05, 44A15)
- (with Rivlin, T. J.) Optimal recovery of best approximations. *Resulante Math.* 3 (1980), no. 1, 25–32. (J. Szabados) **81h:41031** 41A50
- Micha, David A.** (with Bosanac, S.) Long-lived states in atom-surface collisions: reciprocal lattice vector poles. *J. Chem. Phys.* 73 (1980), no. 12, 6169–6173. (Authors' summary) **81k:81088** 81F99
- Michael, Ernest A.** Some results on continuous selections. *Topological structures, II* (Proc. Sympos. Topology and Geom., Amsterdam, 1978), Part 1, pp. 161–163, Math. Centre Tracts, 115, Math. Centrum, Amsterdam, 1979. (T. Maćkowiak) **81c:54027** 54C65
- Continuous selections: some old and some new results. *Topology* (Proc. Fourth Colloq., Budapest, 1978), Vol. II, pp. 849–851, Colloq. Math. Soc. János Bolyai, 23, North-Holland, Amsterdam, 1980. (See **81c:54001**) **54C65**
- (with Pixley, C.) A unified theorem on continuous selections. *Pacific J. Math.* 87 (1980), no. 1, 187–188. (P. J. Collins) **81m:54025a** 54C65 (46B99, 90C25)
- Continuous selections and finite-dimensional sets. *Pacific J. Math.* 87 (1980), no. 1, 189–197. (P. J. Collins) **81m:54025b** 54C65 (46B99, 90C25)
- Michael, J. H.** Elliptic partial differential equations on convex sets. *J. London Math. Soc.* (2) 21 (1980), no. 1, 133–143. (G. P. Bava) **81c:35052** 35J25
- Michaelidis, P.** Orbits near a 2/3 resonance. *Astronom. and Astrophys.* 91 (1980), no. 1–2, 165–174. (K. B. Bhatnagar) **81m:85003** 85A05 (58F22, 70F15)
- Michaels, Axel** ★ Beweisverfahren in der vedischen Sakralgeometrie. (German) [Methods of proof in Vedic sacred geometry] Ein Beitrag zur Entstehungsgeschichte von Wissenschaft. [A contribution to the history of the origin of science] With an English summary. Alt- und Neindische Studien [Old and New Indian Studies], 20. Franz Steiner Verlag GmbH, Wiesbaden, 1978. xiv + 209 pp. ISBN 3-515-02978-8 (A. I. Volodarskii) **81g:01004** 01A32
- Michalak, P.** (with Tatjewski, P.) Algorithms of prediction methods in multilevel optimization. (Russian summary) *Systems Sci.* 6 (1980), no. 1, 23–43. (Y. Cherruault) **81k:49027** 49D30 (65K10)
- Michalek, J.** The queuing system with random repeating service. (Russian summary) *Scripta Fac. Sci. Natur. UJEP Brnoensis—Math.* 9 (1979), no. 5, 1–12. (Author's summary) **81a:68043** 68C15 (60K25, 68A05)
- Michalek, Jaroslav** The distribution of the estimate of entropy and its applications. *Arch. Math. (Brno)* 15 (1979), no. 3, 133–141. (Ibrahim A. Ahmad) **81g:62075** 62G05 (94A17)
- Michalewicz, G.** (with Siret, J.-M.; Bertrand, P.) On the use of aggregation techniques. *Handbook of large scale systems engineering applications*, pp. 20–37, North-Holland, Amsterdam, 1979. (Guy Jumarie) **81m:93010** 93A15 (93A13)
- chojnowska-Michalik, Anna** See Chojnowska-Michalik, Anna
- Michalik, Czesław** (with Piekarski, Marian S.) A low-pass filter with a convex attenuation characteristic in the pass-band and with maximum asymptotic attenuation. (Polish. English, French, German and Russian summaries) *Asymptotic Attenuation*. 26 (1980), no. 2, 511–523. (Authors' summary) **81k:94044** 94C05
- Michalodimitrakakis, M.** (with Ithiaroglou, S.; Katopodis, K.) Restricted problem: families of vertical critical periodic orbits. *Astronom. and Astrophys.* 90 (1980), no. 3, 324–326. (Authors' summary) **81j:70006** 70F07 (58F22)
- Hill's problem: families of three-dimensional periodic orbits. I. *Astrophys. and Space Sci.* 68 (1980), no. 1, 253–268. (Author's summary) **81c:70007** 70F15
- The families CIV and M2V of the three-dimensional general three-body problem. *Astronom. and Astrophys.* 93 (1981), no. 1–2, 212–218. (Author's summary) **81m:70017** 70F07 (58F05)
- Michalopoulos, C. D.** (with Hanna, S. Y.) Improved lower bounds for buckling loads and fundamental frequencies of beams. *Trans. ASME Ser. E J. Appl. Mech.* 46 (1979), no. 3, 696–698. (M. C. Singh) **81c:73045** 73H05 (49G10, 73K05)
- Michalopoulos, Panos G.** (with Stephanopoulos, Gregory; Stephanopoulos, George) An application of shock wave theory to traffic signal control. *Transportation Res. Part B* 15 (1981), no. 1, 35–51. (Authors' summary) **81m:90051** 90B20
- Michalowski, Wojciech** (with Kersten, Grzegorz; Nykowski, Ireneusz) On a certain sensitivity analysis in linear programming problems. I. (Polish. English and Russian summaries) *Przeegląd Statyst.* 25 (1978), no. 4, 495–516 (1979). (Authors' summary) **81h:90102** 90C05
- Michalski, Jacek** On some functors from the category of n -groups. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math.* 27 (1979), no. 6, 437–441. (Author's summary) **81i:20108** 20N15 (08A60, 18B99)
- Inductive and projective limits of n -groups. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math.* 27 (1979), no. 6, 443–446. (Author's summary) **81i:20109** 20N15 (08A60, 18B99)
- Michalski, Ryszard S.** Knowledge acquisition through conceptual clustering: a theoretical framework and an algorithm for partitioning data into conjunctive concepts. *Internat. J. Policy Anal. Inform. Systems* 4 (1980), no. 3, 219–244. **81m:68073** 68G10
- Michard, Pierre-Jacques** (with Dutoya, Denis) Une méthode de volumes finis de type implicite pour le calcul des écoulements elliptiques. (English summary) *Rech. Astronaut.* 1980, no. 2, 123–129. (Authors' summary) **81k:65101** 65N30 (76C99)
- Michavila Pitarach, Francisco F.** (with Gavete Corvinos, Luis) Approximate solution of a particular parabolic differential equation by finite elements. (Spanish) *Gaceta Mat.* (1) (Madrid) 30 (1978), no. 5–6, 124–130. (L. Collatz) **81c:65057** 65N30
- Michel, Anthony N.** (with Skar, Sherwin J.; Miller, Richard K.) Periodic solutions of systems of ordinary differential equations. *Differential equations* (Proc. Eighth Fall Conf., Oklahoma State Univ., Stillwater, Okla., 1979), pp. 51–64, Academic Press, New York, 1980. (M. K. Grammatikopoulos) **81k:34048** 34C25
- (with Tang, Wang; Hale, Harry W.) On structure and stability of interconnected dynamical systems. *IEEE Trans. Circuits and Systems* 27 (1980), no. 5, 391–405. (Authors' summary) **81k:93053** 93D25 (05C20, 93A15)
- (with Miller, Richard K.) On the response of nonlinear multivariable interconnected feedback systems to periodic input signals. *IEEE Trans. Circuits and Systems* 27 (1980), no. 11, 1088–1097. (Authors' summary) **81j:93043** 93D15 (45D05, 93C10)
- (with Miller, Richard K.) Asymptotic stability of systems: results involving the system topology. *SIAM J. Control Optim.* 18 (1980), no. 2, 181–190. (Günter Kern) **81h:93052** 93D20 (34D05, 70K20)
- (with Miller, Richard K.) On existence of periodic motions in nonlinear control systems with periodic inputs. *SIAM J. Control Optim.* 18 (1980), no. 5, 585–598. (E. F. Infante) **81m:93040** 93C10 (93C20)
- Michel, Bernd** Energy of thermoelastic inclusions in a semi-infinite solid. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Tech.* 27 (1979), no. 2, 121–124. (Aloknath Chakrabarti) **81b:73056** 73U05
- Point defects and inclusions near solid surfaces and interfaces. (Polish and Russian summaries) *Arch. Mech. (Arch. Mech. Stos.)* 32 (1980), no. 1, 73–79. (Author's summary) **81c:73013** 73C40 (80A20)
- Michel, Dominique** Bimartingales invariantes sous l'action d'une application pseudo-conforme et fonctions pluriharmoniques. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 22, A1037–A1040. (Yves Le Jan) **81g:60057** 60G60 (32A35, 60G44)
- Régularité de lois conditionnelles en théorie du filtrage non linéaire. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 8, A387. (Author's summary) **81a:60054** 60G35 (60H05)
- See also Malliaris, Paul, **81d:60077**
- Michel, Françoise** Inversibilité des noeuds et idéaux ambiges. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 19, A909–A912. (Author's summary) **81c:57026** 57Q45 (10C05)
- Michel, Horst** ★ Mass- and Integrationstheorie. I. (German) [Measure and integration theory. I] Studienbücherei. [Textbook Library] VEB Deutscher Verlag der Wissenschaften, Berlin, 1978. 204 pp. (From the preface) **81k:28002** 28–01
- Support as an invariant for dynamical systems. (Russian summary) *Math. Slovaca* 30 (1980), no. 1, 19–30. (Fumio Hiai) **81b:28016** 28D20
- Michel, Louis** Symmetry defects and broken symmetry. Configurations. Hidden symmetry. *Rev. Modern Phys.* 52 (1980), no. 3, 617–651. (M. I. Monastyrskii) **81k:82006** 82A05 (81D25, 81E10)
- Michel, Philippe** (with Fourpeaud, Claude; Lenglud, Bernard) Analyse des équilibres à prix fixes dans un modèle à deux secteurs. (English and Spanish summaries) *Ann.*

- I.N.S.E.E. No. 37* (1980), 25–58. (Ch. Deissenberg) **81i:90038** 90A14 (90A15)
 Programmes mathématiques mixtes. Application au principe du maximum en temps discret dans le cas déterministe et dans le cas stochastique. (English summary) *RAIRO Rech. Opér.* **14** (1980), no. 1, 1–19. (I. M. Stancu-Minasian) **81i:90157** 90C15 (49A99, 90C30)
- Necessary conditions for optimality of elliptic systems with positivity constraints on the state. *SIAM J. Control Optim.* **18** (1980), no. 1, 91–97. (Ju. V. Kostarčuk) **81c:49012** 49B22 (35J25)
- Michel, R.** On the asymptotic efficiency of strongly asymptotically median unbiased estimators. *Ann. Statist.* **6** (1978), no. 4, 920–922. (D. R. Truax) **81c:62032** 62F12
 Asymptotic expansions for conditional distributions. *J. Multivariate Anal.* **9** (1979), no. 3, 393–400. (J. R. Leslie) **81m:60036** 60F05 (62E20)
 Third order efficiency of conditional tests for exponential families. *J. Multivariate Anal.* **9** (1979), no. 3, 401–409. (M. Hušková) **81i:62047** 62F05 (62H15)
 Necessary and sufficient conditions on rates of convergence in the multidimensional central limit theorem. *Manuscripta Math.* **28** (1979), no. 4, 361–377. (Sujit K. Basu) **81i:60030** 60F05
- Michel, René** Sur quelques problèmes de géométrie globale des géodésiques. *Bol. Soc. Brasil. Mat.* **9** (1978), no. 2, 19–37. (Midori Goto) **81a:53046** 53C22
- de-Michele, Leonede** See **De-Michele, Leonede**
- Michelsen, P.** (with Karpman, V. I.; Lynov, J. P.; Pécseil, H. L.; Rasmussen, J. Juul; Turikov, V. A.) Modification of plasma solutions by resonant particles. *Phys. Fluids* **23** (1980), no. 9, 1782–1794. (D. ter Haar) **81j:76107** 76X05 (35Q20)
- Michelson, M. L.** Clifford bundles, spinor bundles and Dirac operators. *Algebraic and geometric topology (Proc. Sympos., Univ. California, Santa Barbara, Calif., 1977)*, pp. 147–162. *Lecture Notes in Math.*, **664**, Springer, Berlin, 1978. (From the introduction) **81m:53064** 53C42 (57R20)
- Micheliuci, M. L.** (with Reas, P. G.; Papuzza, F. P.) A differential model concerning morphogenetic processes. (Italian) *Atti Accad. Sci. Lett. Arti Palermo Parte I* (4) **36** (1976/77), 235–248 (1978). (T. Poggio) **81i:92007** 92A09 (58C99, 82A35)
 (with Papuzza, F. P.; Reas, P. G.) The growth of a microbial/population as approximate solution of a first-order partial differential equation. (Italian) *Atti Accad. Sci. Lett. Arti Palermo Parte I* (4) **36** (1976/77), 457–472 (1978). (Authors' summary) **81c:92015** 92A17 (35L67)
 (with Papuzza, F. P.; Reas, P. G.) Approximate solution of a first-order differential system that represents a "predator-prey" model with account taken of age. (Italian) *Atti Accad. Sci. Lett. Arti Palermo Parte I* (4) **36** (1976/77), 473–490 (1978). (Authors' summary) **81c:92016** 92A17 (35L67)
 (with Papuzza, F. P.; Reas, P. G.) A mathematical model concerning the behavior of two biological associations: numerical approximation. (Italian) *Atti Accad. Sci. Lett. Arti Palermo Parte I* (4) **36** (1976/77), 557–579 (1978). (Authors' summary) **81c:92017** 92A17 (35L67)
- Michelić, N. V.** See **Michelić, N. V.**
- Michie, Donald** See **Machine Intelligence**, **81i:68100**
- Michlin, Y.** (with Omote, Minoru; Wadati, Miki) A Bäcklund transformation of the axially symmetric stationary Einstein-Maxwell equations. *Phys. Lett. A* **79** (1980), no. 2–3, 141–142. (From the summary) **81i:83032** 83C50 (35A25, 53A35, 58A15)
- Michiwa, Yoshimasa** (with Shimodaira, Kazuo; Noguchi, Taisuke; Matsuzaki, Toshio; Kuwabara, Hideo; Suzuki, Hisao; Takagi, Shigeo; Matsuoka, Motohisa; Oya, Shinichi) Perspective of study of history of mathematics. (Japanese) Special issue on the 20th anniversary of Sūgaku Kenkyū. *Sūgaku Kenkyū* No. 80 (1979), 3–75. (K. Inoue) **81b:01008** 01A27
- Michler, Gerhard O.** (with Lorenz, Martin) On maximal ideals in Ore extensions. *Ring theory (Proc. Antwerp Conf. (NATO Adv. Study Inst.), Univ. Antwerp, Antwerp, 1978)*, pp. 139–151. *Lecture Notes in Pure and Appl. Math.*, **51**, Dekker, New York, 1979. (L. A. Skornjakov) **81d:16002** 16A05 (16A27)
 (with Landrock, Peter) Principal 2-blocks of the simple groups of Ree type. *Trans. Amer. Math. Soc.* **260** (1980), no. 1, 83–111. (Michael Klemm) **81h:20013** 20C20 (16A64, 20C30)
- Michler, Lothar** (with Schreckenberger, Jürgen) Über die Vollständigkeit algebraischer induktiver Gruppoide. *Algebraische Modelle, Kategorien und Gruppoide*, pp. 61–83. *Studien zur Algebra und ihre Anwendungen*, **7**, Akademie-Verlag, Berlin, 1979. (Jaroslav Ježek) **81i:20073** 20L17 (08A35, 18B99)
- Michling, Horst** Eine Reise nach Helgoland im Jahre 1789. Aus dem Tagebuch des Bremer Astronomen Wilhelm Olbers. Festschrift zum 200. Geburtstag von Carl Friedrich Gauss. *Gauss-Ges. Göttingen Mitt.* No. 14 (1977), 124–131. (Peeter Müürsepp) **81k:01043** 01A70
 Das Gaussjahr 1777. *Gauss-Ges. Göttingen Mitt.* No. 15 (1978), 48–69. (Editors) **81a:01048** 01A74 (01A70)
- Michod, Richard E.** (with Anderson, Wyatt W.) Measures of genetic relationship and the concept of inclusive fitness. *Amer. Natur.* **114** (1979), no. 5, 637–647. (Authors' summary) **81k:92034** 92A10
- Michor, P.** Contributions to finite operator calculus in several variables. *J. Combin. Inform. System Sci.* **4** (1979), no. 1, 39–65. (P. Saphar) **81b:05013** 05A15
- Michelson, Alan R.** (with Engheta, Nader; Pappas, Charles H.) On the near-zone inverse Doppler effect. *IEEE Trans. Antennas and Propagation* **28** (1980), no. 4, 519–522. (Authors' summary) **81c:78012** 78A25
- Michelić, N. V.** (with Pandey, S. N.) On the motion of test particles in the field of a plane gravitational wave. *Gen. Relativity Gravitation* **12** (1980), no. 7, 581–583. (Authors' summary) **81g:83023** 83C35 (83C10)
 See also **Liebocher, Dierrick-Eikehard**, **81i:83009**
- Mickey, M. Ray** (with Schwemer, Gregory T.) A note on the linear discriminant function when group means are equal. *Comm. Statist. B—Simulation Comput.* **9** (1980), no. 6, 633–638. (Authors' summary) **81m:62114** 62H30
- Miclet, Laurent** Regular inference with a tail-clustering method. *IEEE Trans. Systems Man Cybernet.* **10** (1980), no. 11, 737–743. (Author's summary) **81m:68074** 68G10
- Micu, N.** Sur la comparabilité des séries de variables aléatoires. *Bull. Math. Soc. Sci. Math. R. S. Roumanie (N.S.)* **23**(71) (1979), no. 2, 183–188. (Adolfo Gili) **81a:60047** 60F99
- Micula, G.** Numerische Behandlung der Volterra-Integralgleichungen mit Splines. (Romanian summary) *Studia Univ. Babeş-Bolyai Math.* **24** (1979), no. 2, 46–54. (Il. Brunner) **81i:65136** 65R20
- Middlecoff, J. F.** (with Thomas, P. D.) Direct control of the grid point distribution in meshes generated by elliptic equations. *AIAA J.* **18** (1980), no. 6, 652–656. (Authors' summary) **81i:65071** 65N05
- thierry-Mieg, Jean** See **Thierry-Mieg, Jean**
- Miel, George J.** Unified error analysis for Newton-type methods. *Numer. Math.* **33** (1979), no. 4, 391–396. (L. Collatz) **81m:65095** 65J15
 Cones and error bounds for linear iterations. *Aequationes Math.* **20** (1980), no. 2–3, 170–183. (R. J. Plemmons) **81i:47040** 47B55 (65F10, 65J10)
 Calculator calculus and roundoff errors. *Amer. Math. Monthly* **87** (1980), no. 4, 243–252. (R. P. Brent) **81c:65020** 65G05 (65–01)
 Majorizing sequences and error bounds for iterative methods. *Math. Comp.* **34** (1980), no. 149, 185–202. (L. B. Rall) **81h:65056** 65J05 (47H10)
- Mielants, W.** On polarities of a class of divisible partial designs. *Bull. Soc. Math. Belg.* **28** (1976), no. 1, 3–9. (T. G. Ostrom) **81c:05039** 05B05 (05B25)
 Remark on the generalized graph extension theorem. *European J. Combin.* **1** (1980), no. 2, 155–161. (D. F. Holt) **81i:20004** 20B20 (05C25, 20J05)
- Miele, A.** (with Cloutier, J. R.; Mohanty, B. P.; Wu, A. K.) Sequential conjugate gradient-restoration algorithm for optimal control problems with nondifferential constraints. *Int. J. Numer. J. Control* **29** (1979), no. 2, 189–211, 213–234. (F. M. Kirillova) **81k:49022** 49D07 (93C99)
 Gradient algorithms for the optimization of dynamic systems. *Control and dynamic systems*, Vol. 16, pp. 1–52. Academic Press, New York, 1980. (See **81j:93002**) 49D07
 (with Wu, A. K.) Sequential conjugate gradient-restoration algorithm for optimal control problems with nondifferential constraints and general boundary conditions. *Optimal Control Appl. Methods* **1** (1980), no. 1, 69–88. (T. Giec) **81m:49031** 49D07
- Mielke, M. V.** Differentiable decompositions of manifolds into totally C^∞ -path disconnected subsets. *Proc. Amer. Math. Soc.* **78** (1980), no. 3, 439–442. (M. L. Mar) **81a:57023** 57R22 (54C05, 58D15)
- Mielke, Paul W., Jr.** On asymptotic nonnormality of null distributions of MRPP statistics. *Comm. Statist. A—Theory Methods* **8** (1979), no. 15, 1541–1550. (Edward M. Carter) **81i:62077** 62G10
 (with O'Reilly, Federico J.) Asymptotic normality of MRPP statistics from invariance principles of U -statistics. *Comm. Statist. A—Theory Methods* **9** (1980), no. 6, 629–637. (P. K. Sen) **81i:62041** 62E20 (60F17)
- Mielnik, Bogdan** Mobility of nonlinear systems. *J. Math. Phys.* **21** (1980), no. 1, 44–54. (Vittorio Cantoni) **81a:70018** 70G99 (58F99, 81C05)
- Mielnic, Klaus-J.** Bayesian subset selection for additive and linear loss functions. *Comm. Statist. A—Theory Methods* **8** (1979), no. 12, 1205–1226. (Joseph A. Yahav) **81a:62021** 62F07
 (with Sehr, Joachim) On a conjecture concerning the least favorable configuration of certain two-stage selection procedures. *Comm. Statist. A—Theory Methods* **9** (1980), no. 15, 1609–1617. (Young Jack Lee) **81k:62031** 62F07
- Miethe, Manfred** Approximation der optimalen Strategieparameter von (σ, S) -Lagerhaltungsmodellen. (English and Russian summaries) *Math. Operationsforsch. Statist. Ser. Optim.* **9** (1978), no. 3, 451–470. (Author's summary) **81h:90050** 90B05
 Die Untersuchung der Grenzverteilung des körperlichen Bestandsprozesses in einem semi-Markovschen Lagerhaltungsmodell. (English and Russian summaries) *Math. Operationsforsch. Statist. Ser. Optim.* **9** (1978), no. 4, 611–622. (J. A. E. van Nunen) **81b:90063** 90B05 (90C40)
- Miethe, N.** Asymptotic properties of tests in autoregressive moving average models. (German and Russian summaries) *Math. Operationsforsch. Statist. Ser. Statist.* **10** (1979), no. 2, 307–318. (E. J. Hannan) **81c:62104** 62M10
- Mifflin, Robert** A feasible descent algorithm for linearly constrained least squares problems. *Nonsmooth optimization (Proc. IIAA Workshop, Laxenburg, 1977)*, pp. 103–126. *IIASA Proc. Ser.*, **3**, Pergamon, Oxford, 1978. (Wolfgang Watterling) **81b:65037** 65F20 (65K05, 90C20)
- Migdal, A. A.** Properties of the loop average in QCD. *Ann. Physics* **126** (1980), no. 2, 279–290. (Author's summary) **81e:81126** 81G05
 (with Makeenko, Ju. M.) Self-consistent area law in QCD. *Phys. Lett. B* **97** (1980), no. 2, 253–256. (Authors' summary) **81i:81060** 81G05
- Migdaliev, I. M.** Coercive solvability of the Dirichlet problem for operator-differential equations of elliptic type. (Russian. Azerbaijani and English summaries) *Akad. Nauk Azerbaidžan. SSR Dokl.* **35** (1979), no. 8, 21–25. (K. S. Mamedov) **81i:34055** 34G10
- Migliaccio, Lucia** (with Donato, Patrizia) Sobolev spaces with a weight and elliptic problems in a domain of \mathbb{R}^2 with corner points. (Italian. English summary) *Rend. Circ. Mat. Palermo* (2) **27** (1978), no. 2, 153–209. (Pavel Doktor) **81i:46036** 46E35 (35J40)
- Miglietta, F.** Covariant derivatives without gauge fields. *Let. Nuovo Cimento* (2) **28** (1980), no. 3, 78–80. (P. K. Smrz) **81i:81061** 81E10 (22E70, 53C05)
- Migliorini, F.** (with Szép, J.) Equivalences, congruences and decompositions in semigroups. (Italian summary) *Riv. Mat. Univ. Parma* (4) **5** (1979), part 2, 745–752 (1980). (M. Friedberg) **81m:20081** 20M10
- Mignano, F.** (with Lucchetti, R.) Variational perturbations of the minimum effort problem. *J. Optim. Theory Appl.* **30** (1980), no. 3, 485–499. (Authors' summary) **81a:93043** 93C25 (49A27)
- Mignani, R.** (with Dattoli, G.) Formulation of electromagnetism in a six-dimensional space-time. *Let. Nuovo Cimento* (2) **22** (1978), no. 2, 65–68. (Editors) **81j:78003** 78A25 (83A05)
 Gravitational analogues of magnetic monopoles from the path-dependent formalism. *Let. Nuovo Cimento* (2) **22** (1978), no. 15, 597–600. (From the text) **81h:83020** 83C45
 Path-dependent approach to gravitational monopoles. *Nuovo Cimento B* (1) **56** (1980), no. 2, 201–209. (Author's summary) **81d:83034** 83C45
- Mignot, Fulbert** (with Murat, François; Puel, Jean-Pierre) Variation d'un point de retournement par rapport au domaine. (English summary) *Bifurcation and nonlinear eigenvalue problems (Proc., Session, Univ. Paris XIII, Villeminieu, 1978)*, pp. 222–254. *Lecture Notes in Math.*, **782**, Springer, Berlin, 1980. (Z. C. Motteler) **81m:35060** 35J65 (35B32)

- (with Puel, Jean-Pierre) Sur un modèle de flambage pour une plaque mince élastoplastique. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **290** (1980), no. 11, A519-A521. (Authors' summary) **81g:73074** 73K10 (73E99)
- Migotte, Maurice Approximation des nombres par certaines suites de rationnels. *Séminaire Delange-Pisot-Poitou, 18e année: 1976/77, Théorie des nombres, Fasc. 1, Exp. No. 16, 3 pp., Secrétariat Math., Paris, 1977. (P. Bundschuh)* **81c:10041** 10F35 (10F30)
- Approximation des nombres algébriques par des nombres algébriques de grand degré. (English summary) *Ann. Fac. Sci. Toulouse Math. (5)* **1** (1979), no. 2, 165-170. (Marie-José Bertin) **81h:10050** 10F25
- Calcul des racines d -ièmes dans un corps fini. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **290** (1980), no. 5, A205-A206. (Author's introduction) **81h:12022** 12C15
- Test de primalité. (English summary) *Theoret. Comput. Sci.* **12** (1980), no. 1, 109-117. (H. J. Godwin) **81i:10012** 10A25 (68C25)
- Miguel, M. See San Miguel, M.
- Mihaili, N. A. A theorem on the existence and uniqueness of the solutions of a stochastic system with lag. (Russian) *Asymptotic methods of nonlinear mechanics* (Russian), pp. 86-91, 196, *Akad. Nauk Ukrain. SSR, Inst. Mat., Kiev, 1979. (Author's introduction)* **81i:35165** 35R60 (60H99)
- Behavior of solutions of a stochastic system with lag. (Russian) *Ukrain. Mat. Ž.* **31** (1979), no. 5, 566-569, 621. (A. B. Kuržanskii) **81c:35123** 35R60 (60H15, 93E15)
- Mihal, Alexandru Sur les connexions méromorphes. *Rev. Roumaine Math. Pures Appl.* **23** (1978), no. 2, 215-232. (M. Schneider) **81c:32013** 32C25
- A generalization of Weierstrass points. (Romanian. French summary) *Stud. Cerc. Mat.* **31** (1979), no. 2, 183-187. (F. Huckemann) **81j:30075** 30F10 (14F07)
- Mihail, Ieronim Sur le problème des deux corps dans la mécanique invariante. (English summary) *Rev. Roumaine Phys.* **25** (1980), no. 3, 289-293. (Author's summary) **81i:83045** 83D05
- Mihailov, V. A. Refinement of asymptotic formulas for the spectrum of the Laplace operator in domains of type $G = G_1 \times G_2$. (Russian) *Uspehi Mat. Nauk* **33** (1978), no. 4(202), 219-220. (B. Heliwig) **81g:35099** 35P20 (47A70, 58G25, 81C10)
- Spectral asymptotic behavior of boundary value problems for the operator Sturm-Liouville equation. (Russian) *Spectral theory of operators (Proc. Second All-Union Summer Math. School, Baku, 1975)* (Russian), pp. 139-146, "Ėlm", Baku, 1979. (I. Kiguradze) **81j:34037** 34B25 (47E05)
- The spectral asymptotic behavior of general smooth elliptic operators. (Russian) *Uspehi Mat. Nauk* **35** (1980), no. 1(211), 205-206. (B. P. Panjeh) **81c:35097** 35P20 (35J55, 47A40)
- Mihailenko, V. M. An effective computational procedure for the degeneration of dual problems of mathematical programming. (Russian) *Automat. Sistemy Upravleniya i Prirody* **1980**, no. 55 (1980), 5-11, i. (Author's summary) **81f:90063** 90C05
- Mihailenko, A. M. Statistical model of roots of a characteristic equation of dynamical systems. (Russian) *Akad. Nauk Ukrain. SSR, Inst. Mat. Preprint No. 2* (1979), 28 pp. (Author's summary) **81a:93111** 93E20 (93A10)
- Mihailjuk, M. V. Complexity of the realization of the characteristic function of linear sets. (Russian) *Diskret. Analiz* No. 31 *Metody Diskret. Anal. v Teorii Upravljajushchih Sistem* (1977), 71-75, 91. (Andrew M. Odlyzko) **81f:94040** 94C10 (94B05)
- The complexity of calculation of elementary symmetric functions in finite fields. (Russian) *Dokl. Akad. Nauk SSSR* **244** (1979), no. 5, 1072-1076. (Stefan Dodunekov) **81e:68051** 68C25 (12C05)
- Mihailov, A. G. A game with a hierarchical structure. (Russian) *Modelling and control in evolving systems* (Russian), pp. 102-108, 259, "Nauka", Moscow, 1978. (Klaus Lommatzsch) **81h:90180** 90D20
- Mihailov, A. I. See Problems in geometry, **81c:53003**; Studies in nonclassical logics and set theory, **81f:03003**; Semiotics and information science, **81h:68003** and Semiotics and information science, **81i:68008**
- Mihailov, A. M. (with Kavlan, M. V.) Solution of a mixed static problem of the elasticity theory for the half-space on an elastic base. (Russian) *Dokl. Akad. Nauk SSSR* **251** (1980), no. 6, 1338-1341. (P. P. Teodorescu) **81m:73020** 73C35
- Mihailov, A. N. (with Kadasevič, Ju. I.) A theory of plasticity without yield surface. (Russian) *Dokl. Akad. Nauk SSSR* **254** (1980), no. 3, 574-576. **81m:73037** 73E99
- Mihailov, A. P. (with Galaktionov, V. A.; Kurdjumov, S. P.; Samarskii, A. A.) Unbounded solutions of semilinear parabolic equations. (Russian. English summary) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 161* (1979), 36 pp. (Stefan Balint) **81c:35060** 35K15
- (with Galaktionov, V. A.; Kurdjumov, S. P.) Metastable localization of disturbances in problems for equations of nonlinear heat conduction type. (Russian. English summary) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 181* (1979), 34 pp. (Authors' summary) **81g:35050** 35K55 (35D10, 80A20)
- (with Galaktionov, V. A.; Kurdjumov, S. P.; Samarskii, A. A.) Comparison of solutions of parabolic equations on the basis of a priori pointwise estimates of the highest derivative. (Russian. English summary) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 21* (1979), 50 pp. (I. Aganović) **81a:35043** 35K10
- (with Galaktionov, V. A.; Kurdjumov, S. P.; Samarskii, A. A.) The comparison of solutions to parabolic equations. (Russian) *Dokl. Akad. Nauk SSSR* **248** (1979), no. 3, 586-589. (O. A. Oleinik) **81g:35047** 35K35 (35B05)
- (with Galaktionov, V. A.; Kurdjumov, S. P.; Samarskii, A. A.) An approach to the comparison of solutions of parabolic equations. (Russian) *Ž. Vychisl. Mat. i Mat. Fiz.* **19** (1979), no. 6, 1451-1461, 1628. (P. C. Fife) **81c:35064** 35K55 (35B05)
- (with Galaktionov, V. A.; Kurdjumov, S. P.; Samarskii, A. A.) Asymptotic phase of modes with peaking and effective localization of heat in problems of nonlinear heat conduction. (Russian) *Differentsial'nye Uravnenija* **16** (1980), no. 7, 1196-1204, 1349. (Authors' summary) **81g:65163** 65N35 (80A20)
- (with Galaktionov, V. A.; Kurdjumov, S. P.; Samarskii, A. A.) On unbounded solutions of the Cauchy problem for the parabolic equation $u_t = \nabla(u^p \nabla u) + u^p$. (Russian) *Dokl. Akad. Nauk SSSR* **252** (1980), no. 6, 1362-1364. (J. Kačur) **81j:35018** 35B40 (35K55)
- Mihailov, A. V. (with Zaharov, V. E.) On the integrability of classical spinor models in two-dimensional space-time. *Comm. Math. Phys.* **74** (1980), no. 1, 21-40. (M. Carmeli) **81h:81078** 81E10 (35Q99, 58F07)
- (with Zaharov, V. E.) A variational principle for equations that are integrable by the inverse problem method. (Russian) *Funktsional. Anal. i Prilozhen.* **14** (1980), no. 1, 55-56. (L. A. Takhtajan (Tahtadžjan)) **81c:35111** 35Q20 (49H05, 58F07)
- Mihailov, B. O. (with Brovar, V. V.) Calculation of the stationary magnetic field. (Russian. English summary) *Moskoc. Gos. Univ. Soolbič. Gos. Astronom. Inst. Sternberg No. 210* (1980), 26-36. (Authors' summary) **81g:86005** 86A25
- Mihailov, G. A. Numerical construction of a random field with a given spectral density. (Russian) *Dokl. Akad. Nauk SSSR* **238** (1978), no. 4, 793-795. (Author's introduction) **81f:65007** 65C20 (62M15)
- Variance of vector algorithms of the Monte Carlo method. (Russian) *Dokl. Akad. Nauk SSSR* **253** (1980), no. 5, 1047-1050. (F. Szidarovszky) **81m:65013** 65C05 (65R20)
- Mihailov, G. K. See Theory of shells, **81c:73003**; General mechanics, **81d:70001** and Theoretical and applied mechanics, **81k:76048**
- Mihailov, G. N. (with Rudnev, V. V.) Simple interconnected graph system and extension of the practical applications of finite automata. *Automat. i Telemekh.* **1979**, no. 10, 105-122. (Russian. English summary; translated as *Automat. Remote Control* **40** (1979), no. 10, part 2, 1487-1503 (1980). (J. Paredaens) **81i:68076** 68D05
- Mihailov, I. I. Diophantine analysis of higher orders. (Russian) *Rev. Roumaine Math. Pures Appl.* **25** (1980), no. 3, 345-363. (S. V. Kotov) **81i:10023** 10B15
- Mihailov, Ju. I. The structure of almost Grassmann manifolds. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* **1978**, no. 2(189), 62-72. (Erwin Kasperek) **81c:53031** 53C30
- Mihailov, L. G. Correction to: "The consistency of some overdetermined systems of partial differential equations with two unknown functions" [Dokl. Akad. Nauk SSSR **238** (1978), no. 6, 1291-1294; MR **57** #13235]. (Russian) *Dokl. Akad. Nauk SSSR* **245** (1979), no. 2, 280. (Editors) **81m:35101** 35N99
- Compatibility conditions and manifolds of solutions to a generalized Cauchy-Riemann system with several variables. (Russian) *Dokl. Akad. Nauk SSSR* **249** (1979), no. 6, 1313-1317. (Wolfgang Tutschke) **81c:32005** 32A30 (30G20, 35F05)
- Problems of conjugation of harmonic functions. (Russian. Tajiki summary) *Dokl. Akad. Nauk Tadžik. SSR* **23** (1980), no. 4, 171-174. (N. K. Karapetjan) **81k:31007** 31A25
- Mihailov, S. E. Stress singularity in a compound arbitrarily anisotropic body, and applications to composites. *Izv. Akad. Nauk SSSR Meh. Toerd. Tela* **14** (1979), no. 6, 33-42. (Russian; translated as *Mech. Solids* **14** (1979), no. 6, 27-33. (Author's summary) **81g:73009** 73C30 (73K20)
- Mihailov, V. A. (with Cybakov, B. S.) Free synchronous packet access in a broadcast channel with feedback. *Problemy Peredaci Informacii* **14** (1978), no. 4, 32-59. (Russian; translated as *Problems Inform. Transmission* **14** (1978), no. 4, 259-280 (1979). (Anthony Ephremides) **81g:94024** 94A40
- (with Cybakov, B. S.) Ergodicity of a slotted ALOHA system. *Problemy Peredaci Informacii* **15** (1979), no. 4, 73-87. (Russian; translated as *Problems Inform. Transmission* **15** (1979), no. 4, 301-312 (1980). (Authors' summary) **81g:94025** 94A40
- See also Mathematical problems of chemical thermodynamics, **81j:80001**
- Mihailov, V. G. Asymptotic normality of the number of empty cells in allocation of particles by groups. (Russian. English summary) *Teor. Veroyatnost. i Primenen.* **25** (1980), no. 1, 83-91. (G. P. Egorčev) **81j:60012** 60C05
- Mihailov, V. M. The representation of surfaces in automatic design systems. (Russian. English summary) *Kibernetika (Kiev)* **1978**, no. 5, 37-40. (Author's summary) **81i:68075** 68G99
- Mihailov, V. P. The boundary values of solutions of elliptic equations. (Russian) *Proceedings of an All-Union Conference on Partial Differential Equations (Moscow State Univ., Moscow, 1976)* (Russian), pp. 160-161, *Moskoc. Gos. Univ., Meh.-Mat. Fakul'tet, Moscow, 1978. (See 80f:35002)* 35J67 (35J25)
- On the boundary values of the solutions of elliptic equations. *Appl. Math. Optim.* **6** (1980), no. 3, 193-199. (Manfred W. Kracht) **81c:35038** 35J67 (35D99)
- Boundary properties of solutions of elliptic equations. (Russian) *Mat. Zametki* **27** (1980), no. 1, 137-145, 159. (V. A. Kondrat'ev) **81c:35055** 35J40
- Mihailov, V. V. Addition of a large number of identical angular momenta. Statistical distributions. *J. Phys. A* **12** (1979), no. 12, 2329-2335. (Author's summary) **81d:81033** 81C40 (81Hxx, 82A05)
- (with Gadasin, V. A.) Optimization of load sharing among computer centers in a network. *Automat. i Vychisl. Tehn. (Riga)* **1980**, no. 3, 13-18, 95. (Russian; translated as *Automat. Control Comput. Sci.* **14** (1980), no. 3, 10-15. (Authors' summary) **81m:68007** 68A05
- Mihailova, I. G. (with Lukomskii, V. P.) Complete integrability of physical systems described by a one-dimensional equation of Boussinesq type. (Russian) *Physics and mechanics of nonlinear phenomena* (Russian), pp. 109-115, 209, "Naukova Dumka", Kiev, 1979. (D. ter Haar) **81f:35107** 35Q20 (35L75, 58F07, 76B15)
- Mihailova, I. V. (with Afanas'eva, L. G.) On the number of demands serviced during a busy period. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* **1978**, no. 6, 88-96. (Russian; translated as *Engng. Cybernetics* **16** (1978), no. 6, 67-75. (Stig I. Rosenlund) **81c:60093** 60K25 (39A10)
- Mihailovskii, A. B. (with Lominadze, D. G.; Sagdeev, R. Z.) Langmuir turbulence of a relativistic plasma in a strong magnetic field. *Ž. Eksp. Teoret. Fiz.* **77** (1979), no. 5, 1951-1961. (Russian; translated as *Soviet Phys. JETP* **50** (1979), no. 5, 927-932. (Authors' summary) **81h:82009** 82A45 (76X05, 76Y05, 85A30)
- Mihailović, Borivoj On some classes of spectra and their application. *Mat. Vesnik* **2**(15)(30) (1978), no. 1, 69-73. (Judith Sunley) **81c:10073** 10M05 (68C05)
- Mihal'čuk, R. I. (with Sevcuk, S. P.) Sufficient condition for the convergence of continued fractions in a space of continuous functions. (Russian) *Vestnik L'vov. Politehn. Inst.* No. 141 *Differentsial'nye Uravnenija i ih Prilozhen.* (1980), 64-65, 120. (Authors' summary) **81i:40003** 40A15
- Mihal'čuk, V. G. (with Golinsonskii, I. P.) Extremal quasiconformal mappings of systems of curves of doubly connected domains. (Russian) *Metric questions of the theory of functions and mappings, No. VII (Proc. Fourth Colloq., Quasiconformal Mappings and their Generalizations, Donetsk, 1974)* (Russian), pp. 32-36, "Naukova Dumka", Kiev, 1975. (See 80c:30023) 30C60

- Mihalev, A. I. (with Ivahnenko, M. M.) Active method of search identification of a multiparameter object with incomplete observability. (Russian) *Adapt. Sistemy Avtomat. Upravleniya* No. 8 (1980), 21-33, 2. (Authors' summary) **81j:93022** 93B30 (93B40, 93C40)
- Mihalev, A. V. (with Bel'dar, K. I.; Salavová, K.) Generalized identities and semiprime rings with involution. (Russian) *Uspehi Mat. Nauk* 35 (1980), no. 1(211), 222. (Ju. N. Mal'cev) **81i:16020** 16A38 (16A28)
- See also Faith, Carl C., **81a:16001**
- Mihalev, V. S. (with Ivanov, V. V.; Ljudevčenko, V. A.; Trubin, V. A.; Šor, N. Z.) Questions of increasing the effectiveness of algorithms for minimization of functions and mathematical programming. (Russian) *Akad. Nauk Ukrain. SSR Inst. Kibernet. Preprint* No. 59 (1979), 55 pp. (E. G. Gol'fstein) **81i:90147** 90C10 (65K05, 90C05, 90C30)
- Mihailin, G. O. Conditions for the equivalence of (R, p_a) and (J, p_a) methods of summability. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1979, no. 5, 41-51. (J. Németh) **81h:40019** 40G99
- (with Teskenko, L. S.) (C)-property of the (A, a) - and $(A \times (C, a))$ -methods of summation of series, and Tauberian type theorems. (Russian) *Teor. Funkcii Funkcional. Anal. i Prilozhen.* No. 31 (1979), 160-163, 169. (M. S. Rangachari) **81e:40006a** 40E05 (40E15)
- Conditions for coincidence of the core of a sequence with the cores of its (R, p_a) - and (J, p_a) -averages. (Russian) *Ukrain. Mat. Ž.* 31 (1979), no. 5, 504-509, 618. (M. S. Rangachari) **81h:40014** 40E05 (40E15)
- (with Davidov, M. O.) The core of Voronoï means for a bounded sequence. (Russian) *Ukrain. Mat. Ž.* 31 (1979), no. 6, 675-682, 766. (M. S. Rangachari) **81e:40008** 40E99
- Generalization of Tauberian theorems for a class of (J, p_a) -summability. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1980, no. 4, 61-68. (E. Reimers) **81h:40008** 40E05
- Mihailko, Daniel P. (with Moore, David S.) Chi-square tests of fit for type II censored data. *Ann. Statist.* 8 (1980), no. 3, 625-644. (Lionel Weiss) **81e:62053** 62G10 (62E20)
- Milhev, I. M. Lacunary subsystems of a system of Walsh functions. (Russian) *Sibirsk. Mat. Ž.* 20 (1979), no. 1, 109-118, 205. (F. Schipp) **81k:42022** 42C10
- Prime right alternative rings with idempotent. (Russian) *Mat. Zametki* 27 (1980), no. 2, 185-191, 317. (Harry F. Smith) **81i:17005** 17A30
- Mihlin, S. G. A method of approximate solution of Fredholm equations. (Russian) *Proceedings of an All-Union Conference on Partial Differential Equations (Moscow State Univ., Moscow, 1976)* (Russian), pp. 161-162. *Moskov. Gos. Univ., Meh.-Mat. Fakul'tet, Moscow*, 1978. (See **80f:35002**) 65R20
- Constants in estimates of the error of variational-grid approximation. (Russian) *Variational-difference methods in mathematical physics (Proc. All-Union Conf., Novosibirsk, 1977)* (Russian), pp. 6-14. *Akad. Nauk SSSR Sibirsk. Otdel., Vychisl. Centr. Novosibirsk*, 1978. (R. Smarzewski) **81g:41028** 41A30 (41A25, 65D15)
- Equivalent norms in Sobolev spaces and the norm of the extension operator. (Russian) *Sibirsk. Mat. Ž.* 19 (1978), no. 5, 1141-1153, 1215. (Author's summary) **81g:46043** 46E35
- On the minimal extension constant for functions of Sobolev classes. (Russian) *Numerical methods and questions in the organization of calculations, 3. Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 90 (1979), 150-185, 300. (B. S. Rubin) **81k:46034** 46E35
- The approximate solution of one-sided variational problems. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1980, no. 2, 45-58. (W. W. Breckner) **81g:49015** 49A29 (49A27, 49D40)
- Mihljav, S. V. (with Koronkevič, V. P.; Krivenkov, B. E.; Čugui, Ju. V.) An optical-geometric method for calculating Fraunhofer diffractions by volume bodies. (Russian) *Acetometrija* 1980, no. 2, 25-35, 127. (Authors' summary) **81e:78030** 78A45
- Mihoc, Gheorghe. Statistical methods in systems theory. (Romanian) *Systems theory (Proc. Nat. Conf., Univ. Braşov, Braşov, 1977)* (Romanian), pp. 17-23. *Univ. Braşov, Braşov*, 1978. (Opris Gheorghe) **81h:62190** 62P05 (90A09)
- (with Craiu, Virgil) ★ *Tratat de statistică matematică. Vol. III. (Romanian)* [Treatise of mathematical statistics. Vol. III] *Analiză secvențială. [Sequential analysis]* *Editura Academiei Republicii Socialiste România, Bucharest*, 1979. 396 pp. (Z. Šidák) **81g:62003** 62-02 (62L10)
- Milov, V. M. (with Sahtarin, B. I.) Dynamics of a synchronization system with discontinuous characteristics. (Russian. English summary) With a loose English translation. *Problems Control Inform. Theory / Problemy Upravlen. Teor. Inform.* 9 (1980), no. 6, 429-439. (Authors' summary) **81m:93043** 93C15 (58F13)
- Milova-Nehmer, V. On the generalized common curvature of some subspaces of the tangent space of an almost contact metric manifold. *C. R. Acad. Bulgare Sci.* 32 (1979), no. 9, 1175-1178. (M. C. Chaki) **81c:53037** 53C15
- Milgram, G. Arthur A closer look at Thom's catastrophe theory. *Proceedings of the First International Conference on Mathematical Modeling (St. Louis, Mo., 1977)*, Vol. I, pp. 359-368. *Univ. Missouri-Rolla, Rolla, Mo.*, 1977. (I. Stewart) **81k:58015** 58C28 (92A05)
- Mila, Ioana On the synthesis of control systems subject to perturbations. (Romanian. English summary) *Bul. Inst. Politehn. Bucureşti Ser. Electrotehn.* 40 (1978), no. 4, 55-60. (Author's summary) **81h:93015** 93C05
- vinou-Mila, Nicoleta See Vinou-Mila, Nicoleta
- Milida, P. A study of the convergence of approximate methods for finding self-oscillations by means of rotations of the vector field. (Russian. English summary) *Tartu Riikl. Ül. Toimetised* No. 492 (1979), 69-79. (P. P. Zabreiko) **81j:34074** 34C25 (47H17, 65J15)
- Mijajlović, Zarko Saturated Boolean algebras with ultrafilters. *Publ. Inst. Math. (Beograd) (N.S.)* 26(40) (1979), 175-197. (Annalisa Marja) **81i:03053** 03C65 (03C50, 06E99)
- Mijhaer, Joop A strong approximation of partial sums of i.i.d. random variables with infinite variance. *Z. Wahrsch. Verw. Gebiete* 52 (1980), no. 1, 1-7. (Endre Csáki) **81e:60032** 60F15
- Mika, Andrzej (with Balcer, Marek; Pizioń, Tomasz) The construction of admissible words of a certain alphabet as equivalent concepts by means of arithmetic term expressions. (Polish. Russian and French summaries) *Zeszyty Nauk. Politech. Śląsk. Mat.-Fiz.* No. 34 (1979), 5-12. (Ryszard Janicki) **81i:68121a** 68F25 (03D05, 68E10)
- (with Balcer, Marek; Pizioń, Tomasz) A theorem on the equivalence of the definitions of admissible words of a certain alphabet and arithmetic term expressions. (Polish. Russian and French summaries) *Zeszyty Nauk. Politech. Śląsk. Mat.-Fiz.* No. 34 (1979), 13-19. (Ryszard Janicki) **81i:68121b** 68F25 (03D05, 68E10)
- (with Balcer, Marek; Pizioń, Tomasz) An algorithm for deciding the truth of an equation between two arbitrary arithmetic expressions. (Polish. Russian and French summaries) *Zeszyty Nauk. Politech. Śląsk. Mat.-Fiz.* No. 34 (1979), 21-27. (Ryszard Janicki) **81i:68121c** 68F25 (03D05, 68E10)
- (with Balcer, Marek; Pizioń, Tomasz) Quasigroupoid. (Polish. Russian and French summaries) *Zeszyty Nauk. Politech. Śląsk. Mat.-Fiz.* No. 34 (1979), 29-35. (Authors' summary) **81f:20071** 20L99 (20N99)
- Mika, K. (with Eckhardt, Ulrich) Numerical treatment of incorrectly posed problems—a case study. *Numerical treatment of integral equations (Workshop, Math. Res. Inst. Oberwolfach, 1979)*, pp. 92-101. *Internat. Ser. Numer. Math.*, 53, Birkhäuser, Basel, 1980. (Authors' summary) **81m:65196** 65R20 (82A55)
- Mika, Stanislav On the approximate solution of the multigroup time-dependent transport equation by P_L -method. (Czech and Russian summaries) *Apl. Mat.* 24 (1979), no. 2, 133-154. (From the summary) **81i:82039** 82A77
- Mikeladze, Š. E. See Obituary: Mikeladze, Š. E., **81f:01045**
- Mikelić, A. (with Martinis, M.) Solution of a relativistic quasipotential wave equation for a two-body bound state. *Phys. Rev. C* (3) 22 (1980), no. 2, 878-883. (Authors' summary) **81e:81147** 81G35
- Mikenberg, Irene A closure for partial algebras. *Mathematical logic in Latin America (Proc. IV Latin Amer. Sympos. Math. Logic, Santiago, 1978)*, pp. 239-253. *Studies in Logic and Foundations of Math.*, 99, North-Holland, Amsterdam, 1980. (Stanley N. Burris) **81g:08011** 08A55
- Mikhail, N. N. (with Dwyer, Paul S.; Tracy, Derrick S.) A concise proof of a theorem on products of power sums. (French summary) *Canad. J. Statist.* 6 (1978), no. 1, 11-17. (B. C. Gupta) **81a:62019** 62E30 (62D05, 62F10)
- (with Malik, Henrick J.) Unbiased estimates of Dwyer's moment function and their products for finite population. *J. Indian Statist. Assoc.* 16 (1978), 71-82. (B. C. Gupta) **81a:62020** 62E30 (62D05, 62F10)
- Mikhailov, A. V. See Mikhailov, A. V.
- Mikhailov, G. K. See Mikhailov, G. K.
- Mikhailov, G. N. See Mikhailov, G. N.
- Mikhailov, S. E. See Mikhailov, S. E.
- Mikhailov, V. A. See Mikhailov, V. A.
- Mikhailov, V. P. See Mikhailov, V. P.
- Mikhailov, V. V. See Mikhailov, V. V.
- Mikhailovskii, A. B. See Mikhailovskii, A. B.
- Mikhaylova, I. V. See Mikhaylova, I. V.
- Mikhaev, M. V. Multiplicative structure in fiber space cohomology. (Russian. Georgian and English summaries) *Soobšč. Akad. Nauk Gruz. SSR* 97 (1980), no. 3, 565-568. (I. Pop) **81i:55018** 55R20
- Mikljuk, Ja. V. Spectral theory of a class of nonselfadjoint operators. (Russian) *Dokl. Akad. Nauk SSSR* 252 (1980), no. 1, 40-43. (Alexander Alekicyn) **81m:47044** 47B38
- Mikljukov, V. M. Conformal type of surfaces, Liouville's theorem and Bernstein's theorem. (Russian) *Dokl. Akad. Nauk SSSR* 242 (1978), no. 3, 537-540. (R. N. Abdulaev) **81b:53013** 53A10 (30D15, 35J65)
- Some properties of tubular minimal surfaces in \mathbb{R}^n . (Russian) *Dokl. Akad. Nauk SSSR* 247 (1979), no. 3, 549-552. (D. Mitov) **81a:53007** 53A10 (53C42)
- Asymptotic properties of subsolutions of quasilinear equations of elliptic type and mappings with bounded distortion. (Russian) *Mat. Sb. (N.S.)* 111(153) (1980), no. 1, 42-66, 159. (Matti Vuorinen) **81j:35037** 35J15 (30C60)
- (with Botvinnik, V. A.) A theorem of Phragmén-Lindelöf-type for n -dimensional mappings with bounded distortion. (Russian) *Sibirsk. Mat. Ž.* 21 (1980), no. 2, 232-235, 240. (Matti Vuorinen) **81e:30029** 30C60
- Mikolajczak, Bolesław On the simulation problem of a set of automata. *Wiss. Z. Tech. Univ. Dresden* 29 (1980), no. 2, 383-385. (Author's summary) **81g:68083** 68D30 (03D05, 20M35)
- Mikolajski, Z. Remarque sur la méthode de la variation de la constante généralisée. *Ann. Polon. Math.* 37 (1980), no. 2, 199-209. (Plácido Z. Táboas) **81k:34078** 34K20 (58F10, 58F30)
- Mikolás, M. Orthogonal systems of characteristic functions and Hilbert space. *Resultate Math.* 1 (1978), no. 2, 195-206. (R. H. Cox) **81d:46027** 46C30 (42C99)
- Mikos, H. Explicit forms of block matrices in unbalanced cross classification. (Polish summary) *Zastos. Mat.* 16, no. 3, 459-463 (1979). (J. Kleffe) **81a:62062** 62K99
- Mikulevičius, R. (with Grigelionis, B.) Semimartingales with values in \mathbb{R}^n . (Russian. Lithuanian and English summaries) *Lietovsk. Mat. Sb.* 19 (1979), no. 2, 61-79, 211. (Jean Mémoin) **81c:60063** 60G44
- (with Grigelionis, B.) On statistical problems of stochastic processes with penetrable boundaries. *Mathematical statistics and probability theory (Proc. Sixth Internat. Conf., Włsta, 1978)*, pp. 152-169. *Lecture Notes in Statist.*, 2, Springer, New York, 1980. (J. Szpirglas) **81h:60058** 60G35 (60J60, 93E11)
- Mikulic, L. I. See Machine Intelligence, **81f:68100**
- Mikulaševičius, R. See Mikulevičius, R.
- Mikulaš, P. W. (with Archambault, W. A. T., Jr.) On bounds for the asymptotic power and on Pitman efficiencies of the Cramér-von Mises test. (Polish summary) *Zastos. Mat.* 16, no. 3, 429-444 (1979). (George C. S. Yu) **81h:62084** 62G20
- Mikusiński, J. (with Ferens, C.) Urysohn's condition and Cauchy sequences. (Russian summary) *Theory of cubature formulas and the application of functional analysis to problems of mathematical physics (Russian)*, pp. 122-124, 167. *Trudy Sem. S. L. Soboleva*, No. 1, 1978. *Akad. Nauk SSSR Sibirsk. Otdel., Inst. Mat., Novosibirsk*, 1978. (Authors' summary) **81e:20063** 20K45
- Mikusiński, Piotr Cauchy sequences in abelian groups. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math. Astronom. Phys.* 26 (1978), no. 8, 707-709. (E. Reimers) **81f:40002** 40A05
- Milani, M. (with Lugiatto, L. A.) On the quantum-mechanical description of Josephson junctions. (Italian and Russian summaries) *Nuovo Cimento B* (11) 55 (1980), no. 2, 417-434. (Authors' summary) **81e:81175** 81Hxx (81K05)

- Minimov, P. B.** (with Kovalev, M. M.) Minimization of a discrete convex function on Jordan-Dedekind lattices. (Russian. English summary) *Dokl. Akad. Nauk BSSR* 24 (1980), no. 9, 784-787, 859. (S. Rudeanu) **81k:06002** 06A10 (90C25)
- Milman, V. P.** (with Pasečnik, L. P.) Kinetics of Coulomb-particle systems in the weak-relativistic approximation. (Russian) *Izv. Vysš. Učebn. Zaved. Fizika* 1980, no. 5, 99-101. (Authors' summary) **81g:82050** 82A45
- Milne, J. P.** A generalization of the Stein-Rosenberg theorem to Banach spaces. *Numer. Math.* 34 (1980), no. 4, 403-409. (Author's summary) **81m:65087** 65J10 (47B55)
- Miles, John W.** On Kelvin-Helmholtz instability. *Phys. Fluids* 23 (1980), no. 9, 1915-1916. (Author's summary) **81g:76048** 76E05
- Guided solitary waves. *Proc. Nat. Acad. Sci. U.S.A.* 77 (1980), no. 4, part 1, 1723-1724. (Alberto Valli) **81d:76019** 76B25 (35Q20)
- Miles, R. E.** The random tangential projection of a surface. *Adv. in Appl. Probab.* 12 (1980), no. 2, 425-446. (L. A. Santaló) **81d:60016** 60D05 (55P47, 55R35, 57Q60)
- (with Ruben, Harold) A canonical decomposition of the probability measure of sets of isotropic random points in \mathbb{R}^n . *J. Multivariate Anal.* 10 (1980), no. 1, 1-18. (A. W. Davis) **81g:62040** 62E20 (52A22, 60D05, 62H10)
- Milne, Jan** The Cauchy problem for certain equations involving the ultraparabolic operator. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math.* 27 (1979), no. 6, 455-459. (Lu-San Chen) **81a:35045** 35K30
- Milgram, R. James** (with Madsen, Ib Henning) ★The classifying spaces for surgery and cobordism of manifolds. *Annals of Mathematics Studies*, 92. Princeton University Press, Princeton, N.J.; University of Tokyo Press, Tokyo, 1979. xii + 279 pp. ISBN 0-691-08225-1 (Ju. P. Solov'ev) **81d:57014** 57N70 (55P47, 55R35, 57Q60)
- (with Hambleton, Ian) The surgery obstruction groups for finite 2-groups. *Invent. Math.* 61 (1980), no. 1, 33-52. (A. A. Ranicki) **81k:18007** 18F25 (57R67)
- Milgrom, Paul R.** A convergence theorem for competitive bidding with differential information. *Econometrica* 47 (1979), no. 3, 679-688. (Author's summary) **81a:90014** 90A05
- Milne, Xavier** (with Letac, Gérard) Une suite stationnaire et isotrope est sphérique. *Z. Wahrsch. Verw. Gebiete* 49 (1979), no. 1, 33-36. (M. M. Leonenko) **81c:60037** 60G10
- Milic, Mirko M.** (with Novak, Ladislav A.) Explicit form of Lagrangian equations for nonlinear RLC networks containing memristors. *Univ. Beograd. Publ. Elektrotehn. Fak. Ser. Elektron. Telekomun. Automat. No. 118-128* (1978), 49-52. (Authors' summary) **81c:94038** 94C05
- (with Novak, Ladislav A.) Formulation of new equations from scalar generating functions for nonlinear RLC networks with memristors. *Univ. Beograd. Publ. Elektrotehn. Fak. Ser. Elektron. Telekomun. Automat. No. 118-128* (1978), 53-61. (Authors' summary) **81c:94036** 94C05
- (with Novak, Ladislav A.) Extension of formulation of Lagrangian and anti-Lagrangian equations through nonlinear multipoint decomposition. *Proceedings of the Fourth International Symposium on Network Theory (Ljubljana, 1979)*, pp. 235-240. Georgi, St.-Saphorin, 1979. (Authors' summary) **81c:94037a** 94C05
- (with Novak, Ladislav A.) Extension of formulation of Lagrangian and anti-Lagrangian equations through nonlinear multipoint decomposition. *Univ. Beograd. Publ. Elektrotehn. Fak. Ser. Elektron. Telekomun. Automat. No. 129-135* (1979), 35-40. (Authors' summary) **81c:94037b** 94C05
- Milicic, B.** Topological methods in chemical kinetics. On the applicability of thermodynamics to mass action kinetics. *Proceedings of Bremer Konferenz zur Chemie (Univ. Bremen, Bremen, 1978)*, Part II. *Match* No. 7 (1979), 141-161. (Richard J. Field) **81f:80012** 80A30 (58F11, 80A10)
- Miljutina, A. A.** (with Levin, V. L.) The problem of the displacement of masses with a discontinuous cost function and the mass formulation of the problem of the duality of convex extremal problems. (Russian) *Uspehi Mat. Nauk* 34 (1979), no. 3(207), 3-68, 248. (S. F. Sburian) **81g:49009** 49A27 (46G99, 90C48)
- Milka, A. D.** Shortest lines on convex surfaces. (Russian) *Dokl. Akad. Nauk SSSR* 248 (1979), no. 1, 34-36. (V. I. Oliker) **81c:53056** 53C45
- van Mill, Jan** (with van de Vel, Marcel) Path connectedness, contractibility, and LC-properties of superextensions. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math. Astronom. Phys.* 26 (1978), no. 3, 261-269. (Authors' summary) **81g:54040** 54F99 (54C55)
- (with Wattel, E.) Souslin dendrons. *Proc. Amer. Math. Soc.* 72 (1978), no. 3, 545-555. (G. R. Gordh, Jr.) **81c:54058** 54F50
- (with Hušek, Miroslav; Mills, Charles F.) Some very small continua. *Topological structures, II* (Proc. Sympos. Topology and Geom., Amsterdam, 1978), Part 1, pp. 147-151. *Math. Centre Tracts*, 115. Math. Centrum, Amsterdam, 1979. (R. F. Dickman, Jr.) **81b:54036** 54F99
- A simple observation concerning the existence of non-limit points in small compact F -spaces. *Topological structures, II* (Proc. Sympos. Topology and Geom., Amsterdam, 1978), Part 1, pp. 167-168. *Math. Centre Tracts*, 115. Math. Centrum, Amsterdam, 1979. (Ryszard Frankiewicz) **81d:54029** 54G20 (54A25, 54E50)
- (with van de Vel, Marcel) On superextensions and hyperspaces. *Topological structures, II* (Proc. Sympos. Topology and Geom., Amsterdam, 1978), Part 1, pp. 169-180. *Math. Centre Tracts*, 115. Math. Centrum, Amsterdam, 1979. (Roman Duda) **81c:54011** 54B20
- (with Vermeer, Johannes) Wallman compactifications and the continuum hypothesis. *Topological structures, II* (Proc. Sympos. Topology and Geom., Amsterdam, 1978), Part 1, pp. 181-185. *Math. Centre Tracts*, 115. Math. Centrum, Amsterdam, 1979. (Ronnie Levy) **81c:54035** 54D35 (0A30)
- The superextension of the closed unit interval is homeomorphic to the Hilbert cube. *Fund. Math.* 103 (1979), no. 3, 151-175. (R. R. Summerhill) **81c:57017** 57N20 (54F45)
- (with van de Vel, Marcel) On an internal property of absolute retracts. The Proceedings of the 1979 Topology Conference (Ohio Univ., Athens, Ohio, 1979). *Topology Proc.* 4 (1979), no. 1, 193-200 (1980). (K. Sieklucki) **81j:54024** 54C55 (54F40)
- (with Bell, Murray G.) The compactness number of a compact topological space. I. *Fund. Math.* 106 (1980), no. 3, 163-173. (Olav Njåstad) **81b:54022** 54D30 (54D35)
- A Peano continuum homeomorphic to its own square but not to its countable infinite product. *Proc. Amer. Math. Soc.* 80 (1980), no. 4, 703-705. (O. G. Harrold) **81k:54061** 54F20 (54B10, 54G15)
- (with Mills, Charles F.) A topological property enjoyed by near points but not by large points. *Topology Appl.* 11 (1980), no. 2, 199-209. (Ronnie Levy) **81c:54024** 54D35 (54D40)
- (with van Douwen, Eric K.) Subspaces of basically disconnected spaces or quotients of countably complete Boolean algebras. *Trans. Amer. Math. Soc.* 259 (1980), no. 1, 121-127. (V. Kannan) **81b:54038** 54G05 (03E50, 06E05, 54C15, 54C25)
- (with van Douwen, Eric K.) $\beta\omega$ - ω is not first order homogeneous. *Proc. Amer. Math. Soc.* 81 (1981), no. 3, 503-504. (Ronnie Levy) **81m:54039** 54D35 (03B10)
- See also *Topological structures*, **81a:54001a** and *Topological structures*, **81a:54001b**
- Millán, Leopoldo** (with Marchi, Ezio) On the exact solution of differential equations of Hodgkin-Huxley model type. *Proceedings of the First International Conference on Mathematical Modeling* (St. Louis, Mo., 1977), Vol. 1, pp. 447-458. Univ. Missouri-Rolla, Rolla, Mo., 1977. (Authors' summary) **81k:92015** 92A09 (35K55)
- Miller, Robert F.** Singularities of solutions to exterior analytic boundary value problems for the Helmholtz equation in three independent variables. II. The axisymmetric boundary. *SIAM J. Math. Anal.* 10 (1979), no. 4, 682-694. (D. L. Colton) **81m:35010** 35A20 (35J05)
- The analytic continuation of solutions to elliptic boundary value problems in two independent variables. *J. Math. Anal. Appl.* 76 (1980), no. 2, 498-515. (Manfred W. Kracht) **81j:35025** 35C15 (35A20, 35B60, 35J25)
- Miller, Terrence S.** A complete, decidable theory with two decidable models. *J. Symbolic Logic* 44 (1979), no. 3, 307-312. (G. Asser) **81b:03040** 03C50 (03C15)
- Miller, Alan J.** Problems in non-linear least-squares estimation. *Interaction statistics* (Proc. Appl. Statist. Conf., Macquarie Univ., Sydney, 1979), pp. 39-51. North-Holland, Amsterdam, 1979. (See **81f:62003**) 62F10
- Miller, Arnold W.** (with Fleissner, William G.) On Q sets. *Proc. Amer. Math. Soc.* 78 (1980), no. 2, 280-284. (V. I. Malyhin) **81i:03077** 03E35 (54A25, 54A35, 54E30)
- Miller, Arthur I.** On the history of the special relativity theory. *Albert Einstein: his influence on physics, philosophy and politics*, pp. 89-108. Vieweg, Braunschweig, 1979. (See **81f:01039**) 01A70
- Miller, D. J.** (with Hell, Pavol) Graphs with forbidden homomorphic images. *Second International Conference on Combinatorial Mathematics* (New York, 1978), pp. 270-280. *Ann. New York Acad. Sci.*, 319. New York Acad. Sci., New York, 1979. (Andreas Blass) **81c:05067** 05C15 (05C75)
- (with Cockayne, E. J.) Optimum addition of an edge to a path. *IEEE Trans. Circuits and Systems* 27 (1980), no. 7, 649-651. (Authors' summary) **81f:60074** 68E10 (68B05)
- Miller, D. M.** (with Muzio, J. C.) A class of two-place three-valued unary generators. *Notre Dame J. Formal Logic* 21 (1980), no. 1, 148-154. (László T. Kóczy) **81a:03022** 03B50 (94D05)
- Miller, David** Metric postulates for modular, distributive, and Boolean lattices. *Polish Acad. Sci. Inst. Philos. Sociol. Bull. Sect. Logic* 8 (1979), no. 4, 191-196. (From the summary) **81a:06007** 06B05
- Miller, Douglas E.** The invariant Π_0^2 separation principle. *Trans. Amer. Math. Soc.* 242 (1978), 185-204. (Douglas Cenzler) **81b:03054** 03E15 (03C15, 03C70, 03C75)
- Miller, Douglas R.** Almost sure comparisons of renewal processes and Poisson processes, with application to reliability theory. *Math. Oper. Res.* 4 (1979), no. 4, 406-413. (S. K. Srinivasan) **81b:60088** 60K05 (90B25)
- Miller, Edward Y.** (with Mann, Benjamin M.) The construction of the Kervaire sphere by means of an involution. *Michigan Math. J.* 27 (1980), no. 3, 301-308. (R. De Sapio) **81m:57023** 57R55 (57R60)
- Miller, Fred D., Jr.** (with Altman, Andrew; Bradie, Michael) On doing without events. *Philos. Stud.* 36 (1979), no. 3, 301-307. (From the introduction) **81m:03008** 03A05
- Miller, Gary L.** (with Đoković, Dragomir Ž.) Regular groups of automorphisms of cubic graphs. *Graph theory and related topics* (Proc. Conf., Univ. Waterloo, Waterloo, Ont., 1977), pp. 145-152. Academic Press, New York, 1979. (Norman Biggs) **81f:05092** 05C25
- (with Đoković, Dragomir Ž.) Regular groups of automorphisms of cubic graphs. *J. Combin. Theory Ser. B* 29 (1980), no. 2, 195-230. (G. Laman) **81m:05076** 05C25 (20F32)
- (with Garey, M. R.; Johnson, David S.; Papadimitriou, Christos H.) The complexity of coloring circular arcs and chords. *SIAM J. Algebraic Discrete Methods* 1 (1980), no. 2, 216-227. (Authors' summary) **81g:68065** 68C25 (03D15, 05C15, 20F10)
- Miller, Guthrie** Stability of the noncircular screw pinch. *Phys. Fluids* 23 (1980), no. 11, 2277-2282. (Author's summary) **81k:76027** 76E25 (76X05)
- Miller, Harry I.** Summability of subsequences, rearrangements and stretchings of sequences. (Serbo-Croatian summary) *Akad. Nauka Unjjet. Bosne Hercegov. Rad. Odelj. Prirod. Mat. Nauka* No. 19 (1980), 95-102. (John A. Fridy) **81m:40005** 40C05
- Miller, Haynes** (with Snaith, Victor P.) On the K -theory of the Kahn-Priddy map. *J. London Math. Soc. (2)* 20 (1979), no. 2, 339-342. (Stewart B. Priddy) **81b:55025** 55P47 (55N15)
- Miller, J. G.** Bifurcate Killing horizons. *J. Math. Phys.* 20 (1979), no. 7, 1345-1348. (J. D. Zund) **81c:83022** 83C40 (83C05)
- Kaluza and Klein's five-dimensional relativity. *Quantum theory and gravitation* (Proc. Sympos., Loyola Univ., New Orleans, La., 1979), pp. 221-232. Academic Press, New York, 1980. (M. Carmeli) **81g:83055** 83E15 (53B50)
- Miller, James** Convex and starlike meromorphic functions. *Proc. Amer. Math. Soc.* 80 (1980), no. 4, 607-613. (W. C. Royster) **81k:30015** 30C45
- Miller, John D.** Maxima of functions. *Texas J. Sci.* 32 (1980), no. 2, 109-113. (B. K. Lahiri) **81f:26008** 26A99
- Miller, John J. H.** Sufficient conditions for the convergence, uniformly in ϵ , of a three-point difference scheme for a singular perturbation problem. *Numerical treatment of differential equations in applications* (Proc. Meeting, Math. Res. Center, Oberwolfach, 1977), pp. 85-91. *Lecture Notes in Math.*, 679. Springer, Berlin, 1978. (Author's summary) **81i:65066** 65L10
- On the convergence, uniformly in ϵ , of difference schemes for a two point boundary

- singular perturbation problem. *Numerical analysis of singular perturbation problems* (Proc. Conf., Math. Inst., Catholic Univ., Nijmegen, 1978), pp. 467-474, Academic Press, London, 1979. (A. M. Il'in) **81i:65061** 65L10
- (with Carroll, John) Completely exponentially fitted finite difference schemes for some singular perturbation problems. *Boundary and interior layers—computational and asymptotic methods* (Proc. Conf., Trinity College, Dublin, 1980), pp. 225-230, Boole, Dún Laoghaire, 1980. (Authors' summary) **81m:65129** 65L10
- (with Farrell, P. A.; Hegarty, F.; O'Reilly, M. J.; Sloane, A. A.) Numerical results for singularly perturbed linear and quasilinear differential equations using a coarse grid. *Boundary and interior layers—computational and asymptotic methods* (Proc. Conf., Trinity College, Dublin, 1980), pp. 275-280, Boole, Dún Laoghaire, 1980. (From the introduction) **81m:65132** 65L10
- (with Sztatrowski, Ted H.) Explicit maximum likelihood estimates from balanced data in the mixed model of the analysis of variance. *Ann. Statist.* **8** (1980), no. 4, 811-819. (C. R. Rao) **81h:62126** 62J05 (62F10)
- See also *Boundary and interior layers—computational and asymptotic methods*, **81j:76001**
- Miller, John R.** Use of an infinite-valued propositional calculus in a document retrieval system. *Proceedings of the Eighth International Symposium on Multiple-Valued Logic* (Rosemont, Ill., 1978), pp. 157-162, IEEE, Long Beach, Calif., 1978. (Author's summary) **81d:68132** 68H05 (03B50)
- Miller, Keith** (with Manselli, Paolo) Calculation of the surface temperature and heat flux on one side of a wall from measurements on the opposite side. (Italian summary) *Ann. Mat. Pura Appl.* (4) **123** (1980), 161-183. (Authors' summary) **81m:80004** 80A20 (35K05)
- (with Simon, B.) Quantum magnetic Hamiltonians with remarkable spectral properties. *Phys. Rev. Lett.* **44** (1980), no. 25, 1706-1707. (Authors' summary) **81d:81022** 81C10 (35P05, 82A42)
- (with Manselli, Paolo) Dimensionality reduction methods for efficient numerical solution, backward in time, of parabolic equations with variable coefficients. *SIAM J. Math. Anal.* **11** (1980), no. 1, 147-159. (Philip Brenner) **81h:65097** 65M30 (65N25)
- Miller, Kenneth G.** Parametrics for a class of hypoelliptic operators. *J. Differential Equations* **31** (1979), no. 3, 313-328. (David S. Tartakoff) **81k:35032** 35H05 (47F05)
- Hypoellipticity on the Heisenberg group. *J. Funct. Anal.* **31** (1979), no. 3, 306-320. (David S. Tartakoff) **81e:58061** 58G15 (35H05)
- Miller, Kenneth S.** ★An introduction to vector stochastic processes. Applied Mathematics Series. Robert E. Krieger Publishing Co., Huntington, N.Y., 1980. vii + 214 pp. ISBN 0-88275-855-1 (H. Salehi) **81h:60092** 60H99 (60G10, 93E99)
- (with Leskiw, Donald M.) Convergence properties in Kalman filtering. *J. Inform. Optim. Sci.* **1** (1980), no. 3, 197-213. (Authors' summary) **81h:93110** 93E11
- Miller, Larry E.** Generalized boundary-value problems. *J. Math. Anal. Appl.* **74** (1980), no. 1, 233-246. (R. E. Gaines) **81f:34017** 34A60
- Miller, Louis W.** Using linear programming to derive planning horizons for a production smoothing problem. *Management Sci.* **25** (1979), no. 12, 1232-1244. (Author's summary) **81e:90048** 90B30 (90C08)
- Miller, Matthew** Bourbaki's theorem and prime ideals. *J. Algebra* **64** (1980), no. 1, 29-36. (Yves Lequain) **81h:13007** 13C05
- Self-analysis of rank-2 reflexive modules. *J. Pure Appl. Algebra* **16** (1980), no. 3, 275-284. (M. Schneider) **81g:13006** 13C10 (14F05)
- (with Kustin, Andrew R.) Algebra structures on minimal resolutions of Gorenstein rings of embedding codimension four. *Math. Z.* **173** (1980), no. 2, 171-184. (Jonathan M. Wahl) **81j:13013** 13D25
- Miller, Maximilian** ★Gelöste und ungelöste mathematische Probleme. (German) [Solved and unsolved mathematical problems] Third edition. Mathematische Schülerbücherei [Mathematical Library for Students], 73. BS B. G. Teubner Verlagsgesellschaft, Leipzig, 1979. 96 pp. (Editors) **81j:00062** 00A05
- Miller, Michael D.** (with Guralnick, Robert M.) Maximal subfields of algebraically closed fields. *J. Austral. Math. Soc. Ser. A* **29** (1980), no. 4, 462-468. (W.-D. Geyer) **81j:12023** 12F05
- tmović-Miller, Naza** See **tmović-Miller, Naza**
- Miller, R. L.** (with Reed, I. S.; Truong, T. K.) A new algorithm for computing primitive elements in the field of Gaussian complex integers modulo a Mersenne prime. *IEEE Trans. Acoust. Speech Signal Process.* **27** (1979), no. 5, 561-563. (S. W. Golomb) **81b:10002** 10A10 (12C15, 68G99)
- Miller, Raymond E.** (with Pippenger, Nicholas; Rosenberg, Arnold L.; Snyder, Lawrence) Optimal 2,3-trees. Preliminary version. *Proceedings of a Conference on Theoretical Computer Science* (Univ. Waterloo, Waterloo, Ont., 1977), pp. 30-35, Univ. Waterloo, Waterloo, Ont., 1978. (Authors' summary) **81h:68058** 68E10
- (with Yap, Chee K.) On the formal specification and analysis of loosely connected processes. *Mathematical studies of information processing* (Proc. Internat. Conf., Kyoto, 1978), pp. 33-66, *Lecture Notes in Comput. Sci.*, 75, Springer, Berlin, 1979. (Authors' summary) **81g:68042** 68B20
- (with Yap, Chee K.) On formulating simultaneity for studying parallelism and synchronization. ACM-SIGACT Symposium on the Theory of Computing (San Diego, Calif., 1978). *J. Comput. System Sci.* **20** (1980), no. 2, 203-218. (Jane W. S. Liu) **81h:68026** 68B10
- Miller, Richard J.** (with Lovass-Nagy, Victor; Mukundan, Rangaswamy) On the application of matrix generalized inverses to the design of observers for time-varying and time-invariant linear systems. *IEEE Trans. Automat. Control* **25** (1980), no. 6, 1213-1218. (Authors' summary) **81m:93017** 93B07 (15A09)
- Miller, Richard K.** (with Skar, Sherwin J.; Michel, Anthony N.) Periodic solutions of systems of ordinary differential equations. *Differential equations* (Proc. Eighth Fall Conf., Oklahoma State Univ., Stillwater, Okla., 1979), pp. 51-64, Academic Press, New York, 1980. (M. K. Grammatikopoulos) **81h:34048** 34C25
- (with Michel, Anthony N.) On the response of nonlinear multivariable interconnected feedback systems to periodic input signals. *IEEE Trans. Circuits and Systems* **27** (1980), no. 11, 1088-1097. (Authors' summary) **81j:93043** 93D15 (45D05, 93C10)
- (with Michel, Anthony N.) Asymptotic stability of systems: results involving the system topology. *SIAM J. Control Optim.* **18** (1980), no. 2, 181-190. (Günter Kern) **81b:93052** 93D20 (34D05, 70K20)
- (with Michel, Anthony N.) On existence of periodic motions in nonlinear control systems with periodic inputs. *SIAM J. Control Optim.* **18** (1980), no. 5, 585-598. (E. F. Infante) **81m:93040** 93C10 (93C20)
- Miller, Robert E.** Reduction of the error in eccentric beam modelling. *Internat. J. Numer. Methods Engrg.* **15** (1980), no. 4, 575-582. (Author's summary) **81b:73036** 73K25 (73K05)
- Miller, Robert N.** (with Rinzel, John) Numerical calculation of stable and unstable periodic solutions to the Hodgkin-Huxley equations. *Math. Biosci.* **49** (1980), no. 1-2, 27-59. (Gail A. Carpenter) **81g:92012** 92A09 (65M10, 92-04)
- Miller, Robert W.** (with Teply, Mark L.) On flatness relative to a torsion theory. *Comm. Algebra* **6** (1978), no. 10, 1037-1071. (K. M. Rangaswamy) **81a:16016** 16A50 (18E40)
- (with Teply, Mark L.) The descending chain condition relative to a torsion theory. *Pacific J. Math.* **83** (1979), no. 1, 207-219. (Jonathan Golan) **81b:16019** 16A63 (16A08)
- Miller, Ronald Eugene** ★Dynamic optimization and economic applications. Advanced Book Program. McGraw-Hill International Book Co., New York-Auckland-Bogota, 1979. x + 332 pp. ISBN 0-07-042180-3 (Edwin H. Neave) **81b:49001** 49-01 (49C99, 90-01, 90A16)
- Miller, Rupert G.** (with Halpern, Jerry W.) Robust estimators for quantal bioassay. *Biometrika* **67** (1980), no. 1, 103-110. (K. Dietz) **81h:62070** 62F35 (62P10)
- Miller, Sanford S.** (with Mocanu, Petru T.; Reade, Maxwell O.) The order of starlikeness of alpha-convex functions. *Mathematica (Cluj)* **20** (43) (1978), no. 1, 25-30. (S. Ruscheweyh) **81d:30016** 30C45
- Miller, Webb** (with Spooner, David) Software for roundoff analysis. II. *ACM Trans. Math. Software* **4** (1978), no. 4, 369-387. (Authors' summary) **81i:65035** 65G05 (65F99)
- Miller, Willard, Jr.** (with Boyer, Charles P.; Kalnins, E. G.) R-separable coordinates for three-dimensional complex Riemannian spaces. *Trans. Amer. Math. Soc.* **242** (1978), 355-376. (Tom H. Koornwinder) **81h:53015** 53B20 (22E70, 35A22)
- (with Kalnins, E. G.) Nonorthogonal separable coordinate systems for the flat 4-space Helmholtz equation. *J. Phys. A* **12** (1979), no. 8, 1129-1147. (Michael P. Ryan, Jr.) **81e:58065** 58G30 (22E70, 35J05, 53B20, 83C99)
- (with Kalnins, E. G.) Killing tensors and variable separation for Hamilton-Jacobi and Helmholtz equations. *SIAM J. Math. Anal.* **11** (1980), no. 6, 1011-1026. (A. P. Stone) **81m:53026** 53B20 (35C99, 70H20)
- (with Kalnins, E. G.; Manocha, H. L.) The Lie theory of two-variable hypergeometric functions. *Stud. Appl. Math.* **62** (1980), no. 2, 143-173. (Carl Wulfman) **81e:33010** 33A75 (22E05, 22E70, 33A30, 35A30, 53B20)
- (with Kalnins, E. G.; Manocha, H. L.) Transformation and reduction formulas for two-variable hypergeometric functions on the sphere S_2 . *Stud. Appl. Math.* **63** (1980), no. 2, 155-167. (J. P. Singhal) **81m:33011** 33A75 (17B10, 22E45)
- Miller, Zevi** (with Brualdi, Richard A.; Harary, Frank) Bigrads versus digraphs via matrices. *J. Graph Theory* **4** (1980), no. 1, 51-73. (Jean H. Bevis) **81b:05077** 05C30 (15A21)
- Millet, Annie** (with Sucheston, Louis) Classes d'amarts filtrants et conditions de Vitali. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **296** (1978), no. 19, A835-A837. (Authors' summary) **81e:60056** 60G48
- (with Sucheston, Louis) On the existence of α -finite invariant measures for operators. A collection of invited papers on ergodic theory. *Israel J. Math.* **33** (1979), no. 3-4, 349-367 (1980). (Richard Isaac) **81j:60073** 60J05 (28D05, 47B38)
- (with Sucheston, Louis) A characterization of Vitali conditions in terms of maximal inequalities. *Ann. Probab.* **8** (1980), no. 2, 339-349. (U. Krengel) **81g:60052** 60G48 (60G40)
- (with Fouque, Jean-Pierre) Régularité à gauche des martingales fortes à plusieurs indices. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **290** (1980), no. 16, A773-A776. (Authors' summary) **81e:60049** 60G44 (60G48)
- (with Sucheston, Louis) Convergence of classes of amarts indexed by directed sets. *Canad. J. Math.* **32** (1980), no. 1, 86-125. (U. Krengel) **81g:60051** 60G48
- Sur le théorème en moyenne d'Akcoğlu-Sucheston. *Math. Z.* **172** (1980), no. 3, 213-237. (Michael Lin) **81h:47007** 47A35 (46E30)
- Milliet, T.** (with Tang, I.) Using inners to determine multiple roots of polynomials. *Southeast Asian Bull. Math.* **3** (1979), no. 2, 203-211. (Edward W. Kamen) **81c:12034** 12D10
- de Milleville, Hervé** Théorèmes de représentation des espaces vectoriels réticulés. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **290** (1980), no. 7, A317-A320. (W. Hackenbroch) **81f:46034** 46E05 (46E30)
- Millero, Tomaso** (with Veluscek, Antonio) The extension property in Noetherian rings. (Italian. English summary) *Rend. Sem. Mat. Univ. Padova* **60** (1978), 23-31 (1979). (Ezio Stagnaro) **81a:13012** 13E05 (14F05)
- Millman, C. B.** (with Isaacson, Karen) On a class of Nash-solvable bimatrix games and some related Nash subsets. *Naval Res. Logist. Quart.* **27** (1980), no. 3, 407-412. (Milan Mareš) **81j:90137** 90D05
- Milliken, George A.** (with Hussein, M.) An unbalanced mixed model with random effects having unequal variances. *Biometrical J.* **21** (1979), no. 2, 103-113. (Robert Hultquist) **81h:62129** 62J10 (62F10)
- (with Khorasani, Fariborz) On the exactness of confidence bands about a linear model. *J. Amer. Statist. Assoc.* **74** (1979), no. 366, part 1, 446-448. (V. K. Srivastava) **81a:62060** 62J05 (62F25)
- (with Searle, S. R.; Speed, F. M.) Population marginal means in the linear model: an alternative to least squares means. *Amer. Statist.* **34** (1980), no. 4, 216-221. (Authors' summary) **81m:62129** 62J05
- Millman, Richard S.** (with Stehney, Ann K.) Riemannian manifolds with many Killing vector fields. *Fund. Math.* **105** (1979/80), no. 3, 241-247. (K. Nomizu) **81g:53039** 53C30
- The upper half plane model for hyperbolic geometry. *Amer. Math. Monthly* **87** (1980), no. 1, 48-53. (L. M. Kelly) **81d:51001** 51-01
- Remarks on spectrum of the Laplace-Beltrami operator in the middle dimensions. *Tensor (N.S.)* **34** (1980), no. 1, 94-96. (Akira Asada) **81f:58043** 58G25

- (with Parker, George D.) The Pin(n) group as a covering group of $O(n)$. *Tensor* (N.S.) 34 (1980), no. 2, 138-140. (V. Cruceanu) **81j:22013** 22E15
- (with Parker, George D.) Denseness of bounded and unbounded Riemannian metrics. *Tensor* (N.S.) 34 (1980), no. 2, 223-224. (H. D. Fegan) **81f:53033** 53C21 (58D17)
- Mills, Charles F. (with Hulek, Miroslav; van Mill, Jan) Some very small continua. *Topological structures, II* (Proc. Sympos. Topology and Geom., Amsterdam, 1978), Part 1, pp. 147-151, *Math. Centre Tracts*, 115, *Math. Centrum, Amsterdam*, 1979. (R. F. Dickman, Jr.) **81b:54036** 54F99
- (with van Mill, Jan) A topological property enjoyed by near points but not by large points. *Topology Appl.* 11 (1980), no. 2, 199-209. (Ronnie Levy) **81e:54024** 54D35 (54D40)
- Mills, D. L. (with Li, C. H.; Tong, S. Y.) Large-angle inelastic electron scattering from adsorbate vibrations: basic theory. *Phys. Rev. B* (3) 21 (1980), no. 8, 3057-3073. (From the summary) **81a:82043** 82A60 (81F99)
- Mills, George Substructure lattices of models of arithmetic. *Ann. Math. Logic* 16 (1979), no. 2, 145-180. (Author's summary) **81i:03105** 03H15
- (with Paris, J. B.) Closure properties of countable nonstandard integers. *Fund. Math.* 103 (1979), no. 3, 205-215. (Authors' summary) **81j:03099** 03H15 (10N15)
- Mills, P. M. (with Adler, P. M.) Motion and rupture of a porous sphere in a linear flow field. *J. Rheol.* 23 (1979), no. 1, 25-37. (Authors' summary) **81k:76065** 76S05
- Mills, T. M. Quasi-Hermite-Fejér interpolation. *Studia Sci. Math. Hungar.* 12 (1977), no. 1-2, 61-63 (1980). (P. Vértesi) **81j:41006** 41A05
- (with Goodenough, S. J.) The asymptotic behaviour of certain interpolation polynomials. *J. Approx. Theory* 28 (1980), no. 4, 309-316. (L. Berg) **81k:41015** 41A50 (41A05, 41A60, 65D05)
- Mills, W. H. A new 5-design. *Ars Combin.* 6 (1978), 193-195. (From the introduction) **81f:05026** 05B05
- The construction of balanced incomplete block designs. *Proceedings of the Tenth Southeastern Conference on Combinatorics, Graph Theory and Computing* (Florida Atlantic Univ., Boca Raton, Fla., 1979), pp. 73-86, *Congress. Numer.*, XXIII-XXIV, *Utilitas Math., Winnipeg, Man.*, 1979. (Diane Johnson) **81m:05025** 05B05
- Covering designs. I. Coverings by a small number of subsets. *Ars Combin.* 8 (1979), 199-315. (R. C. Mullin) **81c:05058** 05B40
- Mills, Wendell (with Weisfeiler, Boris; Krall, Allan M.) Discovering theorems with a computer: the case of $y' = \sin(xy)$. *Amer. Math. Monthly* 86 (1979), no. 9, 733-739. (R. B. Grafton) **81g:34002** 34-01 (34A50)
- Milman, John J. (with Kudla, Stephen S.) Harmonic differentials and closed geodesics on a Riemann surface. *Invent. Math.* 54 (1979), no. 3, 193-211. (Jürgen Elstrodt) **81a:53041** 53C22 (10D15, 30F35, 58G25)
- (with Raghunathan, M. S.) Geometric construction of cohomology for arithmetic groups. I. *Geometry and analysis*, pp. 103-123, *Indian Acad. Sci., Bangalore*, 1980. (Avner Ash) **81m:22020** 22E40 (22E41)
- Millicci, Vincenzo More on gravity waves in MHD. (Italian. English summary) *Riv. Mat. Univ. Parma* (4) 5 (1979), part 1, 105-113 (1980). (D. Graffi) **81j:76095** 76W05 (76B15)
- Milman, Mario Embeddings of Lorentz-Marcinkiewicz spaces with mixed norms. (Russian summary) *Anal. Math.* 4 (1978), no. 3, 215-223. (W. A. J. Luxemburg) **81c:46020** 46E30
- Spaces between L^1 and L^∞ and the Laplace transform. *4th Latin-American School of Mathematics* (Lima, 1978), pp. 307-314, *IV ELAM, Lima*, 1979. (J. N. Pandey) **81c:44004** 44A10 (46E30)
- Interpolation of operators of mixed weak-strong type between rearrangement invariant spaces. *Indiana Univ. Math. J.* 28 (1979), no. 6, 985-992. (S. D. Riemschneider) **81b:46039** 46E30 (46M35, 47B38)
- Milman, Pierre D. (with Lambert, Joseph M.) Restricted Chebyshev centers of bounded subsets in arbitrary Banach spaces. *J. Approx. Theory* 26 (1979), no. 1, 71-78. (Geetha S. Rao) **81j:41035** 41A65 (46B99)
- Milman, V. D. (with Karpovskiy, Mark) On subspaces contained in subsets of finite homogeneous spaces. *Discrete Math.* 22 (1978), no. 3, 273-280. (Authors' summary) **81g:05013** 05A15 (05C35, 94B05)
- Milne, Frank Private markets and production decisions. *Econom. Lett.* 4 (1979/80), no. 3, 201-209. (Author's summary) **81e:90015** 90A10
- Short-selling, default risk and the existence of equilibrium in a securities model. *Internat. Econom. Rev.* 21 (1980), no. 2, 255-267. (From the text) **81g:90016** 90A09
- Milne, James S. \star Étale cohomology. *Princeton Mathematical Series*, 33, *Princeton University Press, Princeton, N.J.*, 1980. xiii + 323 pp. ISBN 0-691-08238-3 (G. Horrocks) **81j:14002** 14-02 (14F20, 18F99)
- Milne, R. K. (with Griffiths, R. C.; Wood, R.) Aspects of correlation in bivariate Poisson distributions and processes. *Austral. J. Statist.* 21 (1979), no. 3, 238-255. (Jif Andell) **81c:62066** 62H20 (60G55)
- Milne, Ronald Douglas \star Applied functional analysis. An introductory treatment. *Applicable Mathematics Series. Pitman Advanced Publishing Program*, Boston, Mass., 1980. xv + 501 pp. ISBN 0-273-08404-6 (M. M. Day) **81j:46001** 46-01 (46F10, 47E05, 47F05)
- Milne, Stephen C. Hypergeometric series well-poised in $SU(n)$ and a generalization of Biedenharn's G-functions. *Adv. in Math.* 36 (1980), no. 2, 169-211. (C. F. Dunkl) **81i:33010** 33A35 (22E30, 81C40)
- Milner, A. A. The maximal degree of irreducible representations of a Lie algebra over a field of positive characteristic. (Russian) *Funktsional. Anal. i Prilozhen.* 14 (1980), no. 2, 67-68. (James E. Humphreys) **81b:17012** 17B10
- Milner, E. C. Transversals of infinite set systems. *Second International Conference on Combinatorial Mathematics* (New York, 1978), pp. 397-401, *Ann. New York Acad. Sci.*, 319, *New York Acad. Sci., New York*, 1979. (C. St. J. A. Nash-Williams) **81f:05005** 05A05 (04A20)
- Milner, Robin A theory of type polymorphism in programming. *J. Comput. System Sci.* 17 (1978), no. 3, 348-375. (Author's summary) **81g:68022** 68B10
- LCF: a way of doing proofs with a machine. *Mathematical foundations of computer science*, 1979 (Proc. Eighth Sympos., Olomouc, 1979), pp. 146-159, *Lecture Notes in Comput. Sci.*, 74, *Springer, Berlin*, 1979. (From the text) **81g:68124** 68G15 (03B35)
- An algebraic theory for synchronization. *Theoretical computer science* (Fourth GI Conf., Aachen, 1979), pp. 27-35, *Lecture Notes in Comput. Sci.*, 67, *Springer, Berlin*, 1979. (See **81i:68013**) 68B20
- Flowgraphs and flow algebras. *J. Assoc. Comput. Mach.* 26 (1979), no. 4, 794-818. (V. Căzănescu) **81c:68022** 68B20
- (with Hennessy, Matthew C. B.) On observing nondeterminism and concurrency. *Automata, languages and programming* (Proc. Seventh Internat. Colloq., Noordwijkerhout, 1980), pp. 299-309, *Lecture Notes in Comput. Sci.*, 85, *Springer, Berlin*, 1980. (From the introduction) **81k:68021** 68B20 (68B10)
- Milnes, Paul Continuity properties of compact right topological groups. *Math. Proc. Cambridge Philos. Soc.* 86 (1979), no. 3, 427-435. (Robert S. Doran) **81h:22003** 22A10 (54H20)
- (with Pym, J. S.) Function spaces on semitopological semigroups. *Semigroup Forum* 19 (1980), no. 4, 347-354. (John F. Berglund) **81i:43014** 43A60 (22A20, 46E99)
- Milne-Thomson, L. M. See Salzer, Herbert E. **81c:65067**
- Milnor, John W. (with Stasheff, James) \star Характеристические классы. (Russian) [Characteristic classes] Translated from the English by M. A. Štan'ko. "Mir", Moscow, 1979. 371 pp. (Editors) **81j:57014** 57R20
- See also Roberts, Leslie G. **81c:18008**
- Milnor, Tilla Klotz Harmonically immersed surfaces. *J. Differential Geom.* 14 (1979), no. 2, 205-214. (J. Eells) **81j:58039** 58E20 (53C42)
- Mapping surfaces harmonically into E^n . *Proc. Amer. Math. Soc.* 78 (1980), no. 2, 269-275. (R. Osserman) **81a:53033** 53A05 (53A05, 58E20)
- Milo, W. (with Wasilewski, Z.) Comparison of methods for detecting outliers. *Publ. Économétriques* 12 (1979), no. 2, 43-53. (Steven J. Schwager) **81m:62041** 62F05
- Estimation of the final form parameters of the linear econometric model. I. *Publ. Économétriques* 13 (1980), no. 1, 69-97. (Peter Schmidt) **81j:62003** 62P20
- Miloh, T. (with Landweber, L.) Generalization of the Kelvin-Kirchhoff equations for the motion of a body through a fluid. *Phys. Fluids* 24 (1981), no. 1, 6-9. (Authors' summary) **81k:76016** 76C99
- Milomir, Peter W. Classical and quantum theories of radiation. *Foundations of radiation theory and quantum electrodynamics*, pp. 1-21, *Plenum, New York*, 1980. (See **81i:81002**) **81K05** (78A25)
- (with Knight, P. L.) The Rabi frequency in optical spectra. *Phys. Rep.* 66 (1980), no. 2, 21-107. (Authors' summary) **81k:81121** 81K05 (81-02)
- Milosević, S. (with Knežević, M.) One-dimensional compressible Ising chain with general spin. *J. Phys. A* 13 (1980), no. 7, 2479-2488. (Authors' summary) **81c:82061** 82A67
- Milov, L. T. Multidimensional matrix derivatives and sensitivity analysis of control systems. *Automat. i Telemekh.* 1979, no. 9, 15-25. (Russian. English summary); translated as *Automat. Remote Control* 40 (1979), no. 9, part 1, 1269-1277 (1980). (Author's summary) **81a:93028** 93B35 (93C05)
- Milovanov, M. V. Solvable Lie groups with a given uniform subgroup. (Russian. English summary) *Dokl. Akad. Nauk BSSR* 23 (1979), no. 6, 485-487, 571. (G. A. Solfer) **81g:22006** 22E25 (22E40)
- Milovanović, Gradimir V. (with Milovanović, Igor Ž.) A generalization of a problem given by D. S. Mitrović. *Univ. Beograd. Publ. Elektrotehn. Fak. Ser. Mat. Fiz.* No. 602-633 (1978), 129-132 (1979). (Chung Lie Wang) **81i:26022** 26D20
- (with Đorđević, Radosav Ž.; Pečarić, Josip E.) Some estimates of L^1 norm on the set of continuously-differentiable functions. *Univ. Beograd. Publ. Elektrotehn. Fak. Ser. Mat. Fiz.* No. 634-677 (1979), 57-61. (J. Horváth) **81h:26013** 26D10 (46E30)
- (with Milovanović, Igor Ž.) On a generalization of certain results of A. Ostrowski and A. Lupas. *Univ. Beograd. Publ. Elektrotehn. Fak. Ser. Mat. Fiz.* No. 634-677 (1979), 62-69. (William N. Everitt) **81g:26011** 26D15
- (with Pečarić, Josip E.) The Steffensen inequality for convex function of order 1. *Univ. Beograd. Publ. Elektrotehn. Fak. Ser. Mat. Fiz.* No. 634-677 (1979), 97-100. (E. F. Beckenbach) **81i:26018** 26D15
- Milovanović, Igor Ž. (with Milovanović, Gradimir V.) A generalization of a problem given by D. S. Mitrović. *Univ. Beograd. Publ. Elektrotehn. Fak. Ser. Mat. Fiz.* No. 602-633 (1978), 129-132 (1979). (Chung Lie Wang) **81i:26022** 26D20
- (with Milovanović, Gradimir V.) On a generalization of certain results of A. Ostrowski and A. Lupas. *Univ. Beograd. Publ. Elektrotehn. Fak. Ser. Mat. Fiz.* No. 634-677 (1979), 62-69. (William N. Everitt) **81g:26011** 26D15
- Milovidova, I. P. On the set of limit points of the sequence of arithmetic means of a numerical series. (Russian. Armenian and English summaries) *Izv. Akad. Nauk Armjan. SSR Ser. Mat.* 12 (1977), no. 5, 385-398, 416. (Włodzisław Lenski) **81a:40009** 40G05
- Milstein, Jaime Error estimates for rate constants of inverse problems. *SIAM J. Appl. Math.* 35 (1978), no. 3, 479-487. (Author's introduction) **81m:92026** 92A09 (65L07, 80A30)
- Milton, D. R. (with Fischer, C. N.) LL(k) parsing for attributed grammars. *Automata, languages and programming* (Sixth Colloq., Graz, 1979), pp. 422-430, *Lecture Notes in Comput. Sci.*, 71, *Springer, Berlin*, 1979. (From the introduction) **81c:68106** 68F25
- (with Fischer, C. N.; Quiring, S. B.) Efficient LL(1) error correction and recovery using only insertions. *Acta Inform.* 13 (1980), no. 2, 141-154. (Author's summary) **81c:68116** 68F25 (68B99)
- Milton, Kimball A. Macroscopic quantum electrodynamics. *Foundations of radiation theory and quantum electrodynamics*, pp. 173-182, *Plenum, New York*, 1980. (See **81i:81002**) **81L05**
- Semiclassical electron models: Casimir self-stress in dielectric and conducting balls. *Ann. Physics* 127 (1980), no. 1, 49-61. (Author's summary) **81c:81106** 81L05 (81G10)
- (with Urrutia, Luis F.; Finkelstein, Robert J.) Constructive approach to supergravity. *Gen. Relativity Gravitation* 12 (1980), no. 1, 67-81. (Authors' summary) **81d:83042** 83C99 (81G25)
- See also Schwinger, Julian, **81b:01023**
- Mileševa, S. D. Application of the averaging method to a class of singularly perturbed integro-differential equations. (Russian. Bulgarian and English summaries) *Godišnik Viss. Učebn. Zased. Prilozna Mar.* 13 (1977), no. 2, 53-67 (1978). (Nicolae Luca) **81c:45024** 45M05 (34K15)
- (with Bălnov, D. D.) Application of the averaging method for the solution of

- multipoint boundary value problems with a nonlinear boundary condition for a class of integro-differential equations containing multiple integrals. (Russian) *An. Univ. București Mat.* **28** (1979), 17–24. (K. Seitz) **81c:45015** 45J05
- (with Bainov, D. D.) Application of the averaging method for the solution of multipoint boundary value problems with a nonlinear boundary condition for a class of integro-differential equations that contain multiple integrals. (Russian) *Rev. Roumaine Sci. Tech. Sér. Méc. Appl.* **24** (1979), no. 3, 433–440. (Ju. A. Melencova) **81b:45012** 45J05 (34C29)
- (with Bainov, D. D.) Application of the averaging method for the solution of multipoint boundary value problems with a nonlinear boundary condition for systems of differential and integro-differential equations that are not solved for the derivative. (Russian) *Rev. Roumaine Sci. Tech. Sér. Méc. Appl.* **24** (1979), no. 4, 537–543. (Ju. A. Melencova) **81b:45013** 45J05 (34B15, 34C29)
- (with Bainov, D. D.; Konstantinov, Mihail M.) A boundary value problem for systems of differential equations with fast and slow variables. (Russian) *Ukrain. Mat. Ž.* **32** (1980), no. 3, 301–313. (Stefan Balint) **81m:34018** 34B15
- Mima, Kunio (with Hasegawa, Akira) Nonlinear instability of electromagnetic drift waves. *Phys. Fluids* **21** (1978), no. 1, 81–86. (Authors' summary) **81e:76009** 76X05
- (with Makar, Malak; Nishihara, Katsunobu; Uji, Masataka) Parametric instabilities in two-electron temperature plasma by laser. *Tech. Rep. Osaka Univ.* **30** (1980), no. 1517–1550, 129–136. (Authors' summary) **81f:76054** 76X05
- Mimura, Fumitake (with Nono, Takayuki) Dynamical symmetries. *V. Bull. Fukuoka Univ. Ed. III* **28** (1978), 7–16. (Demeter Krupka) **81b:58018** 58F05
- (with Nono, Takayuki) Material symmetries. I. *Bull. Fukuoka Univ. Ed. III* **29** (1979), 21–31. (Demeter Krupka) **81g:58033** 58F35 (22E70, 73B99)
- Mimura, Mamoru (with Sambe, Yuriko) On the cohomology mod p of the classifying spaces of the exceptional Lie groups. I. *J. Math. Kyoto Univ.* **19** (1979), no. 3, 553–581. (J. F. Adams) **81c:55025** 55R40 (57T35)
- (with Sambe, Yuriko) On the cohomology mod p of the classifying spaces of the exceptional Lie groups. II. *J. Math. Kyoto Univ.* **20** (1980), no. 2, 327–379. (J. F. Adams) **81j:55023** 55T20
- (with Kono, Akira) Cohomology mod 3 of the classifying space of the Lie group E_6 . *Math. Scand.* **46** (1980), no. 2, 223–235. (H. Scheerer) **81m:55015** 55R40 (57T10)
- Mimura, Masayasu (with Nishihara, Yasumasa; Yamaguchi, Masaya) Some diffusive prey and predator systems and their bifurcation problems. *Bifurcation theory and applications in scientific disciplines (Papers, Conf., New York, 1977)*, pp. 490–510, *Ann. New York Acad. Sci.*, **316**, New York Acad. Sci., New York, 1979. (E. D. Conway) **81a:35050** 35K55 (35B32, 92A15)
- Asymptotic behaviors of a parabolic system related to a planktonic prey and predator model. *SIAM J. Appl. Math.* **37** (1979), no. 3, 499–512. (E. D. Conway) **81i:35063** 35K55 (92A15)
- (with Hosono, Yuzo) Singular perturbation to travelling wave solutions of some competitive systems with diffusion. *Boundary and interior layers—computational and asymptotic methods (Proc. Conf., Trinity College, Dublin, 1980)*, pp. 312–316, *Boole, Dún Laoghaire*, 1980. (Gail A. Carpenter) **81m:35071** 35K55 (35B25, 80A20, 92A15)
- (with Tabata, Masahisa; Hosono, Yuzo) Multiple solutions of two-point boundary value problems of Neumann type with a small parameter. *SIAM J. Math. Anal.* **11** (1980), no. 4, 613–631. (S. Schwabik) **81g:34025** 34B15 (34E15, 92A15)
- Mimura, Yoshio On 2-lattices over real quadratic integers. *Math. Sem. Notes Kobe Univ.* **7** (1979), no. 2, 327–342. (Dennis Estes) **81m:10036** 10C04
- Min, Lim Choo (with Habibullah, B. S.) Design of optimal controller for linear single-input system. *Electron. Lett.* **15** (1979), no. 20, 660–661. (Authors' summary) **81a:93018** 93B05
- Minagawa, S. A non-Riemannian geometrical theory of imperfections in a Cosserat continuum. (Polish and Russian summaries) *Arch. Mech. (Arch. Mech. Stos.)* **31** (1979), no. 6, 783–792. (Authors' summary) **81j:73013** 73B99
- Minashin, V. V. A pair of Riemannian metrics on a complete manifold. (Russian) *Funktsional. Anal. i Prilozhen.* **14** (1980), no. 2, 69–70. (V. I. Olikier) **81k:58072** 58G99 (53C20)
- Minami, Haruo On J_g -homomorphisms. *Osaka J. Math.* **16** (1979), no. 3, 581–588. (V. P. Snaith) **81c:55021** 55Q50
- Minami, Masatsugu Dirac's monopole and the Hopf map. *Progr. Theoret. Phys.* **62** (1979), no. 4, 1128–1142. (Authors' summary) **81m:81042** 81E10 (53C05, 57R25)
- stancu-Minasian, I. M. See Stancu-Minasian, I. M.
- Minasian, I. S. A theorem of expansion of all roots of a polynomial in absolutely convergent series. (Russian) *Dokl. Akad. Nauk SSSR* **244** (1979), no. 5, 1068–1071. (D. A. Brannan) **81m:30005** 30C10
- Minasian, V. B. The averaging principle and theorem of large deviations for some families of extensions of an Anosov flow. (Russian) *Uspehi Mat. Nauk* **35** (1980), no. 2(212), 215–216. (M. I. Brin) **81b:58048** 58F15 (58F11, 60F10)
- Minc, G. E. A new reduction sequence for arithmetic. (Russian. English summary) *Studies in constructive mathematics and mathematical logic, VIII. Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* **88** (1979), 106–130, 240–241. (W. Marek) **81k:03060** 03F05 (03F30)
- A primitive recursive bound for strong normalization in predicate calculus. (Russian. English summary) *Studies in constructive mathematics and mathematical logic, VIII. Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* **88** (1979), 131–136, 241–242. (A. S. Kuzichev) **81k:03107** 03F05
- Minc, Henryk An asymptotic solution of the multidimensional dimer problem. *Linear and Multilinear Algebra* **8** (1979/80), no. 3, 235–239. (R. A. Brualdi) **81e:82063** 82A67 (05B40, 15A15, 15A51)
- Bounds for permanents and determinants. *Linear and Multilinear Algebra* **9** (1980), no. 1, 5–16. (Thomas H. Foregger) **81i:15008** 15A15
- Rearrangement inequalities. *Proc. Roy. Soc. Edinburgh Sect. A* **86** (1980), no. 3–4, 339–345. (I. Olkin) **81k:26015** 26D20
- Mine, Piotr (with Krasinkiewicz, Józef) Generalized paths and pointed 1-movability. *Fund. Math.* **104** (1979), no. 2, 141–153. (R. H. Overton) **81b:55028** 55P55 (54F43)
- Fixed points and locally connected cyclic continua in E^2 . *Fund. Math.* **107** (1980), no. 1, 1–20. (James T. Rogers, Jr.) **81i:54036** 54H25 (54F20)
- (with Krasinkiewicz, Józef) Continuous monotone decompositions of planar curves. *Fund. Math.* **107** (1980), no. 2, 113–128. (David C. Wilson) **81k:54010** 54C10 (54F50)
- Mincor, B. (with Urbanik, K.) Completely stable measures on Hilbert spaces. *Colloq. Math.* **42** (1979), 301–307. (A. Badrikian) **81g:60008** 60B11 (28C20, 60E07)
- Mincer, M. C. Quantisation in indefinite metric. *J. Phys. A* **13** (1980), no. 5, 1841–1859. (John L. Challifour) **81f:81062** 81E99 (22E70, 47B47, 58F06)
- bui-Min-Çi See Bui-Min-Çi
- Minda, Carl David The Aumann-Carathéodory rigidity constant for doubly connected regions. *Kodai Math. J.* **2** (1979), no. 3, 420–426. (E. Reich) **81d:30043** 30C80 (30C75)
- Fixed points of analytic self-mappings of Riemann surfaces. *Manuscripta Math.* **27** (1979), no. 4, 391–399. (L. Keen) **81a:30024** 30F10
- Mindlin, R. D. High frequency vibrations of quartz plates by expansion in series of Ekstein functions. *Internat. J. Solids and Structures* **16** (1980), no. 9, 785–791. (Authors' summary) **81f:73028** 73K12
- Mine, Hisashi (with Kimura, Toshikazu; Ohno, Katsuhisa) Diffusion approximation for $GI/G/1$ queueing systems with finite capacity. I. The first overflow time. (Japanese summary) *J. Oper. Res. Soc. Japan* **22** (1979), no. 1, 41–68. (Authors' summary) **81j:60106a** 60K25
- (with Kimura, Toshikazu; Ohno, Katsuhisa) Diffusion approximation for $GI/G/1$ queueing systems with finite capacity. II. The stationary behaviour. (Japanese summary) *J. Oper. Res. Soc. Japan* **22** (1979), no. 4, 301–320. (Authors' summary) **81j:60106b** 60K25
- (with Katoh, N.; Ibaraki, Toshihide) Notes on the problem of the allocation of resources to activities in discrete quantities. *J. Oper. Res. Soc. Japan* **31** (1980), no. 7, 595–598. (Authors' summary) **81g:90057** 90B30 (68C25, 90C10)
- Mineev, V. S. (with Gostev, V. B.; Frenkin, A. R.) Exact solution of functional equations of a special form. (Russian) *Vestnik Moskov. Univ. Ser. III Fiz. Astronom.* **21** (1980), no. 3, 86–88, 96–97. (F. Smithies) **81h:45014** 45G05 (44A05, 82A40)
- Minelli, T. A. (with Pusterla, M.; Roberts, N. C.) Analytical approximate solutions of the nonlinear basic equations in classical physics. *Lett. Nuovo Cimento* (2) **27** (1980), no. 11, 331–335. (B. Buti) **81h:34011** 34A45 (76X05, 78A55)
- (with Pascolini, A.) Soliton dynamics and nonlinear quantum mechanics. *Lett. Nuovo Cimento* (2) **27** (1980), no. 13, 413–423. (V. Z. Enol'skii) **81k:81016** 81C05
- Minemura, K. (with Kashiwara, Masaki; Kowata, Atsutaka; Okamoto, Kiyosato; Ōshima, Toshio; Tanaka, Makoto) Eigenfunctions of invariant differential operators on a symmetric space. *Ann. of Math.* (2) **107** (1978), no. 1, 1–39. (Kenneth Johnson) **81i:43013** 43A80 (22E30)
- Mines, R. (with Julian, W.; Richman, F.) Algebraic numbers, a constructive development. *Pacific J. Math.* **74** (1978), no. 1, 91–102. (S. A. Bassarab) **81a:03061** 03F65 (12L05)
- (with Oxford, E.) Model induced triples and completions of abelian groups. *Symposia Mathematica, Vol. XXIII (Conf. Abelian Groups and their Relationship to the Theory of Modules, INDAM, Rome, 1977)*, pp. 189–199, *Academic Press, London*, 1979. (L. Bican) **81f:18030** 18E40
- (with Mader, Adolf) Functorial topologies with totally ordered neighborhood bases. *Arch. Math. (Basel)* **34** (1980), no. 3, 272–275. (Donald Cook) **81k:20079** 20K45 (54A99)
- yue chi Ming, Roger See Yue Chi Ming, Roger
- Mingarelli, Angelo B. Some extensions of the Sturm-Picone theorem. *C. R. Math. Rep. Acad. Sci. Canada* **1** (1978/79), no. 4, 223–226. (Vadim Komkov) **81k:34025** 34C10
- Mingo, James A. Jordan subalgebras of Banach algebras. *J. London Math. Soc.* (2) **21** (1980), no. 1, 162–166. (J. D. Maitland Wright) **81i:46092** 46L99 (17C65)
- Mingozzi, Aristide (with Christofides, Nicos; Toth, Paolo) Contributions to the quadratic assignment problem. *European J. Oper. Res.* **4** (1980), no. 4, 243–247. (Authors' summary) **81a:90133** 90C30 (90B05)
- (with Christofides, Nicos; Toth, Paolo) Dynamic loading and unloading of liquids into tanks. *Oper. Res.* **28** (1980), no. 3, part 2, 633–649. (Authors' summary) **81d:90074** 90C10 (90B35, 90C39)
- do le Minh See Do Le Minh
- bui Minh Phong See Bui Minh Phong
- Miniconi, Michel Un théorème des fonctions implicites. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **289** (1979), no. 12, A601–A603. (Felice Ronga) **81a:32096** 32B99 (58C15)
- Minieka, Edward The Chinese postman problem for mixed networks. *Management Sci.* **25** (1979/80), no. 7, 643–648. (Authors' summary) **81a:90085** 90B10 (68E10, 90B35)
- Conditional centers and medians of a graph. *Networks* **10** (1980), no. 3, 265–272. (Authors' summary) **81i:90066** 90B05 (94C15)
- Minia, V. V. (with Petrov, A. I.) Application of observers for optimal control of linear stochastic discrete systems. *Automatika* **1978**, no. 6, 33–40. (Russian. English summary); translated as *Soviet Automat. Control* **11** (1978), no. 6, 29–35. (S. G. Tzafestas) **81i:93073** 93E11
- Minini, Michele About the solvability of some nonlinear equations with α -contractivity conditions. (Italian summary) *Boll. Un. Mat. Ital. B* (5) **15** (1978), no. 2, 546–565. (James R. Ward, Jr.) **81b:47080** 47H15 (58C30, 58E07)
- Minlowitz, Ruth Quasiregular mappings. *Complex analysis Joensuu 1978 (Proc. Colloq. Univ. Joensuu, Joensuu, 1978)*, pp. 285–288, *Lecture Notes in Math.*, **747**, Springer, Berlin, 1979. (G. D. Anderson) **81d:30032** 30C60
- Minjaeva, L. N. (with Sabinin, O. Ju.) Adaptive statistical modelling algorithms for stochastic control systems. *Avtomat. i Vyčisl. Tehn. (Riga)* **1980**, no. 1, 55–63, 97. (Russian); translated as *Automat. Control Comput. Sci.* **14** (1980), no. 1, 50–57. (Authors' summary) **81j:93070** 93E25 (68J10)
- Milajuk, S. A. (with Metel'skii, A. V.) On the theory of the complete observability of systems with lag. (Russian) *Differentsial'nye Uravneniya* **14** (1978), no. 4, 624–633, 764. (F. M. Kirillova) **81i:93008** 93B07
- (with Ljahovec, S. N.) Construction of accessibility sets for controllable second-order differential-difference systems. (Russian. English summary) *Dokl. Akad. Nauk BSSR* **24** (1980), no. 2, 109–112, 188. (N. N. Petrov) **81j:34119** 34K05 (93B05)
- Minkin, A. N. An equiconvergence theorem for a normal integral operator with a kernel of the type of Green function. (Russian) *Numerical methods and programming, No. 1 (Russian)*, pp. 181–190, 201–202, *Saratov. Gos. Univ., Saratov*, 1977. (Authors' summary)

- 81a:47051 47G05
Minkoff, M. (with Cornwell, L. W.; Schultz, H.) Testing of augmented Lagrangians. *Survey of mathematical programming (Proc. Ninth Internat. Math. Programming Symp., Budapest, 1976)*, Vol. 1, pp. 409-420, North-Holland, Amsterdam, 1979. (T. Giec) 81a:65099 65K05 (90C30)
Minkova, L. D. (with Hadžiev, D. L.) Theorem of Girsanov's type for Gaussian martingales. *C. R. Acad. Bulgare Sci.* 32 (1979), no. 11, 1465-1466. (R. Š. Lipcer) 81g:60050 60G44
Minkowski, Peter Are forces between leptons and quarks phenomena of a gauge field theory? *Einstein Symposium, Berlin* (1979), pp. 259-307, *Lecture Notes in Phys.*, 100, Springer, Berlin, 1979. (E. Wiczorek) 81g:81106 81G25 (81E99)
Minlos, R. A. (with Mal'nev, V. A.) Invariant subspaces of clustering operators. *J. Statist. Phys.* 21 (1979), no. 3, 231-242. (Kiran Chandra Das) 81d:82065 82A67 (47A15, 47B99)
 See also Euclidean quantum field theory, 81f:81002 and Gibbs states in statistical physics, 81i:82003
Min' Ngok See Dao Min' Ngok
Minoli, Daniel Sufficient forms for n -hyperperfect numbers. *Ann. Fac. Sci. Univ. Nat. Zaire (Kinshasa) Sect. Math.-Phys.* 4 (1978), no. 2, 277-302 (1979). (S. A. Stepanov) 81j:10018 10A40
 Inductive formulae for general sum operations. *Math. Comp.* 34 (1980), no. 150, 543-545. (Author's introduction) 81c:65002 65B15 (10J06, 40-04)
Min-Oo (with Ruh, Ernst A.) Comparison theorems for compact symmetric spaces. *Ann. Sci. École Norm. Sup. (4)* 12 (1979), no. 3, 335-353. (Karsten Grove) 81e:53027 53C20 (53C35)
Minoux, Michel (with Gondran, Michel) Valeurs propres et vecteurs propres en théorie des graphes. (English summary) *Problèmes combinatoires et théorie des graphes (Colloq. Internat. CNRS, Univ. Orsay, Orsay, 1976)*, pp. 181-183, *Colloques Internat. CNRS*, 260, CNRS, Paris, 1978. (See 80e:05005) 05C99
 (with Gondran, Michel) Eigenvalues and eigenvectors in semimodules and their interpretation in graph theory. *Survey of mathematical programming (Proc. Ninth Internat. Math. Programming Symp., Budapest, 1976)*, Vol. 2, pp. 333-348, North-Holland, Amsterdam, 1979. (László Lovász) 81k:15011 15A18 (05C38, 15A33)
 Generalized path algebras. *Survey of mathematical programming (Proc. Ninth Internat. Math. Programming Symp., Budapest, 1976)*, Vol. 2, pp. 359-364, North-Holland, Amsterdam, 1979. (W. G. Brown) 81l:90075 90B10 (05C38, 68E10)
 Solutions entières et solutions continues des problèmes de couplages dans les graphes pondérés finis. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 291 (1980), no. 5, A363-A364. (Author's summary) 81k:90099 90C35 (90C10)
Mincher, M. See Minčev, M. C.
Min Min Tien See Tran Min Tien
Minato, Paul D. (with Freund, Rudolf J.) ★Regression methods. A tool for data analysis. Statistics: Textbooks and Monographs, 30. Marcel Dekker, Inc., New York-Basel, 1979. xi + 261 pp. ISBN 0-8247-6647-4 (Kenneth N. Berk) 81g:62114 62J05
Minty, George J. On maximal independent sets of vertices in claw-free graphs. *J. Combin. Theory Ser. B* 28 (1980), no. 3, 284-304. (D. de Werra) 81f:60076 68E10 (05C99)
Minster, Frederick C. (with Teaney, Dale T.; Moruzzi, Victor L.) The tempered Fourier transform. *J. Acoust. Soc. Amer.* 67 (1980), no. 6, 2063-2067. (Authors' summary) 81c:44010 44A15 (42A38)
Miuvielle, Francis A simulation study of truncation selection for a quantitative trait opposed by natural selection. *Genetics* 94 (1980), no. 4, 989-1000. (Author's summary) 81k:92035 92A10
Minyeva, L. N. See Minjaeva, L. N.
Mioc, V. (with Radu, E.) Perturbations in the anomalistic period of artificial satellites caused by the direct solar radiation pressure. (French summary) *Astronom. Nachr.* 300 (1979), no. 6, 313-315. (Authors' summary) 81a:70028 70M05
Mioduk, L. What you always wanted to know about the application of inverse problems to nonlinear equations (or what you would like to do with the I.S.T.). *Applied inverse problems*, pp. 296-313, *Lecture Notes in Phys.*, 85, Springer, Berlin, 1978. (M. S. Agnawici) 81h:35045 35Q20 (35A25)
Miquel, Vicente (with Martínez Naveira, Antonio) Sur la relation entre la fonction volume de certaines boules géodésiques et la géométrie d'une variété riemannienne. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 8, A379-A381. (Haruo Kitahara) 81f:53029 53C20
Mira, Christian (with Gumowski, Igor) Bifurcation déstabilisant une solution chaotique d'un endomorphisme du deuxième ordre. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 286 (1978), no. 9, A427-A430. (Authors' summary) 81e:58035 58F13
 (with Gumowski, Igor) ★Recurrence and discrete dynamic systems. *Lecture Notes in Mathematics*, 809. Springer-Verlag, Berlin-New York, 1980. vi + 272 pp. ISBN 3-540-10017-2 (P. J. Holmes) 81m:58052 58F13 (26A18, 28D20, 34C15, 39B05, 70K99)
Miraglia, J. E. (with Garibotti, C. R.; Grinstein, F. F.) Calculation of the nonforward scattering amplitude for long range potentials. *Z. Phys. A* 297 (1980), no. 3, 189-197. (Authors' summary) 81m:81054 81F05
Miramedov, Š. A. A remark on the Berry-Esseen inequality for the minimum contrast estimate. (Russian) *Limit theorems, random processes and their applications (Russian)*, pp. 150-155, 234, "Fan", Tashkent, 1979. (A. L. Rukhin) 81m:62056 62F12 (62E20)
 Limit theorems for the first passage time over a step-boundary. (Russian. Lithuanian and English summaries) *Litovsk. Mat. Sb.* 19 (1979), no. 3, 21-33, 202. (P. Révész) 81c:60044 60F17 (60J65)
Miranda, Antonio See Diaz Miranda, Antonio
Miranda, Mario Recent progress in the calculus of variations. (Italian) *Boll. Un. Mat. Ital. A* (5) 17 (1980), no. 2, 209-225. (F. J. Almgren, Jr.) 81h:49001 49-02 (01A65)
Miranda, T. V. M. (with Ciurlienza, G. A.; Hernández, C. H.) Optimal time interval in the determination of the constants of speed of reaction using "projective geometry". (Spanish. English summary) *Acta Mexicana Cienc. Tecn.* 9(10) (1975/76), no. 25-30, 13-21 (1978). (Authors' summary) 81d:80010 80A30 (51N99)
Miranker, Willard L. Parallel methods for solving equations. *Math. Comput. Simulation* 20 (1978), no. 2, 93-101. (Ahmed H. Sameh) 81d:65024 65H05 (65F10, 65H10)
 (with Auslander, Louis) Algebraic methods in the study of stiff differential equations. *Numerical analysis of singular perturbation problems (Proc. Conf., Math. Inst., Catholic Univ., Nijmegen, 1978)*, pp. 3-23, Academic Press, London, 1979. (N. A. Sidorov) 81g:65094 65L05
 (with Kulisch, U. W.) Arithmetic operations in interval spaces. *Fundamentals of numerical computation (computer-oriented numerical analysis) (Proc. Conf., Tech. Univ. Berlin, Berlin, 1979)*, pp. 51-67, *Comput. Suppl.*, 2, Springer, Vienna, 1980. (Robert Todd Gregory) 81m:65069 65G10
 (with Bandes, K.) A functional relation and an acceleration procedure for calculating the voltage response of Josephson junctions. *J. Comput. Phys.* 37 (1980), no. 2, 274-279. (Hans Kaper) 81l:65105 65P05 (35Q20, 78A55)
Miris Amor, Julio Defects in the sampling framework. (Spanish. English summary) *Estadist. Española* No. 82-83 (1979), 27-49. (Author's summary) 81j:62029 62D05
Mirels, H. (with Liu, S. W.) Numerical solutions for unsteady laminar boundary layers behind blast waves. *Phys. Fluids* 23 (1980), no. 4, 681-688. (J. F. Clarke) 81e:76051 76L05 (65P05, 76N05)
Mironov, N. N. Process synchronization. *Kibernetika (Kiev)* 1979, no. 1, 59-63. (Russian); translated as *Cybernetics* 15 (1979), no. 1, 66-72. (From the introduction) 81a:68112 68L05 (68B20)
Mirica, Stefan A note on the generalized differentiability of mappings. *Nonlinear Anal.* 4 (1980), no. 3, 567-575. (A. D. Ioffe) 81h:58009 58C20 (26B05, 49A51)
Miric, Rida M. (with Su, C. H.) On head-on collisions between solitary waves. *J. Fluid Mech.* 98 (1980), no. 3, 509-525. (Authors' summary) 81j:76023 76B25
Mir-Kashmou, R. M. (with Atakishiev, N. M.; Nagiev, Š. M.) A covariant formulation of the relativistic Hamiltonian theory on the light cone (fields with spin). (Russian. English and Azerbaijani summaries) *Izv. Akad. Nauk Azerbaidžan. SSR Ser. Fiz.-Tehn. Mat. Nauk* 1979, no. 1, 8-18. (N. V. Micevici) 81d:81043 81E05 (47A55, 58G40, 81E15)
 (with Atakishiev, N. M.; Nagiev, Š. M.) Quasipotential models of a relativistic oscillator. (Russian. English summary) *Teor. Mat. Fiz.* 44 (1980), no. 1, 47-62. (Authors' summary) 81h:81208 81M05
Mirkin, B. G. Characteristic of federation rules of agreement. (Russian) *Models and methods of investigating economic systems (Russian)*, pp. 214-220, "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. (From the text) 81d:90008 90A07 (90A08)
 See also Models and methods of investigating economic systems, 81a:90006
Mirkin, B. M. (with Šiljakova, V. A.) Optimization and analysis of the sensitivity of continuous stochastic systems with discrete control. (Russian) *Optimization and adaptive control in large-scale systems (Russian)*, pp. 18-27, 105-106, "Ilim", Frunze, 1980. (Authors' summary) 81m:90083 90C15
Mirkin, A. S. Application of the method of multiscalar decomposition to solution of equations with nonstationary coefficients. *Izv. Akad. Nauk SSSR Meh. Teor. Tela* 13 (1978), no. 1, 22-31. (Russian); translated as *Mech. Solids* 13 (1978), no. 1, 18-27. (G. Papanicolaou) 81g:82008 82A05 (34F05)
Mirkovska, Grahana Complete axiomatization of algorithmic properties of program schemes with bounded nondeterministic interpretations. *Conference Proceedings of the Twelfth Annual ACM Symposium on Theory of Computing (Los Angeles, Calif., 1980)*, pp. 14-21, ACM, New York, 1980. (See 81j:68006) 03B60 (68B10)
Mirman, Leonard J. (with Levhari, David) The great fish war: an example using a dynamic Cournot-Nash solution. *Bell J. Econom.* 11 (1980), no. 1, 322-334. (Colin W. Clark) 81e:90023 90A14 (90A16, 90A30, 92A15)
Mir-Mohamed-Sadegh, A. (with Rajagopal, K. R.) A boundary integral approach for determining the pressure error. *Rheol. Acta* 19 (1980), no. 1, 12-18. (Authors' summary) 81h:76006 76A10
 (with Rajagopal, K. R.) The flow of a non-Newtonian fluid past projections and depressions. *Trans. ASME Ser. E J. Appl. Mech.* 47 (1980), no. 3, 485-488. (Authors' summary) 81g:76001 76A05 (65R20)
Mirolli, Massimo Duality for Boolean operators. (Italian) *Matematiche (Catania)* 32 (1977), no. 1, 94-105 (1979). (S. Rudeanu) 81f:06016 06E15 (03G05)
Miros, Radu Almost affine spaces over a field. *An. Ştiinţ. Univ. "Al. I. Cuza" Iaşi Sect. I a Mat. (N.S.)* 24 (1978), no. 2, 327-344. (G. Ewald) 81f:51013 51K10
 Invariant frames in the normal distribution of a nonholonomic manifold of a Riemannian space. *Proceedings of the National Conference on Nonholonomic Spaces (Iaşi, 1976)*, pp. 111-118, Ed. Acad. R.S. România, Bucharest, 1979. (E. M. Patterson) 81c:53029 53B25
 On a class of Finsler connections. (Romanian summary) *Bul. Inst. Politehn. Iaşi Sect. I* 25(29) (1979), no. 3-4, 53-55. (Makoto Matsumoto) 81f:53056 53C60
 (with Hashiguchi, Masao) Metrical Finsler connections. *Rep. Fac. Sci. Kagoshima Univ. No. 12* (1979), 21-35. (H. Rund) 81f:53018 53B40
Mironjuk, P. I. (with Korobčuk, I. V.) Properties of solutions of parabolic equations and second-order systems. (Russian) *Mat. Metody i Fiz.-Meh. Polja* No. 12 (1980), 89-91, 122. (Authors' summary) 81k:35071 35K20
Mironov, A. V. Some properties of partially ordered topological vector spaces and algebras. (Russian) *Uspehi Mat. Nauk* 34 (1979), no. 6(210), 162-166. (S. Kutateladze) 81b:47047 47B55 (46A40)
Mironov, S. V. See Problems of numerical analysis and systems programming, 81j:65010
Mironovskii, L. A. Functional diagnosis of linear dynamic systems. *Automat. i Telemekh.* 1979, no. 8, 120-128. (Russian); translated as *Automat. Remote Control* 40 (1979), no. 8, part 2, 1198-1205 (1980). (Author's summary) 81a:93035 93C05
Miroslav, R. N. Markov and reciprocal stationary Gaussian processes of second order. (Russian. English summary) *Teor. Veroyatnost. i Primenen.* 24 (1979), no. 4, 847-853. (M. I. Jadrénko) 81k:60047 60G15
Mirzabekjan, M. Two nonlocal boundary value problems for the Lavrent'ev-Bicadze equation. (Russian) *Dokl. Akad. Nauk UzSSR* 1980, no. 1, 16-18. (Megumi Saigo) 81j:35081 35M05
 (with Salakhitdinov, M. S.) Some boundary value problems with a shift for an equation of hyperbolic type that degenerates on the boundary. (Russian) *Izv. Akad. Nauk UzSSR Ser. Fiz.-Mat. Nauk* 1980, no. 1, 16-21, 95. (Authors' summary) 81d:35057 35L80
Mirzabekjan, B. Ju. Generalization of the Prandtl problem of indentation of a die to the case of force eccentricity. *Izv. Akad. Nauk SSSR Meh. Teor. Tela* 14 (1979), no. 5, 127-138. (Russian); translated as *Mech. Solids* 14 (1979), no. 5, 109-119. (Author's summary) 81d:73096 73T05

- Mirzaev, D. A. (with Rulic, S. V.) General solution to the problem of diffraction of X rays by close-packed crystals with chaotic packing defects of the subtraction type. *Kristallografiya* 24 (1979), no. 6, 1142-1149 (Russian); translated as *Soviet Phys. Cryst.* 24 (1979), no. 6, 655-658. (Authors' summary) **81c:82056** 82A60 (78A45)
- Mirzashanjan, E. A. On the properties of a class of mappings of subsets of Hilbert space. (Russian. Armenian summary) *Akad. Nauk Armyan. SSR Dokl.* 68 (1979), no. 5, 257-261. (S. Buryčik) **81c:58007** 58C20 (47H99)
- Mirzashmedov, M. A. (with Hakimov, S. A.; Hoshni, A. K.) On the integrated mean square error of nonparametric probability density estimators. (Russian) *Random processes and mathematical statistics* (Russian), pp. 101-110, 188, "Fan", Tashkent, 1978. (G. Manija) **81c:62041** 62G05
- Mirzashmedov, F. (with Ljajko, S. I.) Method of feasible directions in the minimization of almost differentiable functions with unknown parameters. (Russian) Stochastic optimization models. *Akad. Nauk Ukrain. SSR Inst. Kibernet. Preprint* 1979, no. 13, 14-20, 53. (Authors' summary) **81d:90084** 90C15
- (with Timoshenko, T. G.) An approach to the solution of the problem of control of the operation of a single reservoir. (Russian) Stochastic optimization models. *Akad. Nauk Ukrain. SSR Inst. Kibernet. Preprint* 1979, no. 13, 45-51, 55. (Authors' summary) **81d:90035** 90A30 (90C15)
- Mirzoev, G. A. Fourth-order quasiregular differential operator. (Russian) *Dokl. Akad. Nauk SSSR* 251 (1980), no. 3, 550-553. (M. Švec) **81h:34030** 34B25 (47E05)
- Mirzoeva, M. M. (with Gavrilov, V. I.) Boundary uniqueness theorems for meromorphic functions. (Russian. English summary) *Vestnik Moskov. Univ. Ser. I Mat. Meh.* 1979, no. 4, 34-37, 101. (A. G. Džvarševili) **81f:30030** 30D40
- Mirzozade, D. L. (with Stepaiko, T. A.) Bismetric quaternion projective geometry. (Russian) *Tajiki summary. Izv. Akad. Nauk Tadžik. SSR Otdel. Fiz.-Mat. i Geol.-Him. Nauk* 1979, no. 2(72), 3-13. (D. B. Persic) **81c:51036** 51N25
- Mirzashmedov, F. A problem of control of stocks with constraints. (Russian) *Operations research (models, systems, solutions)*, No. 7 (Russian), pp. 41-47, 2, *Akad. Nauk SSSR, Vychisl. Centr, Moscow*, 1979. (Author's summary) **81f:90042** 90B05
- Milčev, N. M. Classification of flags of foliations. (Russian) *Uspehi Mat. Nauk* 35 (1980), no. 2(212), 217-218. (I. Vaisman) **81f:57025** 57R30
- Milčenko, A. S. C^* -algebras and K -theory. *Algebraic topology, Aarhus 1978* (Proc. Sympos., Univ. Aarhus, Aarhus, 1978), pp. 262-274, *Lecture Notes in Math.*, 763, Springer, Berlin, 1979. (Jerome Kaminker) **81d:58049** 58G12 (46L05, 57R20)
- (with Fomenko, A. T.) Symplectic Lie group actions. *Algebraic topology, Aarhus 1978* (Proc. Sympos., Univ. Aarhus, Aarhus, 1978), pp. 504-538, *Lecture Notes in Math.*, 763, Springer, Berlin, 1979. (J. S. Joel) **81c:58026** 58F05 (58F07)
- (with Fomenko, A. T.) The index of elliptic operators over C^* -algebras. (Russian) *Izv. Akad. Nauk SSSR Ser. Mat.* 43 (1979), no. 4, 831-859, 967. (László Zsidó) **81i:46075** 46L05 (46M20, 58G12)
- (with Fomenko, A. T.) Integrability of Euler's equations on semisimple Lie algebras. (Russian) *Trudy Sem. Vektor. Tenzor. Anal.* No. 19 (1979), 3-94. (A. Morimoto) **81g:58014** 58F05 (34C35, 58F07)
- The problem of invariance for characteristic classes of smooth manifolds. (Russian) *Vestnik Moskov. Univ. Ser. I Mat. Meh.* 1979, no. 6, 18-23. (V. Crăciun) **81c:57022** 57R20 (58G12)
- (with Biktashev, R. A.) Spectra of elliptic unbounded pseudodifferential operators over C^* -algebras. (Russian. English summary) *Vestnik Moskov. Univ. Ser. I Mat. Meh.* 1980, no. 3, 56-58, 108. (A. S. Dynin) **81c:47067** 47G05 (46L05, 58G12, 58G15)
- Milčenko, A. V. (with Sukkov, B. G.) The problem of optimal allocation of resources on a network model with linear constraints on task completion time. (Russian) *Ž. Vychisl. Mat. i Mat. Fiz.* 20 (1980), no. 5, 1324-1328, 1360. (Authors' summary) **81k:90033** 90B10
- Milčenko, E. F. (with Rozov, N. H.) Some questions of the theory of relaxation oscillations. (Russian) *Asymptotic methods in the theory of nonlinear oscillations* (Proc. All-Union Conf. Asymptotic Methods in Nonlinear Mech., Katsiveli, 1977) (Russian), pp. 113-120, 274-275, "Naukova Dumka", Kiev, 1979. (W. S. Loud) **81h:34064** 34E15 (34C15)
- Milčenko, V. O. Expansion in eigenfunctions of a symmetric abstract elliptic differential operator. (Russian) *Differentsial'nye Uravnenija* 16 (1980), no. 8, 1474-1483, 1534. (P. A. Minaevskii) **81k:47066** 47E05 (34C99)
- Milenkova, T. A. The G_c problem for a nonlinear equation with the operator S . (Russian) *Differentsial'nye Uravnenija* (Ryazan) No. 12 (1978), 87-92. (Author's summary) **81f:35087** 35M05
- Misereque, Didier Sur le treillis distributif des V_1 -formules fermées de l'arithmétique de Peano. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 13, A571-A573. (Cristian Calude) **81m:03069** 03F30 (06D05)
- von Mines, Richard See Bernhardt, Hamelore, **81k:01027**
- Misfeld, Jürgen (with Tecklenburg, Helga) Dimension of nearaffine spaces. *Geometry and differential geometry* (Proc. Conf., Univ. Haifa, Haifa, 1979), pp. 97-109, *Lecture Notes in Math.*, 792, Springer, Berlin, 1980. (J. André) **81m:51013** 51D15 (51B99)
- Mitschenko, A. S. See Milčenko, A. S.
- Mitschina, Nobuhiko (with Yamakoshi Petrosko, Tomio; Suzuki, Ryoji) Theory of irreversible processes in nonequilibrium quantum systems. I. General formalism. *J. Statist. Phys.* 21 (1979), no. 4, 347-392. (J. Fernando Perez) **81i:81124a** 81Hxx (82A15)
- Mishin, I. V. See Mishin, I. V.
- Mishnevskiy, P. A. See Milinaevskii, P. A.
- Mishra, Babban Prasad Some generalizations on a scale of Abel type summability methods. *Mat. Vesnik* 2(15)(30) (1978), no. 4, 377-386. (E. Smet) **81c:40013** 40G10 (40F05)
- Mishra, K. K. (with Beohar, B. K.) On Nörlund summability of Jacobi series. (Hindi. English summary) *Vijnana Parishad Anusandhan Patrika* 23 (1980), no. 1, 37-42. (Tikam Singh) **81f:42023** 42C10 (40G05)
- Mishra, Neelam (with Gupta, A. P.) Effect of secondary terms on axisymmetric vibration of circular plates. *J. Engrg. Math.* 14 (1980), no. 2, 101-106. (Authors' summary) **81a:73032** 73K12 (73D15)
- Mishra, R. N. (with Wilson, D. A.) A new algorithm for optimal reduction of multivariable systems. *Internat. J. Control* 31 (1980), no. 3, 443-466. (Authors' summary) **81f:93047** 93C35
- Mishra, R. S. (with Pandey, S. B.) On H -conharmonic curvature tensor in Kähler manifolds. *Indian J. Pure Appl. Math.* 7 (1976), no. 11, 1277-1287. (Y. Tashiro) **81i:53022** 53B25
- (with Pandey, H. B.) On (F, G) -structure manifolds. *Indian J. Pure Appl. Math.* 7 (1976), no. 12, 1371-1380. (Mihai Dediu) **81c:53038** 53C15
- (with Rathore, Mahendra Pal Singh) On conformal Weingarten's map. *Indian J. Pure Appl. Math.* 7 (1976), no. 12, 1466-1471. (T. Okubo) **81c:53051** 53C40 (53C55)
- (with Singh, Shree Dhar) On pseudo H -curvature tensors in a differentiable manifold V_{2m} equipped with KH -structure. *Indian J. Pure Appl. Math.* 8 (1977), no. 12, 1525-1530. (M. Okumura) **81h:53019** 53B20
- (with Pal, Ram Babu) (F, T, g) -connection in a Sasakian manifold. *Acta Cien. Indica* 5 (1979), no. 4, 155-158. (A. Gray) **81m:53056** 53C25
- Submanifolds of 3-structure metric manifolds. *Tensor (N.S.)* 33 (1979), no. 3, 265-270. (Koichi Ogue) **81g:53042** 53C40 (53C15)
- Structures in submanifolds of an almost Hermite manifold. *Tensor (N.S.)* 33 (1979), no. 3, 271-276. (Koichi Ogue) **81g:53043** 53C40 (53C15)
- Electromagnetic tensor fields in general relativity. *Indian J. Pure Appl. Math.* 11 (1980), no. 5, 588-608. (Brian O. J. Tupper) **81f:83025** 83C50 (53B50)
- (with Pandey, S. N.) On quarter symmetric metric F -connections. *Tensor (N.S.)* 34 (1980), no. 1, 1-7. (A. Sharfuddin) **81j:53038** 53C05
- Mishra, S. K. (with Datta, N.) Two-dimensional stagnation point flow of a dusty fluid near an oscillating plate. (German summary) *Acta Mech.* 36 (1980), no. 1-2, 71-78. (F. Feuillebois) **81f:76046** 76T05
- Mishra, Shankar Prasad (with Mohapatra, Umakanta) Oscillatory free convection flow of elastic-viscous liquid from a vertical plate. *Rev. Roumaine Math. Pures Appl.* 25 (1980), no. 3, 413-428. (C. F. Chan Man Fong) **81h:76004** 76A10 (76R10)
- Misra, M. n -harmonic solutions of the anti-median classic problem. *Rev. Roumaine Sci. Tech. Sér. Méc. Appl.* 25 (1980), no. 2, 161-169. (Author's summary) **81d:73007** 73C05
- Miták, Ladislav Extreme essential derivatives of Borel and Lebesgue measurable functions. *Math. Slovaca* 29 (1979), no. 1, 25-38. (B. Bongiorno) **81c:26005** 26A24
- Maximal additive and maximal multiplicative families for the family of all interval-Darboux Baire one functions. *Real Anal. Exchange* 5 (1979/80), no. 2, 285-302. (A. M. Bruckner) **81c:26005** 26B05
- Mišin, I. V. (with Orlov, V. M.) The optical transfer functions of the atmosphere. *Izv. Akad. Nauk SSSR Ser. Fiz. Atmosf. i Okeana* 15 (1979), no. 3 (Russian); translated as *Izv. Acad. Sci. USSR Atmospher. Ocean. Phys.* 15 (1979), no. 3, 183-188 (1980). (Authors' summary) **81c:60018** 86A35
- Mišina, A. P. Abelian groups. (Russian) *Algebra. Topology. Geometry, Vol. 17* (Russian), pp. 3-63, 308, *Akad. Nauk SSSR, Vsesojuz. Inst. Nauch. i Tehn. Informacii, Moscow*, 1979. (A. I. Moskalenko) **81m:20068** 20Kxx
- Misurlewicz, Michał Invariant measures for continuous transformations of $[0, 1]$ with zero topological entropy. *Ergodic theory* (Proc. Conf., Math. Forschungsinst., Oberwolfach, 1978), pp. 144-152, *Lecture Notes in Math.*, 729, Springer, Berlin, 1979. (Jeanne L. Cornette) **81a:28017** 28D05 (54C70, 54H20)
- Horseshoes for mappings of the interval. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math.* 27 (1979), no. 2, 167-169. (Zbigniew Nitecki) **81h:58033** 58F20 (28D20, 58F15)
- Mishra, T. V. Finite-zone Dirac operators. (Russian) *Teor. Funkcii Funkcional. Anal. i Prilozhen.* No. 33 (1980), 107-111, iv. (Alexander Alenitsyn) **81j:47036** 47E05 (34B25)
- Miškin, V. V. Inductively irreducible epimorphisms. *Topology* (Proc. Fourth Colloq., Budapest, 1978), Vol. II, pp. 855-861, *Colloq. Math. Soc. János Bolyai*, 23, North-Holland, Amsterdam, 1980. (M. S. Burgin) **81m:18002** 18A20 (18B30, 54B30)
- Miškoj, G. K. ★ Вероятности состояний приоритетных систем в нестационарном режиме. (Russian) [State probabilities of priority systems in the nonstationary mode] "Ština", Kishinev, 1979. 140 pp. (B. Dimitrov) **81j:60110** 60K25
- Miškovec, U. A. A property of the areas of tangential trapezoids and approximate calculation of integrals. (Ukrainian. Russian summary) *Visnik L'viv. Derž. Univ. Ser. Meh.-Mat.* No. 12 (1977), 68-70, 96. (I. P. Myslovskii) **81a:65036** 65D32 (41A55)
- Mišin, Guido (with Varadarajan, K.) The finiteness obstructions for nilpotent spaces lie in $D(\mathbb{Z})$. *Invent. Math.* 53 (1979), no. 2, 185-191. (Harvey Margolis) **81c:55011** 55P15 (18F25)
- (with Eckmann, Beno) Rational representations of finite groups and their Euler class. *Math. Ann.* 245 (1979), no. 1, 45-54. (J. F. Adams) **81d:20013** 20C99 (55R40)
- The geometric realization of Wall obstructions by nilpotent and simple spaces. *Math. Proc. Cambridge Philos. Soc.* 87 (1980), no. 2, 199-206. (Laurence R. Taylor) **81f:55011** 55P99
- Mišinaevskii, P. A. (with Ramm, A. G.) Uniqueness theorem for abstract hyperbolic equations with application to the uniqueness of the harmonic coordinate system in general relativity. *J. Math. Anal. Appl.* 75 (1980), no. 1, 58-65. (Tapas Mazumdar) **81h:34068** 34G10 (46N05, 83C35)
- Mišin, Karel Pencil of orbits with variable launching direction. *Acta Tech. ČSAV* 24 (1979), no. 4, 477-512. (Author's summary) **81f:70027** 70M05
- Mishra, B. L. (with Chandak, M. L.) On orthogonal mates of F -squares associated with PBIB designs of m -associate classes. *Utilitas Math.* 14 (1978), 17-20. (Authors' summary) **81g:05028** 05B05
- On the construction of PBIB and PBYS designs. *Calcutta Statist. Assoc. Bull.* 28 (1979), no. 109-112, 163-167. (R. A. Bailey) **81m:05026** 05B05 (62K10)
- (with Chandak, M. L.) On existence of orthogonal mates of F -squares associated with PBIB designs of two associate classes. *Pure Appl. Math. Sci.* 12 (1980), no. 1-2, 53-61. (Damaraju Raghavarao) **81k:62104** 62K10 (05B15)
- Mishra, J. C. (with Chakravarty, S.) Study of compressibility in vascular rheology. (German summary) *Rheol. Acta* 19 (1980), no. 3, 381-388. (From the introduction) **81f:73059** 73P05
- Mishra, M. M. (with Awasthi, G. D.) Swerve of a congruence of curves in a Riemannian manifold. *An. Univ. Timișoara Ser. Științ. Mat.* 16 (1978), no. 2, 107-110 (1979). (M. A. Akivis) **81c:53011** 53B20
- Mishra, N. On the rate of convergence of the Hermite-Fejér process on the Tchebycheff matrix of the second kind. *Indian J. Pure Appl. Math.* 11 (1980), no. 10, 1329-1333. (P. Vértési) **81m:41016** 41A25

- Mitra, R. B. (with Kishore, Nawal) On curvature collineations in Finsler manifolds. (Italian summary) *Atti Accad. Sci. Lett. Arti Palermo Parte I* (4) 36 (1976/77), 521-534 (1978). (H. Rund) **81b:53025** 53B40
- A turning point in the theory of recurrent Finsler manifolds. II. Certain types of projective motions. (Italian summary) *Boll. Un. Mat. Ital. B* (5) 16 (1979), no. 1, 32-53. (H. Rund) **81i:53025** 53B40
- Mitra, S. B. (with Dubey, V. J.) Some theorems on infinitesimal conformal transformation in projective symmetric Finsler space. *Indian J. Appl. Math.* 11 (1980), no. 1, 54-59. (Yoshihiro Ichijyo) **81b:53026** 53B40
- Mitra, Sushil K. (with Kalman, C. S.; Hall, Richard L.) Hyperfine splitting of the ground state of baryonium using a harmonic-oscillator potential. *Phys. Rev. D* (3) 21 (1980), no. 7, 1908-1915. (P. Achuthan) **81c:81057** 81G05
- Misnerov, M. D. (with Bleher, P. M.) The equations of Wilson's renormalization group and analytic renormalization. I. General results. *Comm. Math. Phys.* 74 (1980), no. 3, 235-254. (Francesco Guerra) **81j:82012a** 82A25 (81E15)
- (with Bleher, P. M.) The equations of Wilson's renormalization group and analytic renormalization. II. Solution of Wilson's equations. *Comm. Math. Phys.* 74 (1980), no. 3, 255-272. (Francesco Guerra) **81j:82012b** 82A25 (81E15)
- Misnerov, N. M. (with Evans, David J.) The preconditioned simultaneous displacement method (PSD method) for elliptic difference equations. *Math. Comput. Simulation* 22 (1980), no. 3, 256-263. (G. N. de Oliveira) **81c:65035** 65F10 (15A06)
- Mitka, Krystyna Interior pairs of Aharonov. (Polish. Russian and English summaries) *Zasady Nauk. Politech. Śląsk. Mat.-Fiz. No. 34* (1979), 137-145. (W. Smajdor) **81d:30017** 30C45
- Mittra, L. On the solutions of the Gibbs-Duhem equation. *J. Phys. A* 12 (1979), no. 9, 1547-1562. (Richard S. Ellis) **81c:80001** 80A05
- Mita, Haruyoshi Asymptotic sufficiency of maximum likelihood estimator in a truncated location family. *Tokyo J. Math.* 2 (1979), no. 2, 323-335. (Masafumi Akahira) **81g:62059** 62F12
- Mits, T. Author's reply to: "Design of zero-sensitive systems" [Internat. J. Control 27 (1978), no. 2, 325-326; MR 58 #9519] by B. Porter. *Internat. J. Control* 29 (1979), no. 3, 535. (Editors) **81m:93026** 93B35
- Mital, D. P. (with Shrikhande, V. L.; Ray, L. M.) On minimal canonical realization from input-output data sequences. *IEEE Trans. Automat. Control* 25 (1980), no. 2, 309-312. (Authors' introduction) **81c:93022** 93B15
- (with Eklare, A. B.) An algorithm for designing multiplexer logic circuits. *Internat. J. Electron.* 49 (1980), no. 2, 103-114. (Authors' summary) **81j:94044** 94C10
- Mitchell, A. Richard (with Smith, Chris) An existence theorem for weak solutions of differential equations in Banach spaces. *Nonlinear equations in abstract spaces* (Proc. Internat. Sympos., Univ. Texas, Arlington, Tex., 1977), pp. 387-403, Academic Press, New York, 1978. (Michele Mininni) **81k:34059** 34G20 (47H10)
- (with Cramer, Evin; Lakshmikantham, V.) On the existence of weak solutions of differential equations in nonreflexive Banach spaces. *Nonlinear Anal.* 2 (1978), no. 2, 169-177. (A. Szep) **81d:34051** 34G20
- Mitchell, Andrew Ronald (with Lawlor, F.) The parabolic-hyperbolic interface in conduction-convective problems. *Proceedings of the Fourth Symposium on Basic Problems of Numerical Mathematics* (Pilsen, 1978), pp. 141-151, Charles Univ., Prague, 1978. (Mario Primicerio) **81c:80011** 80A20 (35K20, 65N30)
- (with Griffiths, D. F.) On generating upwind finite element methods. *Finite element methods for convection dominated flows* (Papers, Winter Ann. Meeting Amer. Soc. Mech. Engrs., New York, 1979), pp. 91-104, AMD, 34, Amer. Soc. Mech. Engrs. (ASME), New York, 1979. (Michael Engelman) **81f:76038** 76R99 (65N30, 76D99)
- (with Christie, I.) Finite difference/finite element methods at the parabolic-hyperbolic interface. *Numerical analysis of singular perturbation problems* (Proc. Conf., Math. Inst., Catholic Univ., Nijmegen, 1978), pp. 339-360, Academic Press, London, 1979. (Ju. K. Dem'janović) **81k:65092** 65L10
- Advantages of cubics for approximating element boundaries. *Comput. Math. Appl.* 5 (1979), no. 4, 321-327. (Stephen W. Brady) **81a:65103** 65N30
- (with Andersen, Robert S.) Analysis of generalized Galerkin methods in the numerical solution of elliptic equations. *Math. Methods Appl. Sci.* 1 (1979), no. 1, 3-15. (I. P. Gavriljuk) **81b:65097** 65N30
- (with Griffiths, D. F.; Christie, I.) Analysis of error growth for explicit difference schemes in conduction-convective problems. *Internat. J. Numer. Methods Engrg.* 15 (1980), no. 7, 1075-1081. (Samuel Levy) **81c:80003** 80A20 (65N05, 76R99)
- (with Griffiths, D. F.) Upwinding by Petrov-Galerkin methods in convection-diffusion problems. *J. Comput. Appl. Math.* 6 (1980), no. 3, 219-228. (John Crank) **81m:65172** 65N30
- Mitchell, Barry Some applications of module theory to functor categories. *Bull. Amer. Math. Soc.* 84 (1978), no. 5, 867-885. (Charles Ching An Cheng) **81i:18010** 18E05 (16A90, 18G20)
- (with Cheng, Charles Ching An; Wu, Yel Chiang) Categories of fractions preserve dimension one. *Comm. Algebra* 8 (1980), no. 10, 927-939. (Howard Lyn Hiller) **81f:18029** 18D20 (18E35)
- Mitchell, J. G. (with London, Ralph L.; Guttig, John V.; Horning, James J.; Lampson, B. W.; Popek, G. J.) Proof rules for the programming language EUCLID. *Languages et traducteurs* (Papers, IRIA Sem., Rocquencourt, 1977), pp. 77-100, IRIA, Rocquencourt, 1977. (See **80c:68062**) 68B10
- Mitchell, Sandra L. (with Chinn, Phyllis Z.; Hedetniemi, Stephen T.) Multiple-message broadcasting in complete graphs. *Proceedings of the Tenth Southeastern Conference on Combinatorics, Graph Theory and Computing* (Florida Atlantic Univ., Boca Raton, Fla., 1979), pp. 251-260, Congress. Numer., XXIII-XXIV, Utilitas Math., Winnipeg, Man., 1979. (Fan R. K. Chung) **81g:94064** 94C15 (05C99)
- (with Hedetniemi, Stephen T.) Linear algorithms for edge-coloring trees and unicyclic graphs. *Inform. Process. Lett.* 9 (1979), no. 3, 110-112. (Y. L. Varol) **81d:68067** 68E10 (05C15)
- (with Hedetniemi, Stephen T.) A census of minimum broadcast graphs. *J. Combin. Inform. System Sci.* 5 (1980), no. 2, 141-151. (J. B. Kelly) **81m:94036** 94C15 (05C30)
- (with Farley, Arthur M.; Hedetniemi, Stephen T.) Rectilinear Steiner trees in rectangle trees. *SIAM J. Algebraic Discrete Methods* 1 (1980), no. 1, 70-81. (Eberhard Lüdde) **81h:60054** 68E10 (05C05, 68C25)
- Mitchell, Theodore Invariant means and analytic actions. *Pacific J. Math.* 85 (1979), no. 1, 145-153. (A. T.-M. Lau) **81m:43001** 43A07 (22A20, 47H10)
- Mitchell, W. (with Martin, Donald A.) On the ultrafilter of closed, unbounded sets. *J. Symbolic Logic* 44 (1979), no. 4, 503-506. (M. M. Richter) **81a:03051** 03E35 (03E55, 03E60)
- (with Jech, Thomas J.; Magidor, Menachem; Prikyr, Karel) Precipitous ideals. *J. Symbolic Logic* 45 (1980), no. 1, 1-8. (James Baumgartner) **81h:03097** 03E35 (03E55)
- Mitek, Jerzy Generalization of a theorem of Erdős and Surányi. *Comment. Math. Prace Mat.* 21 (1980), no. 1, 173-175. (John T. Hardy) **81j:10026** 10B35
- Mittel, A. A. (with Russu, G. I.) Symmetrically normed ideals weakly intermediate between γ_1 and some γ_p . (Russian) *Linear operators. Mat. Issled.* No. 54 (1980), 121-140, 168. (E. D. Gluskin) **81k:47057** 47D25 (46M35, 47B10)
- Vila Mitja, A. See Vila Mitja, A.
- Mitjagin, B. S. Geometry of nuclear spaces. I. Nuclear Fréchet spaces without basis. *Séminaire d'Analyse Fonctionnelle* (1978-1979), Exp. No. 1, 10 pp., École Polytech., Palaiseau, 1979. (E. Dubinsky) **81d:46008a** 46A12
- Geometry of nuclear spaces. II. Linear topological invariants. *Séminaire d'Analyse Fonctionnelle* (1978-1979), Exp. No. 2, 10 pp., École Polytech., Palaiseau, 1979. (E. Dubinsky) **81d:46008b** 46A12
- Geometry of nuclear spaces. III. Spaces of holomorphic functions. *Séminaire d'Analyse Fonctionnelle* (1978-1979), Exp. No. 3, 8 pp., École Polytech., Palaiseau, 1979. (E. Dubinsky) **81d:46008c** 46A12
- Mitjuk, I. P. (with Jaremenko, L. A.) The displacement of a regular image of a multiply connected domain. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* No. 10 (1978), 885-888, 956. (E. Reich) **81b:30017** 30C35 (30A10)
- (with Levickii, B. E.) "Narrow" theorems on spatial moduli. (Russian) *Dokl. Akad. Nauk SSSR* 248 (1979), no. 4, 780-783. (Matti Vuorinen) **81i:30020** 30C60
- Mitov, K. V. (with Janev, N. M.) Controlled branching processes: the case of random migration. *C. R. Acad. Bulgare Sci.* 33 (1980), no. 4, 473-475. (Warren Eady) **81c:60088** 60B80
- Mitra, Amitava (with Alam, Khurshed) Measurement error in regression analysis. *Comm. Statist. A—Theory Methods* 9 (1980), no. 7, 717-723. (Joseph W. McKean) **81f:62110** 62J05
- Mitra, D. (with Basu, Debabrata) The Lorentz group in the oscillator realization. II. Integral transforms and matrix elements of $SO(2, 1)$. *J. Math. Phys.* 21 (1980), no. 4, 636-637. (Authors' summary) **81i:81033** 81C40 (22E43, 22E70)
- Mitra, Debasis Network synchronization: analysis of a hybrid of master-slave and mutual synchronization. *IEEE Trans. Comm.* 28 (1980), no. 8, part 1, 1245-1259. (Author's summary) **81f:94041** 94C10 (68A05)
- Mitra, P. (with Roy, Probir) Dynamical symmetry breakdown in two-dimensional quantum chromodynamics. I. Massless quarks. *Phys. Rev. D* (3) 21 (1980), no. 2, 511-520. (Authors' summary) **81d:8102a** 81G05 (81D20, 81E99)
- (with Roy, Probir) Dynamical symmetry breakdown in two-dimensional quantum chromodynamics. II. Boson representation and light quarks. *Phys. Rev. D* (3) 21 (1980), no. 2, 521-530. (Authors' summary) **81d:8102b** 81G05
- (with Roy, Probir) Dynamical symmetry breakdown in two-dimensional quantum chromodynamics. III. The physical space. *Phys. Rev. D* (3) 21 (1980), no. 10, 2926-2933. (Authors' summary) **81d:8102c** 81G05
- Mitra, Sanjit K. (with Chakrabarti, Satyabrata) Decision methods and realization of 2-D digital filters using minimum number of delay elements. *IEEE Trans. Circuits and Systems* 27 (1980), no. 8, 657-666. (Authors' summary) **81g:94011** 94A12
- (with Mondal, K.; Chakrabarti, Satyabrata) State structures in digital filter configurations. I. Conventional and nodal state structures. *J. Franklin Inst.* 309 (1980), no. 1, 1-12. (Joseph D. Cole) **81h:9404a** 94C30
- (with Mondal, K.; Chakrabarti, Satyabrata) State structures in digital filter configurations. II. Reduced and minimal state structures. *J. Franklin Inst.* 309 (1980), no. 1, 13-27. (Joseph D. Cole) **81h:9404b** 94C30
- Mitra, Sujit Kumar (with Majumdar, Dibyen) Statistical analysis of nonestimable functionals. I. Estimation. *Mathematical statistics and probability theory* (Proc. Sixth Internat. Conf., Wista, 1978), pp. 288-317, Lecture Notes in Statist., 2, Springer, New York, 1980. (Friedrich Pukelsheim) **81j:62124** 62J05
- Mitra, Tapas On the value maximizing property of infinite horizon efficient programs. *Internat. Econom. Rev.* 20 (1979), no. 3, 635-642. (Rubin Sapostnik) **81c:90016** 90A10
- (with McFadden, Daniel; Majumdar, Mukul) Pareto optimality and competitive equilibrium in infinite horizon economies. *J. Math. Econom.* 7 (1980), no. 1, 1-26. (Authors' summary) **81a:90052** 90A14 (90A16)
- Mitran, Ilie Le critère de la probabilité maximale. *Proceedings of the International Symposium on Applications of Mathematics in System Theory* (Unio. Braşov, Braşov, 1978), II, pp. 37-45, Unio. Braşov, Braşov, 1979. (See **81j:9304b**) 90C15
- Mitran, I. (with Sevcik, K. C.) The distribution of queueing network states at input and output instants. *Performance of computer systems* (Proc. Fourth Internat. Sympos. Modelling Performance Evaluation Comput. Systems, Vienna, 1979), pp. 319-335, North-Holland, Amsterdam, 1979. (D. C. McNickie) **81j:60111** 60K25 (68C15)
- (with Fayolle, G.; Iasnogorodski, R.) Sharing a processor among many job classes. *J. Assoc. Comput. Mach.* 27 (1980), no. 3, 519-532. (Authors' summary) **81f:68031** 68B20 (68C15)
- (with Coffman, E. G., Jr.) A characterization of waiting time performance realizable by single-server queues. *Oper. Res.* 28 (1980), no. 3, part 2, 810-821. (John P. Lehoczyk) **81g:60050** 60K25 (90B22, 90B35)
- Mitrinović, Dragoslav S. ★Specijalne funkcije. (Serbo-Croatian) [Special functions] Zbornik zadataka i problema. [A collection of exercises and problems] Second edition, supplemented. Novi Zbornik Matematičkih Problema [New Collection of Mathematical Problems], I. Naučna Knjiga, Beograd, 1978. xii + 172 pp. (Editors) **81f:33001** 33-01 (00A07)
- ★Diferencijalne jednačine. (Serbo-Croatian) [Differential equations] Zbornik zadataka i problema. [A collection of exercises and problems] Second edition, revised and supplemented. Novi Zbornik Matematičkih Problema [New Collection of Mathematical Problems], IV. Naučna Knjiga, Beograd, 1979. xi + 266 pp. (Editors)

- 81f:34003** 34-01 (00A07)
 ★Kompleksna analiza. (Serbo-Croatian) [Complex analysis] Zbornik zadatka i problema. [A collection of exercises and problems] Second edition, revised and supplemented. Novi Zbornik Matematičkih Problema [New Collection of Mathematical Problems]. III. Naučna Knjiga, Beograd, 1979. xii + 264 pp. (Editors) **81h:30001** 30-01 (00A07)
 On the univalence of rational functions. *Unio. Beograd. Publ. Elektrotehn. Fak. Ser. Mat. Fiz.* No. 634-677 (1979), 221-227. (D. R. Wilken) **81i:30028** 30C45
- ★Matrice i determinante. (Serbo-Croatian) [Matrices and determinants] Zbornik zadatka i problema. [A collection of exercises and problems] Third edition, supplemented. Novi Zbornik Matematičkih Problema [New Collection of Mathematical Problems]. II. Naučna Knjiga, Beograd, 1980. x + 178 pp. (Editors) **81f:15002** 15-01 (00A07)
 See also Bertolino, Milorad; et al. **81e:01023**; Janić, Radovan R. **81f:01030** and Kečkić, Jovan D. **81f:34006**
- Mitrofanova, E. A.** A class of congruences of hyperbolic paraboloids in A_2 . (Russian) *Kaliningrad. Gos. Univ. Differentsial'naja Geom. Mnogooobraz. Figur* No. 10 (1979), 67-69, 162. (Leo Boček) **81j:53007** 53A15
- Mitropolskiĭ, Ju. A.** (with Martinjuk, D. I.) ★Периодические и квазипериодические колебания систем с запаздыванием. (Russian) [Periodic and quasiperiodic oscillations of systems with lag] *Golosn. Izdatel'stvo Izdatel'stvo Ob'ed. "Vilča Škola", Kiev*, 1979. 247 pp. (A. Halanay) **81c:34064** 34K15 (34C15)
 (with Samoilenko, A. M.) Asymptotic methods in the theory of multifrequency oscillations. (Russian) *Asymptotic methods in the theory of nonlinear oscillations (Proc. All-Union Conf. Asymptotic Methods in Nonlinear Mech., Katsiveli, 1977)* (Russian), pp. 93-113, 274. "Naukova Dumka", Kiev, 1979. (T. Canturia) **81f:34045** 34C15
 (with Lopatin, O. K.) Asymptotic splitting of systems of differential equations. (Russian) *Akad. Nauk Ukrain. SSR Inst. Mat. Preprint No. 11* (1979), 68 pp. (P. Brunovsky) **81m:34060** 34C45
 (with Vladimirov, V. S.; Guz', O. M.; Parajuk, O. S.) Nikolai Nikolaevič Bogoljubov (on the occasion of his seventieth birthday). (Russian) *Prikl. Meh.* 15 (1979), no. 8, 124-127. (Editors) **81g:01020a** 01A70
 (with Vladimirov, V. S.; Parajuk, O. S.) Nikolai Nikolaevič Bogoljubov (on the occasion of his seventieth birthday). (Russian) *Ukrain. Mat. Ž.* 31 (1979), no. 4, 339-340 (1 plate). (Editors) **81g:01020b** 01A70
 (with Martinjuk, D. I.; Dankanič, V. A.) Galerkin's method in the theory of quasiperiodic solutions of nonlinear differential equations with lag. (Russian) *Ukrain. Mat. Ž.* 32 (1980), no. 4, 553-557. (W. S. Loud) **81j:34124** 34K15 (65L99)
 (with Gorbačuk, M. L.) F. Riesz and L. Fejér (on the 100th anniversary of their birth). (Russian) *Ukrain. Mat. Ž.* 32 (1980), no. 5, 714-715. (Editors) **81j:01040** 01A70
 See also Boundary value problems of mathematical physics. **81a:00006**; Asymptotic methods in the theory of nonlinear oscillations. **81a:34002**; Asymptotic methods of nonlinear mechanics. **81a:34003**; Berežanskii, Ju. M. **81b:47035**; Numerical-analytic methods for the solution of problems of heat conduction and electrodynamics. **81c:00004**; Birthday: Mitropolskiĭ, Ju. A. **81f:01041a**; Birthday: Mitropolskiĭ, Ju. A. **81f:01041b** and Representations and quadratic forms. **81m:16036**
- Mitropoulos, Constantin** (with Sayir, Mahir) On elementary theories of linear elastic beams, plates and shells. (German summary) *Z. Angew. Math. Phys.* 31 (1980), no. 1, 1-55. (Yi-Yuan Yu) **81h:73029** 73K05 (73K10, 73L99)
- Mituch, H.** Rechteckweise geordnete Gruppen. *Czechoslovak Math. J.* 30(105) (1980), no. 2, 250-258. (L. Fuchs) **81i:06020** 06F15
- Mitschka, Pavel** (with Lhotá, Edgar; Říha, Pavel) Numerical analysis of the circulating flow in a mixing vessel with a draught tube. *Acta Tech. ČSAV* 25 (1980), no. 3, 347-357. (Authors' summary) **81f:76016** 76D05
- Mitskevici, N. V.** See Mickevič, N. V.
- Mitsuka, Noriko** (with Kikuchi, Norio) On nonlinear Euler equations. *Keio Math. Sem. Rep.* No. 5 (1980), 19-35. (P. W. Bates) **81k:35045** 35J20 (58E05)
- Mitsunuma, Hiromichi** (with Masuda, Akira; Kuo, Yi Yu) On the dispersion relation of random gravity waves. I. Theoretical framework. *J. Fluid Mech.* 92 (1979), no. 4, 717-730. (J. D. Atkinson) **81f:76009a** 76B15 (86A05)
 (with Kuo, Yi Yu; Masuda, Akira) On the dispersion relation of random gravity waves. II. An experiment. *J. Fluid Mech.* 92 (1979), no. 4, 731-749. (J. D. Atkinson) **81f:76009b** 76B15 (86A05)
 (with Masuda, Akira; Kuo, Yi Yu) Corrigendum: "On the dispersion relation of random gravity waves. I. Theoretical framework". *J. Fluid Mech.* 97 (1980), no. 4, 829. (Editors) **81f:76009c** 76B15 (86A05)
- Mittal, M. L.** (with Prasad, G.) On absolute matrix summability of a sequence of Fourier coefficients. *An. Univ. Timișoara Ser. Științ. Mat.* 16 (1978), no. 1, 69-75 (1979). (N. Kishore) **81d:42013** 42A28 (40C05)
 (with Govinda Thirtha, D.) Nonlinear magnetoacoustic waves in a weakly inhomogeneous plasma. (French summary) *Canad. J. Phys.* 58 (1980), no. 1, 110-115. (Authors' summary) **81g:76122** 76X05
- Mittal, P. K.** (with Garg, O. P.) Double infinite series for the H-function of two variables. (Hindi. English summary) *Vijnana Parishad Amsandhan Patrika* 22 (1979), no. 4, 319-325. (Ram Kishore Saxena) **81b:33009** 33A35
- Mittal, Vashantil** (with Stuetzle, Werner) Some comments on the asymptotic behavior of robust smoothers. *Smoothing techniques for curve estimation (Proc. Workshop, Heidelberg, 1979)*, pp. 191-195. *Lecture Notes in Math.*, 757, Springer, Berlin, 1979. (F. P. Tarasenko) **81g:62069** 62F35 (62G05)
- Mittan, Jean** Hypergroupes fortement canoniques et supérieurement canoniques. *Proceedings of the International Symposium on Applications of Mathematics in System Theory (Unio. Braşov, Braşov, 1978)*, II, pp. 297-302. *Unio. Braşov, Braşov*, 1979. (Editors) **81m:00016** 08A99 (20N99)
- ramirez Mittelbrunn, J.** See Ramirez Mittelbrunn, J.
- Mittelmann, Hans-Defel** On the efficient solution of nonlinear finite element equations. I. *Numer. Math.* 35 (1980), no. 3, 277-291. (Manfred Dobrowolski) **81m:65173** 65N30 (65H10)
 See also Bifurcation problems and their numerical solution. **81i:50003**
- Mittelstaedt, Peter** Der Dualismus von Feld und Materie in der allgemeinen Relativitätstheorie. *Einstein Symposium, Berlin* (1979), pp. 308-319. *Lecture Notes in Phys.*, 100, Springer, Berlin, 1979. (Hans Stephani) **81g:83006** 83C05
 The modal logic of quantum logic. *J. Philos. Logic* 8 (1979), no. 4, 479-504. (Maurizio Fattorosi-Barnaba) **81d:03060** 03G12 (03B45, 81B10)
- Mittler, Heinrich** ★Quantentheorie. (German) [Quantum theory] Second revised edition. B.I. Hochschultaschenbücher [B.I. University Paperbacks], 701. *Bibliographisches Institut, Mannheim*, 1979. iii + 305 pp. *ISBN 3-411-05701-7* (From the introduction) **81k:81001** 81-01
 (with Becker, W.; Gesztesy, F.) On systems of periodic differential equations. *Let. Math. Phys.* 3 (1979), no. 4, 249-253. (Authors' summary) **81m:34063** 34D05
 (with Widder, F.) Classical solutions of σ models. *J. Phys. A* 13 (1980), no. 10, 3275-3286. (From the introduction) **81i:81062** 81E10
- Mittler, Sanjoy K.** (with Toldalagi, Pal) Variable metric methods and filtering theory. *Recent developments in variable structure systems, economics and biology (Proc. US-Italy Sem., Taormina, 1977)*, pp. 214-221. *Lecture Notes in Econom. and Math. Systems*, 162, Springer, Berlin, 1978. (Authors' introduction) **81m:90084** 90C15 (65K05, 93E11)
 (with Djaferis, T. E.) The generalized pole assignment problem. *Proceedings of the 18th IEEE Conference on Decision and Control (Fort Lauderdale, Fla., 1979)*, Vol. 1, 2, pp. 758-765. *IEEE, New York*, 1979. (Authors' summary) **81m:93034** 93B55
 (with Kanal, M.; Moses, H. E.) A variational principle for the linear filter matrix and an interpretation for the maximum value of the functional. *Transport Theory Statist. Phys.* 8 (1979), no. 3, 163-168. (Authors' summary) **81a:82006** 82A05
 Filtering theory and quantum fields. *Systems analysis (Conf., Bordeaux, 1978)*, pp. 199-205. *Astérisque*, 75.76, Soc. Math. France, Paris, 1980. (From the introduction) **81i:81079** 81E99 (93E11)
- Mitragin, B.** See Mitjagin, B. S.
- Mitzel, Glenn E.** (with Clancy, Steven J.; Rugh, Wilson J.) On transfer function representations for homogeneous nonlinear systems. *Proceedings of the 1978 IEEE Conference on Decision and Control including the 17th Symposium on Adaptive Processes (San Diego, Calif., 1979)*, pp. 161-169. *IEEE, New York*, 1979. (Roger Brockett) **81a:93040** 93C10
- Miura, Robert M.** Solitons and die inverse Streumethode. *Jahrbuch Überblicke Mathematik*, 1978, pp. 27-39. *Bibliographisches Inst., Mannheim*, 1978. (See **80c:00007**) 35Q20 (58F07)
 Explicit roots of the cubic polynomial and applications. *Appl. Math. Notes* 5 (1980), no. 1, 22-40. (Manfred W. Kracht) **81j:35109** 35Q20 (26C10, 35A30, 35C05)
- Miwa, Hiroo** On the analysis of compactness under closed mappings. (Japanese) *Sūgaku* 30 (1978), no. 1, 68. (Tsugio Tani) **81d:54010** 54C10 (54D30)
- Miyabe, Hiroshi** (with Noguchi, Shoichi) Study of multiprogramming system with storage hierarchy. *Systems-Comput.-Controls* 9 (1978), no. 6, 26-34 (1980). (Authors' summary) **81i:68019** 68A05
- Miyachi, Akihiko** On some Fourier multipliers for $H^p(\mathbb{R}^n)$. *J. Fac. Sci. Univ. Tokyo Sect. IA Math.* 27 (1980), no. 1, 157-179. (K. Tandori) **81g:42020** 42B15
- Miyadera, Isao** (with Kobayasi, Kazuo) Some remarks on nonlinear ergodic theorems in Banach spaces. *Proc. Japan Acad. Ser. A Math. Sci.* 56 (1980), no. 3, 88-92. (C. P. Gupta) **81i:47056** 47H06 (47H09)
- Miyagi, H.** (with Taniguchi, Tsuneo) Application of the Lagrange-Charpit method to analyze the power system's stability. *Internat. J. Control* 32 (1980), no. 2, 371-379. (Authors' summary) **81g:93077** 93D05
- Miyagi, Mitsumobu** (with Nishida, Shigeo) Transmission characteristics of dielectric tube leaky waveguide. *IEEE Trans. Microwave Theory Tech.* 28 (1980), no. 6, 536-541. (Authors' summary) **81i:78038** 78A50
- Miyahara, Hideo** (with Takahashi, Yutaka; Hasegawa, Toshiharu) An approximation method for open restricted queueing networks. *Oper. Res.* 28 (1980), no. 3, part 1, 594-602. (Authors' summary) **81d:90047** 90B22
- Miyahara, Yasushi** A theorem on linear isomorphisms of a space of analytic functions on a Riemann surface. *TRU Math.* 14 (1978), no. 2, 1-8. (M. Nakai) **81b:30078** 30F10 (30C15, 46J15)
- Miyajima, Kimio** On the equivalence of embeddings (generalization of an example of Zappa). (Japanese) *Sūgaku* 30 (1978), no. 4, 355-357. (Shigeo Nakano) **81b:32016** 32L99 (32C99)
- Miyajima, Shinzo** A reduction of Banach lattices and its application to positive ergodic operators. *J. Fac. Sci. Univ. Tokyo Sect. IA Math.* 27 (1980), no. 2, 321-330. (A. J. Lazar) **81j:47026** 47B55 (46B30)
- Miyakawa, Tetsuro** (with Inoue, Atsushi) On the existence of solutions for linearized Euler's equation. *Proc. Japan Acad. Ser. A Math. Sci.* 55 (1979), no. 8, 282-285. (C. Bardos) **81c:35104** 35Q10 (76D99)
- Miyake, Katsuya** See Oda, Tadao. **81e:14001**
- Miyake, Masatake** A remark on the inverse theorem of Cauchy-Kowalevski. *Proc. Japan Acad. Ser. A Math. Sci.* 56 (1980), no. 2, 55-58. (L. A. Ivanov) **81i:35026** 35E15
 Remarks on the formulation of the Cauchy problem for general system of ordinary differential equations. *Tōhoku Math. J.* (2) 32 (1980), no. 1, 79-89. (A. D. Ziebur) **81f:34008** 34A10
- Miyakoda, Tsuyako** (with Kubo, Tadao) Estimate of number of significant digits for system of linear equations by conjugate gradients method. *Tech. Rep. Osaka Univ.* 20 (1979), no. 1492-1516, 337-346. (Authors' summary) **81a:65041** 65F10
- Miyakoshi, Tadashi** Shadow poles. General discussion including detection and application. *Progr. Theoret. Phys.* 64 (1980), no. 2, 568-582. (Author's summary) **81h:81119** 81F15
- Miyamoto, Izumi** Finite groups with a standard subgroup of type $U_3(2^n)$, $n > 1$. *J. Algebra* 64 (1980), no. 2, 430-459. (Ulrich Dempwolff) **81g:20031** 20D05
- Miyamoto, Masahiko** (with Enomoto, Hikoe) On maximal weights of Hadamard matrices. *J. Combin. Theory Ser. A* 29 (1980), no. 1, 94-100. (Jennifer Seberry) **81m:05044** 05B20
- Miyamoto, Munemi** An equilibrium state for a one-dimensional life game. *J. Math. Kyoto Univ.* 19 (1979), no. 3, 525-540. (U. Krengel) **81g:28028** 28D05
- Miyamoto, S.** (with Ikeda, Saburo; Sawaragi, Yoshikazu) Regularization method for identification of distributed systems. *Identification and system parameter estimation (Proc. Fourth IFAC Sympos., Tbilisi, 1976)*, Part 3, pp. 1517-1526. North-Holland, Amsterdam, 1978. (See **80d:93010c**) 93B30

Miyazaki, Masayoshi ★Curves on rational and unirational surfaces. Tata Institute of Fundamental Research Lectures on Mathematics and Physics, 60. Published for the Tata Institute of Fundamental Research, Bombay; by the Narosa Publishing House, New Delhi, 1978. ii + 302 pp. ISBN 0-387-08943-8 (M. H. Gizatullin) 81f:14001 14-02 (14E05, 14M20)

Analytic irreducibility of certain curves on a nonsingular affine rational surface. *Proceedings of the International Symposium on Algebraic Geometry (Kyoto Univ., Kyoto, 1977)*, pp. 575-587, Kinokuniya Book Store, Tokyo, 1978. (M. Fried) 81i:14008 14E25 (14E10)

(with Sugie, Tohru) Affine surfaces containing cylinderlike open sets. *J. Math. Kyoto Univ.* 20 (1980), no. 1, 11-42. (M. H. Gizatullin) 81h:14020 14J10 (14M20)

See also **Levasseur, Thierry**, 81k:14026

Miyano, Satoru On a lower bound of Shepherdson function. *Mem. Fac. Sci. Kyushu Univ. Ser. A* 33 (1979), no. 2, 257-267. (From the introduction) 81h:68079 68F10

One-way weak-stack-counter automata. *J. Comput. System Sci.* 20 (1980), no. 1, 59-76. (Author's summary) 81h:68072 68D35

Miyazaki, Masahiko *Florida Ser. Katsumi Miyazaki, Florida*

Miyata, Takehiko (with Endō, Shizuo) On the class groups of dihedral groups. *J. Algebra* 63 (1980), no. 2, 548-573. (M. E. Keating) 81h:16021 16A26 (12A57, 16A54, 20C99)

A normal integral basis theorem for dihedral groups. *Tōhoku Math. J.* (2) 32 (1980), no. 1, 49-62. (Jon F. Carlson) 81i:20007 20C10 (12A57)

Miyata, Yoshimasa On the module structure of a p -extension over a p -adic number field. *Nagoya Math. J.* 77 (1980), 13-23. (M. E. Keating) 81h:12015 12B17

Miyatake, O. (with Yoshizawa, Y.; Inoue, H.; Kumahara, H.; Ichimura, M.; Kimura, H.) On the generation and properties of physical random numbers. *Math. Japon.* 24 (1979/80), no. 4, 369-376. (From the summary) 81h:65016 65C10

Miyatake, S. Le problème mixte des équations des ondes et applications. *Séminaire Goulaouic-Schwartz* (1978/1979), Exp. No. 21, 14 pp., École Polytech., Palaiseau, 1979. (Tommaso Ruggeri) 81f:35070 35L20 (35L05, 78A25)

Miyawaki, Isao On the zeros of Dirichlet series associated with cusps on $\Gamma_0(N)$. *Math. Rep. Kyushu Univ.* 12 (1979/80), no. 1, 17-22. (Wen Ch'ing Winnie Li) 81c:10031 10D24 (10D12)

Miyazaki, Fumio (with Arimoto, Suguru) A control theoretic study on dynamical biped locomotion. *Trans. ASME Ser. G, J. Dynamic Systems Measurement Control* 102 (1980), no. 4, 233-239. (Authors' summary) 81h:93049 93C99 (70B99)

Miyazaki, Kenichi (with Kato, Mikio) A note on limit orders of operator ideals. *Bull. Kyushu Inst. Tech. Math. Natur. Sci.* No. 27 (1980), 11-16. (Hermann König) 81h:47038 47D30 (47B10)

Miyazaki, Shigeji (with Nishiyama, Noriyuki) Analysis for minimizing weighted mean flow-time in flow-shop scheduling. (Japanese summary) *J. Oper. Res. Soc. Japan* 23 (1980), no. 2, 118-133. (Authors' summary) 81e:90051 90B35

Miyazawa, Tetsuro (with Adachi, Tetsuo) On P -Sasakian manifolds admitting some parallel and recurrent tensors. *Tensor (N.S.)* 33 (1979), no. 3, 287-292. (Yoshiko Kubo) 81g:53035 53C25

Invariant hypersurfaces immersed in almost paracontact Riemannian manifolds. II. *TRU Math.* 15 (1979), no. 2, 9-20. (Koichi Ogue) 81c:53038 53C15

Miyoshi, Tetsuhiko Numerical stability in dynamic elastic-plastic problems. (French summary) *RAIRO Anal. Numér.* 14 (1980), no. 2, 175-188. (Author's summary) 81g:73046 73E99 (65N30)

Mizel, V. J. (with Marcus, Moshe) A characterization of first order nonlinear partial differential operators on Sobolev spaces. *J. Funct. Anal.* 38 (1980), no. 1, 118-138. (E. A. Catchpole) 81j:47040 47F05 (35Q10, 35R15)

Mizoguchi, Y. N. (with Mihun, V. V.) An iterative algorithm for the solution of a system of linear equations with a constraint on the norm of the solution. (Russian) *Z. Vyčisl. Mat. i Mat. Fiz.* 20 (1980), no. 3, 760-762, 814. (Janusz Mika) 81h:65031 65F10

Mizuo, I. A. (with Sidorov, A. A.) Algorithmic procedures for synthesis of the structure of communications network. (Russian) Problems of information exchange in computer networks. *Voprosy Kibernet. (Moscow)* No. 57 (1979), 78-97. (Authors' summary) 81e:94039 94C10

Mizohata, S. Sur le théorème de Cauchy-Kowalewski. *Séminaire Goulaouic-Schwartz* (1978/1979), Exp. No. 19, 12 pp., École Polytech., Palaiseau, 1979. (H. Goldschmidt) 81h:35007 35A10

Mizokami, T. The equality of large and small inductive dimensions. *J. London Math. Soc.* (2) 20 (1979), no. 3, 541-543. (A. R. Pears) 81c:54055 54F45

Mizutani, Maurice M. Correspondence rules and path integrals. *Feynman path integrals* (Proc. Internat. Colloq., Marseille, 1978), pp. 234-253, Lecture Notes in Phys., 106, Springer, Berlin, 1979. (L. S. Schulman) 81j:81018 81C35 (58D30, 81D05)

Erratum: "Phase space path integrals, without limiting procedure" [*J. Math. Phys.* 19 (1978), no. 1, 298-307; MR 56 #17627]. *J. Math. Phys.* 21 (1980), no. 7, 1965. (Editors) 81f:81019 81C35

Mizuhara, Akira On compact complex analytic surfaces admitting nonvanishing holomorphic vector fields. *Tensor (N.S.)* 32 (1978), no. 1, 101-106. (Shoshichi Kobayashi) 81f:32038 32J15 (57R25)

The group of isometries of a left invariant Hermitian metric on a complex Lie group. *Tensor (N.S.)* 34 (1980), no. 2, 120-122. (K. Nomizu) 81g:53053 53C55 (22E10)

Mitsunaka, Masumi Fixed point free involutions on certain nonsingular quartic surfaces. *Proceedings of the International Symposium on Algebraic Geometry (Kyoto Univ., Kyoto, 1977)*, pp. 589-593, Kinokuniya Book Store, Tokyo, 1978. (Martin Lindner) 81m:14028 14J25 (14K07)

Mizumoto, Hisao A finite-difference method on a Riemannian manifold. *Hiroshima Math. J.* 10 (1980), no. 1, 11-53. (József Dodziuk) 81h:58004 58A14 (39A12)

Mizumoto, Masaharu (with Fukami, Satoru; Tanaka, Kokiichi) Some methods of fuzzy reasoning. *Advances in fuzzy set theory and applications*, pp. 117-136, North-Holland, Amsterdam, 1979. (S. K. Pal) 81g:03027 03B52

(with Tanaka, Kokiichi) Some properties of fuzzy numbers. *Advances in fuzzy set theory and applications*, pp. 153-164, North-Holland, Amsterdam, 1979. (W. Wechler) 81e:03054 03E72 (94D05)

Mizumura, T. (with Kajita, T.; Naruoka, M.) Vibration and buckling analysis of plates of abruptly varying stiffness. *Comput. & Structures* 12 (1980), no. 5, 689-693. (Authors' summary) 81k:65016 65D07 (73K12)

Mizuta, Atsuo (with Fujita, Tatsuo; Tsuda, Osamu) Unstable fracture criterion in a power-law hardening material. (French summary) *Internat. J. Fracture* 16 (1980), no. 3, 221-232. (Authors' summary) 81d:73092 73M20 (73M15)

Mizuta, Yoshikazu (with Bui Huy Qui) On the existence of nongradient limits of polyharmonic functions. *Hiroshima Math. J.* 8 (1978), no. 2, 409-414. (Emmanuel P. Smyrdis and M. Brelot) 81h:31013 31B30

(with Kurokawa, Takahide) On the order at infinity of Riesz potentials. *Hiroshima Math. J.* 9 (1979), no. 2, 533-545. (Gottfried Arger) 81h:31011 31B15 (31C15)

Existence of various boundary limits of Beppo Levi functions of higher order. *Hiroshima Math. J.* 9 (1979), no. 3, 717-745. (I. Netaka) 81d:31013 31B25 (46E35)

Existence of nongradient limits of solutions of nonlinear Laplace equation. *Hiroshima Math. J.* 10 (1980), no. 2, 365-368. (R. Glassey) 81f:35045 35J67 (31B25, 42B30, 46E35)

Continuity of contractions in a functional Banach space. *Hiroshima Math. J.* 10 (1980), no. 2, 381-384. (Robert E. Huff) 81g:46059 46G99

Mizutani, Masahiro (with Shibata, Akira; Mayuyama, Toshihiro; Saitō, Nobuhiko) The nature of chaos in a simple dynamical system. *Z. Naturforsch. A* 34 (1979), no. 11, 1283-1289. (P. J. Holmes) 81a:58037 58F13 (58F11)

Mizutani, Tadayoshi (with Tsuboi, Takashi) Foliations without holonomy and foliated bundles. *Sci. Rep. Saitama Univ. Ser. A* 9 (1979), no. 2, 45-55. (Robert Roussarie) 81a:57027 57R30

Mjasnikov, A. G. (with Sazonov, L. I.) Singular integral operators with a non-Carleman shift on an open contour. (Russian) *Funktsional. Anal. i Prilozhen.* 14 (1980), no. 1, 71-72. (N. K. Karapetjan) 81g:47057 47G05 (47B38)

Mjelde, K. M. A war of attrition and attack with decreasing rates of weapons supply. *Cahiers Centre Études Rech. Opér.* 22 (1980), no. 1, 111-123. (Tamer Başar) 81f:90133 90D25 (90D26)

Bounded allocations of discrete and binary resources. *J. Oper. Res. Soc.* 31 (1980), no. 10, 949-952. (Author's summary) 81h:90051 90B05 (90C10)

Mjølhus, M. See **Müller, Manfred W.**

Mikojan, P. H. A special case of the Riemann problem for a countable set of contours with two limit points. (Russian) *Izv. Vys. Učebn. Zaved. Matematika* 1980, no. 2, 66-69. (D. Mitrović) 81j:30069 30E25

Mikrijärvi, A. M. (with Bablojan, A. A.) Torsion of rods with cross sections in the form of combinations of rectangles and ring sectors. (Russian. Armenian and English summaries) *Izv. Akad. Nauk Armjan. SSR Ser. Meh.* 32 (1979), no. 6, 3-16, 78. (V. P. Kalashnikov) 81j:73056 73K05 (45E99)

Mikrijärvi, R. Z. (with Aleksandrian, P. A.) The qualitative nature of the spectrum of a selfadjoint operator acting in a separable Hilbert space. (Russian) *Proceedings of an All-Union Conference on Partial Differential Equations (Moscow State Univ., Moscow, 1976)* (Russian), pp. 21-23, Moscow. Gos. Univ., Meh.-Mat. Fakul'tet, Moscow, 1978. (See 80f:35002) 47B25

A new criterion characterizing the continuity of a complete system of eigenfunctionals of a selfadjoint operator. (Russian. Armenian and English summaries) *Izv. Akad. Nauk Armjan. SSR Ser. Mat.* 14 (1979), no. 2, 75-90, 155. (V. D. Kosmanenko) 81h:47038 47B25 (47A70)

Mikrumjan, R. R. (with Šikova, R. N.) Meromorphy of solutions of some classes of linear differential equations. (Russian) *Differentsial'nye Uravnenija* 15 (1979), no. 12, 2274-2277, 2303. (J. D. Kečkić) 81d:34005 34A20 (30D30)

Mikryšev, P. Z. (with Ivanov, A. V.) Solvability of the first boundary value problem for some classes of second-order degenerate quasilinear elliptic equations. (Russian) Boundary value problems of mathematical physics. *10. Trudy Mat. Inst. Steklov.* 147 (1980), 14-39, 203. (Milan Kučera) 81h:35012 35J25 (47H17)

Mladenov, K. A problem of the statics of a noncircular cylindrical shell. (Bulgarian. Russian and English summaries) *Godišnik Vis. Učebn. Zaved. Tehn. Meh.* 13 (1978), no. 2, 71-85 (1979). (Author's summary) 81f:73046 73L99

Stability of a straight rod subjected to central distributed loads. (Bulgarian. Russian and English summaries) *Godišnik Vis. Učebn. Zaved. Tehn. Meh.* 13 (1978), no. 2, 87-99 (1979). (Author's summary) 81f:73024 73H10

Małk, Włodzisław Dilations of Hilbert space operators (general theory). *Dissertationes Math. (Rozprawy Mat.)* 153 (1978), 61 pp. (Hari Berčević) 81j:47008 47A20 (46K10, 47D99)

Milčák, J. Approximations of σ -classes and π -classes. *Comment. Math. Univ. Carolin.* 20 (1979), no. 4, 669-679. (L. Bukovský) 81f:03064 03E70 (04A99)

Valuations of structures. *Comment. Math. Univ. Carolin.* 20 (1979), no. 4, 681-695. (L. Bukovský) 81f:03063 03E70 (04A99)

Milz, R. (with Márki, L.; Strecker, Reinhard) Strict radicals of monoids. *Semigroup Forum* 21 (1980), no. 1, 27-66. (J. K. Luedeman) 81h:20095 20M11 (16A21)

Miodonov, L. D. (with Papanicolaou, N.) $SO(2, 1)$ algebra and the large N expansion in quantum mechanics. *Ann. Physics* 128 (1980), no. 2, 314-334. (Authors' summary) 81h:81022 81C12

Mishin, V. B. Spectra of graphs under certain unary operations. (Russian) *Akad. Nauk Ukrain. SSR Inst. Mat. Preprint* 1980, no. 8 *Nekotorye Topologičeskie i Kombinator. Sočinenija Grafov*, 38-44. (D. Cvetković) 81j:05005 05C50

Mont, Daniel S. The q -gamma function for $q > 1$. *Aequationes Math.* 20 (1980), no. 2-3, 278-285. (J. P. Singhal) 81f:33002 33A15

Moon, Turgel On the nature of spatial finite element approximations in structural mechanics. *Mathematics of finite elements and applications, III* (Proc. Third MAFELAP Conf., Brunel Univ., Uxbridge, 1978), pp. 391-413, Academic Press, London, 1979. (Hwa-Shan Ho) 81e:73042 73K25 (65N30)

Mosuro, Vincio (with Lakshminathan, V.; Leela, S.) Existence theory of delay differential equations in Banach spaces. *Nonlinear equations in abstract spaces* (Proc. Internat. Sympos., Univ. Texas, Arlington, Tex., 1977), pp. 125-133, Academic Press, New York, 1978. (G. R. Shendge) 81j:34118 34K05

(with Salvadori, L.; Scalia, M.) Total stability and classical Hamiltonian theory. *Nonlinear equations in abstract spaces* (Proc. Internat. Sympos., Univ. Texas, Arlington, Tex., 1977), pp. 149-159, Academic Press, New York, 1978. (G. Bojadžiev) 81h:58025 58F10 (70H99)

(with D'Anna, Armando; Maio, Alfonso) Global stability properties by means of

- limiting equations. *Nonlinear Anal.* 4 (1980), no. 2, 407-410. (F. Visentin) **81a:34043** 34D20
- Mocanu, C. I. The minimal system of differential equations of electrical networks. (French and German summaries) *Rev. Roumaine Sci. Tech. Sér. Électrotech. Énergét.* 25 (1980), no. 1, 35-45, ii, iii. (Author's summary) **81i:94024** 94C05
- Mocanu, Gh. A representation theorem for the space of the Hermitian elements in a Banach algebra. *Ann. Fac. Sci. Univ. Nat. Zaira (Kinshasa) Sect. Math.-Phys.* 4 (1978), no. 1, 93-104. (A. M. Sinclair) **81h:46049** 46H05
- Mocanu, Petru T. (with Miller, Sanford S.; Reade, Maxwell O.) The order of starlikeness of alpha-convex functions. *Mathematica (Cluj)* 20(43) (1978), no. 1, 25-30. (S. Ruscheweyh) **81d:30016** 30C45
- (with Răduanu, Dumitru) An extremal problem for the transfinite diameter of a continuum. *Romanian-Finnish Seminar on Complex Analysis (Proc., Bucharest, 1976)*, pp. 323-330, *Lecture Notes in Math.*, 743, Springer, Berlin, 1979. (E. Reich) **81c:30043** 30C25
- Mochizuki, Yoshihiro (with Tomita, Yukio) A numerical method for the solution of nonlinear equations with a number of variations. *Bull. JSME* 23 (1980), no. 184, 1676-1681. (Authors' summary) **81j:65118** 65N20 (76A05, 76B10, 76D05)
- Mochon, Simon (with McMahon, Thomas A.) Ballistic walking: an improved model. *Math. Biosci.* 52 (1980), no. 3-4, 241-260. (Authors' summary) **81j:92013** 92A09 (70B99)
- Mock, M. S. Systems of conservation laws of mixed type. *J. Differential Equations* 37 (1980), no. 1, 70-88. (Ronald Di Perna) **81m:35088** 35L65
- Mockai, JH A note on approximation theorems. *Arch. Math. (Brno)* 15 (1979), no. 2, 107-117. (F. Šik) **81i:06021** 06F15
- Mocanu, J. The simple Bayesian algorithm for the multidimensional global optimization. *Numerical techniques for stochastic systems (Conf., Gargano, 1979)*, pp. 369-377, North-Holland, Amsterdam, 1980. (Author's summary) **81h:90083** 90B40 (90C15)
- Micășă, József Extension of decomposability in linear models of the economy. (Hungarian. English and Russian summaries) *Szigma—Mat.-Közgazdasági Folyóirat* 13 (1980), no. 1-2, 23-45. (Author's summary) **81h:90035** 90A15
- Mode, Charles J. Nonparametric estimation of functions in a model of competing risks from incomplete longitudinal data. *Math. Biosci.* 45 (1979), no. 1-2, 1-20. (Niels Keiding) **81g:62147** 62M05 (62P10, 90A09)
- Modica, G. (with Giacomini, M.) Regularity results for some classes of higher order nonlinear elliptic systems. *J. Reine Angew. Math.* 311/312 (1979), 145-169. (Michael Wiegner) **81a:35035** 35J60 (35B45, 35D10)
- Modica, Luciano (with Mortola, Stefano) Some entire solutions in the plane of nonlinear Poisson equations. (Italian summary) *Boll. Un. Mat. Ital. B* (5) 17 (1980), no. 2, 614-622. (A. Borzomynowski) **81h:35036** 35J05 (31A25, 35J60)
- A Runge theorem for overdetermined systems with constant coefficients. *Comm. Partial Differential Equations* 5 (1980), no. 2, 149-185. (V.-V. Ollariu) **81c:35093** 35N99 (35E05)
- (with Mortola, Stefano) Construction of a singular elliptic-harmonic measure. *Manuscripta Math.* 33 (1980/81), no. 1, 81-98. (F. J. Almgren, Jr.) **81m:31001** 31A15 (35J15)
- Moesch, Robert T. (with Carter, John H.) Approximate algorithms to derive exact solutions to systems of linear equations. *Symbolic and algebraic computation (EUROSAM '79, Internat. Sympos., Marseille, 1979)*, pp. 65-73, *Lecture Notes in Comput. Sci.*, 72, Springer, Berlin, 1979. (R. E. Funderlic) **81g:65045** 65F10
- van Moerbeke, Pierre About isospectral deformations of discrete Laplacians. *Global analysis (Proc. Biennial Sem. Canad. Math. Congr., Univ. Calgary, Calgary, Alta., 1978)*, pp. 313-370, *Lecture Notes in Math.*, 755, Springer, Berlin, 1979. (M. F. Atiyah) **81g:58018** 58F07 (14H40, 39A12, 70G05)
- (with McKean, H. P.) Hill and Toda curves. *Comm. Pure Appl. Math.* 33 (1980), no. 1, 23-42. (P. A. Kuchment) **81h:14016** 14H45 (35Q20, 58F07)
- Moeschlin, Otto (with Hellwig, Klaus) On the application of two-stage linear programming under uncertainty to capital budgeting problems. *Operations Research Verfahren*, 30, pp. 60-67, Hain, Meisenheim, 1979. (From the text) **81d:90019** 90A11 (90A12)
- Moet, Henry Johan Karel Singular perturbation methods in a one-dimensional free boundary problem. *Asymptotic analysis*, pp. 63-75, *Lecture Notes in Math.*, 711, Springer, Berlin, 1979. (Pierre-Louis Lions) **81c:35004** 35B25 (34E15, 35J60, 49B60)
- Sur la convergence de la frontière libre dans un problème de perturbations singulières d'une inéquation variationnelle elliptique. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 10, A461-A462. (Author's summary) **81g:35022** 35J20
- amir-Moëz, Ali R. See Amir-Moëz, Ali R.
- Moëzzi, H. (with Ross, G.; Fiddy, M. A.) The solution to the inverse scattering problem, based on fast zero location from two measurements. (French and German summaries) *Optica Acta* 27 (1980), no. 10, 1433-1444. (Brian DeFazio) **81h:78015** 78A45 (35A25, 68G10)
- Moffat, J. W. (with Kunstat, G.; Savaria, P.) Cosmological solution with matter in a new theory of gravitation. (French summary) *Canad. J. Phys.* 58 (1980), no. 6, 729-736. (L. K. Patel) **81h:83043** 83D05
- Moffatt, H. K. The asymptotic behaviour of solutions of the Navier-Stokes equations near sharp corners. *Approximation methods for Navier-Stokes problems (Proc. Sympos., Univ. Paderborn, Paderborn, 1979)*, pp. 371-380, *Lecture Notes in Math.*, 771, Springer, Berlin, 1980. (P. L. Sulem) **81e:76016** 76D05 (35Q10)
- Moffet, Denis A note on the Yaari life cycle model. *Rev. Econom. Stud.* 45 (1978), no. 2, 385-388. (Author's summary) **81a:62104** 62P05 (90A05)
- Mogami, Isao Note on commutativity of rings. II. *Math. J. Okayama Univ.* 22 (1980), no. 1, 51-54. (Ju. N. Mal'cev) **81h:16054** 16A70
- Mogg, Jack M. (with Kao, Peichuen; Kao, Edward P. C.) A simple procedure for computing performance characteristics of truncated sequential tests with exponential lifetimes. *Technometrics* 21 (1979), no. 2, 229-232. (Madañlal T. Wasan) **81d:62079** 62L10
- Mogha, G. Estimation de gain du filtre stationnaire de Kalman par l'intermédiaire du modèle ARMA associé. (English summary) *Bull. Direction Études Rech. Sér. C Math. Inform.* 1980, no. 1, 3, 49-63. (Author's summary) **81h:93111** 93E11
- Moghaddam, M. Reza R. The Baer-invariant of a direct product. *Arch. Math. (Basel)* 33 (1979/80), no. 6, 504-511. (D. E. Cohen) **81f:20041** 20F12
- Mogilevskii, I. Š. Estimates of solutions of a general initial-boundary value problem for the linear nonstationary system of Navier-Stokes equations in a half-space. (Russian. English summary) Boundary value problems of mathematical physics and related questions in the theory of functions, 11. *Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 84 (1979), 147-173, 319, 319. (J. F. Heyda) **81c:35105** 35Q10 (76D05)
- Mogilevskii, O. A. (with Vukajlović, F. R.) Asymptotic form of the electron repulsion matrix elements for hydrogen molecules in the adiabatic representation. *J. Phys. B* 13 (1980), no. 10, 1947-1952. (Authors' summary) **81e:81165** 81G50
- (with Vukajlović, F. R.) Electron repulsion potentials of diatomic molecules in the adiabatic basis. *J. Phys. B* 13 (1980), no. 11, 2157-2164. (Authors' summary) **81e:81172** 81G55
- (with Ponomarev, L. I.; Vukajlović, F. R.) The hydrogen molecule in the adiabatic representation. *J. Phys. B* 13 (1980), no. 13, 2489-2496. (Authors' summary) **81e:81171** 81G55
- Mogilski, Jerzy CE-decomposition of l_2 -manifolds. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math.* 27 (1979), no. 3-4, 309-314. (Richard M. Schori) **81e:57018** 57N20
- Mogolón, Ramón On a class of continuous flows. *Internat. J. Math. Math. Sci.* 3 (1980), no. 2, 267-274. (P. Seibert) **81h:54073** 54H20 (34C35)
- Mogra, Manak Lal (with Juneja, Om Prakash) A class of univalent functions. (French summary) *Bull. Sci. Math. (2)* 103 (1979), no. 4, 435-447. (K. S. Padmanabhan) **81a:30008** 30C45
- Mogyoródi, J. On an inequality of Marcinkiewicz and Zygmund. *Publ. Math. Debrecen* 26 (1979), no. 3-4, 267-274. (A. N. Philippou) **81f:60028** 60E15 (60G50)
- mir-Mohammad-Sadegh, A. See Mir-Mohammad-Sadegh, A.
- Mohamed, Julie (with Coleman, John P.) On de Vogelaere's method for $y'' = f(x, y)$. *Math. Comp.* 32 (1978), no. 143, 751-762. (Authors' summary) **81e:65033** 65L05
- Mohamed, Saad (with Jain, S. K.) Rings whose cyclic modules are continuous. *J. Indian Math. Soc. (N.S.)* 42 (1978), no. 1-4, 197-202 (1979). (T. Cheatham) **81h:16040** 16A53 (16A51)
- Mohammad, Q. G. (with Aziz, Abdul) On the zeros of a certain class of polynomials and related analytic functions. *J. Math. Anal. Appl.* 75 (1980), no. 2, 495-502. (George L. Csordas) **81j:30014** 30C15
- (with Aziz, Abdul) Simple proof of a theorem of Erdős and Lax. *Proc. Amer. Math. Soc.* 80 (1980), no. 1, 119-122. (Thomas McCoy) **81g:30008** 30C10
- noor Mohammad, S. See Noor Mohammad, S.
- Mohan, C. (with Al-Bayaty, A. R.) Power-series solutions of the Lane-Emden equation. *Astrophys. and Space Sci.* 73 (1980), no. 1, 227-239. (Authors' summary) **81h:85006** 85A15 (65L99)
- Mohan, Mahalingam Study of the finite-temperature transverse-autocorrelation function in one-dimensional spin- $\frac{1}{2}$ XY models. *Phys. Rev. B* (3) 21 (1980), no. 3, 1264-1270. (Masuo Suzuki) **81g:82075** 82A67
- Mohan, S. Rama (with Verma, A. P.) Existence and uniqueness of similarity solutions of imbibition equation. *Proc. Indian Acad. Sci. Sect. A Math. Sci.* 88 (1979), no. 5, 409-417. (R. K. Gupta) **81e:76043** 76S05 (35Q99)
- rama Mohana Rao, M. See Rama Mohana Rao, M.
- Mohanty, B. P. (with Miele, A.; Cloutier, J. R.; Wu, A. K.) Sequential conjugate gradient-restoration algorithm for optimal control problems with nondifferential constraints. I, II. *Internat. J. Control* 29 (1979), no. 2, 189-211, 213-234. (F. M. Kirillova) **81h:49022** 49D07 (93C99)
- Mohanty, S. P. (with Sridharan, M. R.; Shukla, S. K.) On cyclic permutation groups and graphs. *J. Math. Phys.* 21 (1978), no. 5, 409-416. (D. R. Lick) **81h:05080** 05C25
- (with Rao, Daljit) Characterization and enumeration of hypotriangular graphs. *Bull. Austral. Math. Soc.* 20 (1979), no. 3, 437-445. (Carsten Thomassen) **81h:05073** 05C45
- Shortest string containing all permutations. *Discrete Math.* 31 (1980), no. 1, 91-95. (Gérard Cohen) **81h:05005** 05A05
- Mohanty, Sri Gopal ★ Lattice path counting and applications. Probability and Mathematical Statistics. *Academic Press [Harcourt Brace Jovanovich, Publishers], New York-London-Toronto, Ont., 1979*. xi + 185 pp. ISBN 0-12-504050-4 (Endre Csáki) **81f:60020** 60C05 (05-02, 60J15, 62G10)
- (with Handa, B. R.) On Dwass's method for deriving the distribution of rank order statistics. (Czech and Russian summaries) *Apl. Mat.* 24 (1979), no. 6, 458-468. (Endre Csáki) **81e:62013** 62E15 (62G10)
- (with Handa, B. R.) Enumeration of higher-dimensional paths under restrictions. *Discrete Math.* 26 (1979), no. 2, 119-128. (D. P. Roselle) **81h:05012** 05A15 (05C30)
- Mohapatra, Ram Narayan (with Sharma, Ambikeshwar) Discrete exponential Abel-Euler splines. *J. Indian Math. Soc. (N.S.)* 42 (1978), no. 1-4, 367-379 (1979). (Jean Tzimbarario) **81h:41016** 41A15
- (with Das, G.) Absolute summability factors. II. *Tamkang J. Math.* 9 (1978), no. 2, 157-169. (N. Kishore) **81h:40012** 40F05
- (with Chandra, Prem) Absolute Nörlund summability factors of Fourier series. *Tamkang J. Math.* 10 (1979), no. 2, 245-252. (H. P. Dikshit) **81h:42009** 42A28 (40G05)
- (with Chandra, Prem) On absolute summability factors of infinite series and their application to Fourier series. II. (French summary) *Rend. Mat.* (6) 13 (1980), no. 1, 21-28. (L. Leindler) **81m:40010** 40D15 (42A28)
- Mohapatra, Umakanta (with Mishra, Shankar Prasad) Oscillatory free convection flow of elastic-viscous liquid from a vertical plate. *Rev. Roumaine Math. Pures Appl.* 25 (1980), no. 3, 413-428. (C. F. Chan Man Fong) **81h:76004** 76A10 (76R10)
- Moharata, A. (with Dutt, Ranabir) Comments on time-dependent canonical transformations as applied to certain nonlinear dissipative classical systems. *Phys. Rev. D* (3) 21 (1980), no. 4, 1184-1186. (C. Marchal) **81h:70010** 70H15
- Mohler, R. R. (with Rao, K. V.; Frick, A.) On bilinear system identification by Walsh functions. *Identification and system parameter estimation (Proc. Fourth IFAC Symp., Tbilisi, 1976)*, Part 3, pp. 1749-1758, North-Holland, Amsterdam, 1978. (See **80d:93010**) 93B30
- Overview of recent BLS research and immunology. *Recent developments in variab*

- structure systems, economics and biology (Proc. US-Italy Sem., Taormina, 1977), pp. 222-231, *Lecture Notes in Econ. and Math. Systems*, 162, Springer, Berlin, 1978. (Author's summary) **81g:92008** 92A09 (93B30)
- Bilinear control structures in immunology. *Modelling and optimization of complex systems* (Proc. IFIP-TC 7 Working Conf., Novosibirsk, 1978), pp. 58-68, *Lecture Notes in Control and Information Sci.*, 18, Springer, Berlin, 1979. (Robert J. Mulholland) **81d:92005** 92A07 (92A09, 93C99)
- (with Hsu, Chin Shung) Systems compartmentation in immunological modeling. *Systems theory in immunology* (Proc. Working Conf., Rome, 1978), pp. 165-174, *Lecture Notes in Biomath.*, 32, Springer, Berlin, 1979. (Robert J. Mulholland) **81j:92014** 92A09 (93B30)
- (with Baheti, R. S.; Spang, H. A., III) Second-order correlation method for bilinear system identification. *IEEE Trans. Automat. Control* **25** (1980), no. 6, 1141-1146. (Authors' summary) **81m:93079** 93E12
- See also Recent developments in variable structure systems, economics and biology, **81f:90002**
- Mohr, Erik Confidence estimation of measures of location in the log normal distribution. *Biometrika* **66** (1979), no. 3, 567-575. (Charles E. Land) **81k:62068** 62F25
- Mohmachev, V. G. (with Konopel'chenko, B. G.) On the group-theoretical analysis of differential equations. *Jadernaja Fiz.* **30** (1979), no. 2, 559-567 (Russian); translated as *Soviet J. Nuclear Phys.* **30** (1979), no. 2, 288-292. (Yvette Kosmann-Schwarzbach) **81f:58045** 58G35 (35A99, 70H35, 81E99)
- Mohmko, V. D. Magnitudes of deviations for the transcendental solution of a differential equation. (Russian) *Differentsial'nye Uravneniya* **14** (1978), no. 7, 1328-1331, 1344. (A. Elbert) **81k:34005** 34A20 (30D35)
- Meromorphic solutions of systems of linear differential equations with meromorphic coefficients. (Russian) *Differentsial'nye Uravneniya* **16** (1980), no. 8, 1417-1426, 1532. (Shlomo Streit) **81m:34006** 34A20 (30D30, 34A30)
- Mohr, Ernst Wo ist die Riemannsche Funktion $\sum_{n=1}^{\infty} \sin n^2 x / n^2$ nichtdifferenzierbar? (English summary) *Ann. Mat. Pura Appl.* (4) **123** (1980), 93-104. (F. Brooks) **81e:26005** 26A27
- Mohr, G. A. A contact stiffness matrix for finite element problems involving external elastic restraint. *Comput. & Structures* **12** (1980), no. 2, 189-191. (Author's summary) **81f:73036** 73K25
- Mohr, Akira (with Fukata, Satoru; Takata, Masaru) On the determination of the optimal feedback gains for multivariable linear systems incorporating integral action. *Internat. J. Control* **31** (1980), no. 6, 1027-1040. (Authors' summary) **81d:93032** 93C35 (49B36, 49B50)
- Mohr, Masayuki (with Shibata, Keiichi) Conformal structures on the real n -torus. *Osaka J. Math.* **17** (1980), no. 1, 137-164. (J. Ferrand) **81d:53024** 53C15 (30C60, 53C70)
- Mühling, W. Acoustic momentum and energy theorems for piecewise uniform ducts. *J. Acoust. Soc. Amer.* **67** (1980), no. 5, 1463-1471. (S. H. Lam) **81e:76038** 76Q05
- Mu, P. (with Kim, J.) On the numerical solution of time-dependent viscous incompressible fluid flows involving solid boundaries. *J. Comput. Phys.* **35** (1980), no. 3, 381-392. (Authors' summary) **81b:76021** 76D05 (65N99)
- Mu, E. I. The uniqueness of the solution of the second boundary value problem. (Russian) *Proceedings of an All-Union Conference on Partial Differential Equations* (Moscow State Univ., Moscow, 1976) (Russian), pp. 162-165, *Moskov. Gos. Univ., Meh.-Mat. Fakul'tet*, Moscow, 1978. (See **80f:35002**) 35J25
- Some properties of the solution of the Lavrent'ev-Bicadze equation. (Russian) *Mat. Zametki* **26** (1979), no. 4, 535-546, 653-654. (V. V. Kovrizkin) **81e:35089** 35M05
- Mu, N. N. (with Kolmanovskii, V. B.; Černous'ko, F. L.) A method of control of stochastic systems. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* **1979**, no. 3, 5-14, 219 (Russian); translated as *Engng. Cybernetics* **17** (1979), no. 3, 1-9 (1980). (Authors' summary) **81g:93128** 93E20
- (with Svirzev, Ju. M.) Systems analysis of dynamic processes in the biosphere. Conceptual model of biosphere. (Russian) *Vestnik Akad. Nauk SSSR* **1979**, no. 2, 47-58. (Editors) **81m:92053** 92A17 (90A16, 92A05)
- Mu, S. S. (with Tur, A. V.; Janovskii, V. V.) Interaction of a packet with random noise in Burgers' equation. *Izv. Vysht. Učebn. Zaved. Radiofizika* **23** (1980), no. 1, 68-78 (Russian, English summary); translated as *Radiophys. and Quantum Electronics* **23** (1980), no. 1, 54-61. (Authors' summary) **81f:76010** 76B15 (35Q20, 76F99)
- Mu, B. L. (with Stockman, S. G.) Electron capture by charged particles at relativistic energies. *J. Phys. B* **13** (1980), no. 15, 2975-2981. (Authors' summary) **81h:81126** 81F20
- Mu, N. N. See Molisev, N. N.
- Mu, N. N. (with Friedland, Shmuel) Association of resonance states with the incomplete spectrum of finite complex-scaled Hamiltonian matrices. *Phys. Rev. A* (3) **22** (1980), no. 2, 618-624. (Lawrence P. Horwitz) **81g:81013** 81C10 (81G45)
- Mu, Boris Topological questions in the theory of algebraic surfaces. *Fonctions de plusieurs variables complexes, III* (Sém. François Norguet, 1975-1977), pp. 120-123, *Lecture Notes in Math.*, 670, Springer, Berlin, 1978. (R. Mandelbaum) **81h:14023** 14J99 (57M99)
- (with Mandelbaum, Richard) On the topology of simply connected algebraic surfaces. *Trans. Amer. Math. Soc.* **260** (1980), no. 1, 195-222. (R. C. Kirby) **81g:14018** 14J99 (57R99)
- Mu, Grigore C. See Radu, Eugen. **81h:01013**
- Mu, C. L. (with Chambers, W. G.; Parker, T. J.) Theory of the scattering of electromagnetic waves by a regular grid of parallel cylindrical wires with circular cross section. *J. Phys. A* **13** (1980), no. 4, 1433-1441. (From the summary) **81a:78013** 78A45
- Mu, Ngaiming Le problème de Serre pour les surfaces de Riemann. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **290** (1980), no. 4, A179-A180. (H. Wu) **81e:32035** 32L05 (32C15, 32G10)
- Mukhachev, V. G. See Mohmachev, V. G.
- Mukhtar-Kharroubi, H. Sur la convergence théorique de la méthode du gradient réduit généralisée. (English summary) *Numer. Math.* **34** (1980), no. 1, 73-85. (Wolfgang Wetterling) **81k:65074** 65K10 (90C30)
- Mukha, B. I. (with Mel'nik, V. S.) On the question of the reconstruction of correlation functions in problems of identification and control of dynamical objects. (Russian) *Adaptive control systems* (Russian), pp. 48-54, *Akad. Nauk Ukrain. SSR, Inst. Kibernet.*, Kiev, 1978. (From the text) **81e:93089** 93E12
- Mukha, Ju. I. Specific properties of algorithms used in the determination of the trajectories of relativistic electrons in a self-consistent electromagnetic field. (Russian) *Ž. Vyšl. Mat. i Mat. Fiz.* **19** (1979), no. 6, 1485-1495, 1629. (Author's summary) **81a:78010** 78A35 (78A50)
- Peculiarities in ill-posed problems which appear in investigations of motion of electrons in an electromagnetic field. (Russian) *Ž. Vyšl. Mat. i Mat. Fiz.* **20** (1980), no. 1, 133-146, 261. (Author's summary) **81b:78008** 78A50
- Mukljak, M. P. (with Grecka, G. P.; Zalcov, I. I.; Jadenko, M. I.) A statistical problem in the error analysis of frequency type detectors. (Russian, English summary) *Vyšl. Prikl. Mat. (Kiev)* **No. 38** (1979), 49-53, 164. (Authors' summary) **81k:62124** 62M09
- Mukobodzki, Gabriel Sur l'algèbre contenue dans le domaine étendu d'un générateur infinitésimal. *Séminaire de Théorie du Potentiel*, No. 3 (Paris, 1976/1977), pp. 168-187, *Lecture Notes in Math.*, 681, Springer, Berlin, 1978. (Hélène Airault) **81e:31007** 31D05 (60J45)
- See also Seminar: Potential theory, **81i:31002**
- Mukrik, R. I. (with P'ir'ev, Ju. O.) Dynamical properties of the solutions of problems of thermoelasticity. (Russian, English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* **1980**, no. 4, 44-47, 99. (M. Sokolowski) **81f:73057** 73U05 (35B05)
- de Mol, C. (with Bertero, M.; Viano, G. A.) On the regularization of linear inverse problems in Fourier optics. *Applied inverse problems*, pp. 180-199, *Lecture Notes in Phys.*, 85, Springer, Berlin, 1978. (Authors' summary) **81k:78002** 78A05 (47A70, 49D20, 65T05, 68G10)
- Molčan, G. M. Homogeneous random fields on symmetric spaces of rank one. (Russian, English summary) *Teor. Veroyatnost. i Mat. Statist.* **21** (1979), 123-148, 167. (Yasuhiko Asoo) **81f:60077** 60G60
- Molčanov, I. M. (with Nikolenko, L. D.; Dejneka, V. S.) Solution by the finite element method of the problem of the stress-deformed state of a cylindrical shell supported by stiffening ribs. (Russian) *Difference and variational-difference methods* (Proc. Second Sem. Methods of Numer. Appl. Math., Novosibirsk, 1977) (Russian), pp. 81-89, *Akad. Nauk SSSR Sibirk. Otdel., Vyšl. Centr, Novosibirsk*, 1977. (See **81b:65063a**) 65N30
- (with Jakovlev, M. F.) Conditions for termination of iteration processes that ensure a given accuracy. (Russian, English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* **1980**, no. 6, 21-23, 92. (Authors' summary) **81f:65034** 65F10
- (with Brusnikin, B. N.) Analysis of a mathematical model of the design of a diak. (Russian) *Ž. Vyšl. Mat. i Mat. Fiz.* **20** (1980), no. 1, 147-161, 261. (S. Matysiak) **81e:73054** 73K10
- Some requirements of numerical programs for linear algebra. (Russian) *Ž. Vyšl. Mat. i Mat. Fiz.* **20** (1980), no. 3, 550-561, 811. (Cs. J. Hegedűs) **81j:65065** 65F99 (15A06, 65G99)
- See also Numerical analysis, **81d:65001**
- Molčanov, S. A. (with Stepanov, A. K.) Markov models for energy dissipation in a homogeneous medium. (Russian) *Studies in the theory of functions of several real variables*, No. 2 (Russian), pp. 148-175, *Jaroslavl. Gos. Univ., Jaroslavl*, 1978. (Authors' introduction) **81e:82038** 82A42 (60K35)
- (with Kuz'menko, Ju. T.) Counterexamples to theorems of Liouville type. (Russian, English summary) *Vestnik Moskov. Univ. Ser. I Mat. Meh.* **1979**, no. 6, 39-43, 107. (Stephan Rempel) **81e:58063** 58G20 (35J20)
- Molčanov, V. F. Quantization on the imaginary Lobachevskii plane. (Russian) *Funktsional. Anal. i Prilozhen.* **14** (1980), no. 2, 73-74. (Virgil Obideanu) **81f:58026** 58F06 (81D99)
- Plancherel's formula for hyperboloids. (Russian) *Boundary value problems of mathematical physics*, 10. *Trudy Mat. Inst. Steklov.* **147** (1980), 65-85, 203. (V. P. Jaitnikov) **81j:43023** 43A90 (22E30, 33A75)
- Moldabaev, S. M. Optimal stabilization of nonlinear systems. (Russian) *Dynamics of control systems* (Third All-Union Četaev Conf., Irkutsk, 1977) (Russian), pp. 192-198, 341, "Nauka" Sibirk. Otdel., Novosibirsk, 1979. (Author's summary) **81h:93066** 93D05 (93C05)
- Moldenhauer, Wolfgang Ein spezielles Dreiecksmodell beim finite-Elemente-Verfahren. *Rostock. Math. Kolloq.* **No. 12** (1979), 87-99. (Ulrich Eckhardt) **81a:65104** 65N30
- Moldovan, M. (with Corici, I. C.) A point of view on the realisation of global economical models. *Proceedings of the International Symposium on Applications of Mathematics in System Theory* (Univ. Braşov, Braşov, 1978), I, pp. 315-324, *Univ. Braşov, Braşov*, 1979. (See **81f:93006a**) 90A17
- Moll, Paul (with Arnal, Didier; Cortet, Jean-Claude) \star -produit et représentation de masse nulle du groupe de Poincaré. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **291** (1980), no. 4, A327-A330. (Authors' summary) **81j:22023** 22E70 (81C40, 81D25)
- Mollat, Alain Onde viscoélastique non linéaire de faible amplitude. (Polish and Russian summaries) *Arch. Mech. (Arch. Mech. Stes.)* **31** (1979), no. 4, 447-465. (D. Graffi) **81e:73042** 73F15
- Mollinelli, Silvia The module of integrable derivations in the case of positive characteristics. (Italian, English summary) *Ann. Mat. Pura Appl.* (4) **121** (1979), 25-38. (Mihnea Morcila) **81j:13006** 13B10
- garcia-Molliner, F. See Garcia-Molliner, F.
- Mollino, P. Problème d'équivalence pour les Γ -structures et problème de Darboux. *Proceedings of the IV International Colloquium on Differential Geometry* (Univ. Santiago de Compostela, Santiago de Compostela, 1978), pp. 205-215, *Curso Cong. Univ. Santiago de Compostela*, 15, Univ. Santiago de Compostela, Santiago de Compostela, 1979. (Ngô Van Quê) **81h:58063** 58H05 (58A15)
- Mollendorf, Joseph C. (with Carey, Van P.; Gebhart, Benjamin) Buoyancy force reversals in vertical natural convection flows in cold water. *J. Fluid Mech.* **97** (1980), no. 2, 279-297. (A. K. Singh) **81e:76087** 76R10
- Möller, Hans Michael (with Grundmann, Axel) Invariant integration formulas for the n -simplex by combinatorial methods. *SIAM J. Numer. Anal.* **15** (1978), no. 2, 282-290. (Authors' summary) **81e:41045** 41A55 (65D30)
- Lower bounds for the number of nodes in cubature formulae. *Numerische Integration* (Tagung, Math. Forschungsinstit., Oberwolfach, 1978), pp. 221-230, *Internat. Ser. Numer. Math.*, 45, Birkhäuser, Basel, 1979. (I. P. Mysovskikh) **81j:65053** 65D32 (41A55, 41A63)

- Linear abhängige Punktfunktionale bei zweidimensionalen Interpolations- und Approximationsproblemen. *Math. Z.* 173 (1980), no. 1, 35–49. (U. Tippenhauer) **81m:41038** 41A63 (41A05, 41A55)
- Möller, Karen K. See Proceedings: Scandinavian Logic Symposium, **81m:03006**
- Mollin, Richard Anthony Splitting fields and group characters. *J. Reine Angew. Math.* 315 (1980), 107–114. (Chih-Han Sah) **81b:12011** 12A57 (20C15)
- Induced p -elements in the Schur group. *Pacific J. Math.* 90 (1980), no. 1, 169–176. (M. E. Keating) **81m:16016** 16A26 (12A80, 13A20, 20C99)
- Molnar, Stojan (with Langov, Anani) On two $n+1$ -dimensional surfaces of degree $n+1$ in $(2n+1)$ and $2n$ -dimensional projective space, respectively. (Bulgarian. German summary) *Annuaire Univ. Sofia Fac. Math. Méc.* 69 (1974/75), 69–78 (1979). (V. Volenec) **81d:51012** 51M35
- On the properties of a three-dimensional surface of second order in the four-dimensional projective space P^4 . (Bulgarian. Russian and English summaries) *Godišnik Visš. Učebn. Zaved. Priložna Mat.* 13 (1977), no. 3, 197–206 (1978). (K. Burian) **81k:14010a** 14E05 (14N05)
- Representation of the four-dimensional projective space on a plane with the aid of a three-dimensional surface of second degree. (Bulgarian. Russian and English summaries) *Godišnik Visš. Učebn. Zaved. Priložna Mat.* 13 (1977), no. 4, 217–229 (1978). (K. Burian) **81k:14010b** 14E05 (14N05)
- Fundamental projective problems in a planar model of P^4 . (Bulgarian. Russian and English summaries) *Godišnik Visš. Učebn. Zaved. Priložna Mat.* 14 (1978), no. 4, 25–36 (1979). (K. Burian) **81h:51002** 51A05
- Molnar, T. Ž. (with Načev, N. A.) Invariants of the Ulm-Kaplansky group of normed units of the center of the group ring of the FC- p -group over a commutative ring of characteristic p . (Russian) *C. R. Acad. Bulgare Sci.* 32 (1979), no. 10, 1311–1313. (G. Karpilovsky) **81e:20006** 20C07
- Mollura, K. G. Periodic solutions of a quasilinear nonautonomous system with retarded argument in the resonance case. (Bulgarian. Russian and English summaries) *Godišnik Visš. Učebn. Zaved. Priložna Mat.* 14 (1978), no. 2, 197–204 (1979). (V. G. Angelov) **81j:34125** 34K15 (34A45)
- (with Rjabov, Ju. A.) Stability of periodic solutions of second-order equations with small lag in the resonance case. (Russian) *Mat. Fiz. No. 27* (1980), 46–50, 121. (P. Talpalaru) **81k:34079** 34K20
- Molluzzo, John C. Toughness, Hamiltonian-connectedness, and n -Hamiltonicity. *Second International Conference on Combinatorial Mathematics* (New York, 1978), pp. 402–404. *Ann. New York Acad. Sci.*, 319, New York Acad. Sci., New York, 1979. (C. Hoede) **81j:05082** 05C45
- Some Hamiltonian counterexamples. *Topics in graph theory* (New York, 1977), pp. 157–165. *Ann. New York Acad. Sci.*, 328, New York Acad. Sci., New York, 1979. (J. A. Bondy) **81k:05072** 05C45
- (with Capobianco, Michael F.) The strength of a graph and its application to organizational structure. *Social Networks* 2 (1979/80), no. 3, 275–283. (K. B. Reid) **81k:05069** 05C40 (92A20)
- See also Problems: Combinatorial mathematics, **81h:05002**
- Molnar, E. Kegelschnitte auf der metrischen Ebene. *Acta Math. Acad. Sci. Hungar.* 31 (1978), no. 3–4, 317–343. (G. Ewald) **81e:51006** 51F05
- Kreisgeometrie und konforme Interpretation des mehrdimensionalen metrischen Raumes. *Period. Math. Hungar.* 10 (1979), no. 4, 237–259. (E. J. F. Primrose) **81h:51010** 51F15
- Molodtsh, V. N. A method of constructing iteration schemes for hyperbolic systems of equations. (Russian) *Čisl. Metody Meh. Splošn. Sredy* 10 (1979), no. 2. *Modelirovanie*, 117–125. (V. D. Glushnikov) **81h:65095** 65M10
- Molodtsh, A. N. Duality of a class of nonconvex extremal problems. (Russian) *Contemporary questions of applied mathematics and programming* (Moscow, 1979), pp. 92–99, 169, "Stiznka", Kishinev, 1979. (Author's summary) **81h:90135** 90C30
- Molostov, V. S. (with Zukovskii, V. I.; Stojanov, N. V.) A coalition differential game of three persons. (Russian) *Problems of stability of motion, analytical mechanics and control of motion* (Third All-Union Cetaev Conf., Irkutsk, 1977) (Russian), pp. 218–226, 325, "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. (W. H. Ruckle) **81g:90110** 90D25
- Molotkov, I. A. Diffraction by a convex curve with impedance variable and large in modulus. Degeneration of creeping waves. (Russian) *Scattering theory. Theory of oscillations* (Russian), pp. 91–112, 185. *Probl. Mat. Fiz.*, 9, Leningrad Univ., Leningrad, 1979. (A. S. Alekseev) **81g:78029** 78A45 (35C20)
- (with Starkov, A. S.) Letter to the editors: "Local degeneration of waves in a thin waveguide" [Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI) 78 (1978), 138–148; MR 80g:78018]. (Russian) Mathematical questions in the theory of wave propagation, 10. *Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 89 (1979), 286. (Editors) **81f:78019** 78A50
- Molotkov, I. A. See Interference waves in layered media, **81k:76001**
- Molzon, Robert E. The Bezout problem for a special class of functions. *Michigan Math. J.* 26 (1979), no. 1, 71–79. (L. I. Ronkin) **81a:32003** 32A22 (32H30)
- Moon, Eduardo (with Amundson, Neal R.) Diffusion and reaction in carbon burning. Dynamics and modelling of reactive systems (Proc. Adv. Sem., Math. Res. Center, Univ. Wisconsin, Madison, Wis., 1979), pp. 353–374. *Publ. Math. Res. Center Univ. Wisconsin*, 44, Academic Press, New York, 1980. (Jagdish Chandra) **81m:80009** 80A25 (35K60, 80A30)
- Monaco, S. (with Gori-Giorgi, C.) Minimal realizations of linear and affine time-varying systems. Recent developments in variable structure systems, economics and biology (Proc. US-Italy Sem., Taormina, 1977), pp. 143–157. *Lecture Notes in Econom. and Math. Systems*, 162, Springer, Berlin, 1978. (K. B. Datta) **81m:93021** 93B20
- Monaco, Vito Antonio (with Filicori, Fabio; Naldi, Carlo) Simulation and design of microwave class-C amplifiers through harmonic analysis. IEEE MTT-S 1979 International Microwave Symposium (Orlando, Fla., 1979). *IEEE Trans. Microwave Theory Tech.* 27 (1979), no. 12, 1043–1051. (N. D. Sengupta) **81g:78039** 78A55 (65H99, 94C05)
- Monari Martinez, Elina Betta Some classes of mixed abelian groups of rank 1. (Italian. English summary) *Ann. Univ. Ferrara Sez. VII (N.S.)* 25 (1979), 47–61. (Delmar L. Boyer) **81h:20070** 20K99
- Monastyrnyi, P. I. On the question of numerical solution of boundary value problems with a regular singular point. (Russian. English summary) *Vest. Akad. Nauk BSSR Ser. Fiz.-Mat. Nauk* 1979, no. 4, 25–30, 140. (R. S. Andersen) **81e:65046** 65L10
- Monastyrnyi, M. I. Boris Nikolaevich Delone (on the occasion of his ninetieth birthday). (Russian) *Mat. v Škole* 1980, no. 3, 70–71. (Editors) **81f:01033** 01A70
- Moncayo, Alberto Ruiz (with Gorostiza, Luis G.) Invariance principles for the spatial distributions of branching populations. *Branching processes* (Conf., Saint Hippolyte, Que., 1976), pp. 159–175. *Advances in Probability and Related Topics*, 5, Dekker, New York, 1978. (N. Leonenko (Zbl 411:60082)) **81m:60151** 60J80
- Mönch, Dietrich Mayersche Transformation bei quasilinearen partiellen komplexen Differentialgleichungen. *Math. Nachr.* 92 (1979), 145–152. (E. Pinney) **81e:35006** 35A22 (35F20)
- Monchick, L. A comment on the inversion of gas transport properties. *J. Chem. Phys.* 73 (1980), no. 6, 2929–2931. (Author's summary) **81g:82082** 82A70 (82A40)
- Moncrief, Vincent The branching of solutions of Einstein's equations. *Geometric methods in mathematical physics* (Proc. NSF-CBMS Conf., Univ. Lowell, Lowell, Mass., 1979), pp. 30–48. *Lecture Notes in Math.*, 775, Springer, Berlin, 1980. (J. E. Marsden) **81j:83013** 83C05 (58D25, 58E07)
- (with Chodos, Alan) Geometrical gauge conditions in Yang-Mills theory: some nonexistence results. *J. Math. Phys.* 21 (1980), no. 2, 364–371. (Murray Cantor) **81d:81060** 81E15 (53C05, 58D30, 58E20)
- (with Demaret, Jacques) Hamiltonian formalism for perfect fluids in general relativity. *Phys. Rev. D* (3) 21 (1980), no. 10, 2785–2793. (Richard Baumeister) **81f:83028** 83C55
- Mond, B. (with Schechter, Murray) Duality in homogeneous fractional programming. *J. Inform. Optim. Sci.* 1 (1980), no. 3, 271–280. (Pierre Lorian) **81k:90098** 90C32
- Mond, David On dimension theory. (Spanish) *Bol. Mat.* 12 (1978), no. 1–3, 39–54. (J. E. Keesling) **81h:54044** 54F45 (54–01)
- On the definition of the first homology group in the open sets of the plane. (Spanish) *Rev. Colombiana Mat.* 13 (1979), no. 2, 121–138. (F. Huckemann) **81j:30001** 30–01 (30G15)
- Mond, Michael (with Knorr, Georg) The representation of shock-like solutions in an Eulerian mesh. *J. Comput. Phys.* 38 (1980), no. 2, 212–226. (Darrell L. Hicks) **81m:65148** 65M05 (76L05)
- (with Knorr, Georg) Iterative approach to strong turbulence theory. *Phys. Fluids* 23 (1980), no. 7, 1301–1305. (Authors' summary) **81d:76064** 76F99
- Mondadori, Fabrizio A harmony of one's own and universal harmony in Leibniz's Paris writings. *Leibniz in Paris* (1672–1676) (Synops. G. W. Leibniz Soc./CNRS, Chantilly, 1976), Vol. II (French), pp. 151–168. *Studia Leibnitiana Suppl.*, XVIII, Steiner, Wiesbaden, 1978. (See **81m:01022b**) 01A45 (03–03)
- Mondal, Abdul Goffur On the homology groups of certain topological manifolds. *Rev. Roumaine Math. Pures Appl.* 25 (1980), no. 2, 245–246. (Editors) **81m:57009** 57N65
- Mondal, K. (with Mitra, Sanjit K.; Chakrabarti, Satyabrata) State structures in digital filter configurations. I. Conventional and nodal state structures. *J. Franklin Inst.* 309 (1980), no. 1, 1–12. (Joseph D. Cole) **81h:94040a** 94C30
- (with Mitra, Sanjit K.; Chakrabarti, Satyabrata) State structures in digital filter configurations. II. Reduced and minimal state structures. *J. Franklin Inst.* 309 (1980), no. 1, 13–27. (Joseph D. Cole) **81h:94040b** 94C30
- Mondello, M. (with Onofri, E.) Planar limit of the singlet spectrum for $SU(N)$ -invariant quantum Hamiltonians by the quantum collective field method. *Phys. Lett. B* 98 (1981), no. 4, 277–279. (Authors' summary) **81m:81048** 81E99
- sanchez-Mondragon, J. J. See Sanchez-Mondragon, J. J.
- Monegato, Giovanni An overview of results and questions related to Kronrod schemes. *Numerische Integration* (Tagung, Math. Forschungsinst., Oberwolfach, 1978), pp. 231–240. *Internat. Ser. Numer. Math.*, 45, Birkhäuser, Basel, 1979. (G. A. Evans) **81m:65033** 65D30
- Abdel-Moneim, T. M. See Abdel-Moneim, T. M.
- Monfort, Alain First-order identification in linear models. *J. Econometrics* 7 (1978), no. 3, 333–350. (Raül Pedro Mentz) **81e:62112** 62P20
- (with Gourieroux, Christian) On the characterization of a joint probability distribution by conditional distributions. *J. Econometrics* 10 (1979), no. 1, 115–118. (Javad Behboodian) **81e:62086** 62H05 (60E05)
- (with Laffont, Jean-Jacques) Disequilibrium econometrics in dynamic models. *J. Econometrics* 11 (1979), no. 2–3, 353–361. (Bärbel Bellach) **81h:62186** 62P20
- (with Gourieroux, Christian) Sufficient linear structures: econometric applications. *Econometrica* 48 (1980), no. 5, 1083–1097. (Peter Schmidt) **81g:62116** 62J05 (62P20)
- Monge, Gaspard See Colombo, Serge, **81m:01044**
- Moniev, A. Ja. (with Gruzdev, G. P.; Šerbova, E. N.) Review of the mathematical modeling of the process of hematopoiesis (stem cell). (Russian) Mathematical models of mechanisms of pathological processes. *Voprosy Kibernet. (Moscow) No. 49* (1979), 64–106. (See **81f:92007**) 92A07
- Monien, Burkhard (with Sudborough, Ivan Hal) On eliminating nondeterminism from Turing machines which use less than logarithm workspace. *Automata, languages and programming* (Sixth Colloq., Graz, 1979), pp. 431–445. *Lecture Notes in Comput. Sci.*, 71, Springer, Berlin, 1979. (Joel I. Seiferas) **81g:68070** 68C25
- On a subclass of pseudopolynomial problems. *Mathematical foundations of computer science*, 1980 (Proc. Ninth Sympos., Rydzyna, 1980), pp. 414–425. *Lecture Notes in Comput. Sci.*, 88, Springer, Berlin, 1980. (See **81k:68003**) 68C25 (03D15)
- Two-way multithread automata over a one-letter alphabet. (French summary) *RAIRO Inform. Theor.* 14 (1980), no. 1, 67–82. (I. Hal Sudborough) **81h:68077** 68D05 (03D05)
- Monier, Louis Combinatorial solutions of multidimensional divide-and-conquer recurrences. *J. Algorithms* 1 (1980), no. 1, 60–74. (Author's summary) **81g:68051** 68C05 (68E99)
- Monin, A. S. On the nature of turbulence. *Uspehi Fiz. Nauk* 125 (1978), no. 1, 97–122. (Russian); translated as *Soviet Phys. Uspekhi* 21 (1978), no. 5, 429–442. (J. L. Lumley) **81h:76038** 76F99 (58F13)
- Moniz, E. J. Pion-nucleus scattering in the isobar formalism. *Theoretical methods in medium-energy and heavy-ion physics* (Proc. NATO Adv. Stud. Inst. Theoret. Nuclear Phys., Univ. Wisconsin, Madison, Wis., 1978), pp. 603–666. *NATO Adv. Study Inst. Ser. Ser. B: Physics*, 38, Plenum, New York, 1978. (See **81h:81030**) 81G99

- Monjardet, B.** An axiomatic theory of tournament aggregation. *Math. Oper. Res.* 3 (1978), no. 4, 334-351. (Author's summary) **81i:90017** 90A06 (05C20, 90D30)
- Théorie de la médiane dans les tribus distributifs finis et applications.** (English summary) *Combinatorics* 79 (Proc. Colloq., Univ. Montréal, Montréal, Que., 1979), Part II. *Ann. Discrete Math.* 9 (1980), 87-91. (Author's summary) **81i:06020** 06D99 (90A08)
- Variations sur l'effet Condorcet ou Condorcet, Black, Arrow, Guilbaud... et les autres. (English summary) *Cahiers Centre Études Rech. Opér.* 22 (1980), no. 1, 7-15. (Author's summary) **81i:90013** 90A08
- Munk, J. Donald** A very rigid Boolean algebra. *Israel J. Math.* 35 (1980), no. 1-2, 135-150. (Bruno Poizat) **81i:03074** 03C60 (06E05)
- Monma, Clyde L.** (with Korte, Bernhard) Some remarks on a classification of oracle-type algorithms. *Numerische Methoden bei graphentheoretischen und kombinatorischen Problemen, Band 2* (Tagung, Math. Forschungsinst., Oberwolfach, 1978), pp. 195-215. *Internat. Ser. Numer. Math.*, 46, Birkhäuser, Basel, 1979. (Rainer Burkard) **81i:90139** 90C09 (68C25)
- Sequencing to minimize the maximum job cost. *Oper. Res.* 28 (1980), no. 4, 942-951. (K. V. Sahbazjan) **81i:90070** 90B35 (68C15)
- Monna, A. F.** Gauss and the physical sciences. *Carl Friedrich Gauss 1777-1855*, pp. 15-31. *Commun. Math. Inst. Rijksuniv. Utrecht, 7, Rijksuniv. Utrecht, Utrecht*, 1978. (See **80g:01034**) 01A55 (86-03)
- ★Évolution de problèmes d'existence en analyse. (French) [Evolution of existence problems in analysis] *Essais historiques. [Historical essays] Communications of the Mathematical Institute, Rijksuniversiteit Utrecht, 9, Rijksuniversiteit Utrecht, Mathematical Institute, Utrecht*, 1979. iii+73 pp. (Burnett Meyer) **81i:01022** 01A60 (01A55, 26-03)
- See also **Symposium: Monna, A. F.**, **81m:00007**
- Monna, Gilbert** Intégrabilité des structures de presque contact. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 291 (1980), no. 3, A215-A217. (Author's summary) **81i:53041** 53C15
- Monro, Donald M.** Interpolation by fast Fourier and Chebyshev transforms. *Internat. J. Numer. Methods Engrg.* 14 (1979), no. 11, 1679-1692. (R. H. Bartels) **81i:65017** 65D05
- Monroe, James L.** (with Pearce, Paul A.) Correlation inequalities for vector spin models. *J. Statist. Phys.* 21 (1979), no. 6, 615-633. (Masuo Suzuki) **81i:82014** 82A15 (82A67)
- Monroe, Robert J.** (with McVay, Francis E.) Gertrude Mary Cox (1900-1978). *Amer. Statist.* 34 (1980), no. 1, 48. (Editors) **81a:01039** 01A70
- Monson, B. R.** The densities of certain regular star-polytopes. *C. R. Math. Rep. Acad. Sci. Canada* 2 (1980), no. 2, 73-78. (Kit Hanes) **81d:51010** 51M20
- Montagna, Franco** On the algebraization of a Feferman's predicate. *Studia Logica* 37 (1978), no. 3, 221-236. (Editors) **81i:03123** 03G25 (03F30)
- On the diagonalizable algebra of Peano arithmetic. (Italian summary) *Boll. Un. Mat. Ital. B* (5) 16 (1979), no. 3, 795-812. (L. L. Maksimova) **81d:03065** 03G25
- Montagna, M.** (with Ferro, R.; Garzena, B.) Analysis of a mathematical model for the choice of economic strategies in house building. *Proceedings of the Second International Conference on Mathematical Modelling (St. Louis, Mo., 1979), Vol. I, II*, pp. 1185-1193. *Univ. Missouri-Rolla, Rolla, Mo.*, 1980. (Authors' summary) **81m:90026** 90A11
- Montaldi, E.** (with Zanon, D.) On the Green functions for the discrete-time Schrödinger equation. *Lett. Nuovo Cimento* (2) 27 (1980), no. 7, 215-221. (From the text) **81i:81030** 81C05
- Montanari, Ugo** (with Catalano, Alfonso; Gnesi, Stefania) Shortest path problems and tree grammars: an algebraic framework. *Graph grammars and their application to computer science and biology (Internat. Workshop, Bad Honnef, 1978)*, pp. 167-179. *Lecture Notes in Comput. Sci.*, 73, Springer, Berlin, 1979. (Josef Dalić) **81i:68101** 68F20 (68E05)
- Montaron, Bernard** (with Harari, Sami) Capacité floue de correction d'un code. *Colloque Mathématiques Discrètes: Codes et Hypergraphes (Brussels, 1978)*. *Cahiers Centre Études Rech. Opér.* 20 (1978), no. 3-4, 411-418. (J. J. Stiffler) **81i:94029** 94B70
- Monte, Anna-Maria** (with D'Anna, Armando; Maio, Alfonso) Limiting equations in asymptotic stability problems for nonautonomous differential equations. (Italian summary) *Ann. Univ. Ferrara Sez. VII (N.S.)* 25 (1979), 75-97. (F. Visentin) **81d:34038** 34D05 (34D20)
- Montoro, Luis** (with Abad, Manuel) Number of epimorphisms between finite symmetric Boolean algebras. *Rep. Math. Logic* No. 10 (1978), 3-7 (1979). (E. Burlacu) **81i:06022** 06E05
- Monteiro Fernandes, Teresa** Problème de Cauchy microdifférentiel et théorèmes de propagation. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 18, A833-A836. (Ju. V. Egorov) **81i:58040** 58G07
- Monsieiro Amilibia, José María** (with González Acuña, F.) Nonamphicheiral codimension 2 knots. *Canad. J. Math.* 32 (1980), no. 1, 185-194. (C. Kearton) **81i:57017** 57Q45
- A note on 3-fold branched coverings of S^3 . *Math. Proc. Cambridge Philos. Soc.* 88 (1980), no. 2, 321-325. (Wolfgang H. Heil) **81i:57002** 57M12
- (with Birman, Joan S.) On minimal Heegaard splittings. *Michigan Math. J.* 27 (1980), no. 1, 47-56. (Hugh M. Hilden) **81i:57007** 57N10
- (with Hilden, Hugh M.) Lifting surgeries to branched covering spaces. *Trans. Amer. Math. Soc.* 259 (1980), no. 1, 157-165. (Allan Edmonds) **81d:57002** 57M12 (57Q99)
- Montgomery, G. Paul, Jr.** Optical properties of a liquid-crystal image transducer at normal incidence: mathematical analysis and application to the off-state. *J. Opt. Soc. Amer.* 70 (1980), no. 3, 287-300. (E. E. Tarceva) **81d:78004** 78A10 (82A60)
- Montgomery, H. L.** (with Vaughan, R. C.) Mean values of character sums. *Canad. J. Math.* 31 (1979), no. 3, 476-487. (H. G. Diamond) **81i:10043** 10G20
- (with Lagarias, J. C.; Odlyzko, A. M.) A bound for the least prime ideal in the Chebotarev density theorem. *Invent. Math.* 54 (1979), no. 3, 271-296. (Larry J. Goldstein) **81i:12013** 12A75 (10H08)
- Montgomery, Susan** (with Cohen, Miriam) The normal closure of a semiprime ring. *Ring theory (Proc. Antwerp Conf. (NATO Adv. Study Inst.), Univ. Antwerp, Antwerp, 1978)*, pp. 43-59. *Lecture Notes in Pure and Appl. Math.*, 51, Dekker, New York, 1979. (W. S. Martindale, III) **81i:16008** 16A12 (16A08)
- Automorphism groups of rings with no nilpotent elements. *J. Algebra* 60 (1979), no. 1, 238-248. (Donald S. Passman) **81i:16040** 16A72 (16A74, 20B27)
- ★Fixed rings of finite automorphism groups of associative rings. *Lecture Notes in Mathematics*, 818. *Springer-Verlag, Berlin-New York*, 1980. vii+126 pp. *ISBN 3-540-10232-9* (Donald S. Passman) **81i:16041** 16A74 (16A72)
- Monti Bragadin, Giacomo** (with Torquati, Franco) An application of invariant currents to compact Lie groups. (Italian. English summary) *Ann. Univ. Ferrara Sez. VII (N.S.)* 25 (1979), 1-8. (Adrian C. Albu) **81d:58007** 58A25
- Monticello, D. A.** (with Bhattacharjee, A.; Dewar, R. L.) Energy principle with global invariants for toroidal plasmas. *Phys. Rev. Lett.* 45 (1980), no. 5, 347-350. (Authors' summary) **81d:76112** 76X05
- Montone, Anna Maria** The shooting method for solving the boundary value problem for second-order differential equations. (Italian. English summary) *Ricerca* (4) (Napoli) 28 (1977), no. 3, 9-16 (1979). (Author's summary) **81i:65039** 65L10
- Montroll, Elliott W.** On some mathematical models of social phenomena. *Nonlinear equations in abstract spaces (Proc. Internat. Sympos., Univ. Texas, Arlington, Tex., 1977)*, pp. 161-216. *Academic Press, New York*, 1978. (Carl P. Simon) **81i:92010** 92A15 (92A20)
- (with Shuler, Kurt E.) Dynamics of technological evolution: random walk model for the research enterprise. *Proc. Nat. Acad. Sci. U.S.A.* 76 (1979), no. 12, 6030-6034. (Authors' summary) **81a:93004** 93A10 (93E25)
- Montvay, L.** (with Hagedorn, R.; Rafelaki, J.) Thermodynamics of nuclear matter from the statistical bootstrap model. *Hadronic matter at extreme energy density (Proc. Workshop, Ettore Majorana Center, Erice, 1978)*, pp. 49-148. *Ettore Majorana Internat. Sci. Ser.: Phys. Sci.*, 2, Plenum, New York, 1980. (Virendra Singh) **81i:81109** 81G35
- (with Engels, J.) Strong coupling $1/N_c$ expansion in the gluonic sector of lattice quantum chromodynamics. *Z. Phys. C* 5 (1980), no. 3, 247-257. (Authors' summary) **81i:81077** 81G05 (81E99)
- boutet de Monvel, Louis** See **Boutet de Monvel, Louis**
- Moodie, T. Bryant** (with Singh, Brij M.; Haddow, J. B.) Closed-form solutions for finite-length crack moving in a strip under antiplane shear stress. *Acta Mech.* 38 (1981), no. 1-2, 99-109. (Authors' summary) **81i:73071** 73M05 (35C05)
- Moody, Michael** (with Nagylaki, Thomas) Diffusion model for genotype-dependent migration. *Proc. Nat. Acad. Sci. U.S.A.* 77 (1980), no. 8, part 2, 4842-4846. (Andris Abakusis) **81i:92023** 92A10 (92A15)
- Moody, Robert V.** Root systems of hyperbolic type. *Adv. in Math.* 33 (1979), no. 2, 144-160. (Robert Lee Wilson) **81i:17006** 17B65 (20H15)
- (with Lepowsky, James) Hyperbolic Lie algebras and quasiregular cusps on Hilbert modular surfaces. *Math. Ann.* 245 (1979), no. 1, 63-88. (Ulrich Karras) **81i:16030** 10D21 (13H10, 14B05, 14J25, 17B65, 32C40)
- Lie algebra subjoining. *C. R. Math. Rep. Acad. Sci. Canada* 2 (1980), no. 5, 259-264. (Author's summary) **81i:17012** 17B15 (81C40)
- Isomorphisms of upper Cartan-matrix Lie algebras. *Proc. London Math. Soc.* (3) 40 (1980), no. 3, 430-442. (James F. Hurley) **81i:17009** 17B05 (17B20)
- Moolgavkar, S. H.** (with Ewing, John; Gustafson, William H.; Halmos, P. R.; Wheeler, William H.; Ziemer, W. P.) American mathematics from 1940 to the day before yesterday. (Czech) Translated from the English by Jiří Vanžura. *Pokroky Mat. Fyz. Astronom.* 24 (1979), no. 5, 258-267. (Editors) **81i:01021** 01A65
- (with Ewing, John; Gustafson, William H.; Halmos, P. R.; Wheeler, William H.; Ziemer, W. P.) American mathematics from 1940 to the day before yesterday. (Czech) Translated from the English by Jiří Vanžura. *Pokroky Mat. Fyz. Astronom.* 24 (1979), no. 6, 326-335. (Editors) **81i:01034** 01A65
- Moore, Francis C.** Experimental models for strange attractor vibrations in elastic systems. *New approaches to nonlinear problems in dynamics (Proc. Conf., Pacific Grove, Calif., 1979)*, pp. 487-495. *SIAM, Philadelphia, Pa.*, 1980. (Author's summary) **81i:73053** 73H10 (58F13)
- Moore, J. W.** Lattice paths in regions with the Catalan property. *J. Combin. Theory Ser. A* 28 (1980), no. 1, 98-102. (R. P. Dilworth) **81i:05098** 05C38 (05A15)
- (with Meir, A.; Pounder, J. R.) On the order of random channel networks. *SIAM J. Algebraic Discrete Methods* 1 (1980), no. 1, 25-33. (A. K. Dewdney) **81i:95042a** 05C05
- (with Meir, A.; Pounder, J. R.) Acknowledgment of priority: "On the order of random channel networks". *SIAM J. Algebraic Discrete Methods* 1 (1980), no. 4, 462. (Editors) **81i:05042b** 05C05
- Mooney, J. W.** Constructive existence theorems for problems of Thomas-Fermi type. *Math. Methods Appl. Sci.* 1 (1979), no. 4, 554-565. (Franz Kappel) **81i:34011** 34B15 (82A55)
- (with Voss, Heinrich; Werner, Bodo) The dependence of critical parameter bounds on the monotonicity of a Newton sequence. *Numer. Math.* 33 (1979), no. 3, 291-301. (Theodore Laetsch) **81i:35049** 35J60 (47H12, 58C15, 65J15)
- Moër, Arthur** Über die durch Kurven bestimmten Sektionalrängen der Finierschen und Weylschen Räume. *Publ. Math. Debrecen* 26 (1979), no. 3-4, 205-214. (A. Kawaguchi) **81i:53017** 53B40
- Moore, Albert H.** (with Harter, H. Leon; Curry, Thomas F.) Adaptive robust estimation of location and scale parameters of symmetric populations. *Comm. Statist. A—Theory Methods* 8 (1979), no. 15, 1473-1491. (Lai K. Chan) **81i:62045** 62F35
- Moore, B. C.** Singular value analysis of linear systems. *Proceedings of the 1978 IEEE Conference on Decision and Control including the 17th Symposium on Adaptive Processes (San Diego, Calif., 1979)*, pp. 66-73. *IEEE, New York*, 1979. (N. Harris McClamroch) **81i:93022** 93B05
- (with Laub, Alan J.) Correction to: "Computation of suprema (A, B)-invariant and controllability subspaces" [IEEE Trans. Automat. Control 23 (1978), no. 5, 783-792; MR 80a:93039]. *IEEE Trans. Automat. Control* 24 (1979), no. 4, 677. (Arild Thowen) **81i:93005** 93B05
- Moore, Calvin C.** (with Feldman, Jacob; Hahn, Peter) Sections for group actions, and some applications. (French summary) *Algèbres d'opérateurs et leurs applications en physique mathématique (Proc. Colloq., Marseille, 1977)*, pp. 167-174. *Colloques Internat. CNRS*, 274, CNRS, Paris, 1979. (Robert J. Zimmer) **81i:28013** 28D15 (22D40, 46L10)
- Amenable subgroups of semisimple groups and proximal flows. *Israel J. Math.* 34

- (1979), no. 1-2, 121-138 (1980). (S. G. Dani) **81b:22007** 22E15 (43A07)
 The Mautner phenomenon for general unitary representations. *Pacific J. Math.* **86** (1980), no. 1, 155-169. (L. Corwin) **81b:22010** 22E45
 (with Feldman, Jacob; Rudolph, Daniel J.) Affine extensions of a Bernoulli shift. *Trans. Amer. Math. Soc.* **257** (1980), no. 1, 171-191. (Douglas Lind) **81a:28014** 28D05 (22D40)
- Moore, D. R. (with Cash, J. R.) A high order method for the numerical solution of two-point boundary value problems. *BIT* **20** (1980), no. 1, 44-52. (T. R. Hopkins) **81e:65044** 65L10
- Moore, D. W. The velocity of a vortex ring with a thin core of elliptical cross section. *Proc. Roy. Soc. London Ser. A* **370** (1980), no. 1742, 407-415. (S. H. Lam) **81b:76016** 76C05
- Moore, David S. Statistical analysis of experimental data. *Mathematics today*, pp. 213-239, Springer, New York, 1978. (See **80b:00007**) 62K99
 Chi-square tests. *Studies in statistics*, pp. 66-106, MAA Studies in Math., 19, Math. Assoc. America, Washington, D.C., 1978. (See **80f:62002**) 62G10
 (with Mihalko, Daniel P.) Chi-square tests of fit for type II censored data. *Ann. Statist.* **8** (1980), no. 3, 625-644. (Lionel Weiss) **81e:62053** 62G10 (62E20)
- Moore, E. H. See Whyburn, Lucille. **81e:01083**
- Moore, E. J. (with Teo, K. L.) Computational methods for a class of time-delayed optimal control problems. *Nanta Math.* **12** (1979), no. 2, 203-221. (J. E. Rubio) **81f:49032** 49D20 (93C15)
- Moore, E. L. (with Parker, G. A.) A modified Volterra series representation for a class of single-valued, continuous nonlinear systems. *Trans. ASME Ser. G J. Dynamic Systems Measurement Control* **102** (1980), no. 3, 163-167. (Authors' summary) **81i:93014** 93C10
- Moore, Elmo A general nonexistence theorem in the theory of partitions. *Bull. Calcutta Math. Soc.* **69** (1977), no. 6, 345-348. (From the text) **81a:10022** 10A45 (05A17)
- Moore, Gerald (with Spence, Alastair) The calculation of turning points of nonlinear equations. *SIAM J. Numer. Anal.* **17** (1980), no. 4, 567-576. (W. C. Rheinboldt) **81i:65047** 65J15 (35P30, 58C15, 58E07)
- Moore, Gerald T. (with Scully, Marian O.) Coherent dynamics of a free-electron laser with arbitrary magnet geometry. I. General formalism. *Phys. Rev. A* (3) **21** (1980), no. 6, 2000-2008. (Authors' summary) **81e:81183a** 81K05
 (with Bonifacio, Rodolfo; Meystre, Pierre; Scully, Marian O.) Coherent dynamics of a free-electron laser with arbitrary magnet geometry. II. Conservation laws, small-signal theory, and gain-spread relations. *Phys. Rev. A* (3) **21** (1980), no. 6, 2009-2019. (Authors' summary) **81e:81183b** 81K05
- Moore, J. B. (with Ledwich, G.) Multivariable adaptive parameter and state estimators with convergence analysis. *J. Austral. Math. Soc. Ser. B* **21** (1979/80), no. 2, 176-197. (Authors' summary) **81a:94016** 94A12
 (with Kumar, R.) State inverse and decorrelated state stochastic approximation. *Automatica—J. IFAC* **16** (1980), no. 3, 295-311. (Authors' summary) **81e:93088** 93E12
 (with Anderson, Brian D. O.) Coping with singular transition matrices in estimation and control stability theory. *Internat. J. Control* **31** (1980), no. 3, 571-586. (Authors' summary) **81f:93063** 93D20 (93C55, 93D05)
- Moore, J. Strother (with Boyer, Robert S.) ★A computational logic. ACM Monograph Series. Academic Press [Harcourt Brace Jovanovich, Publishers], New York-London-Toronto, Ont., 1979. xiv + 397 pp. ISBN 0-12-122950-5 (P. Štěpánek) **81d:68127** 68G15 (03-04, 03B35, 68-01)
 A mechanical proof of the termination of Takeuchi's function. *Inform. Process. Lett.* **9** (1979), no. 4, 176-181. (Luigia Aiello) **81f:68113** 68G15
- Moore, James C. (with Chipman, John S.) Real national income with homothetic preferences and a fixed distribution of income. *Econometrica* **48** (1980), no. 2, 401-422. (Maurice Salles) **81f:90014** 90A10
- Moore, John C. (with Cohen, F. R.; Neisendorfer, Joseph) Decompositions of loop spaces and applications to exponents. *Algebraic topology, Aarhus 1978 (Proc. Sympos., Univ. Aarhus, Aarhus, 1978)*, pp. 1-12, *Lecture Notes in Math.*, 763, Springer, Berlin, 1979. (Brayton Gray) **81g:55010** 55P35 (55Q40)
 (with Cohen, F. R.; Neisendorfer, Joseph) The double suspension and exponents of the homotopy groups of spheres. *Ann. of Math.* (2) **110** (1979), no. 3, 549-565. (M. Mahowald) **81e:55021** 55Q40
- Moore, John Douglas (with Schlafly, Roger) On equivariant isometric embeddings. *Math. Z.* **173** (1980), no. 2, 119-133. (M. L. Gromov) **81h:53059** 53C42 (58C15)
- Moore, Kenneth (with March, Marvin) A subdeterminant inequality for normal matrices. *Linear Algebra Appl.* **31** (1980), 129-143. (A. R. Amir-Moéz) **81g:15008** 15A15 (15A45)
- Moore, L. C., Jr. Hyperfinite-dimensional subspaces of the nonstandard hull of c_0 . *Proc. Amer. Math. Soc.* **80** (1980), no. 4, 597-603. (C. Ward Henson) **81m:46037** 46B99 (03H05)
- Moore, Laurence J. (with Taylor, Bernard W., III; Hammesfahr, R. D.) Global analysis of a multiproduct, multiline production system using Q-GERT modeling and simulation. *AIIE Trans.* **12** (1980), no. 2, 145-155. (Authors' summary) **81h:90072** 90B30
- Moore, Marc Choix séquentiel des points échantillonnés pour reconstruire un schéma ordonné. *Rev. Statist. Appl.* **27** (1979), no. 3, 15-32. (G. Pederzoli) **81i:62013** 62C10 (62L10, 68G10)
- Moore, Marion E. (with Gustafson, William H.) On SB-rings. *Comm. Algebra* **7** (1979), no. 17, 1901-1910. (Manfred Herrmann) **81c:13017** 13E15 (13H10)
- Moore, P. M. A. (with Norman, A. C.) The initial design of a vector based algebra system. *Symbolic and algebraic computation (EUROSAM '79, Internat. Sympos., Marseille, 1979)*, pp. 258-265, *Lecture Notes in Comput. Sci.*, 72, Springer, Berlin, 1979. (Authors' summary) **81e:68043** 68C20 (68B15)
- Moore, Ramon E. ★Methods and applications of interval analysis. *SIAM Studies in Applied Mathematics*, 2, SIAM, Philadelphia, Pa., 1979. xi + 190 pp. ISBN 0-89871-161-4 (H. Ratschek) **81b:65040** 65G10 (65-02)
 Interval methods for nonlinear systems. *Fundamentals of numerical computation (computer-oriented numerical analysis) (Proc. Conf., Tech. Univ. Berlin, Berlin, 1979)*, pp. 113-120, *Comput. Suppl.*, 2, Springer, Vienna, 1980. (C. R. Deeter) **81m:65070** 65G10 (65H10)
- Moore, Robert L. (with Kim, H. W.; Percy, Carl) A variation of Lomonosov's theorem. *J. Operator Theory* **2** (1979), no. 1, 131-140. (P. Rosenthal) **81b:47007** 47A15
- Moore, S. M. Euclidean quantization of gauge theories. *Lett. Nuovo Cimento* (2) **28** (1980), no. 2, 49-52. (From the text) **81g:81027** 81C35 (81E99)
- audinarayana Moorthy, S. See Audinarayana Moorthy, S.
- Mora, Ferdinando On quotient categories. (Italian summary) *Boll. Un. Mat. Ital. B* (5) **17** (1980), no. 1, 59-73. (Timothy Porter) **81f:18010** 18A99
- Mora, Fulvio SW-symmetries and quaternary categories. (Italian. English summary) *Boll. Un. Mat. Ital. B* (5) **15** (1978), no. 1, 328-337. (Author's summary) **81d:18013** 18D05
- Mora, Luciano History and teaching of statistics. (Spanish) *Bol. Mat.* **12** (1978), no. 1-3, 127-144. (Editors) **81a:01001** 01A05 (62-03)
- Moraes, Luiz Amália Theorems of the Cartan-Thullen type and Runge domains. *Advances in holomorphy (Proc. Sem. Univ. Fed. Rio de Janeiro, Rio de Janeiro, 1977)*, pp. 521-561, *North-Holland Math. Studies*, 34, North-Holland, Amsterdam, 1979. (Martin Schottenloher) **81i:46052** 46G20 (32D05, 32E25)
- Moraga, Claudio Complex spectral logic. *Proceedings of the Eighth International Symposium on Multiple-Valued Logic (Rosemont, Ill., 1978)*, pp. 149-156, *IEEE, Long Beach, Calif.*, 1978. (K. L. Kodandapani) **81f:94042** 94C10 (03B50)
- de Moraes, Paulo Renato See De Moraes, Paulo Renato
- Morales, Claudio (with Kirk, W. A.) Fixed point theorems for local strong pseudocontractions. *Nonlinear Anal.* **4** (1980), no. 2, 363-368. (V. V. Obuhovskii) **81a:47056** 47H10
- solá-Morales, J. See Solá-Morales, J.
- Morales, Marcelo Le polynôme de Hilbert-Samuel associé à la filtration par les clôtures intégrales des puissances de l'idéal maximal pour une courbe plane. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **289** (1979), no. 6, A401-A404. (Vasile Brînzănescu) **81h:32014** 32C40 (14H20)
- Moras, Gad On a theorem of Steinitz and Levy. *Trans. Amer. Math. Soc.* **246** (1978), 483-491. (D. Waterman) **81c:40004** 40A99 (46B15)
 (with Leron, Uri) The full cycles in a Young coset. *Ring theory (Proc. Antwerp Conf. (NATO Adv. Study Inst., Univ. Antwerp, Antwerp, 1978)*, pp. 133-137, *Lecture Notes in Pure and Appl. Math.*, 51, Dekker, New York, 1979. (Larry C. Grove) **81d:89036** 05C25 (20C30)
 (with Leron, Uri) The full cycles in a Young coset. *J. Combin. Theory Ser. A* **27** (1979), no. 2, 218-221. (Donald E. Taylor) **81h:05077** 05C25 (05A17)
 On scattered compact ordered sets. *Proc. Amer. Math. Soc.* **75** (1979), no. 2, 355-360. (S. Purisch) **81f:54051** 54F05 (54D30)
 Continuous functions on countable compact ordered sets as sums of their increments. *Trans. Amer. Math. Soc.* **256** (1979), 99-112. (Warren Page) **81m:46043** 46E15 (40A30, 54C05)
- Moran, M. A. (with Murphy, B. J.) A closer look at two alternative methods of statistical discrimination. *J. Roy. Statist. Soc. Ser. C* **28** (1979), no. 3, 223-232. (Peter A. Lachenbruch) **81a:62053** 62H30 (62F15)
- Moran, P. A. P. The use of correlation in large samples. *Austral. J. Statist.* **21** (1979), no. 3, 293-300. (Anant M. Kshirsagar) **81d:62033** 62G05 (62H20)
- Moran, Siegfried (with Williams, Janet) Completions of certain nilpotent groups. *J. Austral. Math. Soc. Ser. A* **28** (1979), no. 4, 461-470. (H. Heineken) **81d:20029** 20F18 (20E22)
- Moran, William (with Brown, Gavin) Maximal elements in the maximal ideal space of a measure algebra. *Math. Ann.* **246** (1979/80), no. 2, 131-140. (J. H. Williamson) **81f:43001** 43A10
- Morandi, Rossana (with Carmignani, Marta) On an algorithm of Phillips and Cox for best uniform approximation by means of stepwise linear polynomials. (Italian) *Atti Sem. Mat. Fis. Univ. Modena* **28** (1979), no. 1, 237-245. (G. Opfer) **81m:65025** 65D15 (41A15)
- Morando, B. (with Davies, M. E.; Abalakin, V. K.; Cross, C. A.; Duncombe, R. L.; Masursky, H.; Owen, T. C.; Seidelmann, P. K.; Sinclair, A. T.; Wilkins, G. A.; Tjufin, Y. S.) Report of the IAU Working Group on Cartographic Coordinates and Rotational Elements of the Planets and Satellites. *Celestial Mech.* **22** (1980), no. 3, 205-230. (Authors' summary) **81j:70009** 70F15
- bellini-Morante, Aldo See Bellini-Morante, Aldo
- Morár, V. A. (with Danilín, Ju. M.) Quasi-Newtonian methods of constrained optimization. *Kibernetika (Kiev)* **1979**, no. 5, ii, 80-86, 154. (Russian. English summary); translated as *Cybernetics* **15** (1979), no. 5, 689-697 (1980). (Authors' introduction) **81d:65030** 65K10 (49D15, 90C30)
- Morari, Manfred (with Arkun, Yaman; Stephanopoulos, George) Studies in the synthesis of control structures for chemical processes. I. Formulation of the problem. Process decomposition and the classification of the control tasks. Analysis of the optimizing control structures. *AIChE J.* **26** (1980), no. 2, 220-232. (Authors' summary) **81h:93002a** 93A13
 (with Stephanopoulos, George) Studies in the synthesis of control structures for chemical processes. II. Structural aspects and the synthesis of alternative feasible control schemes. *AIChE J.* **26** (1980), no. 2, 232-246. (Authors' summary) **81h:93002b** 93A13 (93B05, 93B07)
 (with Stephanopoulos, George) Studies in the synthesis of control structures for chemical processes. III. Optimal selection of secondary measurements within the framework of state estimation in the presence of persistent unknown disturbances. *AIChE J.* **26** (1980), no. 2, 247-260. (Authors' summary) **81h:93002c** 93E10
 (with Stephanopoulos, George) Minimizing unobservability in inferential control schemes. *Internat. J. Control* **31** (1980), no. 2, 367-377. (Authors' summary) **81h:93002d** 93B07
- Morawetz, Michael (with Leschke, Hajo; Stolze, Joachim) Unity-resolving states and generalised Golden-Thompson bounds on partition functions. *J. Phys. A* **13** (1980), no. 4, 1311-1324. (Authors' summary) **81a:82019** 82A15
- Morchocho, Jaroslav Integral inequalities for Volterra equation in the Banach space with cone. *Demonstratio Math.* **12** (1979), no. 3, 705-715. (M. Joshi) **81j:45013** 45G10 (34K30)
 A functional differential inequality for linear integro-differential equation with retardation. *Comment. Math. Prace Mat.* **21** (1980), no. 1, 177-186. (George Seifert)

- 81f:34072** 34K15 (34K20, 45J05)
- Moré, G.** (with Strocchi, F.) Infrared singularities, vacuum structure and pure phases in local quantum field theory. *Ann. Inst. H. Poincaré Sect. A (N.S.)* 33 (1980), no. 3, 251-282. (Authors' summary) **81m:81039** 81E05
- Mordeson, John N.** (with Deveney, James K.) The order of inseparability of fields. *Canad. J. Math.* 31 (1979), no. 3, 655-662. (S. Yuan) **81b:12026** 12F15
- (with Deveney, James K.) Splitting and modularly perfect fields. *Pacific J. Math.* 83 (1979), no. 1, 45-54. (S. Yuan) **81b:12027** 12F15
- Moré, Henry** See Copenhaver, Brian P., **81i:01009**
- Moréau, Jean-Jacques** Application of convex analysis to some problems of dry friction. *Trends in applications of pure mathematics to mechanics, Vol. II (Second Sympos., Kozubnik, 1977)*, pp. 263-280, *Monographs and Studies in Math.*, 5, Pitman, London, 1979. (Paolo Marcellini) **81e:73091** 73T05 (46N05, 49A27, 90C25)
- Duality characterization of strain tensor distributions in an arbitrary open set. *J. Math. Anal. Appl.* 72 (1979), no. 2, 760-770. (W. Kocs) **81e:46039** 46F99 (73C99)
- (with Ros, M.) Tenseurs de distributions dérivées secondes sur un ouvert de \mathbb{R}^n . *Travaux Sémin. Anal. Convexe* 9 (1979), no. 1, Exp. No. 2, 5 pp. (W. Kocs) **81e:46043** 46F99 (73K10)
- Some calculative properties of linear viscosity. (French summary) *Z. Angew. Math. Phys.* 31 (1980), no. 1, 181-184. (R. R. Huilgol) **81g:76046** 76D99 (49B22)
- Moréau, M.** Note on the reaction rate in nonideal mixtures. *Phys. A* 102 (1980), no. 2, 389-398. (Authors' summary) **81f:80013** 80A30
- Morera, Manuel R. F.** Formal groups and the BP spectrum. *J. Pure Appl. Algebra* 18 (1980), no. 1, 79-89. (A. Lilevicius) **81j:55005** 55N22
- Moré, J. E.** (with Halbleib, J. A.) Adjoint Monte Carlo electron transport in the continuous-slowing-down approximation. *J. Comput. Phys.* 34 (1980), no. 2, 211-230. (Authors' summary) **81a:65012** 65C05 (82A70)
- Moré, Paul** Diverses données spectrales pour le problème inverse discret de Sturm-Liouville. *Applied inverse problems, pp. 147-179, Lecture Notes in Phys.*, 85, Springer, Berlin, 1978. (H. Hochstadt) **81c:39002** 39A70 (15A99, 34B25, 39A12, 65L10)
- Algorithmes pour un problème inverse discret de Sturm-Liouville. *Applied inverse problems, pp. 371-387, Lecture Notes in Phys.*, 85, Springer, Berlin, 1978. (H. Hochstadt) **81c:15013** 15A18 (34B25)
- Diverses données spectrales pour le problème inverse discret de Sturm-Liouville. (English summary) *Calcolo* 15 (1978), no. 2, 121-146. (R. C. Gilbert) **81c:39003** 39A12 (34B25, 65L10)
- Morrell, Andreina** Completeness in $L^2(-\infty, +\infty)$ of certain systems of orthonormal polynomials. (Italian) *Pubbl. Istit. Mat. Appl. Fac. Ingeg. Univ. Stud. Roma Quaderno No. 11* (1978), 7-11. (A. Peyerimhoff) **81j:42052** 42C30 (33A65)
- Morero, Carlos Julio** Künneth formula for L-functions. *Number theory, Carbondale 1979 (Proc. Southern Illinois Conf., Southern Illinois Univ., Carbondale, Ill., 1979)*, pp. 243-255, *Lecture Notes in Math.*, 751, Springer, Berlin, 1979. (From the introduction) **81e:12015** 12A70 (12A67)
- The higher reciprocity laws: an example. *J. Number Theory* 12 (1980), no. 1, 57-70. (Klaus Burde) **81j:12006** 12A65 (10A15, 10D24)
- Moreno-Inerter, F.** (with González Gascon, F.; Rodríguez-Camino, E.) The inverse problem of nonlinear dynamical systems: a constructive approach. *Hadronic J.* 3 (1979/80), no. 5, 1491-1520. (Noel G. Lloyd) **81j:34021** 34A55 (58F22, 83A05)
- Moret-Bailly, Laurent** Polarisation de degré 4 sur les surfaces abéliennes. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 289 (1979), no. 16, A787-A790. (M. Fried) **81i:14017** 14H10
- Moret, P. A.** Homogeneous random processes on locally compact abelian groups. *An. Acad. Brasil. Ciênc.* 52 (1980), no. 1, 1-6. (Bennett Eisenberg) **81b:60046** 60G10 (62M15)
- Moré, P. S., Jr.** Higher degree Jacobian extensors. II. *Tensor (N.S.)* 33 (1979), no. 2, 163-172. (J. D. Zund) **81i:53014** 53A45
- Extensors with negative indices. *Tensor (N.S.)* 33 (1979), no. 3, 329-336. (J. D. Zund) **81i:53011** 53A45
- Mori, Martin** (with Kailath, Thomas; Vieira, A.) Orthogonal transformation (square-root) implementations of the generalized Chandrasekhar and generalized Levinson algorithms. *International Symposium on Systems Optimization and Analysis (Rocquencourt, 1978)*, pp. 81-91, *Lecture Notes in Control and Information Sci.*, 14, Springer, Berlin, 1979. (Lennart Ljung) **81b:93069** 93E10
- (with Lévy, Bernard; Kailath, Thomas; Ljung, Lennart) Fast time-invariant implementations for linear least-squares smoothing filters. *IEEE Trans. Automat. Control* 24 (1979), no. 5, 770-774. (Authors' summary) **81i:93032** 93E11 (94A12)
- (with Kailath, Thomas; Lévy, Bernard; Ljung, Lennart) The factorization and representation of operators in the algebra generated by Toeplitz operators. *SIAM J. Appl. Math.* 37 (1979), no. 3, 467-484. (V. S. Pilidi) **81c:47030** 47B35 (65R20)
- (with Longchamp, R.) Estimators for quadratic dynamic systems. *Thirteenth Asilomar Conference on Circuits, Systems and Computers (Pacific Grove, Calif., 1979)*, pp. 463-468, *IEEE, New York*, 1980. (See **81m:93004**) **93E10**
- Mori, Rudolf** (with Leibbrandt, George; Wang, Shein Shion) Solutions of the sine-Gordon equation in higher dimensions. *J. Math. Phys.* 21 (1980), no. 7, 1613-1624. (George Leibbrandt) **81f:35106** 35Q20 (76B25, 81C05)
- Morgado, José** Some remarks on two generalizations of Euler's theorem. *Portugal. Math.* 36 (1977), no. 2, 153-158 (1980). (Torleiv Klove) **81i:10004** 10A10
- Morgan, Byron J. T.** (with North, Philip M.) Modelling human survival using weather data. (French summary) *Biometrics* 35 (1979), no. 3, 667-681. (John M. Karon) **81c:92016** 92A17
- Morgan, Charles G.** Modality, analogy, and ideal experiments according to C. S. Peirce. Essays on the philosophy of Charles Peirce. *Synthese* 41 (1979), no. 1, 65-83. (Stanley H. Stubb) **81h:03013** 03A05 (03B45)
- Morgan, David E.** (with Taylor, David J.; Black, James P.) Redundancy in data structures: improving software fault tolerance. *IEEE Trans. Software Engng.* 6 (1980), no. 6, 585-594. (From the conclusion) **81k:68019a** 68B15
- (with Taylor, David J.; Black, James P.) Redundancy in data structures: some theoretical results. *IEEE Trans. Software Engng.* 6 (1980), no. 6, 595-602. (From the conclusion) **81k:68019b** 68B15
- Morgan, Elizabeth J.** See Billington, Elizabeth J.
- Morgan, John D., III** The asymptotic behavior of bound eigenfunctions of Hamiltonians for single-variable systems. *J. Math. Phys.* 19 (1978), no. 8, 1658-1661. (J. B. McLeod) **81a:34027a** 34B25 (81C05)
- Erratum: "The asymptotic behavior of bound eigenfunctions of Hamiltonians for single-variable systems". *J. Math. Phys.* 20 (1979), no. 2, 344. (J. B. McLeod) **81a:34027b** 34B25 (81C05)
- Schrödinger operators whose potentials have separated singularities. *J. Operator Theory* 1 (1979), no. 1, 109-115. (M. Schechter) **81c:35044** 35J10 (35P25, 47A40, 81C05)
- (with Hoffman-Ostenhof, M.; Hoffman-Ostenhof, T.; Alhrichs, R.) On the exponential falloff of wavefunctions and electron densities. *Mathematical problems in theoretical physics (Proc. Internat. Conf. Math. Phys., Lesanne, 1979)*, pp. 62-67, *Lecture Notes in Phys.*, 116, Springer, Berlin, 1980. (F. R. Halpern) **81b:81114** 81G45 (81C05)
- Morgan, K.** (with Taylor, C.; Hughes, T. G.) Analysis of turbulent free shear flow and heat transfer using the mixing length hypothesis. *Mathematics of finite elements and applications, III (Proc. Third MAFELAP Conf., Brunel Univ., Uxbridge, 1978)*, pp. 247-254, *Academic Press, London*, 1979. (D. Schultz) **81e:76047** 76F10
- (with Johnson, K. H.; Lewis, R. W.) An analysis of oscillations in the finite element modelling of Buckley-Leverett problems. *Boundary and interior layers—computational and asymptotic methods (Proc. Conf., Trinity College, Dublin, 1980)*, pp. 327-331, *Boole, Din Laoghaire*, 1980. (See **81j:76001**) **76T05**
- (with Thomas, H. R.; Lewis, R. W.) A fully nonlinear analysis of heat and mass transfer problems in porous bodies. *Internat. J. Numer. Methods Engrg.* 15 (1980), no. 9, 1381-1393. (Authors' summary) **81g:80008** 80A20
- See also Recent advances in numerical methods in fluids, **81j:76002**
- Morgan, M. J.** (with Ninio, F.) A generalized Laplace formula. *Lett. Math. Phys.* 4 (1980), no. 3, 223-226. (R. Kotěcký) **81c:82014** 82A15 (41A60)
- The linear transverse Ising model with four-spin interactions. (German summary) *Phys. Status Solidi (B)* 101 (1980), no. 1, 321-331. (Authors' summary) **81c:82068** 82A67 (47D45)
- Morgan, Thomas A.** (with Campbell, William B.; Joseph, David W.) Unique specification of Yang-Mills solutions. *Phys. Lett. B* 96 (1980), no. 3-4, 352-354. (Authors' summary) **81j:81040** 81E10
- Morgan-Sclariro, J.** Algorithme d'approximation interne de problèmes de point de selle avec contraintes via l'optimisation. (English summary) *RAIRO Anal. Numér.* 14 (1980), no. 2, 189-202. (S. E. Aïdarous) **81k:49026** 49D30
- Morgantini, Edmondo** On some generalizations of the theorem of Pythagoras. (Italian) *Archiv. 30* (1978), no. 1-2, 54-65. (A. Evyatar (Cutwirth)) **81a:51011** 51N20 (51N05)
- On a theorem of G. Tjiteica. (Italian) *Archiv. 30* (1978), no. 4, 207-210. (Rainer Löwen) **81c:51010** 51B10 (51N10)
- On a problem of Ph. Straffin. (Italian) *Rend. Sem. Mat. Univ. Padova* 59 (1978), 1-10 (1979). (Editors) **81a:51009** 51M20
- Morgenson, C.** Sur les déviations d'un anneau local. *C. R. Math. Rep. Acad. Sci. Canada* 2 (1980), no. 1, 1-4. (J. S. Joel) **81d:13011** 13D03 (13D05)
- Morgenshtern, I.** (with Binder, K.; Horneich, R. M.) Two-dimensional Ising model in random magnetic fields. *Phys. Rev. B* 3 (1981), no. 1, 287-297. (Authors' summary) **81c:82064** 82A67 (82-04)
- Morgenshtern, Oskar** (with von Neumann, John) ★Theory of games and economic behavior. Reprint of the 1953 third edition. *Princeton University Press, Princeton, N.J.*, 1980. xx+641 pp. ISBN 0-691-00362-9 (Editors) **81b:90155** 90Dxx (00A69, 90-01)
- Morgenthal, Klaus** Asymptotische Untersuchungen bei Funktionensystemen mit modifizierter Durchdringungseigenschaft. *Beiträge Anal. No. 13* (1979), 179-189. (M. K. Grammatikopoulos) **81j:34131** 34K25
- Morgers, Salvatore D.** Efficient synthesis and implementation of large discrete Fourier transformations. *SIAM J. Comput.* 9 (1980), no. 2, 251-272. (Authors' summary) **81e:94002** 94A11 (65T05)
- Mori, Atsumoto** (with Aoyama, Kuniaki; Mori, Haruo) Influence of the gas-film inertia forces on the dynamic characteristics of externally pressurized, gas lubricated journal bearings. I. Proposal of governing equations. *Bull. JSME* 23 (1980), no. 178, 582-586. (Authors' summary) **81g:76000** 76N10
- Mori, H.** (with Nakamura, Tsyoshi; Hosono, C.) On the least redundancy problem of the queries of order two in combinatorial filing scheme. *Inform. and Control* 43 (1979), no. 3, 255-265. (R. J. McEliece) **81b:68119** 68H05 (68B15)
- Mori, Haruo** (with Mori, Atsumoto; Aoyama, Kuniaki) Influence of the gas-film inertia forces on the dynamic characteristics of externally pressurized, gas lubricated journal bearings. I. Proposal of governing equations. *Bull. JSME* 23 (1980), no. 178, 582-586. (Authors' summary) **81g:76000** 76N10
- Mori, Hazime** Fractal dimensions of chaotic flows of autonomous dissipative systems. *Progr. Theoret. Phys.* 63 (1980), no. 3, 1044-1047. (Jean-Pierre Eckmann) **81j:58056** 58F13 (34C99)
- (with Fukuyama, Yutaka) Critical fluctuations of Schlögl's chemical model. *Progr. Theoret. Phys.* 63 (1980), no. 4, 1181-1189. (Authors' summary) **81d:80012** 80A30 (82A05, 92A40)
- (with Nagano, Katsuhiko; Karasudani, Takashi; Okamoto, Hisao) Reduced equations of motion for generalized fluxes and forces in the continued-fraction expansion. *Progr. Theoret. Phys.* 63 (1980), no. 6, 1904-1916. (Authors' summary) **81g:82009** 82A05
- (with Fujisaka, Hirokazu) Statistical dynamics of chaotic flows. *Progr. Theoret. Phys.* 63 (1980), no. 6, 1931-1944. (Richard C. Churchill) **81k:58047** 58F13 (65L99, 76F99)
- Mori, Hiroshi** Remarks on the stability of a minimal surface in S^n . *Minimal submanifolds and geodesics (Proc. Japan-United States Sem., Tokyo, 1977)*, pp. 103-115, *North-Holland, Amsterdam*, 1979. (João Lucas Marques Barbosa) **81m:53008** 53A10 (49F10, 53C42, 58E12)
- Mori, Masao** Relations between queue-size and waiting-time distributions. *J. Appl. Probab.* 17 (1980), no. 3, 822-830. (R. Bergmann) **81i:60091** 60K25 (90B22)
- Mori, Masatake** An IMT-type double exponential formula for numerical integration. *Publ. Res. Inst. Math. Sci.* 14 (1978), no. 3, 713-729. (J. G. Herriot) **81c:65012** 65D30

- Mori, Nagumori A monotonicity property of the power function of the modified likelihood ratio test of the equality of two covariance matrices. *Res. Bull. Fac. Ed. Oita Univ.* 5, no. 4, 1-4 (1979). (Nariaki Sugura) **81h:62097** 62H15
- de Mori, Renato See De Mori, Renato
- Mori, Shigefumi Projective manifolds with ample tangent bundles. *Ann. of Math.* (2) **110** (1979), no. 3, 593-606. (Luciana Picco Botta) **81j:14010** 14E05 (14M20)
- Threefolds whose canonical bundles are not numerically effective. *Proc. Nat. Acad. Sci. U.S.A.* **77** (1980), no. 6, part 1, 3125-3126. (Editors) **81e:14023** 14J30
- Mori, Toshiro A duality theorem for flows. *Z. Wahrsch. Verw. Gebiete* **43** (1978), no. 3, 253-262. (Author's introduction) **81h:60047** 60G10 (28D10, 60G57, 60J55)
- A random renewal theorem. *Yokohama Math. J.* **27** (1979), no. 2, 163-167. (Sujit K. Basu) **81m:60157** 60K05
- (with Hatori, Hirohisa; Maejima, Makoto) Supplement to the law of large numbers when extreme terms are excluded. *Z. Wahrsch. Verw. Gebiete* **52** (1980), no. 3, 229-234. (V. K. Rohatgi) **81h:60030** 60F05
- Morice, Philippe (with Viviani, Henri) Équations de conservation et condition d'irréversibilité pour les écoulements transsoniques potentiels. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **291** (1980), no. 10, B235-B238. (Authors' summary) **81i:35104** 35L67 (76H05, 76N10)
- Moricone, Franco (with Rizzi, Bruno) Dystropy and information. (Italian summary) *Boll. Un. Mat. Ital. A* (5) **17** (1980), no. 1, 102-108. (Andrea Sgarro) **81h:94021** 94A17
- Mörz, Ferenc Multiparameter strong laws of large numbers. II. Higher order moment restrictions. *Acta Sci. Math. (Szeged)* **41** (1979), no. 3-4, 339-349. (Shigeru Takahashi) **81h:60029** 60F15
- Exponential estimates for the maximum of partial sums. II. Random fields. *Acta Math. Acad. Sci. Hungar.* **35** (1980), no. 3-4, 361-377. (R. J. Tomkins) **81m:60029** 60E15 (60F15, 60G60)
- (with Tandori, Károly) On the divergence of multiple orthogonal series. *Acta Sci. Math. (Szeged)* **42** (1980), no. 1-2, 133-142. (A. Oleviski) **81h:42016** 42B05
- (with Révész, Pál) Multiplicative systems. (Hungarian) *Mat. Lapok* **28** (1980), no. 1-3, 43-63. (K. Tandori) **81m:42023** 42C10 (60F15)
- Strong laws of large numbers for quasisaturation random fields. *Z. Wahrsch. Verw. Gebiete* **51** (1980), no. 3, 249-268. (M. I. Jadrénko) **81h:60041** 60F15 (60G60)
- Morimoto, Akikito (with Kato, Kazuhisa) Topological \mathcal{U} -stability of Axiom A flows with no \mathcal{U} -explosions. *J. Differential Equations* **34** (1979), no. 3, 464-481. (Ju. E. Gliklikh) **81e:58044** 58F10 (58F15)
- Morimoto, Hiroaki Existence of optimal martingales. *Tôhoku Math. J.* (2) **31** (1979), no. 3, 293-299. (Jean-Yves Ouyard) **81h:60044** 60G44 (60G46)
- Morimoto, Mitsuo (with Yoshino, Kunio) A uniqueness theorem for holomorphic functions of exponential type. *Hokkaido Math. J.* **7** (1978), no. 2, 259-270. (From the introduction) **81g:46052** 46F15 (30D15, 32A45)
- A generalization of the Fourier-Borel transformation for the analytic functionals with nonconvex carrier. *Tokyo J. Math.* **2** (1979), no. 2, 301-322. (Keith Rowlands) **81j:46067** 46F15 (32A10)
- Morimoto, Yoshimori On the hypoellipticity for infinitely degenerate semi-elliptic operators. *J. Math. Soc. Japan* **30** (1978), no. 2, 327-358. (V. R. Fridlender) **81d:35017** 35H05
- Morimune, Kinuo (with Kunitomo, Naoto) Improving the maximum likelihood estimate in linear functional relationships for alternative parameter sequences. *J. Amer. Statist. Assoc.* **75** (1980), no. 369, 230-237. (V. K. Srivastava) **81g:62121** 62J05 (62P20)
- Morini, Carlo n -coverings in universal algebra. (Italian. English summary) *Matematiche (Catania)* **32** (1977), no. 1, 1-4 (1979). (Sauro Tulipani) **81f:08006** 08A40
- Morin-Strom, Karl A. Witt's theorem for modular lattices. *Amer. J. Math.* **101** (1979), no. 6, 1181-1192. (J. S. Hsia) **81i:10013** 10C05 (06C05, 15A63)
- Morioka, N. (with Shimizu, T.) Chaos and limit cycles in the Lorenz model. *Phys. Lett. A* **66** (1978), no. 3, 182-184. (Authors' summary) **81h:58048** 58F13 (70K10, 76E20, 86A10)
- Morioka, Shigeki Steady two-dimensional jet-flow of a dispersive compressible fluid. *J. Phys. Soc. Japan* **48** (1980), no. 3, 1009-1017. (J. F. Clarke) **81f:76055** 76N10 (45F10)
- Morishiki, Masato (with Sakai, Ko) A complete axiom system for rational sets with multiplicity. *Theoret. Comput. Sci.* **11** (1980), no. 1, 79-92. (A. Salomaa) **81j:68071** 68D30 (68F10)
- Morisset, S. (with Reina, C.; Treves, A.) Petrov classification of vacuum axisymmetric space-times. *Gen. Relativity Gravitation* **12** (1980), no. 8, 619-632. (Alan Barnes) **81h:83018** 83C20
- Morishita, Katsumi (with Kumagai, Nobuaki) Systematic derivation of variational expressions for electromagnetic and/or acoustic waves. *IEEE Trans. Microwave Theory Tech.* **26** (1978), no. 9, 684-689. (Authors' summary) **81j:78015** 78A40 (49H05, 76Q05)
- Morita, Akio Exact mathematical expressions for the time-dependent behavior of successive first-order reversible reactions. *J. Chem. Phys.* **73** (1980), no. 1, 230-234. (Author's summary) **81g:80014** 80A30
- Morita, Shigeyuki On characteristic classes of conformal and projective foliations. *J. Math. Soc. Japan* **31** (1979), no. 4, 693-718. (D. B. Fuks) **81e:57025** 57R30
- On characteristic classes of Riemannian foliations. *Osaka J. Math.* **16** (1979), no. 1, 161-172. (From the introduction) **81h:57024** 57R30 (57R20)
- (with Matsuoka, Takashi) On characteristic classes of Kähler foliations. *Osaka J. Math.* **16** (1979), no. 2, 539-550. (C. Albert) **81h:57025** 57R30 (53C05)
- (with Nishikawa, Seiki; Sato, Hajime) On a special kind of Γ -foliation. (Japanese) *Sigaku* **31** (1979), no. 2, 110-125. (Hideki Omori) **81e:57029** 57R30 (57R20, 58H05, 58H10)
- Morita, Toku Upper bounds for random Ising ferromagnets. *Phys. Lett. A* **75** (1979/80), no. 1-2, 99-101. (Author's summary) **81h:82065** 82A67 (82A25, 82A42)
- (with Hara, Hiroaki) Solution of the Fokker-Planck equation with spatial coordinate-dependent moments. *Phys. A* **101** (1980), no. 1, 283-288. (Authors' summary) **81h:81020** 81C35 (82A05)
- Thermodynamic limit for the distribution function of the effective field of random Ising models on the linear chain or on the Cayley tree. *Phys. A* **103** (1980), no. 1-2, 354-362. (Author's summary) **81h:82069** 82A67 (82A42)
- (with Horiguchi, Tsuyoshi) Dynamical properties of the diluted Heisenberg and XY magnets at infinite temperature. I. Spin diffusion constant. *Progr. Theoret. Phys.* **64** (1980), no. 4, 1161-1175. (Authors' summary) **81h:82055** 82A67 (82A42)
- Morita, Yasuo Analytic functions on an open subset of $P^1(k)$. *J. Reine Angew. Math.* **311/312** (1979), 361-383. (W. Bartenwerfer) **81e:30087** 30G05 (14K20, 32B99)
- On the induced h -structure on an open subset of the rigid analytic space $P^1(k)$. *Math. Ann.* **242** (1979), no. 1, 47-58. (Alan Adolphson) **81h:14014** 14G20
- On the radius of convergence of the p -adic L -function. *Nagoya Math. J.* **75** (1979), 177-193. (Robert Perlis) **81d:12013** 12B30 (12A70, 12A95, 12B40)
- On p -adic special functions. (Japanese) *Sigaku* **32** (1980), no. 1, 17-29. (K. Shiratani) **81h:12020** 12B30
- Morita, Yoshihito See Endo, K., **81f:01028**
- Morito, Susumu (with Salkin, Harvey M.) Finding the general solution of a linear Diophantine equation. *Fibonacci Quart.* **17** (1979), no. 4, 361-368. (David Lee Hilliker) **81a:10023** 10B05
- (with Salkin, Harvey M.) Using the Blankinship algorithm to find the general solution of a linear Diophantine equation. *Acta Inform.* **13** (1980), no. 4, 379-382. (H. London) **81h:10021** 10B05 (10A30)
- (with Salkin, Harvey M.; Williams, David E.) Two backtrack algorithms for the radio frequency intermodulation problem. *Appl. Math. Optim.* **6** (1980), no. 3, 221-240. (Authors' summary) **81d:94008** 94A14 (90C10)
- Morita, Ryoji (with Kuriyabashi, Akikazu) On the Weierstrass points of Riemann surfaces defined by the equation $Y^2 = X(X-1)(X-t_1)(X-t_2)$. *Bull. Fac. Sci. Engng. Chuo Univ.* **22** (1979), 97-106. (R. F. Lax) **81j:14016** 14H15 (32G15)
- Morkellinn, A. Decision-making indeterminacy with respect to lexicographic-type criteria. (Russian. Lithuanian and English summaries) *Lietuv. Mat. Sb.* **20** (1980), no. 2, 109-117, 209. (A. Rapoport) **81h:90003** 90A05 (06A10)
- Morley, T. D. (with Duffin, Richard J.) Almost definite operators and electromechanical systems. *SIAM J. Appl. Math.* **35** (1978), no. 1, 21-30. (Authors' summary) **81e:94028** 94C05
- (with Anderson, William N., Jr.; Trapp, George E.) Characterization of parallel subtraction. *Proc. Nat. Acad. Sci. U.S.A.* **76** (1979), no. 8, 3599-3601. (Authors' summary) **81a:94042** 94C05 (47A99)
- Morokov, Ju. N. Convergence of an iteration process of self-consistency in approximate methods of quantum chemistry. (Russian) *Cisl. Metody Meh. Splošn. Sredy* **10** (1979), no. 2 *Mat. Modelirovanie*, 126-139. (Editors) **81h:81123** 81G55
- Moroney, J. R. (with Horiba, Y.) On the structure of comparative advantage in a multifactor trade model. *Internat. Econom. Rev.* **20** (1979), no. 2, 551-554. (From the text) **81h:90061** 90A15
- Moroni, Paola (with Vacca, Jacopa) On an ordinary differential equation deriving from a boundary layer problem, in the presence of a magnetic field. (Italian. English summary) *Rend. Sem. Mat. Univ. Politec. Torino* **37** (1979), no. 3, 89-103 (1980). (Authors' summary) **81j:76096** 76W05 (65L10)
- Morowitz, Harold J. The dimensionality of niche space. *J. Theoret. Biol.* **86** (1980), no. 2, 259-263. (Author's summary) **81h:92022** 92A17
- Morozan, T. (with Halanay, Aristide) Stabilization by linear feedback of linear discrete stochastic systems. *Rev. Roumaine Math. Pures Appl.* **23** (1978), no. 4, 561-571. (Authors' summary) **81h:93091** 93E15 (93D15)
- Morozov, A. V. (with Lebedev, P. A.; Matveev, P. N.) Equation of motion of a train as a viscoelastic one-dimensional medium and its solution. (Russian) *Moskov. Inst. Inzh. Železnodorozh. Transporta* **Trudy No. 640 Prikl. Mat. i Zadachi Železnodorozh. Transporta** (1979), 33-37, 151. (W. Kocs) **81h:73005** 73F05 (35L20, 70F15)
- Morozov, E. M. (with Nikishin, G. P.) ★ Метод конечных элементов в механике разрушения. (Russian) [The finite element method in fracture mechanics] "Nauka", Moscow, 1980, 255 pp. (Authors' summary) **81h:73005** 73-02 (65N30, 73E99)
- Morozov, E. N. Čebyšev subspaces of vector-valued functions. (Russian) *The theory of the approximation of functions (Proc. Internat. Conf., Kaluga, 1975)* (Russian), pp. 267-269, "Nauka", Moscow, 1977. (V. G. Verdier) **81c:41061** 41A50
- Morozov, N. F. See *Studies in elasticity and plasticity*, **81h:73002**
- Morozov, S. F. (with Petrov, V. V.) Discontinuous solutions of irregular variational problems. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* **1979**, no. 11, 40-47. (A. I. Perov) **81a:49010** 49A36
- Morozov, V. A. Seminormed factor-spaces and spline theory. (Russian) *Difference and variational-difference methods (Proc. Second Sem. Methods of Numer. Appl. Math., Nicosiarsk, 1977)* (Russian), pp. 56-62, *Akad. Nauk SSSR Sibirsk. Otdel., Vychisl. Centr. Nicosiarsk, 1977*. (A. A. Pekarskij) **81e:41015** 41A15 (41A63, 65F99)
- Morozov, V. V. (with Krasnoščekov, P. S.; Fedorov, V. V.) Decomposition in planning problems. I. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* **1979**, no. 2, 7-17, 220 (Russian); translated as *Engrg. Cybernetics* **17** (1979), no. 2, 1-10 (1980). (Authors' summary) **81h:90133** 90C30
- (with Krasnoščekov, P. S.; Fedorov, V. V.) External protection under conditions of indeterminacy. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* **1979**, no. 3, 15-27, 219 (Russian); translated as *Engrg. Cybernetics* **17** (1979), no. 3, 10-21 (1980). (Authors' introduction) **81h:90020** 90A11 (90B30)
- Morozova, L. N. (with Volodin, N. A.) Some estimates of probabilities of large deviations for martingales and sums of random vectors. (Russian) *Random processes and mathematical statistics (Russian)*, pp. 35-43, 186, "Fan", Tashkent, 1978. (Zdzisław Rychlik) **81g:60027** 60F10 (60G42)
- Morpurgo, Rosamaria (with Sami, Mariagiovanna) A proposal for the translation of a particular class of regular languages. *Progress in cybernetics and systems research, Vol. V*, pp. 645-664, Hemisphere, Washington, D.C., 1979. (Matti Linna) **81h:68068** 68F10
- Morrel, B. (with Nagata, Jun-iti) Statistical metric spaces as related to topological spaces. *General Topology Appl.* **9** (1978), no. 3, 233-237. (Authors' summary) **81g:54003** 54A99 (08A02, 60B99)
- Morris, A. O. Projective representations of reflection groups. II. *Proc. London Math. Soc.* (3) **40** (1980), no. 3, 553-576. (Author's introduction) **81j:20023** 20C25 (20H15)
- Morris, C. N. See *Experimental design in econometrics*, **81h:62005**
- Morris, D. M. (with Quadding, Douglas) Correspondence with a chemist. *Math. Gaz.* **63** (1979), no. 426, 233-241. (H. Gupta) **81e:05005** 05A10
- Morris, Hedley C. (with Dodd, R. K.) Pattern formation in a delay equation with

- diffusion. *Internat. J. Systems Sci.* 11 (1980), no. 6, 787-792. (Gail A. Carpenter) **81h:92018** 92A15 (34K20)
- Backlund transformations and the symmetries of the Yang equations. *J. Math. Phys.* 21 (1980), no. 2, 256-260. (F. A. E. Pirani) **81i:35012** 35A30 (35Q20, 58A15, 81E10)
- Inverse scattering problems in higher dimensions: Yang-Mills fields and the supersymmetric sine-Gordon equation. *J. Math. Phys.* 21 (1980), no. 2, 327-333. (Mark J. Ablowitz) **81g:81034** 81C99 (35Q20, 58A20, 81E99)
- Morris, J. L. (with Lawson, J. Douglas; Wilkes, M. V.) On the exact solution of linear constant coefficient parabolic partial differential equations using (1, 1) Padé approximations. *Utilitas Math.* 16 (1979), 189-196. (J. R. Cannon) **81c:65050** 65N10
- Morris, James G. (with Verdini, William A.) Minimum l_p distance location problems solved via a perturbed problem and Weiszfeld's algorithm. *Oper. Res.* 27 (1979), no. 6, 1180-1188. (John J. Dinkel) **81h:90064** 90B05 (90C08)
- (with Deckro, Richard F.) An effective decomposition procedure for computing equilibrium single commodity trade flows. *J. Oper. Res. Soc.* 31 (1980), no. 12, 1085-1093. (Authors' summary) **81i:90028** 90A14
- (with Norback, John P.) Fitting hyperplanes by minimizing orthogonal deviations. *Math. Programming* 19 (1980), no. 1, 102-105. (Authors' summary) **81e:65007** 65D10
- Morris, Joel M. On single-sample robust detection of known signals with additive unknown-mean amplitude-bounded random interference. *IEEE Trans. Inform. Theory* 26 (1980), no. 2, 199-209. (Authors' summary) **81c:94008** 94A12
- Morris, Kervin W. (with Szyml, Dominik) On the limiting behaviour of some functions of the average of independent random variables. (Polish and Russian summaries) *Ann. Univ. Mariae Curie-Skłodowska Sect. A* 31 (1977), 85-95 (1979). (Toshio Mori) **81h:60033** 60F05
- Graves-Morris, P. R. See Graves-Morris, P. R.
- Morris, Philip J. (with Tam, Christopher K. W.) The radiation of sound by the instability waves of a compressible plane turbulent shear layer. *J. Fluid Mech.* 98 (1980), no. 2, 349-381. (Authors' summary) **81d:76085** 76Q05 (76N10)
- Morris, Robert A. Reciprocity isomorphisms for separable field extensions. *Rocky Mountain J. Math.* 9 (1979), no. 4, 707-719. (S. A. Amitsur) **81i:12028** 12G05 (12B20)
- Derivations of Witt vectors with application to K_2 of truncated polynomial rings and Laurent series. *J. Pure Appl. Algebra* 18 (1980), no. 1, 91-96. (Keith Dennis) **81i:18012** 18F25 (14C35, 14F15)
- Morris, Sidney A. Duality and structure of locally compact abelian groups... for the layman. *Math. Chronicle* 8 (1979), 39-56. (K. A. Ross) **81a:22003** 22B05 (22-02)
- (with Nikolas, Peter) The extension of norms on subgroups of free topological groups. *Proc. Amer. Math. Soc.* 80 (1980), no. 1, 185-188. (M. I. Kabenjuk) **81g:22001** 22A05
- Morris, T. F. Classical confinement: field theories with spontaneously bounded domains. *Hadronic J.* 3 (1979/80), no. 5, 1333-1359. (Author's summary) **81h:81157** 81G25 (49H05)
- Is the electron a soliton? *Hadronic J.* 3 (1979/80), no. 5, 1360-1392. (Author's summary) **81h:81145** 81G10 (35Q20)
- Morrison, Harry L. (with Creswick, Richard J.) On the dynamics of quantum vortices. *Phys. Lett. A* 76 (1980), no. 3-4, 267-268. (Authors' summary) **81h:81116** 81J05
- Morrison, Ian Projective stability of ruled surfaces. *Invent. Math.* 56 (1980), no. 3, 269-304. (T. Oda) **81e:14007** 14D25 (14C05)
- Morrison, J. A. Analysis of some overflow problems with queuing. *Bell System Tech. J.* 59 (1980), no. 8, 1427-1462. (Author's summary) **81h:90061** 90B22 (60K30, 94A40)
- Some traffic overflow problems with a large secondary queue. *Bell System Tech. J.* 59 (1980), no. 8, 1463-1482. (Author's summary) **81h:90062** 90B22 (60K30, 94A40)
- See also Taylor, R. S. **81e:78020**
- Morrison, Philip J. (with Greene, John M.) Noncanonical Hamiltonian density formulation of hydrodynamics and ideal magnetohydrodynamics. *Phys. Rev. Lett.* 45 (1980), no. 10, 790-794. (Authors' summary) **81g:76114** 76W05
- Morrison, S. D. Differential specializations in integral and algebraic extensions. *Amer. J. Math.* 101 (1979), no. 6, 1381-1399. (R. Kouché) **81d:13020** 13N05 (12H05)
- Morrison, T. J. (with Diestel, J.) The Radon-Nikodým property for the space of operators. *I. Math. Nachr.* 92 (1979), 7-12. (R. H. Lohman) **81h:46024** 46B22 (47D15)
- Morrison, W. R. B. (with Smith, P. Arnot) A practical application of a network model. *Numerical simulation of fluid motion (Proc. Internat. Conf. Numerical Simulation of Fluid Dynamic Systems, Monash Univ., Melbourne, 1976), pp. 407-434, North-Holland, Amsterdam, 1978. (See 81a:76005)* 76-04 (65P05)
- Morro, A. Interaction of waves with shocks in magnetohydrodynamics. (German summary) *Acta Mech.* 35 (1980), no. 3-4, 197-213. (E. G. Broadbent) **81e:76054** 76W05 (35L67, 76L05, 76X05)
- Wave propagation in thermoviscous materials with hidden variables. (Polish and Russian summaries) *Arch. Mech. (Arch. Mech. Stos.)* 32 (1980), no. 1, 145-161. (Author's summary) **81g:73123** 73U05 (73B30, 76L05)
- Shock waves in thermoviscous fluids with hidden variables. *Arch. Mech. (Arch. Mech. Stos.)* 32 (1980), no. 2, 193-199. (Author's summary) **81h:76043** 76L05
- (with Bampi, Franco) Two approaches to nonstationary relativistic thermodynamics. *J. Math. Phys.* 21 (1980), no. 5, 1201-1204. (Gérard A. Maugin) **81h:83027** 83C55
- (with Bampi, Franco) Viscous fluids with hidden variables and hyperbolic systems. *Wave Motion* 2 (1980), no. 2, 153-157. (Authors' summary) **81d:76006** 76A02 (35L65)
- Morrow, Dean C. (with Alex, Leo J.) Simple groups with a Sylow normalizer of order 3p. *J. Algebra* 61 (1979), no. 2, 311-327. (A. V. Borovik) **81a:20016** 20C20 (20D05)
- Morrow, Gregory J. Invariance principles for Gaussian sequences. *Z. Wahrsch. Verw. Gebiete* 52 (1980), no. 2, 115-126. (Wim Vervaat) **81c:60034** 60F17 (60G15)
- Morrow, J. R. On basic sequences in nonlocally convex spaces. *Studia Math.* 67 (1980), no. 2, 119-133. (N. J. Kalton) **81a:46016** 46A35 (46A15)
- Morrow, James A. (with Rossi, Hugo) Canonical embeddings. *Trans. Amer. Math. Soc.* 261 (1980), no. 2, 547-565. (C. Bănică) **81m:32033** 32J25 (14H99)
- Mürsch, M. (with Risken, H.; Vollmer, H. D.) Matrix continued fraction solutions of the Kramers equation and their inverse friction expansions. *Z. Phys. B* 40 (1980/81), no. 4, 343-352. (Authors' summary) **81m:82010** 82A05 (65N99, 82A70)
- Morse, A. Stephen Global stability of parameter-adaptive control systems. *IEEE Trans. Automat. Control* 25 (1980), no. 3, 433-439. (Author's summary) **81g:93006** 93D25 (93C40)
- Morse, Marston See Pöschl, Viktor, **81f:01034**
- Morshed, A. M. (with Ahmadi, G.) Optimization of noisy functionals. *Indust. Math.* 29 (1979), no. 2, 89-104. (Edward J. Haug, Jr.) **81i:49021** 49B60 (93E03)
- Morzy, Monir S. The geometrical relationship between the quadruple $(P_{n+1}(C), Q_n(C), P_{n+1}(R), V_{n+2}(R))$. *Indian J. Pure Appl. Math.* 11 (1980), no. 4, 433-437. (Mihai Dediu) **81b:57022** 57R15 (14M15, 53C15, 53C30)
- A note on Adams operations. *Indian J. Pure Appl. Math.* 11 (1980), no. 8, 974-982. (Author's summary) **81h:55017** 55S25
- Mortell, Michael P. (with Seymour, Brian R.) A finite-rate theory of resonance in a closed tube: discontinuous solutions of a functional equation. *J. Fluid Mech.* 99 (1980), no. 2, 365-382. (C. Bardos) **81f:76064** 76L05 (35L67)
- See also Lardner, R. W.; et al. **81i:35113**
- Mortimer, Brian The modular permutation representations of the known doubly transitive groups. *Proc. London Math. Soc.* (3) 41 (1980), no. 1, 1-20. (W. Feit) **81f:20004** 20B20 (05C25, 20C20)
- Morita, Stefano (with Modica, Luciano) Some entire solutions in the plane of nonlinear Poisson equations. (Italian summary) *Boll. Un. Mat. Ital. B* (5) 17 (1980), no. 2, 614-622. (A. Borzyskowski) **81k:35036** 35J05 (31A25, 35J60)
- (with Modica, Luciano) Construction of a singular elliptic-harmonic measure. *Manuscripta Math.* 33 (1980/81), no. 1, 81-98. (F. J. Almgren, Jr.) **81m:31001** 31A15 (35J15)
- Morton, H. R. Infinitely many fibred knots having the same Alexander polynomial. *Topology* 17 (1978), no. 1, 101-104. (From the introduction) **81e:57007** 57M25
- A criterion for an embedded surface in R^3 to be unknotted. *Topology of low-dimensional manifolds (Proc. Second Sussex Conf., Chelwood Gate, 1977), pp. 93-98, Lecture Notes in Math., 722, Springer, Berlin, 1979. (A. Marin)* **81d:57006** 57M25 (53A05)
- Closed braids which are not prime knots. *Math. Proc. Cambridge Philos. Soc.* 86 (1979), no. 3, 421-426. (Roger Fenn) **81a:57011** 57M25 (20F36)
- Morton, K. W. Petrov-Galerkin methods for nonselfadjoint problems. *Numerical analysis (Proc. 8th Biennial Conf., Univ. Dundee, Dundee, 1979), pp. 110-118, Lecture Notes in Math., 773, Springer, Berlin, 1980. (From the introduction)* **81i:65093** 65N30
- (with Cullen, M. J. P.) Analysis of evolutionary error in finite element and other methods. *J. Comput. Phys.* 34 (1980), no. 2, 245-267. (Authors' summary) **81a:65097** 65N30
- (with Parrott, A. K.) Generalised Galerkin methods for first-order hyperbolic equations. *J. Comput. Phys.* 36 (1980), no. 2, 249-270. (A. V. Džikarian) **81c:65123** 65N30
- Morton, Patrick On Rôdei's theory of the Pell equation. *J. Reine Angew. Math.* 307/308 (1979), 373-398. (William C. Waterhouse) **81f:12005** 12A50 (10B05, 12A25)
- Morton, T. (with Mensching, J.; Garstka, S.) Protective planning-horizon procedures for a deterministic cash balance problem. *Oper. Res.* 26 (1978), no. 4, 637-652. (J. A. E. van Nunen) **81a:90013** 90A05
- Moruz, Victor L. (with Teaney, Dale T.; Mintzer, Frederick C.) The tempered Fourier transform. *J. Acoust. Soc. Amer.* 67 (1980), no. 6, 2063-2067. (Authors' summary) **81c:44010** 44A15 (42A38)
- Morvan, Jean-Marie Variétés de type spécial. Champs presque-quasi-concourants. *Bull. Math. Soc. Sci. Math. R. S. Roumanie (N.S.)* 22(70) (1978), no. 3, 293-302. (Zbl 392:53008) **81m:53027** 53B20
- (with Roşca, Radu) Variétés lorentziennes structurées par une connexion conforme plate. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 286 (1978), no. 11, A519-A522. (Authors' summary) **81e:53049** 53C50
- Sur les déformations des applications symplectiques. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 24, A1131-A1134. (From the introduction) **81i:58025** 58F05 (53C15)
- Some topological properties of totally quasi-umbilical submanifolds. *Simon Stevin* 54 (1980), no. 1, 11-25. (Bang-yan Chen) **81d:53038** 53C40
- Mosca, E. (with Luvison, A.) Development of recursive deconvolution algorithms via innovations analysis with application to identification by PRBS's. *Identification and system parameter estimation (Proc. Fourth IFAC Sympos., Thibisi, 1976), Part 3, pp. 2061-2071, North-Holland, Amsterdam, 1978. (See 80d:93010c)* 93B15
- See also Davis, Mark H. A., **81i:93000**
- Moscariello, Gioconda T-limits in spaces with convergence. (Italian) *Ricerche Mat.* 28 (1979), no. 2, 301-321. (C. H. Cook) **81h:54005** 54A20
- Moscattelli, V. B. Fréchet spaces without continuous norms and without bases. *Bull. London Math. Soc.* 12 (1980), no. 1, 63-66. (H. Hogbe-Niend) **81d:46003** 46A06
- Moschovakis, Joan Rand Kleene's realizability and "divides" notions for formalized intuitionistic mathematics. *The Kleene Symposium (Proc. Sympos., Univ. Wisconsin, Madison, Wis., 1978), pp. 167-179, Studies in Logic and Foundations of Math., 101, North-Holland, Amsterdam, 1980. (Wilfried Sieg)* **81m:03071** 03F50 (03F55)
- Moschovakis, Yiannis N. Inductive scales on inductive sets. *Cabal Seminar 76-77 (Proc. Caltech-UCLA Logic Sem., 1976-77), pp. 185-192, Lecture Notes in Math., 689, Springer, Berlin, 1978. (Author's introduction)* **81m:03059** 03E15 (03D70)
- (with Barwise, K. Jon) Global inductive definability. *J. Symbolic Logic* 43 (1978), no. 3, 521-534. (From the text) **81g:03059** 03D70 (03Cxx)
- Mosco, Umberto (with Joly, Jean-Luc) À propos de l'existence et de la régularité des solutions de certaines inéquations quasi-variationnelles. (English summary) *J. Funct. Anal.* 34 (1979), no. 1, 107-137. (L. Mikolajczyk) **81a:49007** 49A29 (47H15)
- (with Capuzzo Dolcetta, I.) Implicit complementarity problems and quasivariational inequalities. *Variational inequalities and complementarity problems (Proc. Internat. School, Erice, 1978), pp. 75-87, Wiley, Chichester, 1980. (Pierre-Louis Lions)* **81i:49003** 49A29 (65K10, 90C33)
- Moscow, E. (with Ivan, I.) L'utilisation des automates finis du type ATIM dans l'organisation de la production. *Proceedings of the International Symposium on*

- Applications of Mathematics in System Theory* (Unio. Braço, Braço, 1978), II, pp. 157-163. Unio. Braço, Braço, 1979. (See 81j:93006b) 90B30
- Moscovici, Henri** A vanishing theorem for L^2 -cohomology in the nilpotent case. *Noncommutative harmonic analysis* (Proc. Third Colloq., Marseille-Luminy, 1978), pp. 201-210. *Lecture Notes in Math.*, 728, Springer, Berlin, 1979. (A. Kleppner) 81c:22018 22E27
- Moschukov, B. I.** Methods of constructing asymptotic solutions for partial differential equations of quasilinear type. (Russian) *Asymptotic methods in the theory of nonlinear oscillations* (Proc. All-Union Conf. Asymptotic Methods in Nonlinear Mech., Katsiveli, 1977) (Russian), pp. 120-125, 275. "Naukova Dumka", Kiev, 1979. (J. Chrastina) 81d:35013 35C20 (35M05)
- Moser, Jürgen K.** The holomorphic equivalence of real hypersurfaces. *Proceedings of the International Congress of Mathematicians* (Helsinki, 1978), pp. 659-668. *Acad. Sci. Fennica, Helsinki*, 1980. (S. M. Webster) 81d:32016 32C05 (32F25, 53B35)
- Moser, Leo** See Agura, E. L., 81f:90097
- Moser, Nicole** Unités et nombre de classes d'une extension galoisienne diédrale de \mathbb{Q} . *Abh. Math. Sem. Univ. Hamburg* 48 (1979), 54-75. (Harvey Cohn) 81h:12009 12A55 (12A45)
- Moser, William O. J.** (with Newborn, Monroe M.) Placing counters to illustrate Burnside's lemma. *Math. Mag.* 52 (1979), no. 5, 305-309. (Gerard M. Enright) 81f:20031 20D60 (10A10, 20B05)
- (with Coxeter, H. S. M.) ★Generators and relations for discrete groups. Fourth edition. *Ergebnisse der Mathematik und ihrer Grenzgebiete [Results in Mathematics and Related Areas]*, 14. Springer-Verlag, Berlin-New York, 1980. ix + 169 pp. ISBN 3-540-09212-9 (Editors) 81a:20001 20-01
- (with Newborn, Monroe M.) Optimal crossing-free Hamiltonian circuit drawings of K_n . *J. Combin. Theory Ser. B* 29 (1980), no. 1, 13-26. (W.-K. Chen) 81h:05008 05C38 (05C45)
- Moses, H. E.** Gelfand-Levitan equations with comparison measures and comparison potentials. *J. Math. Phys.* 20 (1979), no. 10, 2047-2053. (From the summary) 81a:81067 81F99 (35P99)
- (with Kanal, M.; Mitter, Sanjoy K.) A variational principle for the linear filter matrix and an interpretation for the maximum value of the functional. *Transport Theory Statist. Phys.* 8 (1979), no. 3, 163-168. (Authors' summary) 81a:82006 82A05
- A kernel of Gelfand-Levitan type for the three-dimensional Schrödinger equation. *J. Math. Phys.* 21 (1980), no. 1, 83-89. (Wolfgang Bühring) 81a:81023 81C05 (35J10, 81F99)
- (with DeFacio, B.) The Gelfand-Levitan equation can give simple examples of nonselfadjoint operators with complete eigenfunctions and spectral representations. I. Ghosts and resonances. *J. Math. Phys.* 21 (1980), no. 7, 1716-1723. (A. G. Ramm) 81a:81053 81F05 (47A40)
- Moskell, J. M.** (with Rothstein, J.) Bus automata and immediate languages. *Inform. and Control* 40 (1979), no. 1, 88-121. (E. Ikauniks) 81b:68066 68D20 (68F05)
- Moskinkiy, M.** (with Deenen, J.; Seligman, Thomas H.) Canonical transformations to action and angle variables and their representations in quantum mechanics. III. The general problem. *Ann. Physics* 127 (1980), no. 2, 458-477. (Virendra Singh) 81j:81021 81C40 (81C99)
- (with Winternitz, P.) Quadratic Hamiltonians in phase space and their eigenstates. *J. Math. Phys.* 21 (1980), no. 7, 1667-1682. (Ernest G. Kalnins) 81f:81014 81C05 (22E70, 35J10)
- (with Garcia Calderón, G.) Wigner distribution functions and the representation of canonical transformations in quantum mechanics. *J. Phys. A* 13 (1980), no. 6, L185-L188. (Authors' summary) 81d:81028 81C20 (35B20)
- Moskalenko, A. I.** Sufficient conditions for the simultaneous optimality of dynamical systems. (Russian) *Problems of stability of motion, analytical mechanics and control of motion* (Third All-Union State Conf., Irkutsk, 1977) (Russian), pp. 309-318, 328. "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. (Author's summary) 81g:93054 93C15
- Moskal'kov, M. N.** Schemes of the finite-element method for increased accuracy for solution of nonstationary second-order equations. (Russian) *Differentsial'nye Uravneniya* 16 (1980), no. 7, 1283-1292, 1351. (A. V. Dzhikariani) 81h:65124 65N30
- A completely conservative scheme of gas dynamics. (Russian) *Z. Vyčisl. Mat. i Mat. Fiz.* 20 (1980), no. 1, 162-170, 262. (Author's summary) 81d:76077 76N15
- See also Numerical analysis, 81d:65001
- Moskalov, G. K.** Problems of the reliability of adaptive automatic control systems. (Russian. English summary) *Elektronnoe Modelirovanie* 1980, no. 4, 17-25, 109. (Author's summary) 81h:93049 93C40 (93E03)
- Moskowitz, Martin** (with Greenleaf, F. P.) Groups of automorphisms of Lie groups: density properties, bounded orbits, and homogeneous spaces of finite volume. *Pacific J. Math.* 86 (1980), no. 1, 59-87. (S. G. Dani) 81m:22013 22E15
- An abstract Borel density theorem. *Proc. Amer. Math. Soc.* 78 (1980), no. 1, 19-22. (S. G. Dani) 81d:22014 22E40
- Moskvina, D. A.** (with Dubrov, V. T.) Estimates for higher-order cumulants of sums of weakly dependent variables. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1979, no. 5, 20-28. (M. M. Leonenko) 81e:60017 60F05 (60G10)
- (with Dubrov, V. T.) Probabilities of large deviations for the sums of functions of mixing sequences. (Russian. English summary) *Teor. Veroyatnost. i Primenen.* 24 (1979), no. 4, 840-846. (S. A. Book) 81e:60027 60F10 (60G10)
- Moskvina, V. G.** (with Seljakhova, T. N.; Sobolev, V. V.) Extremal properties of certain classes of functions with fixed first coefficients that map the half plane conformally onto itself. (Russian) *Sibirsk. Mat. Ž.* 21 (1980), no. 2, 139-154, 238. (Stanisław Walczak) 81d:30038 30C70 (30C50)
- Mosolov, P. P.** (with Maslov, V. P.) Asymptotic behavior as $N \rightarrow \infty$ of trajectories of N point masses, interacting according to Newton's gravitation law. (Russian) *Izv. Akad. Nauk SSSR Ser. Mat.* 42 (1978), no. 5, 1063-1100, 1183. (R. G. Langebartel) 81b:70005 70F10 (58F05, 76X05)
- Mosolov, V. E.** (with Tihonov, V. S.) Determination of the transfer function of a flexible unstretchable thread in the case of three-dimensional flow around it. *Automatika* 1979, no. 4, 24-30, 94 (Russian); translated as *Soviet Automat. Control* 12 (1979), no. 4, 18-23. (Authors' summary) 81h:73036 73K12 (70J99, 93C20)
- Moss, R. L.** (with Rogers, T. G.; Spencer, A. J. M.) Axially symmetric deformations of fibre-reinforced cylinders. *J. Inst. Math. Appl.* 26 (1980), no. 1, 21-38. (G. A. Nanioli) 81k:73014 73C40 (73L10)
- Mossak, S.** On the existence of right-coprime factorization for functions meromorphic in a half-plane. *IEEE Trans. Automat. Control* 25 (1980), no. 3, 550-551. (P. Lappan) 81j:30073 30E99 (44A10)
- (with Cameron, R.; Kouvaritakis, B. A.) A new approach to the prediction of limit cycles. *Internat. J. Control* 32 (1980), no. 6, 963-981. (Authors' summary) 81c:93024 93C10
- Mosses, Peter** A constructive approach to compiler correctness. *Automata, languages and programming* (Proc. Seventh Internat. Colloq., Noordwijkerhout, 1980), pp. 449-469. *Lecture Notes in Comput. Sci.*, 85, Springer, Berlin, 1980. (Author's summary) 81k:68013 68B10
- Mossino, J.** (with Gourgou, H.) Sur un problème à frontière libre de la physique des plasmas. (English summary) *Ann. Inst. Fourier (Grenoble)* 29 (1979), no. 4, ix, 127-141. (T. Kahan) 81f:82023 82A45 (35R35)
- Some nonlinear problems involving a free boundary in plasma physics. *J. Differential Equations* 34 (1979), no. 1, 114-138. (N. N. Janenko) 81c:35052 35J65 (35R35, 47H05, 49A29, 82A45)
- khodnadad-Mostashiry, Behzad** See Khodnadad-Mostashiry, Behzad
- Mostepanenko, V. M.** (with Grib, A. A.) Spontaneous breaking of gauge and discrete symmetries in curved space-time. (Russian) *Problemy Teor. Gravitatsii i Element. Čistic* No. 10 (1979), 74-91. (From the text) 81h:81060 81D25 (81M05, 83C99)
- (with Grib, A. A.; Mamaev, S. G.) Vacuum stress-energy tensor and particle creation in isotropic cosmological models. *Fortschr. Phys.* 28 (1980), no. 4, 173-199. (Authors' summary) 81c:83028 83C45
- (with Grib, A. A.; Mamaev, S. G.) Particle creation and vacuum polarisation in an isotropic universe. *J. Phys. A* 13 (1980), no. 6, 2057-2065. (Authors' summary) 81d:83056 83F05
- (with Mamaev, S. G.) Isotropic cosmological models determined by vacuum quantum effects. *Ž. Eksper. Teoret. Fiz.* 78 (1980), no. 1, 20-27 (Russian); translated as *Soviet Phys. JETP* 51 (1980), no. 1, 9-13. (Authors' summary) 81c:83056 83F05 (81M05)
- Mostow, Mark** See Follath, 81c:57028
- Mostowski, Andrzej Włodzimierz** (with Kowalski, Stanisław) ★Teoria automatów i lingwistyka matematyczna. (Polish) [Automata theory and mathematical linguistics] Państwowe Wydawnictwo Naukowe (PWN), Warsaw, 1979. 116 pp. ISBN 83-01-00855-5 (Przemysław Prusinkiewicz) 81h:68070 68F05
- ★Foundational studies. Selected works. Vol. I. Edited by Kazimierz Kuratowski, Wiktor Marek, Leszek Pacholski, Helena Rasiowa, Czesław Ryll-Nardzewski and Paweł Ziński. With contributions by Wiktor Marek, A. Grzegorzczak, W. Guzicki, Leszek Pacholski, C. Rausser and Paweł Ziński. Studies in Logic and the Foundations of Mathematics, 93. North-Holland Publishing Co., Amsterdam-New York; PWN—Polish Scientific Publishers, Warsaw, 1979. xlv + 635 pp. (1 plate). ISBN 0-444-85102-X (C. Smoryński) 81i:01018a 01A75 (03-XX)
- ★Foundational studies. Selected works. Vol. II. Edited by Kazimierz Kuratowski, Wiktor Marek, Leszek Pacholski, Helena Rasiowa, Czesław Ryll-Nardzewski and Paweł Ziński. Studies in Logic and the Foundations of Mathematics, 93. North-Holland Publishing Co., Amsterdam-New York; PWN—Polish Scientific Publishers, Warsaw, 1979. viii + 605 pp. ISBN 0-444-85103-8 (C. Smoryński) 81i:01018b 01A75 (03-XX)
- Mostowski, Jan** (with Rzążewski, Kazimierz) Rabi oscillations in a partially coherent field. *Z. Phys. B* 39 (1980), no. 2, 183-185. (Authors' summary) 81h:81194 81K05
- Mostowski, Tadeusz** (with Pfister, Gerhard) Der Cohensche Eliminationsatz in positiver Charakteristik. Beiträge zur Algebra und Geometrie [Contributions to Algebra and Geometry], 8. Wiss. Beitr. Martin-Luther-Univ. Halle-Wittenberg M 12 (1979), 115-123. (Leonard Lipshitz) 81h:13015 13J05 (03C10)
- Moszer, Zénon** Les repères dans la géométrie de Klein. *Tensor (N.S.)* 33 (1979), no. 1, 37-39. (V. Volencé) 81m:20055 20F26
- Décompositions invariantes du demi-groupe des éléments non-négatifs du groupe archimédien. *Tensor (N.S.)* 34 (1980), no. 1, 8-10. (G. Čupona) 81g:06013 06F20
- Moszyński, Krzysztof** Projection methods in the approximate solution of the eigenvalue problem in a Hilbert space. *Mathematical models and numerical methods* (Papers, Fifth Semester, Stefan Banach Internat. Math. Center, Warsaw, 1975), pp. 183-202. Banach Center Publ., 3, PWN, Warsaw, 1978. (L. Collatz) 81c:65008 65J10 (47A70, 49G20)
- A general scheme for obtaining estimates for interior approximation of certain operators in Banach spaces. (Polish) *Mat. Stos.* (3) 14 (1979), 79-95. (A. Alexiewicz) 81a:47014 47A50 (65J10)
- Concerning some version of the Lax-Milgram lemma in normed spaces. *Studia Math.* 68 (1980), no. 1, 67-78. (S. Rolewicz) 81i:35050 35J20 (47A50, 49G20)
- Mote, C. D., Jr.** (with Schajer, G. S.) An algorithm for the solution of a third-order eigenvalue problem. *Internat. J. Numer. Methods Engrg.* 15 (1980), no. 3, 457-463. (Authors' summary) 81a:65042 65F15
- Mote, John** (with Glover, Fred; Klingman, Darwin; Whitman, David) An extended abstract of an indepth algebraic and computational study for maximum flow problems. *Discrete Appl. Math.* 2 (1980), no. 3, 251-254. (Editors) 81j:90047 90B10 (90C35)
- Mothson, Bernard** Prolongements de valuations dans un cas non commutatif. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 291 (1980), no. 1, A5-A6. (Author's summary) 81i:12030 12J20 (16A15)
- Motoc, I.** Monte Carlo application in polymer chemistry. A selected bibliography. *Math. No.* 5 (1979), 283-287. (Liliana Spiru) 81a:92025 92A40 (00A15)
- Motohashi, Yoichi** A note on the large sieve. III. *Proc. Japan Acad. Ser. A Math. Sci.* 55 (1979), no. 3, 92-94. (Matti Jutila) 81j:10070 10H30
- A note on almost-primes in short intervals. *Proc. Japan Acad. Ser. A Math. Sci.* 55 (1979), no. 6, 225-226. (Matti Jutila) 81a:10056 10H15
- An asymptotic series for an additive divisor problem. *Math. Z.* 170 (1980), no. 1, 43-63. (G. Greaves) 81j:10067 10H25 (10H32)
- A note on the large sieve. IV. *Proc. Japan Acad. Ser. A Math. Sci.* 56 (1980), no. 6, 288-290. (Matti Jutila) 81j:10071 10H30 (10H15)
- Motoo, Minoru** Periodic boundary problems of the two-dimensional Brownian motion on upperhalf plane. *Proceedings of the International Symposium on Stochastic Differential*

- Equations (Res. Inst. Math. Sci., Kyoto Univ., Kyoto, 1976), pp. 265-281, Wiley, New York, 1978. (A. D. Wentzell (Ventsel'))* 81h:60103 60360
- Motone, Kaoru** Notes on the radical of a finite-dimensional algebra. *J. Fac. Sci. Shinshu Univ.* 14 (1979), no. 2, 95-97. (N. Divinsky) 81g:16028 16A46 (16A21)
- (with Asano, Shigemoto) On QF-2 algebras with commutative radicals. *Proceedings of the 12th Symposium on Ring Theory (Hokkaido Univ., Sapporo, 1979), pp. 58-60, Okayama Univ., Okayama, 1980. (S. S. Page)* 81g:16021 16A36
- (with Asano, Shigemoto) On QF-2 algebras with commutative radicals. *Math. J. Okayama Univ.* 22 (1980), no. 1, 17-20. (Denis Floyd) 81i:16017 16A36
- Motrilov, I. A.** (with Novikova, A. M.; Ševchenko, S. I.) Heat-stressed state of a rectangular plate under the action of a multistage heat source. (Russian) *Dinamika i Pročnost' Mašin* No. 31 (1980), 89-96, 3. (Authors' summary) 81g:73124 73U05 (80A20)
- On determination of the temperature field of a multilayer cylinder. (Russian) *Dinamika i Pročnost' Mašin* No. 32 (1980), 37-40, 2. (Author's summary) 81h:80006 80A20
- Motreanu, Dumitru** Preringed manifolds and bundles with structure group. (Romanian summary) *Bul. Inst. Politehn. Iași Sec. I* 24(28) (1978), no. 3-4, 19-24. (Jean Pradines) 81c:58005 58A05 (58A40)
- Embeddings of C^∞ -sub-Cartesian spaces. *An. Științ. Univ. "Al. I. Cuza" Iași Sec. I a Mat. (N.S.)* 25 (1979), no. 1, 65-70. (P. G. Walczak) 81d:58009 58A40 (58A20, 58B99)
- Singular homology of some adjunction spaces more general than CW-complexes. *An. Univ. Timișoara Ser. Științ. Mat.* 17 (1979), no. 2, 133-141. (From the text) 81m:55008 55N99 (54E60)
- Une caractérisation de certaines équivalences d'homotopie. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 291 (1980), no. 1, A53-A56. (Author's summary) 81i:55008 55P10
- Motzka, Emil** Model of U(1) chiral-symmetry breaking. *Phys. Rev. D* (3) 21 (1980), no. 12, 3401-3412. (Author's summary) 81e:1057 81D20
- de Mottoli, Piero** (with Tesi, Alberto) On the solutions of a class of nonlinear Sturm-Liouville problems. *SIAM J. Math. Anal.* 9 (1978), no. 6, 1020-1029. (Authors' summary) 81h:34031 34B25
- Über eine nichtlineare Randwertaufgabe. *Numerische Behandlung von Eigenwertaufgaben (Tagung, Tech. Univ. Clausthal, Clausthal, 1978), pp. 127-133, Internat. Schriftenreihe Numer. Math., 43, Birkhäuser, Basel, 1979. (Russell C. Thompson)* 81d:58042 58F14 (34B15)
- (with Rothe, F.) A simple system of reaction-diffusion equations describing morphogenesis: asymptotic behavior. *Ann. Mat. Pura Appl. (4)* 122 (1979), 141-157. (P. C. Fife) 81f:35067 35K55 (35B40, 92A05)
- (with Orlandi, E.; Tesi, Alberto) Asymptotic behavior for a system describing epidemics with migration and spatial spread of infection. *Nonlinear Anal.* 3 (1979), no. 5, 663-675. (From the introduction) 81a:92015 92A15 (35K55)
- (with Rothe, F.) Convergence to homogeneous equilibrium state for generalized Volterra-Lotka systems with diffusion. *SIAM J. Appl. Math.* 37 (1979), no. 3, 648-663. (J. W. Jerome) 81b:92008 92A15 (35B40, 35K60)
- (with Rothe, F.) A singular perturbation analysis for a reaction-diffusion system describing pattern formation. *Stud. Appl. Math.* 63 (1980), no. 3, 227-247. (J. Smoller) 81m:35072 35K55 (92A09)
- Mouchtari, D. H.** See Mouchtari, D. H.
- le Mouél, J. L.** See Le Mouél, J. L.
- Moulin, Hervé** Implementing efficient, anonymous and neutral social choice functions. *J. Math. Econom.* 7 (1980), no. 3, 249-269. (J. J. Buckley) 81m:90015 90A08
- See also Aubin, Jean-Pierre, 81c:4001
- Moulines, Carlos-Ulises** (with Sneed, Joseph D.) Suppes' philosophy of physics. *Patrick Suppes, pp. 59-91, Profiles, 1, Reidel, Dordrecht, 1979. (See 80m:01040)* 81B05 (01A70, 03A05)
- Moulin Ollagnier, Jean** (with Pinchon, Didier) Dynamical systems of total orders. *Ergodic theory (Proc. Conf., Math. Forschungsinst., Oberwolfach, 1978), pp. 153-162, Lecture Notes in Math., 729, Springer, Berlin, 1979. (John C. Kieffer)* 81c:43001 43A07 (28D05, 54H20)
- Moulin, Edward J., Jr.** Generalizations of the Robertson functions. *Pacific J. Math.* 81 (1979), no. 1, 167-174. (M. S. Robertson) 81c:30023 30C45 (30C50)
- Moult, A.** (with Koonin, M. L.; Markatos, N. C.; Spalding, D. Brian) Mathematical models for the prediction of thermal pollution in rivers. *Simulation of systems '79 (Proc. Ninth IMACS Congress, Sorrento, 1979), pp. 633-643, North-Holland, Amsterdam, 1980. (Authors' summary)* 81m:90038 90A30 (92A17)
- Moutrie, Benjamin** Upper bounds for port bond causal orientations of weighted junction structures. *J. Franklin Inst.* 308 (1979), no. 3, 353-359. (Author's summary) 81a:94062 94C10
- (with Rosenberg, Ronald C.) Basis order for bond graph junction structures. *IEEE Trans. Circuits and Systems* 27 (1980), no. 10, 909-920. (Authors' summary) 81i:94043 94C15
- Mout, Kenneth R.** (with Villamayor, Orlando E.) Sur les nombres de Thom-Boardman et les transformations monodiales. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 23, 1077-1079. (Authors' summary) 81i:14006 14E15
- Moustford, David** An inequality in p -functions. *Ann. Probab.* 7 (1979), no. 1, 184-185. (Editors) 81k:60077 60J27 (60K15)
- Moura, Carlos A.** (with Raupp, M. A.; Feijó, R. A.) An optimization algorithm for the pile driver problem. *Bol. Soc. Brasil. Mat.* 9 (1978), no. 2, 39-61. (Ja. I. Al'ber) 81d:49008 49A29 (49D45, 65K10, 65P05, 73K30)
- (with Raupp, M. A.; Barbetta, J. C.) Numerical study of an equation related to wave propagation. *Bol. Soc. Brasil. Mat.* 10 (1979), no. 1, 57-69. (Authors' summary) 81k:65138 65P05
- de Almeida Moura, J. E.** See de Almeida Moura, J. E.
- de Moura, Marco A.** See De Moura, Marco A.
- shafi-Mousavi, M.** See Shafi-Mousavi, M.
- Mumouris, Nick** (with Porter, A. Duane) Ranked solutions of the matrix equation $A_1X_1 = A_2X_2$. *Internat. J. Math. Math. Sci.* 3 (1980), no. 2, 293-304. (George D. Poole) 81f:15022 15A24
- (with Porter, A. Duane) Exponential sums and rectangular partitions. *Linear Algebra Appl.* 29 (1980), 347-355. (Don Redmond) 81g:10054 10G05
- Moussa, P.** (with Barnale, Michael F.; Bessis, Daniel) The Diophantine moment problem and the analytic structure in the activity of the ferromagnetic Ising model. *J. Math. Phys.* 20 (1979), no. 4, 535-546. (From the summary) 81a:82049 82A67 (44A60)
- Moustakas, E. A.** (with Davis, Artice M.) Decomposition analysis of active networks. *Internat. J. Electron.* 46 (1979), no. 5, 449-456. (Authors' summary) 81a:94043 94C05
- Moravčič, S. M.** See Moravčič, S. M.
- Morvaján, L. A.** (with Bagdov, A. G.) On the question of flexural wave propagation in nonlinear-elastic plates. (Russian. Armenian and English summaries) *Izv. Akad. Nauk Armjan. SSR Ser. Meh.* 32 (1979), no. 5, 25-37, 78. (A. Radu) 81h:73016 73D35 (73K10)
- Morvaján, L. M.** The electromagnetic field induced by a point charge in flight between two parallel plates. (Russian. Armenian and English summaries) *Izv. Akad. Nauk Armjan. SSR Ser. Fiz.* 15 (1980), no. 1, 17-21, 70. (Andrzej Zardecki) 81k:78007 78A35
- Morvák, E. E.** Extension of Lipschitzian functions. (Russian) *Mat. Zametki* 27 (1980), no. 2, 193-195, 317. (Jaroslav Smlat) 81j:26013 26B35
- Morvák, S. M.** The structure of level sets of the dual function and the convergence of some methods of convex programming. *Survey of mathematical programming (Proc. Ninth Internat. Math. Programming Sympos., Budapest, 1976), Vol. 1, pp. 291-298, North-Holland, Amsterdam, 1979. (Marco Gaviano)* 81i:90149 90C25
- Mow, Van C.** (with Lai, W. Michael) Recent developments in synovial joint biomechanics. *SIAM Rev.* 22 (1980), no. 3, 275-317. (Authors' summary) 81g:92009 92A09 (76205)
- Mower, Lyman** Projection-operator approach to perturbation theory. *Phys. Rev. A* (3) 22 (1980), no. 3, 882-897. (Author's summary) 81h:81024 81C12
- Moyer, Donald Franklin** Revolution in science: the 1919 eclipse test of general relativity. *On the path of Albert Einstein, pp. 55-101, Stud. in Nat. Sciences, 15, Plenum, New York, 1979. (See 81k:83003)* 01A60 (83-03, 83B05)
- Moylan, P.** Fiber bundles in nonrelativistic quantum mechanics. *Fortschr. Phys.* 28 (1980), no. 5, 269-284. (Author's summary) 81e:81031 81C05
- Moylan, Peter J.** (with Vannelli, Antonio; Vidyasagar, Mathukumalli) On the stability and well-posedness of interconnected nonlinear dynamical systems. *IEEE Trans. Circuits and Systems* 27 (1980), no. 11, 1097-1101. (From the conclusion) 81j:93040 93D05 (93D25)
- (with Hill, David J.) Dissipative dynamical systems: basic input-output and state properties. *J. Franklin Inst.* 309 (1980), no. 5, 327-357. (Authors' summary) 81d:93006 93A10 (58F99)
- Moylan, Richard** Conjugate transforms for τ_r semigroups of probability distribution functions. *J. Math. Anal. Appl.* 74 (1980), no. 1, 15-30. (H. Sherwood) 81f:60024 60E10 (20M20, 44A05)
- Mezjick, L.** On absolute convergence of Fourier transform for functions of two variables. *Problemy Mat. No. 1* (1977), 21-28. (S. M. Mazhar) 81h:42061 42B10
- Mözer, Jan** Supplement: "A certain Hardy-Littlewood theorem in the theory of the Riemann zeta function" [Acta Arith. 31 (1976), no. 1, 45-51; MR 55 #280]. (Russian) *Acta Arith.* 35 (1979), no. 4, 403-404. (A. I. Vinogradov) 81i:10053 10H05
- Mozgawa, Witold** Flat bundles on homogeneous spaces. *Demonstratio Math.* 12 (1979), no. 4, 947-954. (Ngô Van Quê) 81m:53040 53C05 (57R22)
- Mozzryma, J.** (with Filipowski, H.; Kruk, M.) Structure constants of algebras of projective representations of point groups. *Rep. Math. Phys.* 15 (1979), no. 3, 329-360. (J. E. Adney) 81k:20020 20C25 (20C30)
- Mrólz, Z.** (with Szegő, D.) Optimal design of vibrating beams with unspecified support reactions. *Comput. Methods Appl. Mech. Engrg.* 19 (1979), no. 3, 333-349. (Authors' summary) 81k:73054 73K40
- (with Kujawski, D.) A viscoplastic material model and its application to cyclic loading. (German summary) *Acta Mech.* 36 (1980), no. 3-4, 213-230. (Authors' summary) 81d:73031 73E05
- On hypoelasticity and plasticity approaches to constitutive modelling of inelastic behaviour of soils. *Internat. J. Numer. Anal. Methods Geomech.* 4 (1980), no. 1, 45-55. (Author's summary) 81g:73047 73E99
- Mrievič, M.** Some properties of the space 2^d of a topological R_0 -space. (Russian) *Uspehi Mat. Nauk* 34 (1979), no. 6(210), 166-170. (Stojan Nedev) 81e:54009 54B20 (54D99)
- Mrugala, F.** Modification of the "amplitude density function" method. *Acta Phys. Polon. A* 54 (1978), no. 4, 383-396. (Author's summary) 81d:81090 81F10
- Relationships among \mathcal{Q} -matrix propagation, amplitude density function and invariant imbedding methods. *Chem. Phys.* 49 (1980), no. 2, 241-246. (Author's summary) 81e:81119 81F99 (49C20, 65L1C)
- (with Peplowski, P.) Stability investigations of laser with saturable absorber. *Z. Phys. B* 38 (1980), no. 4, 359-364. (Authors' summary) 81d:81132 81K05 (81C99, 82A25)
- Mrzana, Stanislav** (with Král, Josef) Heat sources and heat potentials. (Czech summary) With a loose Russian summary. *Časopis Pěst. Mat.* 105 (1980), no. 2, 184-191, 209. (S. Dümmler) 81i:31019 31B35 (35K05)
- Ibn Mu'adh al-Jayyāni, Abū 'Abd Allāh Muhammad** See Ibn Mu'adh al-Jayyāni, Abū 'Abd Allāh Muhammad
- Mučin, A. A.** (with Ermolaeva, N. M.) Pretabular temporal logic. (Russian) *Studies in nonclassical logics and set theory (Russian), pp. 288-297, "Nauka", Moscow, 1979. (Stanislav J. Surma)* 81i:03021 03B45
- Mudholkar, Govind S.** (with Chaubey, Yogendra P.) A new approximation for Fisher's z . *Austral. J. Statist.* 20 (1978), no. 3, 250-256. (Henry R. Neave) 81j:62037 62E15 (62J99)
- (with George, E. Olusegun) The logit statistic for combining probabilities—an overview. *Optimizing methods in statistics (Proc. Internat. Conf., Indian Inst. Tech., Bombay, 1977), pp. 345-365, Academic Press, New York, 1979. (Rashid Ahmad)* 81g:62026 62E10 (62F03)
- (with Subbainah, Perla) MANOVA multiple comparisons associated with finite intersection tests. *Multivariate analysis, V (Proc. Fifth Internat. Sympos., Univ. Pittsburgh, Pittsburgh, Pa., 1978), pp. 467-482, North-Holland, Amsterdam, 1980. (Jack*

- C. Lee) **81f:62092** 62H15
(with Subbainah, Perla) Testing significance of a mean vector—a possible alternative to Hotelling's T^2 . *Ann. Inst. Statist. Math.* 32 (1980), no. 1, 43–52. (Franz Streit) **81h:62098** 62H15
- (with Trivedi, Madhusudan C.) A normal approximation for the distribution of the likelihood ratio statistic in multivariate analysis of variance. *Biometrika* 67 (1980), no. 2, 485–488. (Authors' summary) **81h:62031** 62E15 (62J05)
- Mudrinski, V. On K -theory between the products of complex projective spaces. *Topology (Proc. Fourth Colloq., Budapest, 1978), Vol. II*, pp. 869–871. *Colloq. Math. Soc. János Bolyai*, 23, North-Holland, Amsterdam, 1980. (See **81i:54001**) 55N15
- von zur Muehlen, Peter Price dispersion in atomistic competition. *Econom. Lett.* 3 (1979), no. 4, 327–332. (Author's summary) **81a:90053** 90A14
- The "flexible accelerator" and optimization with a finite horizon. *Econom. Lett.* 5 (1980), no. 1, 21–27. (Author's summary) **81i:90030** 90A11
- Mueller, A. H. (with Duncan, A.) Asymptotic behavior of composite-particle form factors and the renormalization group. *Phys. Rev. D* (3) 21 (1980), no. 6, 1636–1650. (Authors' summary) **81a:81062** 81E15
- Mueller, Ivan I. (with Grafarend, Erik W.; Papo, Haim B.; Richter, Burghard) Concepts for reference frames in geodesy and geodynamics: the reference directions. *Bull. Géodésique* 53 (1979), no. 3, 195–213. (Z. Nádeník) **81h:86005** 86A30 (53A05, 53A99)
- Mueller, Thomas (with Cohen, Joel E.; Komlós, János) The probability of an interval graph, and why it matters. *Relations between combinatorics and other parts of mathematics (Proc. Sympos. Pure Math., Ohio State Univ., Columbus, Ohio, 1978), pp. 97–115 (loose errata)*. *Proc. Sympos. Pure Math., XXXIV, Amer. Math. Soc., Providence, R.I., 1979*. (Authors' summary) **81h:05009** 05C99 (92A17)
- Mueller, Thomas J. Application of numerical methods to physiological flows. *Numerical methods in fluid dynamics*, pp. 89–154. Hemisphere, Washington, D.C., 1978. (See **80e:76002**) 76Z05
- Mummenberger, T. B. (with Marr, J. M.) Betweenness in ordered spaces. *J. Indian Math. Soc. (N.S.)* 42 (1978), no. 1–4, 157–172 (1979). (H. A. Priestley) **81a:54028** 54F05 (06A10, 54F15)
- Murfi, I. H. An example of a fold catastrophe in population biology. *Appl. Math. Notes* 4 (1979), no. 2, 65–71. (I. Stewart) **81h:59016** 58C28 (92A17)
- Musler, Dale H. The discrete Paley-Wiener theorem. *J. Math. Anal. Appl.* 75 (1980), no. 1, 172–179. (Wazir Hasan Abdi) **81m:30052** 30G25 (39A12, 42A38)
- Musual, Cristina (with Lipiski, Witold, Jr.; Lodi, Elena; Luccio, Fabrizio; Pagli, Linda) On two-dimensional data organization. II. *Fund. Inform.* (4) 2 (1978/79), no. 3, 245–260. (Authors' summary) **81j:68034** 68B15 (68H05)
- Musierza, R. (with Garcia de Jalón, J.) On the mini-computer solution of large systems of linear equations arising from the finite element method. *Appl. Math. Modelling* 4 (1980), no. 5, 381–388. (Authors' summary) **81j:65056** 65F10 (65–04, 65N30)
- Muskhelishvili, E. (with Dzuraev, S.) Some properties of a pseudoinverse operator. (Russian. Tajiki summary) *Dokl. Akad. Nauk Tadzhik. SSR* 23 (1980), no. 1, 3–5. (J. Kolomyj) **81f:47002** 47A05
- Muskhelishvili, R. Limit distributions of a statistical estimate of entropy in the case of a binomial scheme. (Russian) *Izv. Akad. Nauk UzSSR Ser. Fiz.-Mat. Nauk* 1980, no. 1, 10–15, 95. (V. D. Konakov) **81j:62039** 62E20
- Muskhelishvili, K. (with Dilmurodov, N.) Asymptotic behavior of the boundary between a gas and a liquid in motion of a pressure jump along the surface of a film of liquid. (Russian) *Research in mathematics and physics (Russian)*, pp. 44–49, 145. *Taškent. Gos. Ped. Inst., Tashkent*, 1979. (Authors' summary) **81m:76011** 76B99 (76L05)
- abu-Muhanna, Yusuf See Abu-Muhanna, Yusuf
- Muskhelishvili, N. M. (with Nazirov, Š.) Computerized recognition of closed plane domains. (Russian) *Voprosy Vychisl. i Prikl. Mat. (Tashkent)* No. 53 (1978), 96–107, 182. (V. A. Kovalevskii) **81i:68097** 68E99 (51–04)
- (with Sadykov, M. K.; Hužanov, U.) Formalization on a computer of the theory of stability of difference schemes. (Russian) *Voprosy Vychisl. i Prikl. Mat. (Tashkent)* No. 57 (1979), 52–62, 168–169. (Murlu M. Gupta) **81f:65075** 65N15 (65J10, 65V05)
- Mushin, A. B. Smoothing of compositions of distributions. (Russian) *Izv. Akad. Nauk UzSSR Ser. Fiz.-Mat. Nauk* 1979, no. 3, 14–20, 98. (Zdzisław Rychlik) **81h:60032** 60F05 (60G50)
- Mushin, A. I. Solution of coefficientless equations in finitely determined quasigroups. (Russian) *Quasigroups and loops. Mat. Issled.* No. 51 (1979), 105–119, 164–165. (Miklós Csikós) **81c:20053** 20N05 (39B50)
- Mushin, E. G. (with Zulkov, Ju. G.) Possibilities of dialogue solution of the problem of analysis of the reliability of complex systems. (Russian) *Stochastic optimization models. Akad. Nauk Ukrain. SSR Inst. Kibernet. Preprint* 1979, no. 13, 20–29, 54. (Authors' summary) **81d:90052** 90B25
- Mushin, Ju. N. Locally compact groups of finite rank. (Russian) *Algebra i Logika* 17 (1978), no. 4, 416–435, 490. (M. I. Kabenjuk) **81f:22004** 22D05
- (with Feiman, M. Ju.) Solvable topological groups of Mal'cev type. (Russian) *Ural. Gos. Univ. Mat. Zap.* 11 (1978), no. 1, 125–136, iii. (K. Strambach) **81d:22004** 22D05
- Topological groups whose nonnilpotent subgroups are all invariant. (Russian) *Ural. Gos. Univ. Mat. Zap.* 11 (1979), no. 3, *Issled. po Sovremen. Algebre*, 127–139, 212. (K. A. Ross) **81h:22002** 22D05
- Mushin, V. I. Some properties of one class of control systems that operate in stationary random media. *Problemy Peredachi Informacii* 16 (1980), no. 1, 84–92. (Russian); translated as *Problems Inform. Transmission* 16 (1980), no. 1, 59–65. (Author's summary) **81j:93051** 93E03 (68D25, 92A25)
- Mushin, V. V. Invariant measures on semigroups and imbedding of topological semigroups in topological groups. (Russian) *Mat. Sb. (N.S.)* 112(154) (1980), no. 2(6), 295–303. (M. M. Day) **81h:43003** 43A05 (22A20, 28C10)
- (with Mizgallov, V. N.) An iterative algorithm for the solution of a system of linear equations with a constraint on the norm of the solution. (Russian) *Ž. Vychisl. Mat. i Mat. Fiz.* 20 (1980), no. 3, 760–762, 814. (Janusz Mika) **81h:65031** 65F10
- Mushitdinov, T. M. Random oscillations of systems with impulse action. (Russian) *Asymptotic methods of nonlinear mechanics (Russian)*, pp. 97–106, 196. *Akad. Nauk Ukrain. SSR, Inst. Mat., Kiev*, 1979. (V. G. Kolomeic) **81c:34043** 34F05 (60H10, 70L05)
- Mühlbacher, Jörg Magische Quadrate und ihre Verallgemeinerung: ein graphentheoretisches Problem. (English summary) *Graphs, data structures, algorithms (Proc. Workshop, Graphtheoretic Concepts in Comput. Sci., Erlangen, 1978), pp. 45–64*. *Applied Comput. Sci.*, 13, Hanser, Munich, 1979. (J. Sedláček) **81d:05069** 05C99
- Mühlmann, H.-B. Bounds for the solutions of a class of nonselfadjoint boundary value problems. *Numerical methods in geomechanics, Aachen 1979 (Proc. Third Internat. Conf., Aachen, 1979), Vol. IV*, pp. 1265–1272. *Balkema, Rotterdam*, 1980. (See **81m:73009**) 73C99
- Mühlschlegel, B. (with Entel, P.; Ono, Y.) On the electrical conductivity of intermediate valence compounds. *Z. Phys. B* 38 (1980), no. 3, 227–234. (Authors' summary) **81d:82051** 82A55
- Muhly, Paul S. (with Loeb, Richard I.) Analyticity and flows in von Neumann algebras. *J. Funct. Anal.* 29 (1978), no. 2, 214–252. (Authors' summary) **81h:46080** 46L10 (46L55)
- Muhometov, R. G. (with Romanov, V. G.) On the problem of finding an isotropic Riemannian metric in an n -dimensional space. (Russian) *Dokl. Akad. Nauk SSSR* 243 (1978), no. 1, 41–44. (J. Szente) **81a:53059** 53C65 (53C21)
- (with Romanov, V. G.) Correction to: "On the problem of finding an isotropic Riemannian metric in an n -dimensional space" [Dokl. Akad. Nauk SSSR 243 (1978), no. 1, 41–44; MR 81a:53059]. (Russian) *Dokl. Akad. Nauk SSSR* 245 (1979), no. 2, 280. (Editors) **81m:53070** 53C65
- Muhomov, M. A. Attainable sets of differential inclusions. (Russian. Tajiki summary) *Dokl. Akad. Nauk Tadzhik. SSR* 22 (1979), no. 8, 459–462. (P. Brunovsky) **81g:34088** 34H05 (34A60, 49E15)
- A generalization and new proof of a theorem on the existence of a continuous projection. (Russian) *Mat. Zametki* 26 (1979), no. 3, 411–415, 493. (P. S. Kenderov) **81f:47055** 47H09 (47H99)
- Muhstarov, G. I. Fourier-Jacobi coefficients. (Russian) *Azerbaidžan. Gos. Univ. Učen. Zap.* 1978, no. 4, 19–24. (H. J. Landau) **81g:42005** 42A10
- Muhstarov, H. Š. (with Guseinov, A. I.) Application of the monotone operator method to a class of integral equations. (Russian. Azerbaijani and English summaries) *Akad. Nauk Azerbaidžan. SSR Dokl.* 35 (1979), no. 3, 3–6. (C. Avramescu) **81f:45003** 45B05 (45G05, 47H05)
- Mui, J. K. (with Fu, King Sun) A survey on image segmentation. *Pattern Recognition* 13 (1981), no. 1, 3–16. (Authors' summary) **81m:68071** 68G10 (92A07)
- Muir, A. (with Warner, M. W.) Homogeneous tolerance spaces. *Czechoslovak Math. J.* 30(105) (1980), no. 1, 118–126. (A. Császár) **81c:54005** 54A05 (90A06)
- Muirhead, Robb J. (with Waternaux, Christine M.) Asymptotic distributions in canonical correlation analysis and other multivariate procedures for nonnormal populations. *Biometrika* 67 (1980), no. 1, 31–43. (I. Olkin) **81g:62089** 62H10 (62F35)
- Mujica, Jorge The Oka-Weil theorem in locally convex spaces with the approximation property. *Séminaire Paul Krée, 4e année: 1977–1978. Equations aux dérivées partielles en dimension infinie, Exp. No. 3, 7 pp.*, Secrétariat Math., Paris, 1979. (Jean-François Colombeau) **81a:32014** 32E30 (46G20)
- Spaces of germs of holomorphic functions. *Studies in analysis*, pp. 1–41. *Advances in Math., Suppl. Studies, A, Academic Press, New York*, 1979. (Martin Schottenloher) **81h:46054** 46G20 (32A10, 46E10, 58B12)
- Mukai, H. A scheme for determining stepsizes for unconstrained optimization methods. *IEEE Trans. Automat. Control* 23 (1978), no. 6, 987–995. (Author's summary) **81g:65084** 65K10 (90C30)
- Algorithms for multicriterion optimization. *IEEE Trans. Automat. Control* 25 (1980), no. 2, 177–186. (Joachim Hirsche) **81g:90091** 90C31
- Mukaidono, Masao The B -ternary logic and its applications to the detection of hazards in combinational switching circuits. *Proceedings of the Eighth International Symposium on Multiple-Valued Logic (Rosemont, Ill., 1978)*, pp. 269–275. *IEEE, Long Beach, Calif.*, 1978. (Author's summary) **81h:94070** 94C10 (03B50)
- A necessary and sufficient condition for fuzzy logic functions. *Proceedings of the Ninth International Symposium on Multiple-Valued Logic (Bath, 1979)*, pp. 159–166. *IEEE, Long Beach, Calif.*, 1979. (W. Wechler) **81d:03026** 03B52 (03E72, 94D05)
- Mukamel, David (with Domany, Eytan; Schwimmer, Adam) Phase diagram of the $Z(5)$ model on a square lattice. *J. Phys. A* 13 (1980), no. 9, L311–L320. (Authors' summary) **81g:82018** 82A25 (82A67)
- Mukherjee, Rahul Inter-effect-orthogonality in factorial experiments. *Calcutta Statist. Assoc. Bull.* 28 (1979), no. 109–112, 83–108. (K. Vijayan) **81h:62108** 62K15
- Further results on the analysis of factorial experiments. *Calcutta Statist. Assoc. Bull.* 29 (1980), no. 113–114, 1–26. (U. B. Paik) **81m:62145** 62K15
- Mukherjee, Arunava Limit theorems: stochastic matrices, ergodic Markov chains, and measures on semigroups. *Probabilistic analysis and related topics, Vol. 2*, pp. 143–203. *Academic Press, New York*, 1979. (H. Heyer) **81i:60013** 60B15 (60J10, 60J15)
- (with Högnäs, Göran) Recurrent random walks and invariant measures on semigroups of $n \times n$ matrices. *Math. Z.* 173 (1980), no. 1, 69–94. (René Schott) **81m:60131** 60J15 (60B15)
- Mukherjee, A. (with Dutta, M.) On a classification of integral transforms after their abstract structure. *Bull. Calcutta Math. Soc.* 69 (1977), no. 2, 97–102. (B. S. Tavathia) **81c:44001** 44A05
- Constraints on a class of Yang-Mills configurations. *Phys. Rev. D* (3) 21 (1980), no. 10, 2934–2939. (Author's summary) **81g:81055** 81E10
- Mukherjee, R. N. Background to the discovery of the symbol for zero. *Proceedings of the Symposium on the 1500th Birth Anniversary of Āryabhaṭa I (New Delhi, 1976)*. *Indian J. Hist. Sci.* 12 (1977), no. 2, 225–231. (C. R. Fletcher) **81c:01013** 01A32
- On some trace class integral operators. *Tamkang J. Math.* 9 (1978), no. 2, 195–198. (J. Donig) **81i:45026** 45P05 (47G05)
- On reducing subspaces of completely nonnormal operators. *Indian J. Pure Appl. Math.* 10 (1979), no. 4, 493–495. (Author's summary) **81h:47031** 47B20
- A note on subnormal operators with finite rank self-commutator. *Indian J. Pure Appl. Math.* 10 (1979), no. 4, 505–507. (Author's summary) **81m:47036** 47B20
- Mixed semigroups of operators on a locally convex space. *Indian J. Pure Appl. Math.* 10 (1979), no. 7, 859–866. (J. Kiszyński) **81a:47040** 47D05
- A note on similarity of operators and related results. *Indian J. Pure Appl. Math.* 11 (1980), no. 4, 518–521. (N. K. Thakare) **81d:47012** 47A65 (47A12)

- Mukherjee, S. P. A note on the sum of ordered variate densities with its application in reliability theory. *Calcutta Statist. Assoc. Bull.* 28 (1979), no. 109-112, 143-146. (E. El-Newehi) **81k:62072** 62H10 (62N05)
- Mukhin, V. I. See Mukhin, V. I.
- Mukhopadhyay, Amar A fast algorithm for the longest-common-subsequence problem. *Inform. Sci.* 20 (1980), no. 1, 69-82. (J. K. Lenstra) **81k:68033** 68C05 (68C25)
- Mukhopadhyay, Nils Fixed size simultaneous confidence region for mean vector and dispersion of a multinormal distribution. *Calcutta Statist. Assoc. Bull.* 28 (1979), no. 109-112, 147-150. (R. A. Wijsman) **81j:62165** 62L12 (62F25)
- (with Ghosh, Malay) Sequential point estimation of the mean when the distribution is unspecified. *Comm. Statist. A—Theory Methods* 8 (1979), no. 7, 637-652. (B. Ja. Levit) **81a:62029** 62G05 (62L12)
- (with Ghosh, J. K.) Sequential procedures in identification. *Comm. Statist. A—Theory Methods* 9 (1980), no. 15, 1625-1639. (Rasul A. Khan) **81j:62158** 62L10 (62L99)
- Mukhopadhyay, Parimal (with Chaudhuri, Arijit) A note on how to choose the sample size for Horvitz-Thompson estimation. *Calcutta Statist. Assoc. Bull.* 27 (1978), no. 105-108, 149-154 (1979). (Nanak Chand) **81d:62008** 62D05
- Mukhopadhyay, S. N. On the Abel limit of the terms of trigonometric series. *J. London Math. Soc.* (2) 20 (1979), no. 2, 319-326. (Naza Tanović-Müller) **81c:42011** 42A24 (40G10)
- Mukhopadhyay, Arup Note on the extensional vibration of a thin isotropic nonhomogeneous circular plate with a central hole. *Rev. Roumaine Sci. Tech. Sér. Méc. Appl.* 24 (1979), no. 3, 507-513. (J. Ignaczak) **81f:73029** 73K12
- Mukminov, F. H. Behavior as $t \rightarrow \infty$ of solutions of the first mixed problem for the heat equation in domains that are unbounded with respect to the space variables. (Russian) *Differentsial'nye Uravneniya* 15 (1979), no. 11, 2021-2033, 2109. (M. A. Atahodzaev) **81b:35041** 35K05 (35B40)
- Stabilization of the solutions of the first mixed problem for a second-order parabolic equation. (Russian) *Mat. Sb. (N.S.)* 111(153) (1980), no. 4, 503-521, 623. (L. I. Rubinstein) **81c:35059** 35K20
- Muknoed, A. P. A variant of the refined theory of shells. (Russian) *Prikl. Meh.* 15 (1979), no. 12, 43-50, 141. (Szczepan Borkowski) **81e:73067** 73L10 (35J20)
- Mukunda, N. Phase space methods and the Hamilton-Jacobi form of dynamics. *Proc. Indian Acad. Sci. Sect. A* 87 (1978), no. 5, 85-105. (Demeter Krupka) **81f:58021** 58F05 (70H20, 81C05)
- (with Sudarshan, E. C. G.; Sharma, J. K.; Mehta, C. L.) Representations and properties of para-Bose oscillator operators. I. Energy position and momentum eigenstates. *J. Math. Phys.* 21 (1980), no. 9, 2386-2394. (F. R. Halpern) **81k:81033** 81C40 (17B10, 22E70, 81D05)
- (with van Dam, H.; Biedenharn, L. C.) Composite systems viewed as relativistic quantal rotators: vectorial and spinorial models. *Phys. Rev. D* (3) 22 (1980), no. 8, 1938-1951. (Hsin-Yang Yeh) **81k:81034** 81C40 (81F30)
- Generators of symmetry transformations for constrained Hamiltonian systems. *Phys. Scripta* 21 (1980), no. 6, 783-791. (Frans Cantrijn) **81c:58039** 58F05 (70H99)
- Time-dependent constraints in classical dynamics. *Phys. Scripta* 21 (1980), no. 6, 801-804. (Frans Cantrijn) **81c:70014** 70H99 (58F05)
- Mukundan, Rangaswamy (with Lovass-Nagy, Victor; Müller, Richard J.) On the application of matrix generalized inverses to the design of observers for time-varying and time-invariant linear systems. *IEEE Trans. Automat. Control* 25 (1980), no. 6, 1213-1218. (Authors' summary) **81m:93017** 93B07 (15A09)
- (with Lovass-Nagy, Victor) Determination of time-exponential inputs generating time-exponential state responses for linear time-invariant control systems. *Internat. J. Control* 31 (1980), no. 1, 153-158. (D. H. Chyung) **81b:93039** 93C45
- Mulak, Stanley A. (with McDonald, Roderick P.) The effect of additional variables on factor indeterminacy in models with a single common factor. *Psychometrika* 43 (1978), no. 2, 177-192. (Authors' summary) **81k:62082** 62H25
- Muller, Martya Ramsey theory. Packing and covering in combinatorics. pp. 107-117, *Math. Centre Tracts*, 106, Math. Centrum, Amsterdam, 1979. (See **81b:05001**) 05C55 (0, λ)-graphs and n -cubes. *Discrete Math.* 28 (1979), no. 2, 179-188. (Diane Johnson) **81m:05120** 05C99
- n -cubes and median graphs. *J. Graph Theory* 4 (1980), no. 1, 107-110. (Author's summary) **81a:05081** 05C38
- Müller, Tomasz On compilation of parallel programs. *Fundamentals of computation theory (Proc. Conf. Algebraic, Arith. and Categorical Methods in Comput. Theory, Berlin/Wendisch-Rietz, 1979)*, pp. 295-300, Math. Research, 2, Akademie-Verlag, Berlin, 1979. (From the introduction) **81b:68028** 68B20
- Muldoon, M. E. An infinite system of equations characterizing the zero of Bessel functions. *Lett. Nuovo Cimento* (2) 23 (1978), no. 12, 447-448. (A. de Castro Brzezicki) **81b:33012** 33A40
- Muldoway, James S. Linear differential inequalities. *SIAM J. Math. Anal.* 9 (1978), no. 1, 106-120. (K. Schmitt) **81c:34007** 34A40
- Mulholland, Robert J. (with Weidner, Richard J.) Kronecker product representation for the solution of the general linear matrix equation. *IEEE Trans. Automat. Control* 25 (1980), no. 3, 563-564. (D. P. Rasković) **81b:15003** 15A06 (93C15)
- Mullere, Pietro The rank order distribution of observations drawn from a population with a random distribution function chosen according to a Dirichlet process. (Italian. English and French summaries) *Statistica (Bologna)* 40 (1980), no. 2, 223-233. (J. Tiago de Oliveira) **81j:62092** 62G30
- Mulla, F. S. (with Pareek, C. M.) On 3-regular graphs. (French summary) *Problèmes combinatoires et théorie des graphes (Colloq. Internat. CNRS, Univ. Orsay, Orsay, 1976)*, pp. 301-303, Colloques Internat. CNRS, 260, CNRS, Paris, 1978. (V. Krishnamoorthy) **81c:05085** 05C99
- Mullat, I. E. Stable coalitions in monotonic games. *Automat. i Telemekh.* 1979, no. 10, 84-94. (Russian. English summary); translated as *Automat. Remote Control* 40 (1979), no. 10, part 1, 1469-1478 (1980). (Author's summary) **81b:90170** 90D12 (90D35)
- Mullen, Gary L. Equivalence classes of matrices over a finite field. *Internat. J. Math. Math. Sci.* 2 (1979), no. 3, 487-491. (M. Shafqat Ali) **81f:15026** 15A33
- Local permutation polynomials over Z_p . *Fibonacci Quart.* 18 (1980), no. 2, 104-108. (J. B. Kelly) **81b:05006** 05A05 (05B15, 12C05)
- Mullen, K. A note on Bernstein's bivariate inequality. *Canad. Math. Bull.* 22 (1979), no. 3, 371-375. (F. Móricz) **81a:60026** 60E15
- Müller, A. M. K. (with Siedentop, H. K. H.) On the relation between k -body interaction and k -particle density. *Phys. Lett. A* 81 (1981), no. 1, 5-8. (Authors' summary) **81m:82014** 82A15 (47A70)
- Müller, Andreas H. Existenz schwacher Lösungen des Frankl-Morawetz-Problems in R^2 . *Math. Nachr.* 94 (1980), 97-106. (N. N. Janenko) **81j:35041** 35J25 (35M05)
- Kleebusch-Müller, B. D. See Kleebusch-Müller, B. D.
- Müller, Bernd Convergence tensor products and a strict topology. *Bull. Austral. Math. Soc.* 21 (1980), no. 2, 281-301. (D. G. Tacon) **81j:46014** 46A32 (15A04, 57N17)
- Müller, Bernd (with Soffel, Michael; Greiner, Walter) Radiation and the structure of space-time. *Gen. Relativity Gravitation* 12 (1980), no. 4, 287-303. (Beverly K. Berger) **81f:83018** 83C35 (53B50)
- Müller, Bruno J. Two-sided localization in Noetherian PI-rings. *Ring theory (Proc. Antwerp Conf. (NATO Adv. Study Inst.), Univ. Antwerp, Antwerp, 1978)*, pp. 169-190, *Lecture Notes in Pure and Appl. Math.*, 51, Dekker, New York, 1979. (A. Verschoren) **81b:16008a** 16A08 (16A33)
- Two-sided localization in Noetherian PI-rings. *J. Algebra* 63 (1980), no. 2, 359-373. (A. Verschoren) **81b:16008b** 16A08 (16A33)
- Müller, C. (with Kersten, Heinrich) Zwei Klassen vollständiger Funktionensysteme zur Behandlung der Randwertaufgaben der Schwingungsgleichung $\Delta U + k^2 U = 0$. (English summary) *Math. Methods Appl. Sci.* 2 (1980), no. 1, 48-67. (E. Kreszsig) **81k:35037** 35J05
- (with Richberg, R.) Über die Radon-Transformation kreissymmetrischer Funktionen und ihre Beziehung zur Sommerfeldschen Theorie der Hankelfunktionen. (English summary) *Math. Methods Appl. Sci.* 2 (1980), no. 1, 108-129. (I. Fenyő) **81k:44006** 44A20 (33A40)
- Müller, D. W. Asymptotically multinomial experiments and the extension of a theorem of Wald. *Z. Wahrsch. Verw. Gebiete* 50 (1979), no. 2, 179-204. (H. Heyer) **81j:62017** 62B15 (62B10)
- Müller, G. O. On nonlinear α -contractions. *Arch. Math. (Basel)* 34 (1980), no. 2, 149-156. (J. Dancs) **81m:47078** 47H09 (47H15)
- Müller, George M. Spline filters. *Information linkage between applied mathematics and industry (Proc. First Annual Workshop, Naval Postgraduate School, Monterey, Calif., 1978)*, pp. 459-466, Academic Press, New York, 1979. (Author's summary) **81c:94006** 94A05 (65D07)
- Müller, Gisela (with Reinermann, Jochen) Eine Charakterisierung strikt-konvexer Banach-Räume über einen Fixpunktsatz für nichtexpansive Abbildungen. *Math. Nachr.* 93 (1979), 239-247. (S. Swaminathan) **81j:47044** 47H09 (47H10)
- Müller, Hans-Georg (with Gasser, Theo) Kernel estimation of regression functions. *Smoothing techniques for curve estimation (Proc. Workshop, Heidelberg, 1979)*, pp. 23-68, *Lecture Notes in Math.*, 757, Springer, Berlin, 1979. (Wolfgang Wertz) **81k:62052** 62G05
- (with Gasser, Theo) Optimal convergence properties of kernel estimates of derivatives of a density function. *Smoothing techniques for curve estimation (Proc. Workshop, Heidelberg, 1979)*, pp. 144-154, *Lecture Notes in Math.*, 757, Springer, Berlin, 1979. (R. H. Farrell) **81k:62051** 62G05
- Müller, Hans Robert Zum Satz von Holditch. *Contributions to geometry (Proc. Geom. Sympos., Siegen, 1978)*, pp. 330-334, Birkhäuser, Basel, 1979. (W. J. Firey) **81d:53004** 53A17
- Räumliche Gegenstücke zum Satz von Holditch. *Abh. Braunschweig. Wiss. Ges.* 30 (1979), 54-61. (Hellmuth Stachel) **81c:53011** 53A17
- Müller, Heinz (with Greenberg, Joseph) Equilibria under price rigidities and externalities. *Game theory and related topics (Proc. Sem., Bonn and Hamburg, 1978)*, pp. 291-300, North-Holland, Amsterdam, 1979. (J. Rosenmüller) **81b:90030** 90A14
- Théorèmes de décomposition pour les paires de groupes. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 289 (1979), no. 5, A307-A309. (Author's summary) **81f:20005** 20J05
- Finanzierungsverfahren der Sozialversicherung in einem offenen und einem geschlossenen System. (French and English summaries) *Mitt. Verein. Schweiz. Versicherungsmath.* 1980, no. 1, 105-134. (H. L. Seal) **81j:90032** 90A16
- Müller, Helmut Eine Bemerkung zur Zahlentheorie auf freien Halbgruppen. *Mitt. Math. Ges. Hamburg* 10, no. 6, 459-469 (1978). (H. G. Diamond) **81b:10066** 10H40
- Müller, Horst Decidability of reachability in persistent vector replacement systems. *Mathematical foundations of computer science, 1980 (Proc. Ninth Sympos., Rydzyna, 1980)*, pp. 426-438, *Lecture Notes in Comput. Sci.*, 88, Springer, Berlin, 1980. (See **81k:68003**) 68B20
- Müller, Ingo Entropy in nonequilibrium—a challenge to mathematicians. *Trends in applications of pure mathematics to mechanics, Vol. II (Second Sympos., Kacivnik, 1977)*, pp. 281-295, *Monographs and Studies in Math.*, 5, Pitman, London, 1979. (K. S. Harinath) **81c:80002** 80A10 (35R45, 82A35)
- Stress and heat flux in a dumbbell solution. (Polish and Russian summaries) *Arch. Mech. (Arch. Mech. Stos.)* 31 (1979), no. 2, 233-249. (V. P. Milant'ev) **81b:78005** 73B99
- A model for a body with shape-memory. *Arch. Rational Mech. Anal.* 70 (1979), no. 1, 61-77. (R. R. Huigol) **81c:73023** 73E05 (34C15)
- Müller, Iris Intégrales d'entrelacement pour un groupe de Chevalley sur un corps p -adique. *Séminaire harmonique sur les groupes de Lie (Sém., Nancy-Strasbourg 1976-1978), II*, pp. 367-403, *Lecture Notes in Math.*, 739, Springer, Berlin, 1979. (Allan J. Silberger) **81f:22032** 22E50
- Müller, Jacques (with Ealing, Claude; Bunge, Hans-Joachim) Description de la texture par des fonctions de distribution sur l'espace des transformations orthogonales. Implications du centre d'inversion. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 291 (1980), no. 11, B263-B266. (Authors' summary) **81k:82033** 82A50 (22E70)
- Müller, Jürgen (with Schwalbach, Joachim) On the use of nonlinear location models to evaluate the structural efficiency of an industrial sector. *J. Oper. Res. Soc.* 32 (1981), no. 1, 3-10. (Authors' summary) **81k:90020** 90A11
- Müller, Kurt See Leibniz, Gottfried Wilhelm, **81f:01048**
- Müller, Manfred W. On the degree of L_2 -approximation by integral Schoenberg splines. *Fourier analysis and approximation theory (Proc. Colloq., Budapest, 1976), Vol. II,*

- pp. 565-570, *Colloq. Math. Soc. János Bolyai*, 19, North-Holland, Amsterdam, 1978. (L. L. Schumaker) **81k:41079** 41A65 (41A15, 41A35)
- On a modification of the Prandtl system of boundary layer theory for the steady-state flow around a plane profile. (Russian. English summary) Boundary value problems of mathematical physics and related questions in the theory of functions, 11. *Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* **94** (1979), 174-184, 313, 319. (Djordje Đukić) **81d:76037** 76D10
- Müller, Marie-Paule Sur les composantes de Novikov des feuilletages. *Topology* **19** (1980), no. 2, 199-201. (Elmar Vogt) **81k:57026** 57R30
- Müller, Michael R. (with Marsten, Roy E.) A mixed-integer programming approach to air cargo fleet planning. *Management Sci.* **26** (1980), no. 11, 1096-1107. (Authors' summary) **81k:90051** 90B35 (90C35)
- Müller, P. (with Chang, I. Chen) The ancient Chinese pearl in number theory—the Chinese remainder theorem. *Internat. J. Math. Ed. Sci. Tech.* **11** (1980), no. 4, 545-556. (K. Masuda) **81m:01004** 01A25 (01A10)
- Müller, P. C. (with Popp, K.) Kovarianzanalyse von linearen Zufallschwingungen mit zeitlich verschobenen Erregerprozessen. *Z. Angew. Math. Mech.* **59** (1979), no. 5, T144-T146. (From the text) **81c:70020** 70L05 (93E03)
- Müller, P. H. (with Dathe, E. M.) A contribution to spline-regression. (German summary) *Biometrical J.* **22** (1980), no. 3, 259-269. (Frederick N. Fritsch) **81b:62110** 62J02
- Müller, Patrick (with Germain, Paul) ★Introduction à la mécanique des milieux continus. (French) [Introduction to the mechanics of continuous media] Masson, Paris, 1980. viii + 344 pp. ISBN 2-225-65197-3 (R. R. Huilgol) **81m:73001** 73-01 (00A69, 73B99)
- Müller, Rolf A. Adaptive stochastic state space models for population forecasting. *Systems analysis and simulation, 1980 (Proc. Internat. Sympos., Berlin, 1980)*, pp. 487-491. *Math. Research, 5*, Akademie-Verlag, Berlin, 1980. (Author's summary) **81m:92045** 92A15 (93E14, 93E25)
- Müller, V. F. (with Dosch, H. G.) Lattice gauge theory in two spacetime dimensions. *Fortschr. Phys.* **27** (1979), no. 11-12, 547-559. (Authors' summary) **81i:10069** 81E99
- Müller, Vladimir On domination problem in Banach algebras. *Comment. Math. Univ. Carolin.* **20** (1979), no. 3, 475-481. (M. Rajagopalan) **81c:46043** 46H10
- Müller, W.-D. (with Baumer, H.; Braun, P.; Glos, E.; Stoyan, Gisbert) Modelling and computation of water quality problems in river networks. *Optimization techniques (Proc. Ninth IFIP Conf., Warsaw, 1979, Part 2, pp. 482-491, Lecture Notes in Control and Information Sci., 23, Springer, Berlin, 1980. (See 81j:49011b))* 90A30
- Müller, Werner Experiences on numerical calculation of fields. *Numerical treatment of differential equations in applications (Proc. Meeting, Math. Res. Center, Oberwolfach, 1977)*, pp. 93-103. *Lecture Notes in Math.*, 679, Springer, Berlin, 1978. (Editors) **81j:78006** 78A25 (65P05)
- Müller, Winfried B. Über die Kettenregel in Fastringen. *Abh. Math. Sem. Univ. Hamburg* **48** (1979), 108-111. (G. Betsch) **81c:16051** 16A76
- Müller, Xavier (with Burkhardt, Hans) On invariant sets of a certain class of fast translation-invariant transforms. *IEEE Trans. Acoust. Speech Signal Process.* **28** (1980), no. 5, 517-523. (Authors' summary) **81k:94005** 94A11
- Müller-Funk, U. Nonparametric sequential tests for symmetry. *Z. Wahrsch. Verw. Gebiete* **46** (1979), no. 3, 325-342. (Malay Ghosh) **81c:62093** 62L10 (62G10)
- (with Bönser, N.; Witting, H.) A Chernoff-Savage theorem for correlation rank statistics with applications to sequential testing. *Asymptotic theory of statistical tests and estimation (Proc. Adv. Internat. Sympos., Univ. North Carolina, Chapel Hill, N.C., 1979)*, pp. 85-125. Academic Press, New York, 1980. (I. R. Savage) **81f:62073** 62G10 (62L10)
- Müller-Herold, U. Disjointness of β -KMS states with different chemical potential. *Lett. Math. Phys.* **4** (1980), no. 1, 45-48. (Author's summary) **81b:82002** 82A15
- Müller-Horrig, Volker Zur Spektraltheorie abgeschlossener Operatoren mit nichtleerer Fredholmmenge. *J. Reine Angew. Math.* **311/312** (1979), 330-346. (Harro Heuser) **81c:47018** 47A60 (47A10, 47A53)
- Müller-Kirsten, H. J. W. (with Kaushal, R. S.) Explicit normalization of bound-state wave functions and the calculation of decay widths. *J. Math. Phys.* **20** (1979), no. 11, 2233-2243. (B. A. Hargrave) **81a:81021** 81C05 (34E20, 81G25)
- Müller-Pfeiffer, Erich Über die Kompaktheit von Einbettungen Sobolevskischer Räume. *Beiträge Anal.* **10** (1979), 41-46. (K. Kutzler) **81f:46045** 46E35
- Mullikin, T. W. Wiener-Hopf factorizations: computational methods for a class of matrix functions. *J. Integral Equations* **1** (1979), no. 3, 217-240. (M. Z. Nashed) **81i:45020** 45L05 (45E10)
- Mullin, Ronald C. (with Vanstone, S. A.) Embedding the pseudocomplement of a quadrilateral in a finite projective plane. *Second International Conference on Combinatorial Mathematics (New York, 1978)*, pp. 405-412. *Ann. New York Acad. Sci.*, 319, New York Acad. Sci., New York, 1979. (Jim Totten) **81f:05037** 05B25 (51A45)
- A ring partition construction for BIBDs. (Spanish summary) *Rev. Téc. Fac. Ingr. Univ. Zulia* **2** (1979), no. 1-2, 95-104. (Dieter Jungnickel) **81a:05018** 05B05 (05B10)
- (with Schellenberg, P. J.; Stinson, Douglas; Vanstone, S. A.) Some results on the existence of squares. *Combinatorial mathematics, optimal designs and their applications (Proc. Sympos. Combin. Math. and Optimal Design, Colorado State Univ., Fort Collins, Colo., 1978)*. *Ann. Discrete Math.* **6** (1980), 257-274. (Helen Skala) **81m:05036** 05B15
- See also Proceedings: Southeastern Conference on Combinatorics, Graph Theory and Computing, **81b:05004**
- Mullis, T. (with Greated, C. A.) Oscillatory flow in curved pipes. II. The fully developed case. *J. Fluid Mech.* **98** (1980), no. 2, 397-416. (Authors' summary) **81f:76017** 76D05
- Mullineux, G. A characterization of A_n by centralizers of 3-cycles. *Quart. J. Math. Oxford Ser. (2)* **29** (1978), no. 115, 263-279. (John L. Hayden) **81b:20022** 20D99 (20B35)
- On the p -cores of p -regular diagrams. *J. London Math. Soc. (2)* **20** (1979), no. 2, 222-226. (H. K. Farahat) **81a:20017** 20C30 (05A17)
- A bijection of the set of 3-regular partitions. *J. Combin. Theory Ser. A* **28** (1980), no. 2, 115-124. (A. O. Morris) **81i:05021** 05A17 (20C30)
- Mullins, W. W. (with Saker, R. F.) Proof of the symmetry of the transport matrix for diffusion and heat flow in fluid systems. *J. Chem. Phys.* **73** (1980), no. 3, 1413-1421. (Authors' summary) **81g:82030** 82A35
- Mullov, S. (with Sanginov, A.) General boundary value problem for a system of equations of composite type with multiple real characteristics. (Russian) *Differential and integral equations*, No. 1 (Russian), pp. 139-148. *Tadik. Gos. Univ., Dushanbe*, 1977. (A. Džuraev) **81b:35071** 35M05
- Mulvey, Christopher J. (with Burden, Charles W.) Banach spaces in categories of sheaves. *Applications of sheaves (Proc. Res. Sympos. Appl. Sheaf Theory to Logic, Algebra and Anal., Univ. Durham, Durham, 1977)*, pp. 169-196. *Lecture Notes in Math.*, 753, Springer, Berlin, 1979. (J. Wick Pelletier) **81b:46095** 46M20 (18F20)
- Banach sheaves. *J. Pure Appl. Algebra* **17** (1980), no. 1, 69-83. (J. Wick Pelletier) **81b:46097** 46M20 (18F20)
- Mulvey, John M. (with Jackson, Richard H. F.) A critical review of comparisons of mathematical programming algorithms and software (1953-1977). *J. Res. Nat. Bur. Standards* **83** (1978), no. 6, 563-584. (K. G. Murty) **81i:90205** 90C99 (65K05)
- Mumford, D. Hirzebruch's proportionality theorem in the noncompact case. *Invent. Math.* **42** (1977), 239-272. (A. L. Oniščik) **81a:32026** 32M15 (14D20, 22E40, 32N10, 57R20)
- Muminov, N. S. Qualitative investigation of a first-order differential equation of the second degree in the case of a singular solution. (Russian) *Izv. Akad. Nauk U.S.S.R. Ser. Fiz.-Mat. Nauk* **1980**, no. 2, 77-78. (D. Bainov) **81j:34051** 34C05
- Muum, Harald Ein Vergleich zweier Nullmengensysteme bei der polyharmonischen Gleichung. *Elliptische Differentialgleichungen (Meeting, Rostock, 1977)*, pp. 191-198. *Wilhelm-Pieck-Univ., Rostock*, 1978. (I. Netuka) **81d:31014** 31B30 (35J30)
- Muncester, R. G. (with Truesdell, Clifford Ambrose) ★Fundamentals of Maxwell's kinetic theory of a simple monatomic gas. Treated as a branch of rational mechanics. Pure and Applied Mathematics, 83. Academic Press [Harcourt Brace Jovanovich, Publishers], New York-London-Toronto, Ont., 1980. xxvii + 593 pp. ISBN 0-12-701350-4 (Ju. M. Suhov) **81f:80001** 80-02 (01A55, 35Q20, 45K05)
- Münchow, Matthias (with Scheid, Werner) Modification of the Newton method for the inverse-scattering problem at fixed energy. *Phys. Rev. Lett.* **44** (1980), no. 20, 1299-1302. (Authors' summary) **81g:81079** 81F05
- anciaux-Mundeeler, M. See Anciaux-Mundeeler, M.
- Mundlak, Yair Models with variable coefficients: integration and extension. (French and Spanish summaries) Colloque International du CNRS sur l'Économétrie des Données Individuelles Temporelles (Paris, 1977). *Ann. I.N.S.E.E.* **10**, 30-31 (1978), 483-509, 730, 744. (R. Pfaffenberger) **81a:62063** 62J05 (62P20)
- Muni, Giuseppe Riesz-Stone algebras and spaces. (Italian) *Ricerche Mat.* **28** (1979), no. 1, 183-201. (Melvin Henriksen) **81c:46006** 46A40 (06F25, 46E05)
- Munier, A. (with Burgan, J. R.; Feix, M. R.; Fijalkow, E.) Solution of the multidimensional quantum harmonic oscillator with time-dependent frequencies through Fourier, Hermite and Wigner transforms. *Phys. Lett. A* **74** (1979), no. 1-2, 11-14. (Authors' summary) **81c:81014** 81C05 (35A22, 81C20)
- Munir, Nasir I. (with Spilker, Robert L.) The hybrid-stress model for thin plates. *Internat. J. Numer. Methods Engrg.* **15** (1980), no. 8, 1239-1260. (Authors' summary) **81f:73039** 73K25 (73K10)
- recio Muñoz, Tomás J. See Recio Muñoz, Tomás J.
- Munkholm, Hans J. Whitehead torsion for PL fiber homotopy equivalences. *Algebraic topology, Waterloo, 1978 (Proc. Conf., Univ. Waterloo, Waterloo, Ont., 1978)*, pp. 90-101. *Lecture Notes in Math.*, 741, Springer, Berlin, 1979. (Oscar Burlet) **81c:57024** 57Q10
- Simplices of maximal volume in hyperbolic space, Gromov's norm, and Gromov's proof of Mostow's rigidity theorem (following Thurston). *Topology Symposium, Siegen 1979 (Proc. Sympos., Univ. Siegen, Siegen, 1979)*, pp. 109-124. *Lecture Notes in Math.*, 788, Springer, Berlin, 1980. (Y.-T. Siu) **81c:53046** 53C35 (51N20, 57N15)
- (with Pedersen, Erik Kjaer) On the Wall finiteness obstruction for the total space of certain fibrations. *Trans. Amer. Math. Soc.* **261** (1980), no. 2, 529-545. (Guido Mislin) **81j:55016** 55R05
- Munn, W. D. Simple contracted semigroup algebras. *Proceedings of the Conference on Semigroups in Honor of Alfred H. Clifford (Tulane Univ., New Orleans, La., 1978)*, pp. 35-43. Tulane Univ., New Orleans, La., 1979. (P. R. Jones) **81f:20093** 20M25 (16A27)
- Decompositions of the congruence lattice of a semigroup. *Proc. Edinburgh Math. Soc. (2)* **23** (1980), no. 2, 193-198. (G. Szász) **81m:20082** 20M10 (06B10)
- Munot, P. C. (with Padmanabham, P. A.) A note on integral representations for certain hypergeometric functions of three variables. (Spanish summary) *Acta Mexicana Cienc. Tec.* **13** (1979), no. 35-38, 1, 55-58. (L. J. Slater) **81c:33008** 33A35
- Ibarrola Muñoz, María del Pilar See Ibarrola Muñoz, María del Pilar
- Munro, J. Ian Developing lower bounds for selection networks or how to run a double knockout curling bonspiel. *Proceedings of the Sixth Manitoba Conference on Numerical Mathematics (Univ. Manitoba, Winnipeg, Man., 1976)*, pp. 325-330. *Congress. Numer. XVIII, Utilitas Math., Winnipeg, Man., 1977. (From the introduction)* **81a:68032** 68B20
- (with Dobkin, David P.) Efficient uses of the past. *21st Annual Symposium on Foundations of Computer Science (Syracuse, N.Y., 1980)*, pp. 200-206. *IEEE, New York*, 1980. (See 81f:68008) 68B15
- (with Suwanda, Hendra) Implicit data structures for fast search and update. *J. Comput. System Sci.* **21** (1980), no. 2, 236-250. (Authors' summary) **81k:68017** 68B15 (68C25)
- (with Dobkin, David P.) Determining the mode. *Theoret. Comput. Sci.* **12** (1980), no. 3, 255-263. (Authors' summary) **81b:68051** 68E05
- Muntean, Ioan (with Balázs, Martin) A unification of Newton's methods for solving equations. *Mathematica (Cluj)* **21** (1979), no. 2, 117-122. (W. C. Rheinboldt) **81k:65062** 65J15 (58C15)
- Sur le théorème de convexité de Liapounoff. (Romanian summary) *Studia Univ. Babeş-Bolyai Math.* **24** (1979), no. 1, 67-70. (C. Marchan) **81m:28010** 28B05 (46G10, 49A99)
- Munteanu, Marius (with Rădoi, Marin) The dynamics of noncentered vibration machines driven by vibration generators with unbalanced mass. (Romanian. English summary) *Bul. Inst. Politehn. Bucureşti Ser. Mec.* **41** (1979), no. 4, 15-26. (Authors' summary) **81f:70024** 70K99
- Müntefering, Peter Kellerautomaten mit mehreren Kellern. (English and Russian summaries) *Elektron. Informationsverarb. Kybernet.* **15** (1979), no. 8-9, 403-411. (Author's summary) **81b:68095** 68F05

- de Munster-Kuyt, Lucie See De Munster-Kuyt, Lucie
- Münstermayer, Hans Peter Der Calculus Situs und die Grundlagen der Geometrie bei Leibniz. (French summary) *Studia Leibnitiana* 11 (1979), no. 2, 274-300. (Albert C. Lewis) 81e:01020 01A45
- Musnová-Demlová, Marie (with Demel, Jiří; Koubek, Václav) Several algorithms for finite algebras. *Fundamentals of computation theory (Proc. Conf. Algebraic, Arith. and Categorical Methods in Comput. Theory, Berlin/Weidisch-Rietz, 1979)*, pp. 99-104, *Math. Research*, 2, Akademie-Verlag, Berlin, 1979. (G. E. Celitán) 81g:08009 08A50 (68F15)
- Mur, G. Computational aspects of integral-equation methods for the scattering of time-harmonic waves by penetrable obstacles. *Colloquium Numerical Treatment of Integral Equations (Math. Centre, Amsterdam, 1978/79)*, pp. 221-240, *MC Syllabus*, 41, Math. Centrum, Amsterdam, 1979. (G. P. Bava) 81g:78030 78A45
- Mur, V. D. (with Popov, V. S.) Quasiclassical approximation for the Dirac equation in strong fields. *Jadernaja Fiz.* 28 (1978), no. 3, 837-849 (Russian); translated as *Soviet J. Nuclear Phys.* 28 (1979), no. 4, 429-435. (Alexander Alekseyev) 81e:81068 81M05 (34B25, 34E20)
- Muradjan, D. O. (with Piliposjan, T. È.) Minimal numberings of vertices of a rectangular lattice. (Russian. Armenian summary) *Akad. Nauk Armjan. SSR Dokl.* 70 (1980), no. 1, 21-27. (A. K. Kelman) 81m:05121 05C99
- Muradova, N. D. (with Dmitriev, M. G.) Justification of the idealization of a mathematical model of periodic optimization. (Russian. Turkmen and English summaries) *Izv. Akad. Nauk Turkmen. SSR Ser. Fiz.-Tehn. Him. Geol. Nauk* 1980, no. 3, 6-12. (Jiří V. Outrata) 81i:49027 49E20
- Muravej, È. B. Borel summation of n -multiple series, and entire functions associated with them. (Russian) *Sibirsk. Mat. Z.* 19 (1978), no. 6, 1332-1340, 1438. (Author's summary) 81i:40012 40G10
- Murak, Takafumi One conjecture of Paley sur les séries de Taylor lacunaires. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 20, A947-A948. (C. Tanaka) 81j:30006 30B10 (30B30, 42A55)
- Sur la distribution des valeurs des séries lacunaires. *J. London Math. Soc.* (2) 21 (1980), no. 1, 93-110. (A. Erdős) 81g:30004 30B10 (30D35)
- Murakami, H. (with Lee, Peng Yee; Ng, Peng Nung) Modular spaces of strongly summable functions. *Bull. Malaysian Math. Soc.* (2) 1 (1978), no. 2, 91-99. (From the introduction) 81i:46033 46E30
- Murakami, Toshiaki (with Yanuki, Tetsu; Nakano, Masatsika; Arii, Mitsuru) Asymmetric shrink fit of a cylindrical shell. *Bull. JSME* 23 (1980), no. 179, 644-649. (From the summary) 81d:73074 73L99
- Muralidharan, Ramal (with Ho, Yu Chi; Luh, Peter B.) Impact of storage on load management by utilities. *IEEE Trans. Automat. Control* 25 (1980), no. 4, 685-689. (Authors' summary) 81h:90052 90B05
- Muramatsu, Tosinobu (with Nagase, Michihito) On sufficient conditions for the boundedness of pseudodifferential operators. *Proc. Japan Acad. Ser. A Math. Sci.* 55 (1979), no. 8, 293-296. (Tosider Jucan) 81g:47058 47G05
- Muran, K. V. Mapping of a three-dimensional projective space on a plane by a second-order line congruence of the second class. (Russian) *Studies in the geometry of imbedded manifolds and projective geometry (Russian)*, pp. 85-90, Leningrad. Gos. Ped. Inst., Leningrad, 1979. (Krystof Witczyński) 81i:51002 51A45 (14N05)
- Murari, K. A queueing system with n th order Markovian departures. *Cahiers Centre Etudes Rech. Opér.* 21 (1979), no. 3, 279-288. (Peter Purdue) 81d:60103 60K25 (60J10)
- Murashima, Sadaaki (with Kuhara, Hideo) An approximate method to solve two-dimensional Laplace's equation by means of superposition of Green's functions on a Riemann surface. *J. Inform. Process.* 3 (1980/81), no. 3, 127-139. (G. T. Symm) 81m:65182 65N35 (65E05)
- Murashima, M. A study of solutions to the aesthetic field equations. *Internat. J. Theoret. Phys.* 18 (1979), no. 6, 433-444 (1980). (W. M. Baker) 81m:83044 83E99 (49H05, 53B50)
- Murasugi, Kunio (with Hartley, Richard) Homology invariants. *Canad. J. Math.* 30 (1978), no. 3, 655-670. (S. C. Althoen) 81i:57006 57M25 (57M10)
- On dihedral coverings of S^2 . *C. R. Math. Rep. Acad. Sci. Canada* 2 (1980), no. 2, 99-102. (From the text) 81g:57002 57M12
- Murat, François Compacité par compensation. Analyse non convexe (Proc. Colloq. Pau, 1977). *Bull. Soc. Math. France* 108 (1979), 125-127. (Editors) 81i:49036 49D45 (73C50)
- (with Mignot, Fulbert; Puel, Jean-Pierre) Variation d'un point de retournement par rapport au domaine. (English summary) *Bifurcation and nonlinear eigenvalue problems (Proc. Session, Univ. Paris XIII, Villeneuve, 1978)*, pp. 222-254, *Lecture Notes in Math.*, 782, Springer, Berlin, 1980. (Z. C. Motzler) 81m:35060 35J65 (35B32)
- Murata, Hiroshi On a functional of distribution functions having maximum at Gaussian distribution function. *Hiroshima Math. J.* 9 (1979), no. 2, 547-554. (H. P. McKean, Jr.) 81k:60018 60E05 (80A10)
- Murata, Kentaro A note on integrally closed orders in semigroups. *Proceedings of the 3rd Symposium on Semigroups (Inter-Union Sem. House of Kansai, Kobe, 1979)*, pp. 25-30, Osaka Univ., Osaka, 1980. (V. S. Krishnan) 81i:06019 06F05 (20M12)
- A note on arithmetics in semigroups. *Proc. Japan Acad. Ser. A Math. Sci.* 56 (1980), no. 3, 133-135. (V. S. Krishnan) 81i:20094 20M12 (06F05)
- Murata, Leo On certain densities of sets of primes. *Proc. Japan Acad. Ser. A Math. Sci.* 56 (1980), no. 7, 351-353. (Editors) 81k:10098 10L02
- Murata, Minoru Finiteness of eigenvalues of selfadjoint elliptic operators. *J. Fac. Sci. Univ. Tokyo Sect. IA Math.* 25 (1978), no. 2, 205-218. (R. S. Freeman) 81i:35094 35P10
- Murata, Taduo (with Koh, J. Y.) Reduction and expansion of live and safe marked graphs. *IEEE Trans. Circuits and Systems* 27 (1980), no. 1, 68-70. (S. L. Hakimi) 81h:94039 94C15 (05C20, 68B20, 68E10)
- Relevance of network theory to models of distributed/parallel processing. *J. Franklin Inst.* 310 (1980), no. 1, 41-50. (Author's summary) 81f:68037 68B20 (68E10, 94C10)
- Murathulazhev, S. (with Beljanskaja, G. B.) Admissible n -ary quasigroups. II. (Russian) Quasigroups and loops. *Math. Issled.* No. 51 (1979), 27-37, 162. (Ján Duplák) 81i:20069 20N15 (20N05)
- Muratori, M. A. Ideal subspaces in a ring of measurable operators. (Russian) *Tekst. Gos. Univ. Sb. Nauch. Trudov No. 573 Funkcional. Anal.* (1978), 58-60, 113. (József Szűcs) 81g:46094 46L50
- Murshieva, È. D. (with Musaev, B. I.) Convergence of quadrature processes for singular integrals over an interval. (Russian) *Azerbaidžan. Gos. Univ. Učen. Zap.* 1978, no. 3, 64-73. (Gheorghe Coman) 81i:65044 65D30
- Convergence of some quadrature processes for a singular integral along an interval. (Russian) *Azerbaidžan. Gos. Univ. Učen. Zap.* 1979, no. 1, 40-50. (Gheorghe Coman) 81i:65045 65D30
- Muravel, L. A. Asymptotic behavior for large values of time of the solutions of exterior boundary problems for the wave equation with two space variables. (Russian) *Proceedings of an All-Union Conference on Partial Differential Equations (Moscow State Univ., Moscow, 1976)* (Russian), pp. 165-169, *Moskov. Gos. Meh.-Mat. Fakul'tet, Moscow*, 1978. (A. Džuraev) 81i:35020 35B40 (35L05)
- Asymptotic behavior for large time values of the solutions of exterior boundary value problems for the wave equation in two space variables. (Russian) *Mat. Zametki* 27 (1980), no. 6, 959-980, 991. (H. Marcinkowska) 81k:35088 35L05
- Murawski, Anna See Dictionary: Russian-Polish, 81m:00012
- Murayama, Naoshi (with Hisamura, Tomiji) Partial decoupling of multivariable systems by output feedback. *Bull. Sci. Engrg. Res. Lab. Wasuda Univ.* No. 88 (1979), 34-43. (Authors' summary) 81i:93052 93C45
- Murayama, Yoshinasa Theory of scattering in a superconducting state. *Phys. A* 102 (1980), no. 3, 447-469. (Author's summary) 81h:81185 81J05
- Muraz, Gilbert Opérateurs non bornés subordonnés à une mesure spectrale. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 289 (1979), no. 5, A341-A343. (A. McIntosh) 81i:47027 47B15 (47B40)
- Murdis, Lesley (with Clark, David H.) The enigma of Stephen Gray: astronomer and scientist (1666-1736). *Vistas Astronom.* 23 (1979), no. 4, 351-404 (8 plates). (William R. Shea) 81c:01018 01A50
- Murdoch, A. I. (with Cohen, H.) Symmetry considerations for material surfaces. *Arch. Rational Mech. Anal.* 72 (1979/80), no. 1, 61-98. (C.-C. Wang) 81d:73063 73B05
- Murdoch, James (with Robinson, R. Clark) Qualitative dynamics from asymptotic expansions: local theory. *J. Differential Equations* 36 (1980), no. 3, 425-441. (Richard Cushman) 81h:58053 58F30 (34C29)
- (with Robinson, R. Clark) A note on the asymptotic expansion of eigenvalues. *SIAM J. Math. Anal.* 11 (1980), no. 3, 458-459. (W. Allegretto) 81k:19013 15A18 (47A70)
- Murdoch, John W. (with Taylor, Thomas D.) Application of spectral methods to the solution of Navier-Stokes equations. *Approximation methods for Navier-Stokes problems (Proc. Sympos., Univ. Paderborn, Paderborn, 1979)*, pp. 519-537, *Lecture Notes in Math.*, 771, Springer, Berlin, 1980. (Authors' summary) 81g:76038 76D05 (35Q10, 65P05)
- Mureşan, Anton S. (with Mureşan, Viorica) Ein maximales Prinzip für stark elliptische Systeme mit einer geraden Anzahl von partiellen Differentialgleichungen. *An. Ştiinţ. Univ. "Al. I. Cuza" Iaşi Sect. I a Mat. (N.S.)* 25 (1979), no. 2, 303-306. (M. Birioli) 81c:35014 35B50 (35J45)
- Some properties of solutions of equation $\Delta u = 0$. *Anal. Numer. Theor. Approx.* 8 (1979), no. 2, 187-192. (Lung Ock Chung) 81g:31008 31B30
- Mureşan, Viorica (with Mureşan, Anton S.) Ein maximales Prinzip für stark elliptische Systeme mit einer geraden Anzahl von partiellen Differentialgleichungen. *An. Ştiinţ. Univ. "Al. I. Cuza" Iaşi Sect. I a Mat. (N.S.)* 25 (1979), no. 2, 303-306. (M. Birioli) 81c:35014 35B50 (35J45)
- Murgolo, F. P. See Lanzara, G. F., 81m:92059
- Muro, Masaharu (with Kimura, Tatsuo) On some series of regular irreducible prehomogeneous vector spaces. *Proc. Japan Acad. Ser. A Math. Sci.* 55 (1979), no. 10, 384-389. (A. L. Oniščik) 81c:32058 32M10 (20G20)
- On prehomogeneous vector spaces related to binary cubic forms. I. The orbital decomposition in the real domain. *Mem. Fac. Sci. Kōchi Univ. Ser. A Math.* 1 (1980), 35-57. (V. L. Popov) 81i:14028 14L30 (10C10, 12A70, 20G20)
- Some prehomogeneous vector spaces with relative invariants of degree four and the formula of the Fourier transforms. *Proc. Japan Acad. Ser. A Math. Sci.* 56 (1980), no. 2, 70-74. (T. Ono) 81j:20064 20G20 (32M10)
- Muro, Shojiro (with Ibaraki, Toshihide; Hasegawa, Toshiharu) Recognition capacity of finite automata having additive cost functions. *Systems-Comput. Controls* 9 (1978), no. 4, 73-81 (1980). (Authors' summary) 81i:68078 68D05
- Muroga, Saburo ★Logic design and switching theory. A Wiley-Interscience Publication. John Wiley & Sons, New York-Chichester-Brisbane, 1979. xvi + 617 pp. ISBN 0-471-04418-0 (Siegmar Gerber) 81c:94034 94Cxx (68A05, 94-01)
- (with Lai, Hung Chi) Minimum parallel binary adders with NOR (NAND) gates. *IEEE Trans. Comput.* 28 (1979), no. 9, 648-659. (Authors' summary) 81a:94061 94C10
- (with Cutler, Robert B.) Useless prime implicants of incompletely specified multiple-output switching functions. *Internat. J. Comput. Inform. Sci.* 9 (1980), no. 4, 337-350. (Authors' summary) 81m:94031 94C10
- Ivanov-Murumakli, K. A. See Ivanov-Murumakli, K. A.
- Muroo, O. Évaluation de politiques de maintenance pour un système complexe. (English summary) *RAIRO Rech. Opér.* 14 (1980), no. 3, 265-282. (Author's summary) 81i:90089 90B25
- Murphy, B. J. (with Moran, M. A.) A closer look at two alternative methods of statistical discrimination. *J. Roy. Statist. Soc. Ser. C* 28 (1979), no. 3, 223-232. (Peter A. Lachenbruch) 81a:62053 62H30 (62F15)
- Murphy, F. H. (with Soyster, A. L.) Sensitivity analysis of the costs in the dynamic lot size model. *AIIE Trans.* 11 (1979), no. 3, 245-249. (Kailash C. Kapur) 81d:90057 90B30
- Murphy, G. J. (with West, T. T.) Spectral radius formulae. *Proc. Edinburgh Math. Soc.* (2) 22 (1979), no. 3, 271-275. (T. W. Palmer) 81a:46054 46H20
- (with West, T. T.) Removing the interior of the spectrum. *Comment. Math. Univ. Carolin.* 21 (1980), no. 3, 421-431. (Balmohan V. Limaye) 81a:46069 46J05 (47C05)
- (with West, T. T.) Decomposition algebras of Riesz operators. *Glasgow Math. J.* 21 (1980), no. 1, 75-79. (Jaroslav Zemánek) 81a:47023 47B05 (47C05)
- Murphy, Gratian (with Freese, Raymond) The CMP and Banach spaces with unique

- metric lines. *J. Geom.* 14 (1980), no. 1, 50–58. (J. E. Valentine) **81g:51008** 51K05 (46B20, 52A01)
- Murphy, Gwendolen On decomposability of some Specht modules for symmetric groups. *J. Algebra* 66 (1980), no. 1, 156–168. (H. K. Farahat) **81m:20019** 20C30
- Murphy, John D. (with Arieli, Rimón) Pseudodirect solution to the boundary-layer equations for separated flow. *AIAA J.* 18 (1980), no. 8, 883–891. (Authors' summary) **81d:76040** 76D15 (65N30, 76H05)
- Murphy, Lea F. (with Gurtin, Morton E.) On optimal temperature paths for thermorheologically simple viscoelastic materials. *Quart. Appl. Math.* 38 (1980/81), no. 2, 179–189. (R. R. Huilgol) **81j:73063** 73U05 (73F15)
- Murphy, Richard A. (with Sweeney, Dennis J.) A method of decomposition for integer programs. *Oper. Res.* 27 (1979), no. 6, 1128–1141. (C. R. Bector) **81e:90072** 90C10
- Murphy, T. Shift operators for discrete representations of $O(p, q)$. *J. Math. Phys.* 21 (1980), no. 9, 2317–2320. (M. K. F. Wong) **81j:81023** 81C40 (22E65, 22E70)
- Murray, Francis Joseph See Biography: Murray, Francis Joseph, **81m:01090**
- Murray, Gordon D. The estimation of multivariate normal density functions using incomplete data. *Biometrika* 66 (1979), no. 2, 375–380. (Paul Deheuvels) **81f:62059** 62F15
- Murray, J. C. Curvilinear coordinate systems associated with a class of boundary value problems. *J. Inst. Math. Appl.* 25 (1980), no. 4, 397–411. (A. P. Stone) **81g:53004** 53A05
- Murray, J. D. (with Duffy, M. R.; Britton, N. F.) Spiral wave solutions of practical reaction-diffusion systems. *SIAM J. Appl. Math.* 39 (1980), no. 1, 8–13. (J. Smoller) **81j:92010** 92A09 (35K55, 80A20)
- Murphy, Malcolm On a hyperanalytic geometry for complex functions. *Amer. Math. Monthly* 87 (1980), no. 1, 8–25. (Hiroshi Haruki) **81e:51009** 51M10 (30C20)
- Muraleen Invariant means and some classes of matrices. *Soochow J. Math.* 5 (1979), 181–184. (R. A. Raimi) **81k:40007** 40C05
- Murtagh, H. H. (with Amangil'din, T. G.) Asymptotic behavior of the spectrum of the Sturm-Liouville operator. (Russian) *Mat. Sb. (N.S.)* 110(152) (1979), no. 1, 135–149, 160. (R. C. Gilbert) **81b:34016** 34B25 (47E05)
- Murthy, D. N. P. Controllability of a discrete-time bilinear system. *IEEE Trans. Automat. Control* 24 (1979), no. 6, 974–975. (Author's summary) **81a:93019** 93B05 (93C55)
- (with McGiffin, P. B.) Parameter estimation for autoregressive systems with missing observations. *Internat. J. Systems Sci.* 11 (1980), no. 9, 1021–1034. (Authors' summary) **81k:93065** 93E10 (62M10, 90A20)
- Murthy, K. N. See Murty, K. Narasimha
- Murthy, M. Pavaman Affine varieties as complete intersections. *Proceedings of the International Symposium on Algebraic Geometry (Kyoto Univ., Kyoto, 1977)*, pp. 231–236, Kinokuniya Book Store, Tokyo, 1978. (G. Horrocks) **81i:14034** 14M10
- Murty, G. Sri Rama Chandra (with Sitaramachandra Rao, Rudrabhatla) On Mirsky's generalisation of a problem of Evelyn-Linfoot and Page in additive theory of numbers. *J. Reine Angew. Math.* 309 (1979), 92–99. (Carl Pomerance) **81h:10030** 10H25
- Murty, K. Narasimha Four-point boundary value problems—existence and uniqueness. *Proceedings of the Conference on Mathematical Methods in Physics (Mysore, 1978)*, Part B, pp. 45–51, Matscience Rep., 96, Inst. Math. Sci., Madras, 1979. (P. Waltman) **81g:34021** 34B10
- (with Rao, D. R. K. S.; Rao, A. S.) A generalized two-point boundary value problem. *Indian J. Pure Appl. Math.* 11 (1980), no. 10, 1369–1371. (Michal Čverčko) **81k:34013** 34B15
- (with Rao, D. R. K. S.) Transformation of a class of nonselfadjoint eigenvalue problems. *Proc. Amer. Math. Soc.* 81 (1981), no. 2, 287–292. (C. E. Langenhop) **81k:34012** 34B05 (34A30)
- Murty, Katta G. Computational complexity of parametric linear programming. *Math. Programming* 19 (1980), no. 2, 213–219. (Joachim Hirsch) **81k:90096** 90C31 (68C25)
- Murty, M. Ram (with Murty, V. Kumar) Some results in number theory. I. *Acta Arith.* 35 (1979), no. 4, 367–371. (H.-J. Kanold) **81j:10068** 10H25
- ramana Murty, P. V. See Ramana Murty, P. V.
- Murty, V. Kumar (with Murty, M. Ram) Some results in number theory. I. *Acta Arith.* 35 (1979), no. 4, 367–371. (H.-J. Kanold) **81j:10068** 10H25
- Murugli, Robert W. Lewis' postulate of existence disarmed. *Notre Dame J. Formal Logic* 21 (1980), no. 1, 189–191. (Steve Kuhn) **81d:03021** 03B45
- Murzaev, Z. N. (with Alisagaliyev, S. A.) Construction of a regulator for some nonlinear systems with distributed parameters. (Russian) *Theoretical and applied problems of mathematics and mechanics (Russian)*, pp. 8–15, 237, "Nauka" Kazah. SSR, Alma-Ata, 1979. (Authors' summary) **81a:93037** 93C10 (93C20)
- Musaev, B. I. (with Muratkaeva, E. D.) Convergence of quadrature processes for singular integrals over an interval. (Russian) *Azerbaidžan. Gos. Univ. Učen. Zap.* 1978, no. 3, 64–73. (Gheorghe Coman) **81j:65044** 65D30
- Musahhanjan, V. V. Charged particle motion in a medium along an electromagnetic wave. *Phys. Lett. A* 70 (1979), no. 4, 313–314. (Author's summary) **81h:83026** 83C50 (78A35)
- Musalevskii, V. V. (with Lazzaro, E.; Pavlenko, V. N.) Echo in a semibounded plasma with boundary defined by electrostatic-potential profiles. (Italian summary) *Nuovo Cimento B* (11) 56 (1980), no. 1, 137–147. (F. C. Auluck) **81f:76053** 76X05 (82A45)
- Musarskii, R. A. (with Fufaev, N. A.) Behavior of a nonholonomic system under external actions. *Izv. Akad. Nauk SSSR Meh. Teor. Tela* 15 (1980), no. 1, 27–31 (Russian); translated as *Mech. Solids* 15 (1980), no. 1, 22–26. (From the introduction) **81g:70015** 70F25 (70L05)
- Muscat, Z. A. H. (with Shiva, S. G. S.) A new one-step majority logic decodable binary code. (French and German summaries) *Digital Process.* 5 (1979), no. 3–4, 283–285. (Authors' summary) **81k:94034** 94B30
- Muselli, Elena (with D'Anna, Paola) An existence theorem for orientor fields, and applications to the free problem of the calculus of variations in infinite dimension. (Italian. English summary) *Ann. Mat. Pura Appl.* (4) 122 (1979), 245–267. (Vanna Zanelli) **81f:49004** 49A27 (49A22)
- Muskhelishvili, N. I. See Magnaradze, L. G., **81k:01040**
- Muskhov, O. K. See Muskhov, O. K.
- Musiał, Kazimierz (with Rył-Nardzewski, Czesław) Liftings of vector measures and their applications to RNP and WRNP. *Vector space measures and applications (Proc. Conf.,*
- Univ. Dublin, Dublin, 1977)*, II, pp. 162–171, *Lecture Notes in Math.*, 645, Springer, Berlin, 1978. (B. Walsh) **81d:46053** 46G15 (46B22, 46G10)
- Martingales of Pettis integrable functions. *Measure theory, Oberwolfach 1979 (Proc. Conf., Oberwolfach, 1979)*, pp. 324–339, *Lecture Notes in Math.*, 794, Springer, Berlin, 1980. (S. D. Chatterji) **81m:28011** 28B05 (46G10, 60G42)
- Musiak, J. On the p -harmonic boundary problem of Riquier's type in n -dimensional half-space. Special issue dedicated to Władysław Orlicz on the occasion of his seventy-fifth birthday. *Commun. Math. Special Issue* 2 (1979), 251–258. (Gottfried Anger) **81b:31010** 31B30 (35J40)
- Musiak, Jerzy Généralisation de la méthode de Pfaff-Bilimović pour le formalisme canonique avec les dérivées d'ordre supérieur. (English and Serbo-Croatian summaries) *Teor. Primen. Meh.* No. 5 (1979), 105–114. (H. S. P. Grässer) **81h:49011** 49B10 (58A15, 70H99)
- Musiel, Marek Admissible and minimax estimation for two classes of stochastic processes. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math.* 27 (1979), no. 6, 511–514. (Joel Winthrop) **81m:62016** 62C20 (62L12)
- (with Zmyślony, Roman) Estimation for some classes of Gaussian Markov processes. *Mathematical statistics and probability theory (Proc. Sixth Internat. Conf. Wista, 1978)*, pp. 318–329, *Lecture Notes in Statist.*, 2, Springer, New York, 1980. (Steffen Lauritzen) **81j:62171a** 62M05
- (with Zmyślony, Roman) Estimation of regression parameters of Gaussian Markov processes. *Mathematical statistics and probability theory (Proc. Sixth Internat. Conf. Wista, 1978)*, pp. 330–341, *Lecture Notes in Statist.*, 2, Springer, New York, 1980. (Steffen Lauritzen) **81j:62171b** 62M05
- Musiak, Julian An application of modular spaces to a nonlinear integral equation. *Demonstratio Math.* 11 (1978), no. 2, 415–423. (From the text) **81k:45008** 45G10
- (with Jędrzyka, Tadeusz M.) On Jensen's inequality for modulars depending on a parameter. *Funct. Approx. Comment. Math.* 6 (1978), 73–80. (J. Albrzycki) **81j:46036** 46E30
- (with Waszak, Aleksander) Some theorems concerning modulars depending on a parameter. *Funct. Approx. Comment. Math.* 6 (1978), 81–85. (J. Albrzycki) **81h:46029** 46E30
- (with Waszak, Aleksander) A contribution to the theory of countably modularized spaces. *Funct. Approx. Comment. Math.* 7 (1979), 123–127. (J. Albrzycki) **81j:46041** 46E30
- (with Hudzik, Henryk; Urbaniński, R.) Interpolation of compact sublinear operators in generalized Orlicz spaces of nonsymmetric type. *Topology (Proc. Fourth Colloq. Budapest, 1978)*, Vol. 1, pp. 625–638, *Colloq. Math. Soc. János Bolyai*, 23, North-Holland, Amsterdam, 1980. (M. Z. Berkolaiko) **81k:46040** 46E40 (46M35, 47H99)
- Musil, C. (with Lakshmibai, V.; Seshadri, C. S.) Geometry of G/P . *Bull. Amer. Math. Soc. (N.S.)* 1 (1979), no. 2, 432–435. (H. H. Andersen) **81f:14030** 14M17 (14M15, 20G05)
- (with Lakshmibai, V.; Seshadri, C. S.) Geometry of G/P . III. Standard monomial theory for a quasi-minuscule P . *Proc. Indian Acad. Sci. Sect. A Math. Sci.* 88 (1979), no. 3, 93–177. (H. H. Andersen) **81g:14023e** 14M15 (14L30, 14M17)
- (with Lakshmibai, V.; Seshadri, C. S.) Geometry of G/P . IV. Standard monomial theory for classical types. *Proc. Indian Acad. Sci. Sect. A Math. Sci.* 88 (1979), no. 4, 279–362. (H. H. Andersen) **81g:14023d** 14M15 (14L30, 14M17)
- Musin, O. R. Unitary actions of S^1 on complex projective spaces. (Russian) *Uspehi Mat. Nauk* 33 (1978), no. 6(204), 225–226. (Hubert Gollek) **81a:57037** 57S15 (55R10)
- Actions of the circle on homotopy complex projective spaces. (Russian) *Mat. Zametki* 28 (1980), no. 1, 139–152, 170. (A. L. Oniščik) **81m:57027** 57S15 (57R20)
- Muskarov, O. K. (with Dimiev, S. G.) Fonctions presque pluriharmoniques. *C. R. Acad. Bulgare Sci.* 33 (1980), no. 1, 19–21. (Lawrence Gruman) **81g:53027** 53C15 (31C10)
- Musshahanyan, V. V. See Musahhanjan, V. V.
- Musmann, Dieter Equivalent statistical experiments. *Transactions of the Eighth Prague Conference on Information Theory, Statistical Decision Functions, Random Processes (Prague, 1978)*, Vol. B, pp. 51–58, *Reidel, Dordrecht*, 1978. (Eberhard Siebert) **81j:62010** 62B15
- (with Plachky, Detlef) Die Cantorsche Abbildung ist ein Borel-Isomorphismus. *Elem. Math.* 35 (1980), no. 2, 42–43. (A. Appert) **81h:28005** 28A20 (26B35)
- Mustafae, D. M. Elastic equilibrium of a ring coupled with a plane of another material. (Russian. Azerbaijani and English summaries) *Izv. Akad. Nauk Azerbaidžan. SSR Ser. Fiz.-Tehn. Mat. Nauk* 1 (1980), no. 1, 43–50. (Author's summary) **81h:73015** 73C40
- Mustafae, E. H. (with Nevel'son, M. B.) Asymptotically optimal stochastic approximation procedure with continuous time. *Problemy Peredači Informacii* 15 (1979), no. 3, 70–82 (Russian); translated as *Problems Inform. Transmission* 15 (1979), no. 3, 212–223 (1980). (V. Dupač) **81j:62169** 62L20
- Mustafae, L. G. Semigroups of linear continuous transformations. (Russian. English and Azerbaijani summaries) *Izv. Akad. Nauk Azerbaidžan. SSR Ser. Fiz.-Tehn. Mat. Nauk* 1979, no. 5, 3–6. (Ioana Ciorănescu) **81k:47063** 47D99 (20M20, 46B99)
- Semigroups of linear continuous operators. (Russian. Georgian and English summaries) *Sobšč. Akad. Nauk Gruz. SSR* 95 (1979), no. 3, 533–536. (A. B. Buche) **81i:47044** 47D05
- See also Special questions of algebra and topology, **81m:20005**
- Mustafin, R. F. Theorems of the type of Liouville's theorem. (Russian) *Mat. Zametki* 25 (1979), no. 1, 97–105, 159. (A. E. Eremenko) **81k:30006** 30B50 (30D10)
- Mustafin, T. G. (with Bekenov, M. I.) On rank functions, definable and indecomposable types in stable theories. (Russian) *Dokl. Akad. Nauk SSSR* 245 (1979), no. 4, 777–780. (From the text) **81j:03049** 03C45
- A non-two-cardinal set of stable types. (Russian) *Mat. Zametki* 27 (1980), no. 4, 515–525, 668. (B. I. Zil'ber) **81f:03041** 03C35 (03C45, 03C55)
- Mustaqeem (with Lal, K. B.) The wave solutions of nonsymmetric unified field theories of Einstein, Bonnor and Schrödinger. *Ann. Mat. Pura Appl.* (4) 115 (1977), 168–180 (1978). (From the introduction) **81k:83047** 83D05
- Mustari, D. H. (with Šerstev, A. N.) Les fonctions du triangle pour les espaces normés aléatoires. *General inequalities (Proc. First Internat. Conf., Math. Res. Inst., Oberwolfach, 1976)*, I, pp. 255–260, Birkhäuser, Basel, 1978. (L. M. Kelly) **81d:60010** 60B99 (46B99)
- Spaces in which criteria of the Bochner and Lévy type are satisfied. (Russian) *Izv.*

- Vysl. Učebn. Zaved. Matematika 1978, no. 12, 109–112. (M. I. Kadec) **81h:60007** 60B11
- The notion of a normed space of cotype $p < 2$. (Russian) *Funkcional. Anal. i Prilozhen.* 13 (1979), no. 1, 75–76. (T. Figiel) **81i:46012** 46B05 (60B11)
- Mantones, Vesa (with Landes, Rüdiger) On pseudomonotone operators and nonlinear noncoercive variational problems on unbounded domains. *Math. Ann.* 248 (1980), no. 3, 241–246. (Alfonso Castro) **81i:35057** 35J35 (47H05, 49G99)
- Măntănuș, T. (with Krivonozh, L. E.; Leung, K. V.; Ogiuzi, Mehmet Namik) Problèmes à la frontière aux autocontrôles concernant une classe d'équations intégrodifférentielles aux opérateurs hyperboliques. (Romanian and English summaries) *Bul. Univ. Galați Fasc. II Mat. Fiz. Mec. Teoret.* 1 (1978), 7–13. (Thomas S. Angell) **81i:45021** 45K05 (93C20)
- Maszyński, J. (with Maczyński, M. J.; Traczyk, Tadeusz; Żakowski, Wojciech) Matematyka: podręcznik podstawowy dla WST. Tom I. (Polish) [Mathematics: textbook for students in polytechnics. Vol. I] Matematyka dla Politechnik. [Mathematics for Engineering Colleges] Państwowe Wydawnictwo Naukowe (PWN), Warsaw, 1979. 371 pp. (loose errata). ISBN 83-01-00075-9 (B. Choczewski) **81g:00003** 00A06 (15-01, 26-01)
- Matićević, Ljuben R. Limit properties of components of random mappings. *C. R. Acad. Bulgare Sci.* 31 (1978), no. 10, 1257–1260. (From the introduction) **81i:60015** 60C05 (05A15, 60F05)
- Random mappings with constraints over the corresponding graphs. (Russian) *Serdica* 4 (1978), no. 2-3, 105–110. (G. O. H. Katona) **81c:60010** 60C05 (05C30)
- Random mappings and their application to epidemic processes. *C. R. Acad. Bulgare Sci.* 32 (1979), no. 7, 879–882. (Robert Bartoszyński) **81j:60013** 60C05 (92A15)
- al-Mutairi, Muayad A. See Al-Mutairi, Muayad A.
- Mukherjee, Bengt A structural probit model with latent variables. *J. Amer. Statist. Assoc.* 74 (1979), no. 368, 807–811. (Author's summary) **81a:62114** 62P25
- Mukherjee, S. A note on best and best simultaneous approximations. *Indian J. Pure Appl. Math.* 11 (1980), no. 6, 715–719. (O. P. Kapoor) **81j:41043** 41A50 (41A65)
- Muro, Hideo (with Urakawa, Hajime) On the least positive eigenvalue of Laplacian for compact homogeneous spaces. *Osaka J. Math.* 17 (1980), no. 2, 471–484. (R. S. Millman) **81m:58083** 58G25 (53C30)
- Musa, S. Symmetric solutions for symmetric, constant-sum, extreme games with four values. *Internat. J. Game Theory* 8 (1979), no. 2, 115–123. (D. Marc Kilgour) **81j:90144** 90D12
- Generalized k -quota solutions for (N, k) games. *Internat. J. Game Theory* 8 (1979), no. 3, 165–173. (J. Moulin) **81g:90103** 90D12
- Muto, Yosio Some eigenforms of the Laplace-Beltrami operators in a Riemannian submersion. *J. Korean Math. Soc.* 15 (1978), no. 1, 39–57. (R. S. Millman) **81j:58085** 58G25 (53C40)
- Submanifolds of a Euclidean space with homothetic Gauss map. *J. Math. Soc. Japan* 32 (1980), no. 3, 531–555. (Yoshio Matsuyama) **81e:53006** 53A07 (53C40)
- Muttoo, Sunil Kumar (with Dass, Bal Kishan) A bound for random and closed loop burst error detecting codes. *Inform. Sci.* 20 (1980), no. 2, 151–156. (N. J. Patterson) **81g:94032** 94B20
- Mutzbauer, Otto Zerlegbarkeitskriterien für Invarianten torsionsfreier abelscher Gruppen des Ranges 2. (Russian summary) *Czechoslovak Math. J.* 29(104) (1979), no. 3, 337–339. (P. Grabe) **81c:20040** 20K15
- Untergruppen und Faktoren torsionsfreier abelscher Gruppen des Ranges 2. *Publ. Math. Debrecen* 26 (1979), no. 1-2, 95–104. (P. Grabe) **81c:20039** 20K15
- Le Dung Mui See Le Dung Mui
- Mühsch, Peeter Gauss and Tartu University. (Estonian summary) *Historia Math.* 5 (1978), no. 4, 455–459. (Author's summary) **81m:01069** 01A70
- van den Myzenberg, C. L. See Van den Myzenberg, C. L.
- Muzafarov, V. M. On the well-posedness of the formulation without potential of the inverse scattering problem. (Russian. English summary) *Teoret. Mat. Fiz.* 43 (1980), no. 1, 120–123. (Woodford W. Zachary) **81f:81073** 81F30 (35A25, 35R25, 81G25)
- Muzalewski, Michał Restricted decision problems in some classes of algebraic systems. *Z. Math. Logik Grundlag. Math.* 24 (1978), no. 3, 279–287. (Editors) **81g:03010** 03B25 (03D35, 20F10)
- Munkai, Paul (with Sauls, J. A.; Serene, J. W.) 3P_2 pairing in neutron-star matter: magnetic field effects and vortices. *Phys. Rev. D* (3) 21 (1980), no. 6, 1494–1502. (Authors' summary) **81a:81093** 81G10
- Munro, J. C. (with Wesselkamper, T. C.) Generalized finite Post algebras. *Proceedings of the Eighth International Symposium on Multiple-Valued Logic* (Rosemont, Ill., 1978), pp. 235–241. IEEE, Long Beach, Calif., 1978. (Michitaka Kameyama) **81g:03079** 03G20
- (with Miller, D. M.) A class of two-place three-valued unary generators. *Notre Dame J. Formal Logic* 21 (1980), no. 1, 148–154. (László T. Kóczy) **81a:03022** 03B50 (94D05)
- Murty, N. V. Uniqueness theorems for some inverse problems of heat transfer. (Russian) *Z. Vychisl. Mat. i Mat. Fiz.* 20 (1980), no. 2, 388–400, 550. (V. G. Romanov) **81i:35160** 35R30 (35K05)
- Murty, S. V. (with Fel'zenbaum, A. I.) Structure of wind-induced equatorial currents in a linear two-layer model with zero bottom friction. *Izv. Akad. Nauk SSSR Ser. Fiz. Atmosf. i Okeana* 14 (1978), no. 12 (Russian); translated as *Izv. Acad. Sci. USSR Atmospher. Ocean. Phys.* 14 (1978), no. 12, 912–917 (1979). (Authors' summary) **81d:86005** 86A05 (76V05)
- (with Odulo, A. B.) Waves in a rotating stratified liquid near a sloping shore. (Russian) *Dokl. Akad. Nauk SSSR* 250 (1980), no. 2, 331–335. (From the text) **81e:76078** 76U05 (76V05, 86A05)
- nguyen xuan My See Nguyen Xuan My
- Myćielski, Jan (with Ehrenfeucht, Andrzej; Fajtlowicz, Siemion) Homomorphisms of direct powers of algebras. *Fund. Math.* 103 (1979), no. 3, 189–203. (A. Yaquib) **81h:08002** 08A05
- (with Ehrenfeucht, Andrzej) On k -stable functions. *J. Combin. Theory Ser. A* 27 (1979), no. 3, 282–288. (Ann Miller Millman) **81e:05027** 05A99
- (with Ehrenfeucht, Andrzej; Fajtlowicz, Siemion; Malitz, Jerome) Some problems on the universality of words in groups. *Algebra Universalis* 11 (1980), no. 2, 261–263. (D. M. Silberberger) **81k:20045** 20F05 (03D40)
- On the conjugates of the function $2|x| - 1$ in $[-1, 1]$. *Bull. London Math. Soc.* 12 (1980), no. 1, 4–8. (Roman Duda) **81h:54013** 54C10 (26E99)
- Myers, Basil R. The Klee and Quade minimum $(d, 1, 3)$ -graphs revisited. *IEEE Trans. Circuits and Systems* 27 (1980), no. 3, 214–220. (Author's summary) **81a:05003** 05C40 (94C15)
- Myers, Dale The Boolean algebra of the theory of linear orders. *Israel J. Math.* 35 (1980), no. 3, 234–256. (Bruno Poizat) **81i:03038** 03C10
- Myers, Diane-Chaire (with Roulier, John A.) Markov-type inequalities and the degree of convex spline interpolation. *J. Approx. Theory* 28 (1980), no. 3, 267–272. (Eli Passow) **81e:41025** 41A17 (41A05)
- Myers, R. H. (with Khuri, A. I.) A new procedure for steepest ascent. *Comm. Statist. A—Theory Methods* 8 (1979), no. 14, 1359–1376. (G. P. Bhattacharjee) **81f:62130** 62L15
- Myers, Robert Companionship of knots and the Smith conjecture. *Trans. Amer. Math. Soc.* 259 (1980), no. 1, 1–32. (Wilbur Whitten) **81e:57008** 57M25
- Myers, Russell W., Jr. Complexity of model-theoretic notions. *Notre Dame J. Formal Logic* 21 (1980), no. 4, 656–658. (M. Yasuhara) **81j:03070** 03D35 (03C35, 03C50, 03D80)
- Myerson, Gerald A combinatorial problem in finite fields. II. *Quart. J. Math. Oxford Ser. (2)* 31 (1980), no. 122, 219–231. (A. L. Whiteman) **81i:05014** 05A15
- Myerson, R. B. (with Thomson, W.) Monotonicity and independence axioms. *Internat. J. Game Theory* 9 (1980), no. 1, 37–49. (Hans Keiding) **81h:90147** 90D12
- Conference structures and fair allocation rules. *Internat. J. Game Theory* 9 (1980), no. 3, 169–182. (Author's summary) **81j:90152** 90D35
- Myint-U, Tyn Partial differential equations of mathematical physics. Second edition. North-Holland, New York-Oxford, 1980. xiii+380 pp. ISBN 0-444-00352-5 (From the preface) **81a:35001** 35-01
- Mykkelvæit, Johannes J. (with Siu, Man Keung; Tong, Po) On the cycle structure of some nonlinear shift regular sequences. *Inform. and Control* 43 (1979), no. 2, 202–215. (B. Hazeltine) **81a:94037** 94B15
- The covering radius of the $(128, 8)$ Reed-Muller code is 56. *IEEE Trans. Inform. Theory* 26 (1980), no. 3, 359–362. (Torleiv Klove) **81e:94018** 94B05
- Mynbaeva, S. M. Study of a nonlinear system of ordinary differential equations. (Russian) *Collection of questions on mechanics and applied mathematics* (Russian), pp. 66–72, Kazakh. Gos. Univ., Alma-Ata, 1978. (J. W. Macki) **81k:34011** 34A34 (34D05)
- Limit properties of solutions of a nonlinear system of ordinary differential equations. (Russian. Kazakh summary) *Izv. Akad. Nauk Kazakh. SSR Ser. Fiz.-Mat.* 1980, no. 1, 71–73, 94. (V. Šeda) **81j:34043** 34C11 (34A34)
- Mynhardt, C. M. (with Broere, I.) δ -constructibility of planar graphs. *J. Graph Theory* 4 (1980), no. 3, 269–278. (P. R. Goodey) **81k:05062** 05C30
- Mytnik, H. E. (with Krommes, John A.) Particle stochasticity due to magnetic perturbations of axisymmetric geometries. *Phys. Fluids* 23 (1980), no. 6, 1229–1237. (Authors' summary) **81d:76120** 76X05
- Mykies, Hajime Dynamische Team-Entscheidungsregeln für informationell dezentralisierte Produktionsmodelle. *Third Symposium on Operations Research* (Univ. Mannheim, Mannheim, 1978), Section 5, pp. 357–371, *Operations Research Verfahren*, 35, Hain, Meisenheim, 1979. (See **80d:90004e**) 90B30
- (with Kamiyama, S.) A further study of optimal tracking structure with the offset problem and its macroeconomic application. *Internat. J. Control* 31 (1980), no. 5, 893–904. (Authors' summary) **81g:93065** 93C35 (90A17)
- Economic cybernetics of information, decision and control, with special reference to large-scale policy and planning. *Kybernetes* 9 (1980), no. 4, 251–255. (Author's summary) **81i:90049** 90A17
- Myra, J. R. (with Liu, C. S.) Self-modulation of ion Bernstein waves. *Phys. Fluids* 23 (1980), no. 11, 2258–2264. (Authors' summary) **81i:76080** 76X05
- Myask, Lawrence A. Topographically trapped waves. *Annual review of fluid mechanics*, Vol. 12, pp. 45–76, *Annual Reviews, Palo Alto, Calif.*, 1980. (W. O. Crimale, Jr.) **81e:86002** 86A05 (76B15)
- Myseckaja, E. E. (with Dreizin, Ju. A.; Sosnin, N. V.; Favorskii, A. P.) Numerical modelling of stationary plasma configurations by the variational approach. (Russian. English summary) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 104* (1979), 33 pp. (Authors' summary) **81d:76115** 76X05 (65Cxx, 82A45)
- Myshkis, A. D. See Myškis, A. D.
- Myšlov, Adam (with Hajek, Darrell W.) On nonsimplicity of topological categories. *Categorical topology* (Proc. Internat. Conf., Free Univ. Berlin, Berlin, 1978), pp. 84–93, *Lecture Notes in Math.*, 719, Springer, Berlin, 1979. (From the introduction) **81i:18009** 18B30 (54B30, 54D30)
- Two remarks on D -regular spaces. (Serbo-Croatian summary) *Glas. Mat. Ser. III* 15(35) (1980), no. 1, 153–156. (Thomas E. Gantner) **81j:54033** 54D18 (54B10)
- Myškis, A. D. (with Kamenskii, G. A.) Variational and boundary value problems for differential equations with deviating argument. *Equadiff IV* (Proc. Czechoslovak Conf. Differential Equations and their Applications, Prague, 1977), pp. 179–188, *Lecture Notes in Math.*, 703, Springer, Berlin, 1979. (L. J. Grimm) **81h:34060** 34K10
- (with Kamenskii, G. A.; Skubačevskii, A. L.) The minimum of a quadratic functional and linear boundary value problems of elliptic type with deviating arguments. (Russian) *Uspehi Mat. Nauk* 34 (1979), no. 3(207), 197–198. (I. Aganović) **81a:35094** 35R10 (35J20)
- (with Kamenskii, G. A.; Skubačevskii, A. L.) On the minimum of a quadratic functional and on linear boundary value problems of elliptic type with deviating arguments. (Russian) *Differencial'nye Uravnenija* 16 (1980), no. 8, 1469–1473, 1533. (Erich Miersemann) **81k:35044** 35J20 (49A22)
- (with Borisovič, Ju. G.; Gel'man, B. D.; Obuhovskii, V. V.) Topological methods in the theory of fixed points of multivalued mappings. (Russian) *Uspehi Mat. Nauk* 35 (1980), no. 1(211), 59–126, 255. (Gencho Skordev) **81e:55004** 55M20 (55M25)
- Mysovskii, I. P. Invariant cubature formulas. (Russian) *Theory of cubature formulas and the application of functional analysis to problems of mathematical physics* (Russian), pp. 69–78, *Inst. Mat. Sibirsk. Sem. S. L. Soboleva*, No. 1, 1978, *Akad. Nauk SSSR Sibirsk. Otdel. Inst. Mat., Novosibirsk*, 1978. (G. P. Ismatullaev) **81j:41046** 41A55 (65D32)
- Myszewski, Jan Exact model matching for multivariable systems. *Found. Control Engng.* 5

- (1980), no. 1, 13-19. (Author's summary) **81c:93051** 93C35
- Myung, Hyo Chel** (with Ko, Young So) On Lie-admissible algebras associated with invariant bilinear forms. *Bull. Korean Math. Soc.* **16** (1979/80), no. 2, 77-84. (M. L. Tomber) **81h:17024** 17D99 (17A30, 81C99)
- Flexible Lie-admissible algebras with nil-basis. *Hadronic J.* **2** (1979), no. 2, 360-368. (J. Goldman) **81h:17002** 17A20 (17A30)
- (with Santilli, Ruggero Maria) Further studies on the recently proposed experimental test of Pauli's exclusion principle for the strong interactions. Proceedings of the Second Workshop on Lie-Admissible Formulations (Sci. Center, Harvard Univ., Cambridge, Mass., 1979), Part B. *Hadronic J.* **3** (1979/80), no. 1, 196-255. (H. S. Green) **81h:17001** 17A15 (17D99, 81G20)
- Embedding of a Lie algebra into Lie-admissible algebras. *Proc. Amer. Math. Soc.* **73** (1979), no. 3, 303-307. (M. L. Tomber) **81f:17001** 17A30 (17A20)
- (with Ktorides, Christos N.; Santilli, Ruggero Maria) Elaboration of the recently proposed test of Pauli's principle under strong interactions. *Phys. Rev. D* (3) **22** (1980), no. 4, 892-907. (From the introduction) **81i:81044** 81D05 (81G05)
- See also Applications of Lie-admissible algebras in physics, **81i:81040**
- Schmidt-Naake, Gudrun** See Schmidt-Naake, Gudrun
- Naamati, Amnon** (with Galil, Zvi) Network flow and generalized path compression. Conference Record of the Eleventh Annual ACM Symposium on Theory of Computing (Atlanta, Ga., 1979), pp. 13-26. *ACM, New York*, 1979. (Authors' summary) **81c:90068** 90B10 (68C05)
- (with Galil, Zvi) An $O(EV \log^2 V)$ algorithm for the maximal flow problem. *J. Comput. System Sci.* **21** (1980), no. 2, 203-217. (Authors' summary) **81m:90046** 90B10 (68C25)
- Nababan, S.** (with Noussair, Ezzat S.) Existence theorems for optimal control of quasilinear parabolic partial differential equations. *J. Austral. Math. Soc. Ser. B* **21** (1979/80), no. 1, 90-101. (H. S. P. Grissier) **81d:49003** 49A22
- A Filippov-type lemma for functions involving delays and its application to time-delayed optimal control problems. *J. Optim. Theory Appl.* **27** (1979), no. 3, 357-376. (M. B. Suryanarayana) **81a:49012** 49A10 (49A50)
- (with Teo, K. L.) Existence and uniqueness of weak solutions of the Cauchy problem for parabolic delay-differential equations. *Bull. Austral. Math. Soc.* **21** (1980), no. 1, 65-80. (Curtis C. Travis) **81f:35111** 35R10 (35K35)
- (with Teo, K. L.) On the existence of optimal controls of the first boundary value problems for parabolic partial delay-differential equations in divergence form. *J. Math. Soc. Japan* **32** (1980), no. 2, 343-362. (V. L. Bakke) **81d:49004** 49A22 (35K20, 35R10)
- Naber, Gregory L.** Topological methods in Euclidean spaces. *Cambridge University Press, Cambridge-New York*, 1980. x + 230 pp. ISBN 0-521-22746-1 (Jože Vrabec) **81i:55001** 55-01 (54-01, 57-01)
- Nabijalla, M. K.** Stability of relative equilibria of a satellite-gyrost at in axially symmetric fields. (Russian) *Theory of stability and its applications* (Russian), pp. 190-200, 302. "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. (Andrzej Tylikowski) **81j:70004** 70E05 (70M05)
- Nachter, S. N.** Absolutely continuous spectrum of a nondissipative operator, and a functional model. II. (Russian. English summary) Investigations on linear operators and the theory of functions, VIII. *Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* **73** (1977), 118-135, 232-233 (1978). (Author's summary) **81f:47018** 47A45
- Nabonmand, Philippe** Sur les variétés riemanniennes complètes à courbure de Ricci positive. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **291** (1980), no. 10, A591-A593. (Author's summary) **81m:53054** 53C20
- Abd-el-Naby, M. A.** See Abd-el-Naby, M. A.
- Nacev, N. A.** (with Mollov, T. Ž) Invariants of the Ulm-Kaplansky group of normed units of the center of the group ring of the FC-p-group over a commutative ring of characteristic p . (Russian) *C. R. Acad. Bulgare Sci.* **32** (1979), no. 10, 1311-1313. (G. Karpilovsky) **81e:20008** 20C07
- Nachmanin, Jack** (with Maggiora, C. J.) A Fourier Bessel transform method for efficiently calculating the magnetic field of solenoids. *J. Comput. Phys.* **37** (1980), no. 1, 41-55. (Alok Nath Chakrabarti) **81j:78007** 78A25 (65R10)
- Nachane, D. M.** (with Chary, L. R.) Stabilization policies in Phillips' multiplier accelerator model. Proceedings of the First World Conference on Mathematics at the Service of Man (Barcelona, 1977), Vol. II, pp. 38-51. *Univ. Politéc., Barcelona*, 1980. (See **81m:90003b**) 90A99
- Nachbin, Leopoldo** On the closure of modules of continuously differentiable mappings. *Rend. Sem. Mat. Univ. Padova* **60** (1978), 33-42 (1979). (Felice Ronga) **81g:58004** 58C25 (26E15, 32B05)
- (with Barroso, Jorge Alberto) Some topological properties of spaces of holomorphic mappings in infinitely many variables. *Advances in holomorphy* (Proc. Sem. Univ. Fed. Rio de Janeiro, Rio de Janeiro, 1977), pp. 67-91. *North-Holland Math. Studies*, **34**, North-Holland, Amsterdam, 1979. (G. Coeuré) **81h:46049** 46G20 (58B12)
- A look at approximation theory. *Approximation theory and functional analysis* (Proc. Internat. Sympos. Approximation Theory, Univ. Estadual de Campinas, Campinas, 1977), pp. 309-331. *North-Holland Math. Studies*, **35**, North-Holland, Amsterdam, 1979. (Carlos A. Berenstein) **81d:46024** 46E10 (01A65, 41A17)
- Warum unendlichdimensionale Holomorphie? *Jahrbuch Überblicke Mathematik*, 1979, pp. 9-20. *Bibliographisches Inst., Mannheim*, 1979. (J. S. Joel) **81i:46053** 46G20 (32-01, 58B12)
- Nachman, Arje** (with Walton, Jay R.) Energy release rate calculations for interface edge cracks based on a conservation integral. *Internat. J. Solids and Structures* **16** (1980), no. 8, 695-699. (Authors' summary) **81f:73004** 73M05
- (with Antman, Stuart S.) Large buckled states of rotating rods. *Nonlinear Anal.* **4** (1980), no. 2, 303-327. (J. Murzewski) **81e:73044** 73H05
- (with Callegari, A.) A nonlinear singular boundary value problem in the theory of pseudoplastic fluids. *SIAM J. Appl. Math.* **38** (1980), no. 2, 275-281. (Jacques Mauss) **81e:76003** 76A05 (35Q20, 76D10)
- Nachman, David C.** Optimal stopping with a horizon constraint. *Math. Oper. Res.* **5** (1980), no. 1, 126-134. (P. K. Sen) **81d:90058** 90B30 (90C39)
- Nachnovich, Mauro** (with Andreotti, Aldo) Convexité analytique. *Fonctions de plusieurs variables complexes, III (Sém. François Norguet, 1975-1977)*, pp. 341-351. *Lecture Notes*
- in Math.*, **670**, Springer, Berlin, 1978. (Ingo Lieb) **81a:32017a** 32F20 (35E10)
- (with Andreotti, Aldo) Convexité analytique. II. Résultats positifs. *Fonctions de plusieurs variables complexes, III (Sém. François Norguet, 1975-1977)*, pp. 388-393. *Lecture Notes in Math.*, **670**, Springer, Berlin, 1978. (Ingo Lieb) **81a:32017b** 32F20 (35E10)
- (with Andreotti, Aldo) Analytic convexity. *Ann. Scuola Norm. Sup. Pisa Cl. Sci.* (4) **7** (1980), no. 2, 287-372. (Ingo Lieb) **81m:32025** 32F20 (35N15, 58G05)
- Naevin, A. N.** (with Bogomolov, S. I.; Lukin, B. S.) On the calculation of vibrations of wheels of centrifugal compressors in a finite-element approximation. (Russian) *Dinamika i Prochnost' Mashin* No. 31 (1980), 4-12, 1. (Authors' summary) **81g:73003** 73K25 (73K12)
- Nadaraja, E. A.** Maximum deviation of nonparametric estimates of the density of a distribution in certain degenerate cases. (Russian. Georgian and English summaries) *Soobšč. Akad. Nauk Gruz. SSR* **93** (1979), no. 3, 561-564. (L. Rejto) **81b:62052** 62G05
- Nadas, Arthur** (with Meilijson, Isaac) Convex majorization with an application to the length of critical paths. *J. Appl. Probab.* **16** (1979), no. 3, 671-677. (Yosef Rinott) **81c:60019** 60E15 (90B15)
- Naddef, D.** (with Sbili, Najiba; Tchuente, M.) Independence systems with continuous cardinality of bases. *Discrete Math.* **31** (1980), no. 1, 107-109. (J. E. Graver) **81g:05046** 05B35 (05C99)
- Nadeždin, P. V.** Design of a stochastically optimal linear stabilization system with separated control. *Avtomat. i Telemekh.* **1980**, no. 1, 61-70 (Russian); translated as *Automat. Remote Control* **41** (1980), no. 1, part 1, 47-55. (Author's summary) **81h:93115** 93E15
- Nadžin, D. K.** (with Otzoshenko, I. V.) The spectrum of the electron neutrinos and antineutrinos associated with the process of neutron-star formation. *Astronom. Zh.* **57** (1980), no. 1, 78-89 (Russian); translated as *Soviet Astronom.* **24** (1980), no. 1, 47-53. (Authors' summary) **81h:85002** 85A05
- Nadrasde, R. G.** New examples of symplectic and self-conjugate manifolds. (Russian. Georgian and English summaries) *Soobšč. Akad. Nauk Gruz. SSR* **95** (1979), no. 2, 293-296. (P. S. Landweber) **81h:57030** 57R90 (55N22)
- Nadravil, N. S.** A Phragmén-Lindelöf theorem for a class of higher-order elliptic equations. (Russian) *Uspehi Mat. Nauk* **33** (1978), no. 6(204), 210. (M. A. Atahodjaev) **81g:35028** 35J30
- Nadkarni, M. G.** (with Mathew, J.) On systems of imprimitivity on locally compact abelian groups with dense actions. (French summary) *Ann. Inst. Fourier (Grenoble)* **28** (1978), no. 2, v, 1-23. (L. Corwin) **81j:22002** 22B05 (22D30)
- Nadler, D.** (with Feldman, Jacob) Reparametrization of n -flows of zero entropy. *Trans. Amer. Math. Soc.* **256** (1979), 289-304. (Kenneth R. Berg) **81h:28012** 28D15
- Nadler, Sam B., Jr.** (with Quinn, Joseph E.; Stavakas, Nick M.) Hyperspaces of compact convex sets. *Pacific J. Math.* **83** (1979), no. 2, 441-462. (R. R. Summerhill) **81e:57019** 57N20 (46A55)
- Fixed points for confluent maps onto disks. *Proc. Amer. Math. Soc.* **78** (1980), no. 1, 116-118. (L. O. Vaughan, Jr.) **81e:54042** 54H25 (54F20)
- Nadifarov, M. A.** An optimal control problem for a singularly perturbed nonlinear system with lag. (Russian. Azerbaijani and English summaries) *Izv. Akad. Nauk Azerbaidžan. SSR Ser. Fiz.-Tehn. Mat. Nauk* **1979**, no. 5, 110-115. (Rolf Klötzler) **81j:49012** 49B50 (34K35)
- emami-Naeini, A.** See Emami-Naeini, A.
- Nadriović-Veljković, Natalija** (with Plavišić, M.) Thermomorphism in dipolar elastic materials. *Bull. Acad. Serbe Sci. Arts Cl. Sci. Math. Natur. (N.S.)* **10** (1979), 29-39. (Authors' summary) **81j:73006** 73B25 (73B05, 73B30)
- Naftalevičius, A.** On power series and their partial sums. *J. Math. Anal. Appl.* **75** (1980), no. 1, 164-171. (Thomas McCooey) **81g:30005** 30B10 (30B30)
- (with Glyls, A. K.) On meromorphic solutions of a linear differential-difference equation with constant coefficients. *Michigan Math. J.* **27** (1980), no. 2, 195-213. (Hiroshi Haruki) **81h:34081** 34K15 (30D05, 39A99)
- Nagiev, A. V.** Integral theorems for sums of ladder epochs. (Russian) *Random processes and mathematical statistics* (Russian), pp. 110-122, 188. "Fan", Tashkent, 1978. (D. A. Darling) **81b:60069** 60U15
- Nagiev, R. F.** (with Gersman, M. D.) The oscillation brachistochrone problem. *Izv. Akad. Nauk SSSR Meh. Teord. Tela* **14** (1979), no. 2, 10-17 (Russian); translated as *Mech. Solids* **14** (1979), no. 2, 9-17. (P. Hagedorn) **81f:49027** 49C05 (70D05, 93C15)
- (with Stepanov, A. V.) Optimization of the damping factor of free oscillations for a two-mass system. *Izv. Akad. Nauk SSSR Meh. Teord. Tela* **14** (1979), no. 4, 24-28 (Russian); translated as *Mech. Solids* **14** (1979), no. 4, 20-24. (Authors' summary) **81g:70021** 70J05
- Nagiev, S. V.** (with Čebotarev, V. I.) Estimates for the rate of convergence in the central limit theorem for random vectors with values in the space l_2 . (Russian) *Mathematical analysis and related mathematical questions* (Russian), pp. 153-182, 353. "Nauka" Sibirsk. Otdel., Novosibirsk, 1978. (A. Weron) **81d:60005** 60B12 (60F05)
- (with Sakojan, S. K.) A remark on the article: "An estimate for the probability of large deviations" [Limit theorems and mathematical statistics (Russian), pp. 132-140, "Fan" Uzbek. SSR, Tashkent, 1976; MR **55** #9237]. (Russian) *Random processes and mathematical statistics* (Russian), pp. 143-146, 189. "Fan", Tashkent, 1978. (Werner Wolf) **81h:60036** 60F10
- Nagahara, Takasi** On separable polynomials of degree 2 in skew polynomial rings. II. *Math. J. Okayama Univ.* **21** (1979), no. 2, 167-177. (S. Yuan) **81h:16004** 16A05 (16A74)
- On separable polynomials of degree 2 in skew polynomial rings. III. *Math. J. Okayama Univ.* **22** (1980), no. 1, 61-64. (S. Yuan) **81h:16003** 16A05
- Nagai, Takeshi** On finite parametric linear models of dyadic stationary processes. *Bull. Math. Statist.* **19** (1980), no. 1-2, 45-53. (J. R. Blum) **81m:60060** 60G10 (60G12, 62M10)
- Nagailnik, A. F.** Inclusion of the summability method $[W, p]$ in the method $[A^*]$ and Tauberian theorems. (Russian) *Ukrain. Mat. Ž.* **32** (1980), no. 2, 231-234, 285. (M. S. Rangachari) **81f:40007** 40F05 (40G05)
- Nagamatsu, Masahiro** (with Honda, Namio) Describing programs with minimum GO TO statements for flowcharts generated by a finite number of modules.

- Systems-Comput.-Controls** 8 (1977), no. 5, 20-28 (1978). (Kurt Mehlhorn) **81c:6804a**
68E10 (68B05, 68C25)
(with Honda, Namio) Describing programs with minimum GO TO statements for
BJ charts and some NP-complete problems. *Systems-Comput.-Controls* 8 (1977), no. 5,
29-36 (1978). (Kurt Mehlhorn) **81c:6804b** 68B05 (68C25, 68E10)
- Nagami, Keiō** Dimension of free L -spaces. *Fund. Math.* 108 (1980), no. 3, 211-224. (Stian
Nedev) **81m:54070** 54F45
Dimension of nonnormal spaces. *Fund. Math.* 109 (1980), no. 2, 113-121. (G. H. M.
Thomas) **81m:54069** 54F45
- Nagamine, H.** (with Ohmatsu, Shigeru; Soeda, Takashi) The optimal filtering problem for
a discrete-time distributed parameter system. *Internat. J. Systems Sci.* 10 (1979), no. 7,
735-749. (B. D. Donevski) **81b:93073** 93E11 (93C55)
- Nagano, Katsumiko** (with Karasudani, Takashi; Okamoto, Hisao; Mori, Hazime) Reduced
equations of motion for generalized fluxes and forces in the continued-fraction
expansion. *Progr. Theoret. Phys.* 63 (1980), no. 6, 1904-1916. (Authors' summary)
81g:2009 82A05
- Nagao, Hisao** An asymptotic expansion for the distribution of a function of latent roots of
the noncentral Wishart matrix, when $Q = O(n)$. *Ann. Inst. Statist. Math.* 30 (1978), no. 3,
377-383. (Donald R. Jensen) **81g:62090** 62H10
(with Takada, Michio) On sequential point estimation of the mean of a normal
distribution. *Ann. Inst. Statist. Math.* 32 (1980), no. 2, 201-210. (Rasul A. Khan)
81m:62151 62L12
- Nagao, Masashi** Application of Markov chains to a stochastic reservoir theory for water
supply. (Japanese. English summary) *Bull. Nagoya Inst. Tech.* 31 (1979), 369-377.
(Author's summary) **81j:90067** 90B05 (60K30, 90B35)
- Nagao, Takashi** (with Katayama, Shoichi) A stress analysis on the compressive behavior
of granular materials by the two-dimensional finite element method. *Bull. JSME* 23
(1980), no. 185, 1763-1770. (Authors' summary) **81k:73049** 73K25 (73Q05)
- Nagata, Shōyū** Some congruence properties of Eisenstein series. *Hokkaido Math. J.* 8
(1979), no. 2, 239-243. (K.-B. Gundlach) **81d:10019** 10D20
- Nagaraja, H. N.** Some relations between order statistics generated by different methods.
Comm. Statist. B—Simulation Comput. 8 (1979), no. 4, 369-377. (G. S. Lingappaiah)
81c:62016 62E15 (62G30, 65U05)
Some distributional problems connected with order statistics. *Comm. Statist.*
A—Theory Methods 9 (1980), no. 9, 935-942. (Barry C. Arnold) **81h:62028** 62E10
(62G30)
- Nagarajan, M. A.** (with Giraud, B. G.) A symmetric theory of collisions. (French
summary) *J. Physique* 41 (1980), no. 6, 477-484. (Authors' summary) **81d:81089**
81F10
- Nagarsenker, P. B.** On a test of equality of several exponential survival distributions.
Biometrika 67 (1980), no. 2, 475-478. (Author's summary) **81g:62035** 62E15
- Nagata, Kenji** A problem of geometrical probability. *Recent developments in statistical
inference and data analysis* (Proc. Internat. Conf. Inst. Statist. Math., Tokyo, 1979),
pp. 215-219, North-Holland, Amsterdam, 1980. (Herbert Ziebold) **81m:60020** 60D05
(92A17)
- Nagase, Michihiro** (with Muramatsu, Tosinobu) On sufficient conditions for the
boundedness of pseudodifferential operators. *Proc. Japan Acad. Ser. A Math. Sci.* 55
(1979), no. 8, 293-296. (Toader Juan) **81g:47058** 47G05
- Nagase, Teruo** A generalization of Reidemeister-Singer theorem on Heegaard splittings.
Yokohama Math. J. 27 (1979), no. 1, 23-47. (Mitsuyuki Ochiai) **81f:57005** 57N10
(57S17)
(with Homma, Tatsuo) A construction method of homology 3-spheres in S^4 .
Yokohama Math. J. 27 (1979), no. 2, 91-104. (J. S. Birman) **81f:57010** 57N15
(57N12)
- Nagatsuma, Kazutaro** (with Hamada, Minoru; Tanaka, Masataka) Elastoplastic analysis of
unsymmetrical bending of axisymmetric shells. *Bull. JSME* 23 (1980), no. 177,
345-352. (Authors' summary) **81g:73041** 73L99
- Nagata, Jun-iti** (with Morrel, B.) Statistical metric spaces as related to topological spaces.
General Topology Appl. 9 (1978), no. 3, 233-237. (Authors' summary) **81g:54003**
54A99 (08A02, 60B99)
(with Bruijning, Jeroen) New characterizations of covering dimension. *Topological
structures, II* (Proc. Sympos. Topology and Geom., Amsterdam, 1978), Part 2, pp. 199-207,
Math. Centre Tracts, 116, Math. Centrum, Amsterdam, 1979. (V. J. Mancuso) **81f:54020**
54F45
(with Bruijning, Jeroen) A characterization of covering dimension by use of $\Delta_k(X)$.
Pacific J. Math. 90 (1979), no. 1, 1-8. (J. E. Keesling) **81h:54043** 54F45
- Nagata, Masayoshi** See *Proceedings: International Symposium on Algebraic Geometry*,
81e:14002 and **Brauer, Richard**, **81f:20012**
- Nagata, Shiro** (with Oshiba, Takeshi; Funahashi, Sakae) A method for obtaining proof
figures of valid formulas in the first order predicate calculus. *Bull. Nagoya Inst. Tech.*
31 (1979), 117-126. (Authors' summary) **81j:03093** 03F99 (03B10)
- Nagaya, Kosuke** Method for solving vibration problems of a plate with arbitrary shape. *J.*
Acoust. Soc. Amer. 67 (1980), no. 6, 2029-2033. (Author's summary) **81d:73061**
73K12
- Nagel, Alexander** (with Stein, Elias M.; Wainger, Stephen) Hilbert transforms and
maximal functions related to variable curves. *Harmonic analysis in Euclidean spaces*
(Proc. Sympos. Pure Math., Williams Coll., Williamstown, Mass., 1978), Part 1,
pp. 95-98, Proc. Sympos. Pure Math., XXXV, Part 1, Amer. Math. Soc., Providence, R.I.,
1979. (Hans P. Heinig) **81a:42027** 42B25
- Nagel, Jürgen** Verallgemeinerte Slobodetzki-Räume über dem Halbraum. *Wiss. Z. Tech.*
Hochsch. Karl-Marx-Stadt 21 (1979), no. 7, 873-881. (A. Kufner) **81m:46052** 46E35
See also **Mar'ja, V. G.**, **81j:46054**
- Nagel, Klaus** (with Gupta, Shanti S.; Huang, Deng Yuan) Locally optimal subset selection
procedures based on ranks. *Optimizing methods in statistics* (Proc. Internat. Conf., Indian
Inst. Tech., Bombay, 1977), pp. 251-262, Academic Press, New York, 1979. (Z. Šidák)
81c:62023 62F07 (62G99)
- Nagel, P. J. A.** (with de Waal, D. J.) Bayesian classification, estimation and prediction of
growth curves. *South African Statist. J.* 13 (1979), no. 2, 127-137. (Jack C. Lee)
81f:62012 62H30
- Nagel, Rainer** (with Derndinger, Roland) Der Generator stark stetiger
Verbandshalbgruppen auf $C(X)$ und dessen Spektrum. *Math. Ann.* 245 (1979), no. 2,
159-174. (G. Greiner) **81b:47045** 47B47 (47B55, 47D05)
- Nagel, Sabine** (with Bandemer, Hans) On construction of exact experimental designs from
discrete ones. (German and Russian summaries) *Math. Operationsforsch. Statist. Ser.*
Statist. 9 (1978), no. 4, 505-517. (J. Kiefer) **81c:62086** 62K05
Goodness of exact experimental designs with respect to a certain family of criteria.
(German and Russian summaries) *Math. Operationsforsch. Statist. Ser. Statist.* 9 (1978),
no. 4, 519-523. (J. Kiefer) **81c:62088** 62K05
- Nagel, Werner** Über einige Tests zur Auswahl einer Schätzfunktion im linearen
Regressionsmodell. (English and Russian summaries) *Papers on the optimal design of
experiments, Part V* (German), pp. 57-66, Freiburger Forschungshefte D, 117, Deutscher
Verlag für Grundstoffindustrie, Leipzig, 1979. (See **81k:62103**) 62J05
- Nagelkerke, N. J. D.** (with Hart, A. A. M.) The sequential comparison of survival curves.
Biometrika 67 (1980), no. 1, 247-249. (Richard A. Johnson) **81h:62145** 62L10
- Nageswarao, G.** (with Raghavarao, D.) Analysis of covariance as an alternative approach
to the analysis of non-orthogonal lay-outs. (Special issue on covariance. *Comm. Statist.*
A—Theory Methods 8 (1979), no. 8, 843-854. (See **81c:62081**) 62J10
- Naghibi, P. M.** (with Green, A. E.) On thermodynamic restrictions in the theory of
elastic-plastic materials. *Acta Mech.* 30 (1978), no. 1-2, 157-162. (W. Kosiński)
81j:73007 73B30 (73E99)
- Nagiev, R. A.** (with Tairov, M. A.; Salimov, A. H.) Solution of a boundary value problem
for an axially symmetric equation of non-steady-state filtration by the integral
correlation method. (Russian) *Studies in some questions of the constructive theory of
functions and differential equations* (Russian), pp. 159-166, Azerbaidžan. Inst. Nefti i
Himii, Baku, 1974. (See **80d:00021**) 65P05
- Nagiev, Š. M.** (with Atakışiev, N. M.; Mir-Kasimov, R. M.) A covariant formulation of
the relativistic Hamiltonian theory on the light cone (fields with spin). (Russian. English
and Azerbaijani summaries) *Izv. Akad. Nauk Azerbaidžan. SSR Ser. Fiz.-Tehn. Mat.*
Nauk 1979, no. 1, 8-18. (N. V. Mickevič) **81d:81043** 81E05 (47A55, 58G40, 81E15)
(with Atakışiev, N. M.; Mir-Kasimov, R. M.) Quasipotential models of a relativistic
oscillator. (Russian. English summary) *Teoret. Mat. Fiz.* 44 (1980), no. 1, 47-62.
(Authors' summary) **81h:81208** 81M05
- Nagler, D. I.** Calculation of the spectrum of the integral equation of radiative transfer. II.
The plane layer of finite optical thickness. (Russian. English summary) *Astrofizika* 15
(1979), no. 3, 485-495. (V. Protopopescu) **81f:8504b** 85A25
Calculation of the spectrum of the integral equation of radiative transfer. I.
Semi-infinite medium. *Astrofizika* 15 (1979), no. 2, 229-240. (Russian); translated as
Astrophysics 15 (1979), no. 2, 154-161. (V. Protopopescu) **81f:8504a** 85A25
- Nagl, Manfred** ★Graph-Grammatiken. (German) [Graph grammars] Theorie,
Implementierung, Anwendungen. [Theory, Implementation, Applications]
Studienbücher Informatik. [Study Books for Information Science] Friedr. Vieweg &
Sohn, Braunschweig, 1979. vi + 375 pp. ISBN 3-528-03338-X (Immo O. Kerner)
81j:68093 68F05 (68E10)
(with Grötsch, Eberhard) Explicit versus implicit parallel rewriting on graphs.
Graph-grammars and their application to computer science and biology (Internat.
Workshop, Bad Honnef, 1978), pp. 237-254, Lecture Notes in Comput. Sci., 73, Springer,
Berlin, 1979. (Juhan Karhumäki) **81j:68088** 68F05
- Nagle, R. Kent** (with Singkofer, Karen) Solvability of nonlinear elliptic boundary value
problems using a priori estimates. *Differential equations* (Proc. Eighth Fall Conf.,
Oklahoma State Univ., Stillwater, Okla., 1979), pp. 235-247, Academic Press, New York,
1980. (C. P. Gupta) **81i:35074** 35J65 (35J40, 47H15)
(with Singkofer, Karen) Equations with unbounded nonlinearities. *Nonlinear Anal.*
4 (1980), no. 6, 1189-1201. (V. Lakshmikantham) **81m:34083** 34G20 (47H15, 58E07)
- Nagnibida, M. I.** (with Ibragimov, I. I.; Gorgula, V. I.) The simultaneous availability of
the property of multiple completeness of some different systems of functions. (Russian.
Azerbaijani and English summaries) *Izv. Akad. Nauk Azerbaidžan. SSR Ser. Fiz.-Tehn.*
Mat. Nauk 1978, no. 5, 26-31. (I. F. Kušnirčuk) **81c:30011** 30B60
(with Berezovskii, M. I.) A description of the continuous solutions of the operator
equation $Y^2 = d^2/dz^2$ in the space of entire functions. (Russian) *Mat. Zametki* 26
(1979), no. 2, 179-182, 316. (A. A. Škalikov) **81h:47012** 47A62 (30D20)
(with Berezovskii, M. I.) Roots of certain operators in analytic spaces. (Russian)
Ukrain. Mat. Ž. 31 (1979), no. 4, 351-356, 476. (V. A. Tkačenko) **81e:47016** 47A62
(47B38)
- Nagur, B. N.** An invariance property of the L.A.M.S.T. for testing the hypothesis of no
second-order interaction in a three-way contingency table. *Nepali Math. Sci. Rep.* 4
(1979), no. 2, 79-85. (V. P. Bhapkar) **81c:62099** 62H17
- Nagorev, B. M.** (with Nazarov, F.) Some hereditary properties of almost periodic
functions. (Russian. Tajiki summary) *Izv. Akad. Nauk Tadžik. SSR Otdel. Fiz.-Mat. i*
Geol.-Him. Nauk 1979, no. 4(74), 3-10. (C. Corduneanu) **81h:43009** 43A60
(42A75)
(with Evteev, V. P.) Convergence of series representing a class of periodic solutions
of averaging equations of an external variant of the restricted elliptic three-body
problem. (Russian. Tajiki summary) *Dokl. Akad. Nauk Tadžik. SSR* 23 (1980), no. 3,
143-146. (D. ter Haar) **81g:70010** 70F07 (34C29)
- Nagornii, L. Ja.** (with Žukov, I. A.) Solution of large systems of nonlinear equations by the
method of decomposition using the matrix expansion method. (Russian) *Voprosy Vychisl.*
i Prikl. Mat. (Tashkent) No. 58 (1979), 39-45, 120. (G. D. Maistrovskii) **81h:65051**
65H10
- Nagornyi, Ju. I.** (with Mastinovskii, Ju. V.) A cylindrical shell with filler under the action
of impact loading. (Russian) *Dinamika i Prochnost' Masin* No. 32 (1980), 43-47, 3.
(Authors' summary) **81g:73095** 73L15
- Nagornyi, L. Ja.** See **Nagornii, L. Ja.**
- Nagornyi, N. M.** See **Hilbert, David**; et al., **81c:03002**
- Nagrebekii, V. T.** The automorphism groups of finite Miller-Moreno groups. (Russian.
English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* 1980, no. 5, 75-77, 95. (V. D.
Mazurov) **81g:20049** 20D45
- Nagtegaal, J. C.** (with de Jong, J. E.) Some computational aspects of elastic-plastic large
strain analysis. *Computational methods in nonlinear mechanics* (Proc. Second Internat.
Conf., Univ. Texas, Austin, Tex., 1979), pp. 303-339, North-Holland, Amsterdam, 1980.
(François Sidoroff) **81m:73040** 73G10 (65N30)

- Nagura, Toshikatsu** List of the "Jinko-ki" published on the Meiji period. (Japanese) *Shigakushi Kenkyū* No. 77 (1978), 36-39. (Joong Fang) **81c:01005** 01A27
- Nagy, Attila** The separator of a subset of a semigroup. *Publ. Math. Debrecen* 27 (1980), no. 1-2, 25-30. (L. Márki) **81k:20068** 20M10
- Nagy, B.** On S-decomposable operators. *J. Operator Theory* 2 (1979), no. 2, 277-286. (Henry R. Dowson) **81c:47035** 47B40 (47A10)
On cosine operator functions. *Publ. Math. Debrecen* 26 (1979), no. 3-4, 133-138. (S. Kurepa) **81f:47042** 47D05 (39B70)
Residually spectral operators. *Acta Math. Acad. Sci. Hungar.* 35 (1980), no. 1-2, 37-48. (B. L. Wadhwā) **81k:47045** 47B40
A strong spectral residuum for every closed operator. *Illinois J. Math.* 24 (1980), no. 2, 173-179. (F.-H. Vasilescu) **81f:47036** 47B40
Essential spectra of spectral operators. *Period. Math. Hungar.* 11 (1980), no. 1, 1-6. (K. K. Oberai) **81c:47031** 47B40 (47A10)
Restrictions, quotients and S-decomposability of operators. *Rev. Roumaine Math. Pures Appl.* 25 (1980), no. 7, 1085-1090. (B. L. Wadhwā) **81m:47049** 47B40
- sz-Nagy, Béla** See **Sz-Nagy, Béla**
- Nagy, Éva V.** Regularisierungsmöglichkeiten in der Optimierung von unendlichdimensionalen linearen Systemen. (English and Russian summaries) *Math. Operationsforsch. Statist. Ser. Optim.* 10 (1979), no. 3, 357-363. (Angelo Favini) **81g:90010** 49A27 (65K10)
(with Vajda, T.) Ein Algorithmus zur approximativen Lösung von Systemen gewöhnlicher, homogener, nichtlinearer Differentialgleichungen zweiter Ordnung in der chemischen Verfahrenstechnik. *Z. Angew. Math. Mech.* 60 (1980), no. 2, 109-111. (W. S. Loud) **81h:65087** 65L10
- Nagy, József** Continuous local right pseudoprocesses. With a loose Russian summary. *Czechoslovak Math. J.* 30(105) (1980), no. 3, 445-469. (W. R. Utz) **81k:54074** 54H20
- Nagy, M.** Scattering of photons on plasmons in superconductors. *Czechoslovak J. Phys. B* 30 (1980), no. 5, 552-562. (Authors' summary) **81k:81178** 81J05
- Nagy, Péter T.** On the indicatrix of orbits of 1-parameter subgroups in a homogeneous space. *Acta Sci. Math. (Szeged)* 41 (1979), no. 3-4, 351-356. (O. Kowalski) **81f:53042** 53C30
On the orthonormal frame bundle of a Riemannian manifold. *Publ. Math. Debrecen* 26 (1979), no. 3-4, 275-280. (Franco Triccerri) **81h:53047** 53C25
- lovass-Nagy, Victor** See **Lovass-Nagy, Victor**
- Nagyvári, Thomas** The geographical structure of populations. *Studies in mathematical biology, Part II*, pp. 588-624, *MAA Studies in Math.*, 16, Math. Assoc. America, Washington, D.C., 1978. (See **80m:92006**) **92A15** (92A10)
(with Luskin, Mitchell) Numerical analysis of weak random drift in a cline. *Genetics* 92 (1979), no. 1, 297-303. (Authors' summary) **81k:92033** 92A10
(with Ethier, S. N.) Diffusion approximations of Markov chains with two time scales and applications to population genetics. *Adv. in Appl. Probab.* 12 (1980), no. 1, 14-49. (H. A. Guesz) **81c:60086** 60J60 (92A10)
(with Moody, Michael) Diffusion model for genotype-dependent migration. *Proc. Nat. Acad. Sci. U.S.A.* 77 (1980), no. 8, part 2, 4842-4846. (Andris Abakusis) **81j:92023** 92A10 (92A15)
- Nahmova, A. I.** (with Bel'ko, I. V.; Vedernikov, V. I.; Vodnev, V. T.; Gusak, A. A.; Rjabulko, A. P.; Tutae, L. K.; Fedenko, A. S.) ★Сборник задач по дифференциальной геометрии. (Russian) [A collection of problems in differential geometry] Second edition, revised. "Nauka", Moscow, 1979. 272 pp. (Editors) **81i:53001** 53-01 (00A07)
- Nahm, W.** On abelian self-dual multimagnon poles. *Phys. Lett. B* 93 (1980), no. 1-2, 42-46. (Authors' summary) **81d:81056** 81E10 (53C80, 58G20)
Virtual stationary points. *Phys. Lett. B* 96 (1980), no. 3-4, 323-327. (Kotik K. Lee) **81j:81042** 81E10 (58E05)
- Naiman, Steven** Fuzzy variables in a random environment. *Advances in fuzzy set theory and applications*, pp. 165-180, North-Holland, Amsterdam, 1979. (Elic Sanchez) **81g:94081** 94D05 (03E72)
Sign changes in linear combinations of derivatives and convolutions of Pólya frequency functions. *Internat. J. Math. Math. Sci.* 2 (1979), no. 1, 91-101. (R. P. Boas, Jr.) **81h:26009** 26A51
- Naimiev, A. M.** The contemporary state of the theory of boundary value problems for second-order equations of hyperbolic and mixed type in higher-dimensional domains. (Russian) *Proceedings of an All-Union Conference on Partial Differential Equations (Moscow State Univ., Moscow, 1976)* (Russian), pp. 171-174, *Moskov. Gos. Univ., Meh.-Mat. Fakul'tet*, Moscow, 1978. (See **80f:35002**) **35L20** (35M05)
- Nailova, M. K.** Theorems of Phragmén-Lindelöf type for quasilinear elliptic equations. (Russian, Azerbaijani and English summaries) *Akad. Nauk Azerbaidžan. SSR Dokl.* 35 (1979), no. 4, 13-18. (Todor G. Genčev) **81k:35037** 35J60
- Naima, S. Venkata Ratnam** (with Sastry, K. P. R.) On generalized adjoints. *Indian J. Pure Appl. Math.* 9 (1978), no. 7, 722-727. (Authors' summary) **81h:47002** 47A05
(with Sastry, K. P. R.) Convexity conditions in metric linear spaces. *Math. Sem. Notes Kobe Univ.* 7 (1979), no. 2, 235-251. (S. Swaminathan) **81h:46013** 46A99 (46B20)
(with Sastry, K. P. R.) Upper semicontinuity of the best simultaneous approximation operator. *Pure Appl. Math. Sci.* 10 (1979), no. 1-2, 7-8. (O. P. Kapoor) **81c:41037** 41A28
- Nail, P. C.** (with Jena, P. K.; Pradhan, T.) Photon as the zero-mass limit of DKP field. *J. Phys. A* 13 (1980), no. 9, 2975-2978. (Authors' summary) **81i:81120** 81G99 (81D25, 81E10)
- Nail, R.** (with Shrikhande, S. S.; Rao, Siddani Bhaskara; Singhi, N. M.) Intersection graphs of k-uniform hypergraphs. Combinatorial mathematics, optimal designs and their applications (Proc. Sympos. Combin. Math. and Optimal Design, Colorado State Univ., Fort Collins, Colo., 1978). *Ann. Discrete Math.* 6 (1980), 275-279. (F. Sterboul) **81m:05104** 05C65
- Naimark, M. A.** (with Stern, A.) ★Théorie des représentations des groupes. (French) [Theory of group representations] Translated from the Russian by A. Sossinski. *Éditions Mir*, Moscow, 1979. 608 pp. (Jonathan M. Rosenberg) **81b:22001** 22-01 (20Cxx, 20G05)
See also *Biography: Naimark, M. A.* **81m:01091**
- Naimpally, S. A.** (with Anantharaman, R.) Boundedness and equicontinuity of measures and linear functionals. *Math. Sem. Notes Kobe Univ.* 7 (1979), no. 2, 271-285. (Ivan Dobrakov) **81a:28009** 28B05 (46G10)
(with Tikoo, M. L.) On T_1 -compactifications. *Pacific J. Math.* 84 (1979), no. 1, 183-190. (Aleksander Błaszczyk) **81a:54024** 54D35 (54E05)
- saifavi-Naini, R.** See **Saifavi-Naini, R.**
- Nair, K. Aiyappan** Variance and distribution of the Graybill-Deal estimator of the common mean of two normal populations. *Ann. Statist.* 8 (1980), no. 1, 212-216. (B. Raja Rao) **81c:62016** 62E15 (62F10)
- Nair, K. P. K.** (with Aneja, Y. P.; Aggarwal, Vijaykumar) Maximization of the vector-flow in multicommodity networks. (French summary) *INFOR—Canad. J. Oper. Res. Inform. Process.* 17 (1979), no. 3, 276-286. (Authors' summary) **81a:90080** 90B10
(with Aneja, Y. P.) Two problems in multicommodity networks. (French summary) *RAIRO Rech. Opér.* 13 (1979), no. 2, 135-142. (R. Bolstein) **81c:90036** 90B10 (90C08, 90C35)
(with Aneja, Y. P.) Maximal expected flow in a network subject to arc failures. *Networks* 10 (1980), no. 1, 45-57. (Authors' summary) **81a:90087** 90B15
(with Aggarwal, Vijaykumar; Chandrasekaran, R.) Nonterminating stochastic ratio game. (French summary) *RAIRO Rech. Opér.* 14 (1980), no. 1, 21-30. (Authors' summary) **81b:90175** 90D15 (90C40)
(with Aggarwal, Vijaykumar; Chandrasekaran, R.) Discounted stochastic ratio games. *SIAM J. Algebraic Discrete Methods* 1 (1980), no. 2, 201-210. (Jaap Weschi) **81g:90105** 90D15 (90C40)
- Nair, M.** Power free values of polynomials. II. *Proc. London Math. Soc.* (3) 38 (1979), no. 2, 353-368. (G. Greaves) **81m:10084** 10H25
(with Huxley, M. N.) Power free values of polynomials. III. *Proc. London Math. Soc.* (3) 41 (1980), no. 1, 66-82. (G. Greaves) **81m:10085** 10H25
- Nair, S.** On edge-zone solutions and error bounds in the asymptotic theory of shells. *Mechanics today*, Vol. 5, pp. 351-364, Pergamon, Oxford, 1980. (N. Gass) **81m:73065** 73L99
- Nair, Sreekantan S.** Alternating priority queues with wait and switch rule. *Bull. Soc. Math. Belg.* 28 (1976), no. 3, 197-215. (Authors' summary) **81a:60106** 60K25
- Naisul', V. A.** Topological invariants of germs of analytic mappings and area preserving mappings, and their application to analytic differential equations in $\mathbb{C}P^2$. (Russian) *Funkcional. Anal. i Priložen.* 14 (1980), no. 1, 73-74. (Ju. E. Gliklikh) **81h:58029** 58F10 (26E05, 34A20)
- Naitō, Jun** Classification of problems in Sangaku using Malfatti's circles. (Japanese. English summary) *Bull. Aichi Univ. Ed. Natur. Sci.* 29 (1980), 1-27. (S. Hitotsumatsu) **81k:01010** 01A27 (51M05)
- Naito, Masaharu** (with Kusano, Takaši) Nonlinear oscillation of fourth order differential equations with deviating argument. *Rev. Roumaine Math. Pures Appl.* 23 (1978), no. 9, 1351-1365. (Authors' summary) **81c:34055** 34K15
Existence and asymptotic behavior of positive solutions of differential inequalities with deviating argument. *Funkcial. Ekvac.* 22 (1979), no. 2, 127-142. (Pavol Marušák) **81b:34065** 34K15
Positive solutions of nonlinear differential inequalities. *Hiroshima Math. J.* 9 (1979), no. 3, 769-785. (K. Schmitt) **81a:34011** 34A40
(with Kreith, Kurt; Kusano, Takaši) Oscillation criteria for weakly superlinear differential equations of even order. *J. Differential Equations* 38 (1980), no. 1, 32-40. (T. Čanturija) **81m:34043** 34C10
- Najjar, Rudolph M.** Spectral sequences and relative cohomology. *Portugal. Math.* 36 (1977), no. 2, 83-95 (1980). (Authors' summary) **81i:20063** 20J06 (18G10, 18G40)
- Najfeld, Igor** (with Vitale, Richard A.; Davis, Philip J.) Minkowski iteration of sets. *Linear Algebra Appl.* 29 (1980), 259-291. (Peter Gruber) **81f:52005** 52A20 (65H10)
- Naka, Sigefumi** (with Gotō, Tetsuo) A method of quantization of constrained dynamical systems. *Phys. Lett. B* 92 (1980), no. 1-2, 139-143. (Authors' summary) **81d:81042** 81D99 (58D30, 58F06, 81B05)
(with Gotō, Tetsuo; Yamaguchi, Katsuhito) The time as an observable in quantum mechanics. *Progr. Theoret. Phys.* 64 (1980), no. 1, 1-17. (Authors' summary) **81h:81008** 81B05
- Nakada, Hitoshi** (with Ito, Shunji; Tanaka, Shigeru) On unimodal linear transformations and chaos. *Proc. Japan Acad. Ser. A Math. Sci.* 55 (1979), no. 7, 231-236. (From the introduction) **81a:58035** 58F13
(with Ito, Shunji; Tanaka, Shigeru) On unimodal linear transformations and chaos. I, II. *Tokyo J. Math.* 2 (1979), no. 2, 221-239, 241-259. (Leo Jonker) **81d:58040** 58F13 (28D20)
- Nakagami, Yoshiomi** (with Oka, Yukimasa) On Connes spectrum Γ of a tensor product of actions on von Neumann algebras. *Yokohama Math. J.* 6 (1978), no. 2, 189-200. (David Promislow) **81f:46076** 46L10
(with Takesaki, Masamichi) ★Duality for crossed products of von Neumann algebras. *Lecture Notes in Mathematics*, 731, Springer-Verlag, Berlin-New York, 1979. ix + 139 pp. ISBN 3-540-09522-5 (William Paschke) **81c:46053** 46L10
Co-action and Galois correspondence in von Neumann algebras. (French summary) *Algèbres d'opérateurs et leurs applications en physique mathématique (Proc. Colloq. Marseille, 1977)*, pp. 285-290, *Colloques Internat. CNRS*, 274, CNRS, Paris, 1979. (G. A. Elliott) **81j:46105** 46L55
(with Ikeshoji, Kiyoishi) On a strong duality for separable locally compact groups. *Mem. Fac. Sci. Kyushu Univ. Ser. A* 33 (1979), no. 2, 377-389. (Pierre Eymard) **81j:22011** 22D35
Some remarks on crossed products of von Neumann algebras by Kac algebras. *Yokohama Math. J.* 27 (1979), no. 2, 141-162. (Jean-Marie Schwartz) **81f:46080** 46L55 (22D25, 46L50)
- Nakagawa, Hisao** (with Itoh, Takehiro) On isotropic immersions of space forms into a space form. *Minimal submanifolds and geodesics (Proc. Japan-United States Sem., Tokyo, 1977)*, pp. 255-271, North-Holland, Amsterdam, 1979. (V. T. Fomenko) **81k:53054** 53C42 (57N35)
- Nakagawa, R.** (with Herrlich, Horst; Strecker, George E.; Titcomb, T.) Equivalence of topologically-algebraic and semitopological functors. *Canad. J. Math.* 32 (1980), no. 1, 34-39. (Hans-E. Porst) **81f:18008** 18A99 (18D99, 54B30, 55U40)
- Nakagawa, Toshio** (with Osaki, Shunji) Optimum ordering policies with lead time for an

- operating unit. (French summary) *RAIRO Rech. Opér.* 12 (1978), no. 4, 383–393, v. (From the introduction) **81i:90090** 90B25
- A summary of block replacement policies. *RAIRO Rech. Opér.* 13 (1979), no. 4, 351–361. (Author's summary) **81i:90096** 90B25
- Optimum inspection policies for a standby unit. (Japanese summary) *J. Oper. Res. Soc. Japan* 23 (1980), no. 1, 13–27. (Author's summary) **81i:90081** 90B25
- A summary of imperfect preventive maintenance policies with minimal repair. (French summary) *RAIRO Rech. Opér.* 14 (1980), no. 3, 249–255. (Author's summary) **81i:90091** 90B25
- Nakagiri, Shin-ichi** Controllability, observability and identifiability for hereditary control systems in Banach spaces. *Simulation of distributed-parameter and large-scale systems (Proc. IMACS European Simulation Meeting, Univ. Patras, Patras, 1979)*, pp. 55–62, North-Holland, Amsterdam, 1980. (Author's summary) **81i:93013** 93B05
- Nakagomi, T.** Mathematical formulation of the heat-engine theory of thermodynamics including negative absolute temperatures. *J. Phys. A* 13 (1980), no. 1, 291–299. (Author's summary) **81i:80002** 80A10
- Measurement-theory approach to an internal energy function. *J. Phys. A* 14 (1981), no. 2, 303–315. (Author's summary) **81m:80001** 80A10 (82A05)
- Nakahara, Ichiro** (with Matsumoto, Hiroyuki; Shizuya, Mitsuoka) Viscoelastic half-space subjected to impact torsion by a rigid cylinder. *Bull. JSME* 23 (1980), no. 178, 510–515. (Authors' summary) **81g:73053** 73F15
- (with Kawakami, Takashi; Tsuchida, Eiichi; Matsumoto, Hiroyuki) Stresses in a circular cylinder having an eccentric spherical cavity under tension. *Bull. JSME* 23 (1980), no. 179, 630–636. (From the summary) **81g:73006** 73C05
- (with Fujita, Teruaki; Tsuchida, Eiichi) Stress concentration due to a hemiprolate spheroidal pit at a free surface of a semi-infinite body under all-around tension. *Bull. JSME* 23 (1980), no. 181, 1048–1054. (Authors' summary) **81g:73006** 73C05
- (with Hara, Toshiaki; Shibuya, Toshiakazu; Koizumi, Takashi) An asymmetric mixed boundary value problem of the elastic half-space under shear by an annular rigid punch. *Bull. JSME* 23 (1980), no. 181, 1064–1071. (Authors' summary) **81g:73010** 73C55
- (with Tsuchida, Eiichi; Kodama, Masao) On the asymmetric problem of elasticity theory for an infinite elastic solid containing two spherical inclusions. *Bull. JSME* 23 (1980), no. 181, 1072–1080. (Authors' summary) **81g:73014** 73C40
- (with Matsumoto, Hiroyuki; Okamoto, Yuuji) Thick plate subjected to torsional impact by a rigid circular cylinder. *Bull. JSME* 23 (1980), no. 181, 1081–1085. (Authors' summary) **81g:73073** 73K10
- (with Matsumoto, Hiroyuki; Ito, Akihito) Bifurcation or skew of a rapidly propagating crack (case of mode III crack). *Bull. JSME* 23 (1980), no. 184, 1569–1574. (Authors' summary) **81g:73074** 73M05
- Nakahata, Noboru** On units of Galois extensions over \mathbb{Q} . *Proc. Fac. Sci. Tokai Univ.* 15 (1980), 23–27. (Ezra Brown) **81m:12009** 12A45
- Nakai, Mitsuru** Picard principle for finite densities. *Nagoya Math. J.* 70 (1978), 7–24. (G. Weill) **81j:31001** 31A10 (31A35)
- An example on canonical isomorphism. *Nagoya Math. J.* 70 (1978), 25–40. (Editors) **81h:30050** 30F15
- (with Sario, Leo) Square integrable harmonic functions on plane regions. *Ann. Acad. Sci. Fenn. Ser. A I Math.* 4 (1979), no. 2, 193–201. (Lung Ock Chung) **81b:31004** 31A30
- (with Glasner, Moses) Inextremization and boundedness on open Riemann surfaces. *Math. Z.* 168 (1979), no. 1, 1–13. (W. H. Ovi) **81c:30081** 30F15 (31A05)
- Strong Picard principle. *J. Math. Soc. Japan* 32 (1980), no. 4, 631–638. (D. H. Armitage) **81k:31009** 31A99 (30F99)
- Nakai, Toru** Optimal assignment for a random sequence with an unknown parameter. *J. Inform. Optim. Sci.* 1 (1980), no. 3, 214–228. (Author's summary) **81i:90118** 90B40 (90B05)
- Generalized Goofspiel. (Japanese summary) *J. Oper. Res. Soc. Japan* 23 (1980), no. 2, 156–170. (Author's summary) **81i:90128** 90D15 (90B05)
- Nakajima, Atsushi** Cosemisimple coalgebras and coseparable coalgebras over coalgebras. *Math. J. Okayama Univ.* 21 (1979), no. 2, 125–140. (Mitsuhiko Takeuchi) **81c:16010** 16A24
- Cohomology for comodules. *Math. J. Okayama Univ.* 22 (1980), no. 1, 5–15. (E. J. Taft) **81i:18034** 18G25 (16A24)
- Nakajima, Fumio** (with Kozin, Frank) A characterization of consistent estimators. *IEEE Trans. Automat. Control* 24 (1979), no. 5, 758–765. (Lionel Weiss) **81g:62060** 62F12 (93E10)
- (with Kozin, Frank) The order determination problem for linear time-varying AR models. *IEEE Trans. Automat. Control* 25 (1980), no. 2, 250–257. (S. M. Pandit) **81c:93079** 93E10
- (with Sell, George R.) Almost periodic gross-substitute dynamical systems. *Tôhoku Math. J.* (2) 32 (1980), no. 2, 255–263. (T. Yoshizawa) **81j:34075** 34C27 (90A12)
- Nakajima, Hideo** (with Maskawa, Toshihide) Structure of the gauge transformation group in the square integrable space and Gribov's ambiguity in the Coulomb gauge. *Progr. Theoret. Phys.* 63 (1980), no. 2, 641–655. (R. Delbourgo) **81b:81020** 81E10 (22E70, 53C05, 81C40)
- Nakajima, Masayuki** (with Agui, Takeshi; Ogawa, Hirokatsu) Optimal position of measurements in linear stochastic distributed-parameter system by scanning. *Systems-Comput.-Controls* 9 (1978), no. 5, 16–22 (1980). (From the summary) **81j:93054** 93E10
- Nakajima, Siroo** On completely simple-type automata. *Proceedings of the 3rd Symposium on Semigroups (Inter-Univ. Sem. House of Kansai, Kobe, 1979)*, pp. 31–35, Osaka Univ., Osaka, 1980. (Author's summary) **81g:68078** 68D05
- Nakamizo, Takayoshi** (with Kobayashi, Nobuaki) A design of observer for linear systems with unknown inputs—application of inverse systems. (Japanese. English summary) *Systems and Control* 24 (1980), no. 9, Special Issue on Recent Sensors and Systems Techniques, 613–620. (Authors' summary) **81k:93039** 93B07 (93C45)
- Nakamoto, Ritsuo** A spectral characterization of commutative C^* -algebras. *Math. Japon.* 24 (1979/80), no. 4, 399–400. (T. Husain) **81h:46074** 46L05
- (with Fujii, Masatoshi) Intertwining algebraically definite operators. *Math. Japon.* 25 (1980), no. 2, 239–240. (Takayuki Furuta) **81f:47030** 47B15 (47B20)
- A characterization of normal operators using the Hilbert-Schmidt class. *Proc. Amer. Math. Soc.* 79 (1980), no. 2, 343–344. (Lawrence Williams) **81b:47032** 47B15 (47B10)
- Nakamura, Ken** An explicit formula for the fundamental units of a real pure sextic number field and its Galois closure. *Pacific J. Math.* 83 (1979), no. 2, 463–471. (Ezra Brown) **81e:12004** 12A40 (12A45)
- On the group of units of a non-Galois quartic or sextic number field. *Proc. Japan Acad. Ser. A Math. Sci.* 56 (1980), no. 2, 77–81. (A. Pethő) **81h:12004** 12A45
- Nakamura, Akihiro** (with Ohya, Fumimasa; Watanabe, Hiroshi) On some properties of functions in weighted Bergman spaces. *Proc. Fac. Sci. Tokai Univ.* 15 (1980), 33–44. (Manfred Stoll) **81i:30084** 30H05
- Nakamura, Akira** (with Dyer, Charles R.) Bottom-up cellular pyramids for image analysis. *Proceedings of the Fourth International Joint Conference on Pattern Recognition (Kyoto, 1978)*, pp. 494–496, IEEE, New York, 1979. (Authors' summary) **81d:68125** 68G10 (68D20)
- (with Inoue, Katsushi) Two-dimensional finite automata and unacceptable functions. *Internat. J. Comput. Math.* 7 (1979), no. 3, 207–213. (Etsuro Moriya) **81c:68064** 68D45
- A direct method of calculating periodic wave solutions to nonlinear evolution equations. I. Exact two-periodic wave solution. *J. Phys. Soc. Japan* 47 (1979), no. 5, 1701–1705. (G. L. Lamb, Jr.) **81m:35023a** 35C99 (35Q20, 76B25)
- (with Inoue, Katsushi; Takanami, Itsuo; Ae, Tadashi) One-way simple multilevel finite automata. *Theoret. Comput. Sci.* 9 (1979), no. 3, 311–328. (I. Hal Sudborough) **81c:68030** 68C25 (68F10)
- (with Inoue, Katsushi) A remark on two-dimensional finite automata: "Some properties of two-dimensional on-line tessellation acceptors" [*Inform. Sci.* 13 (1977), no. 2, 95–121; MR 80e:68143]. *Inform. Process. Lett.* 10 (1980), no. 4–5, 219–222. (From the summary) **81i:68062** 68D20
- (with Inoue, Katsushi; Takanami, Itsuo) Nonclosure property of nondeterministic two-dimensional finite automata under cyclic closure. *Inform. Sci.* 22 (1980), no. 1, 45–50. (Authors' summary) **81h:68037** 68D05
- A direct method of calculating periodic wave solutions to nonlinear evolution equations. II. Exact one- and two-periodic wave solution of the coupled bilinear equations. *J. Phys. Soc. Japan* 48 (1980), no. 4, 1365–1370. (G. L. Lamb, Jr.) **81m:35023b** 35C99 (35Q20, 76B25)
- Nakamura, Gakuo** (with Kiyasu, Zen'iti; Ikono, Nobuichi) Solution of the round table problem for the case of $(p^k + 1)$ persons. *Comment. Math. Univ. St. Paul.* 29 (1980), no. 1, 7–20. (O. D'Antona) **81m:05004** 05A05 (05A15)
- Nakamura, Kahel** (with Kokawa, Masasumi; Oda, Miori) Fuzziness and catastrophe in estimation and decision processes. *Advances in fuzzy set theory and applications*, pp. 463–480, North-Holland, Amsterdam, 1979. (Zdeněk Eringer) **81c:58020** 58C28 (90A05, 92A25, 94D05)
- Nakamura, Keijiro** A synthesis algorithm for multioutput 2-level MOS networks. *Systems-Comput.-Controls* 9 (1978), no. 2, 26–32. (Author's summary) **81i:94035** 94C10
- Nakamura, Kenjiro** The vetoers in a simple game with ordinal preferences. *Internat. J. Game Theory* 8 (1979), no. 1, 55–61. (Author's summary) **81f:90143** 90D30
- Nakamura, Kôshirô** On Teiji Takagi's *Shinshiki sanjutsu kôgi* (Lectures on the new arithmetic). (Japanese) *Sûgaku Shi Kenkyô No.* 82 (1979), 16–26. (K. Masuda) **81b:01020** 01A60 (01A70)
- Nakamura, Masatoshi** On $(\Phi, \Psi; p)$ -quasi-integral operators. *Math. Sem. Notes Kobe Univ.* 7 (1979), no. 1, 113–117. (B. M. Makarov) **81c:47021** 47B10
- Nakamura, Masayoshi** (with Suzuki, Ryôji) On the exact canonical conjugate momenta of collective motion in many-boson system. *Progr. Theoret. Phys.* 64 (1980), no. 3, 1086–1088. (Authors' summary) **81k:81115** 81Hxx
- Nakamura, Tadao** (with Kinouchi, Toshio; Sato, Risaburo) Analysis of traffic on a common bus. *Systems-Comput.-Controls* 9 (1978), no. 5, 54–62 (1980). (Authors' summary) **81i:90081** 90B20 (90B22)
- Nakamura, Tohgo** Construction of stable multidimensional recursive filters via pseudopolynomials. *IEEE Trans. Acoust. Speech Signal Process.* 28 (1980), no. 3, 337–339. (Author's summary) **81h:93085** 93D99
- Nakamura, Tsuyoshi** (with Hosono, C.; Mori, H.) On the least redundancy problem of the queries of order two in combinatorial filing scheme. *Inform. and Control* 43 (1979), no. 3, 255–265. (R. J. McEliece) **81b:68119** 68H05 (68B15)
- Nakamura, Yoshio** On Witt algebras over a field, especially of characteristic 2. *Math. Rep. Toyama Univ.* 2 (1979), 13–21. (Ron Brown) **81m:10040** 10C05 (10C01, 15A63)
- Nakanishi, E.** (with Nanbara, K.) A new sufficient condition of decoupling of linear time-varying systems with time delays in control and/or state variables. *Internat. J. Control* 32 (1980), no. 4, 609–624. (Authors' summary) **81k:93041** 93C50 (93C05)
- Nakanishi, Hisao** (with Stanley, H. Eugene) Scaling studies of percolation phenomena in systems of dimensionality two to seven: cluster numbers. *Phys. Rev. B* (3) 22 (1980), no. 5, 2466–2488. (Authors' summary) **81g:82045** 82A42 (82-04)
- Nakanishi, Noboru** Lorentz transformation properties in the Thirring and Schwinger models. *Progr. Theoret. Phys.* 58 (1977), no. 3, 1007–1013. (H. Ezawa) **81i:81042** 81E10
- On the general validity of the unitarity proof in the Kugo-Ojima formalism of gauge theories. *Progr. Theoret. Phys.* 62 (1979), no. 5, 1396–1402. (Author's summary) **81a:81070** 81E99 (81F15)
- Nakanishi, Nobutada** Lie subalgebras of finite codimension of the classical infinite Lie algebras. *J. Math. Kyoto Univ.* 19 (1979), no. 2, 255–267. (P. Molino) **81i:58008** 58H05 (17B65)
- The first cohomology groups of infinite-dimensional Lie algebras. *Proc. Japan Acad. Ser. A Math. Sci.* 56 (1980), no. 5, 197–199. (Toru Tsujishita) **81i:17009** 17B65 (58H10)
- Nakanishi, Shizu** The space of distributions treated as a ranked space. *Proc. Japan Acad. Ser. A Math. Sci.* 55 (1979), no. 10, 395–398. (M. Balazant) **81k:46042** 46F05 (46A15)
- The space of distributions treated as a ranked space. *Math. Japon.* 25 (1980), no. 1, 87–100. (Winfried Kabbalo) **81i:46061** 46F05 (54A05)
- Nakano, Huzio** (with Honda, Katsuya) Theory of spin-glass phase. Principle of minimum

- free energy. *Progr. Theoret. Phys.* **63** (1980), no. 5, 1800–1803. (Authors' summary) **81d:82037** 82A42
- Nakano, Masatsuka (with Murakami, Toshiaki; Yanuki, Tetsu; Arii, Mitsuru) Asymmetric shrink fit of a cylindrical shell. *Bull. JSME* **23** (1980), no. 179, 644–649. (From the summary) **81h:73074** 73L99
- Nakano, Shigeo (with Lai, Tung Sheng) Vector bundle version of Ohsawa's finiteness theorems. *Math. Japon.* **24** (1979/80), no. 6, 657–664. (Y.-T. Siu) **81f:32041** 32L10 (32F10)
- (with Omoto, Hideo) Local deformations of isolated singularities associated with negative line bundles over abelian varieties. *Nagoya Math. J.* **75** (1979), 41–70. (G. Trautmann) **81h:32030** 32G07 (32L15)
- Nakano, Yoshihiko Propagating velocity of singularity occurring in certain degenerate parabolic equations. *Transactions of the Twenty-Fifth Conference of Army Mathematicians (Johns Hopkins Univ., Baltimore, Md., 1979)*, pp. 373–379, *ARO Rep.* **80**, 1, U. S. Army Res. Office, Research Triangle Park, N.C., 1980. (Author's summary) **81g:35060** 35K65 (76S05)
- Nakano, Mitsuhiko On the existence of bounded solution for nonlinear evolution equation of parabolic type. *Math. Rep. Kyushu Univ.* **11** (1977/78), no. 1, 3–14. (M. Birolì) **81h:34073** 34G20 (47H15, 49A29)
- Periodic solution of the dissipative wave equation in a time-dependent domain. *J. Differential Equations* **34** (1979), no. 3, 393–404. (R. Glassey) **81k:35015** 35B10 (35L70)
- Decay of solutions of some nonlinear parabolic equations in noncylindrical domains. *Math. Rep. Kyushu Univ.* **12** (1979/80), no. 1, 1–12. (Klaus Deimling) **81h:34056** 34G20 (35K22)
- (with Narazaki, Takashi) Existence and decay of solutions of some nonlinear parabolic variational inequalities. *Internat. J. Math. Math. Sci.* **3** (1980), no. 1, 79–102. (M. Birolì) **81g:35007** 35B40 (35K55, 47H05, 49A29)
- Nakao, Shintaro (with Yamato, Yui) Approximation theorem on stochastic differential equations. *Proceedings of the International Symposium on Stochastic Differential Equations (Res. Inst. Math. Sci., Kyoto Univ., Kyoto, 1976)*, pp. 283–296, Wiley, New York, 1978. (G. Papanicolaou) **81h:60081** 60H10
- Nakao, Akira Solution analytique et non-analytique pour des équations du premier ordre à symboles principaux dégénérés. *Seminar on Hyperbolic and Holomorphic Partial Differential Equations, 1979–1980 (French)*, Exp. No. 9, 11 pp., Univ. Paris VI, Paris, 1980. (Editors) **81m:35011** 35A20
- Nakasa, A. Limit behavior of the convolution iterates of a probability measure on a semigroup of matrices. *J. Math. Anal. Appl.* **70** (1979), no. 2, 337–347. (A. Mukherjee) **81d:60008** 60B15 (60F05)
- Nakamiz, Anastase A topological property of $\beta(N)$. *Internat. J. Math. Math. Sci.* **3** (1980), no. 4, 713–717. (Tsugunori Nogura) **81k:54029** 54D35
- Nakata, Saburō On the unconditional convergence of Walsh series. (Russian summary) *Anal. Math.* **5** (1979), no. 3, 201–205. (From the text) **81j:42048** 42C10
- Nakata, Tomochi A remark to a paper: "A nonuniform bound on convergence to normality" [Ann. Probab. **3** (1975), no. 5, 903–907; MR **53** #6675] by C. C. Heyde. *Rep. Statist. Appl. Res. Univ. Japan. Sci. Engrs.* **26** (1979), no. 1, 11–13. (Author's summary) **81j:60031** 60F05
- Nakayama, Hirotsuka (with Tanino, Tetsuzoh; Matsumoto, Kinosuke; Matsuo, Hirofumi; Inoue, Koichi; Sawaragi, Yoshikazu) Methodology for group decision support with an application to assessment of residential environment. *IEEE Trans. Systems Man Cybernet.* **9** (1979), no. 9, 477–485. (Authors' summary) **81a:90027** 90A07
- (with Tanino, Tetsuzoh; Sawaragi, Yoshikazu) An interactive optimization method in multicriteria decision making. *IEEE Trans. Systems Man Cybernet.* **10** (1980), no. 3, 163–169. (Authors' summary) **81a:90015** 90A05
- Nakayama, Mikio Nash equilibria and Pareto optimal income redistribution. *Econometrica* **48** (1980), no. 5, 1257–1263. (J. Moulen) **81k:90119** 90D45 (90A07)
- Nakayama, Tsukasa (with Washizu, Kyuichiro) Nonlinear analysis of liquid motion in a container subjected to forced pitching oscillation. *Internat. J. Numer. Methods Engrg.* **15** (1980), no. 8, 1207–1220. (Authors' summary) **81e:76017** 76B99 (65N30)
- Nakazato, Hajime A remark on Ribet's theorem. *Proc. Japan Acad. Ser. A Math. Sci.* **56** (1980), no. 4, 192–195. (M. A. Kenku) **81j:12007** 12A35 (12A50)
- Nakazawa, Akira The theory of sampling inspection by multivariable II. (Japanese. English summary) *Res. Rep. Nagaoka Tech. College* **15** (1979), no. 4, 93–98. (Author's summary) **81a:62102** 62N10
- Nakazawa, S. (with Kelly, D. W.; Zienkiewicz, O. C.; Heinrich, J. C.) A note on upwinding and anisotropic balancing dissipation in finite element approximations to convective diffusion problems. *Internat. J. Numer. Methods Engrg.* **15** (1980), no. 11, 1705–1711. (Authors' summary) **81j:76076** 76R99 (65N30)
- Nakazawa, Teiji (with Tsuda, Takeo) An extension of a problem concerning an ellipse. (Japanese) *Math. Rep. Kyushu Univ.* **9** (1973/74), no. 2, 29–34. (S. Hitotumatu) **81h:51014** 51M05 (51N10)
- (with Tsuda, Takeo) Interrelation between two problems. *Math. Rep. Kyushu Univ.* **9** (1973/74), no. 2, 67–71. (S. Hitotumatu) **81h:12014** 12D05 (51M05)
- Nakazi, Takahiko A note on weak*-Dirichlet algebra. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math.* **27** (1979), no. 7-8, 553–555 (1980). (K. Yale) **81k:46060** 46J15
- Nakki, Raimo Prime ends and quasiconformal mappings. *J. Analyse Math.* **35** (1979), 13–40. (T. Kuusalo) **81k:30025** 30C60 (30C35)
- The cardinality of quasiconformally nonequivalent topological 3-balls with flat boundaries is \aleph_1 . *Proc. Amer. Math. Soc.* **75** (1979), no. 1, 63–68. (Timo Erkkä) **81h:30038** 30C60
- Nakonečnyĭ, O. G. (with Grigorov, A. V.) On recursive estimates of states of linear stochastic systems. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* **No. 1** (1980), 68–72, 95. (Authors' summary) **81h:93067** 93E10
- (with Navrods'kii, V. O.) On minimax estimates of states of linear stochastic systems. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* **1980**, no. 8, 66–71, 89. (Authors' summary) **81h:93103** 93E10 (93E11)
- Nakonečnyĭ, V. V. The invariance algebra of a system of equations of elliptic type. (Russian. English summary) *Group theoretic methods in mathematical physics (Russian)*, pp. 152–159, 194, 202, *Inst. Mat. Akad. Nauk Ukrain. SSR, Kiev*, 1978. (J. S. Joel)
- 81a:35006** 35A30 (35J99, 58G35, 81C40)
- The group-theoretic properties of differential equations with coefficients which generate a Clifford algebra. (Russian. English summary) *Group theoretic methods in mathematical physics (Russian)*, pp. 160–170, 194, 202, *Inst. Mat., Akad. Nauk Ukrain. SSR, Kiev*, 1978. (J. S. Joel) **81a:35012** 35A30 (35P05, 58G35, 81D25)
- (with Nikitin, A. G.) The invariance algebras of Dirac and Schrödinger equations. (Russian. English summary) *Ukrain. Fiz. Ž.* **25** (1980), no. 4, 618–621, 696. (J. S. Joel) **81e:81059** 81D25 (22E70, 35A30, 58G35)
- Nakonečnyĭ, A. G. See Nakonečnyĭ, O. G.
- Nakonečnyĭ, V. V. See Nakonečnyĭ, V. V.
- Nakoulins, O. Inéquation variationnelle et système d'inéquations quasi-variationnelles stationnaires de type elliptique. *Afrika Mat.* **1**, no. 1, 45–68 (1978). (Graham H. William) **81d:49006** 49A29 (35J50)
- Inéquations variationnelles et système d'inéquations quasi-variationnelles d'évolution de type parabolique. *Afrika Mat.* **2**, no. 1, 33–70 (1980). (Giovanni M. Troianiello) **81j:35063** 35K55 (49A29)
- Nalbach-Lenkewala, A. Measures of dependence of the multivariate lognormal distribution. (German and Russian summaries) *Math. Operationsforsch. Statist. Ser. Statist.* **10** (1979), no. 3, 381–387. (Moshe Shaked) **81e:62058** 62H05 (62H20)
- Naldi, Carlo (with Filicori, Fabio; Monaco, Vito Antonio) Simulation and design of microwave class-C amplifiers through harmonic analysis. *IEEE MTT-S 1979 International Microwave Symposium (Orlando, Fla., 1979)*. *IEEE Trans. Microwave Theory Tech.* **27** (1979), no. 12, 1043–1051. (N. D. Sengupta) **81g:78039** 78A55 (65H99, 94C05)
- Nailinov, V. I. (with Plotnikov, P. I.) Boundary value problems for the dynamics of an ideal fluid with free boundaries. (Russian) *Proceedings of an All-Union Conference on Partial Differential Equations (Moscow State Univ., Moscow, 1976)* (Russian), pp. 169–171, *Moskov. Gos. Univ., Meh.-Mat. Fakul'tet, Moscow*, 1978. (See **80f:35002**) **35Q20** (76B99)
- Nailinov, V. V. The language of probabilistic representations. I. The arising of the probabilities of a paradigm. *Avtomatika* **1979**, no. 1, 62–74, 79 (Russian); translated as *Soviet Automat. Control* **12** (1979), no. 1, 53–63. (I. J. Good) **81h:60004** 60A05 (00A25)
- The probability distribution function as a method of defining fuzzy sets. Metatheoretic sketches (discussion of the works of L. Zadeh). *Avtomatika* **1979**, no. 6, 80–87 (Russian); translated as *Soviet Automat. Control* **12** (1979), no. 6, 67–73. (Constantin Drossos) **81m:03032** 03B52 (60A99)
- Namba, Makoto (with Akahori, Takao) Examples of obstructed holomorphic maps. *Proc. Japan Acad. Ser. A Math. Sci.* **54** (1978), no. 7, 189–191. (K. Wolffhardt) **81a:32018** 32G10 (30F10)
- Namba, Toshiyuki Density-dependent dispersal and spatial distribution of a population. *J. Theoret. Biol.* **86** (1980), no. 2, 351–363. (Author's summary) **81i:92024** 92A17 (35K55)
- Namboripad, K. S. S. Regular idempotent generated semigroups and regular partial bands. *Proceedings of the Conference on Semigroups in Honor of Alfred H. Clifford (Tulane Univ., New Orleans, La., 1978)*, pp. 44–84, *Tulane Univ., New Orleans, La.*, 1979. (R. McFadden) **81h:20082** 20M10
- Structure of regular semigroups. I. *Mem. Amer. Math. Soc.* **22** (1979), no. 224, vii + 119 pp. (Author's summary) **81i:20086** 20M10
- (with Meakin, John) Coextensions of pseudo-inverse semigroups by rectangular bands. *J. Austral. Math. Soc. Ser. A* **30** (1980/81), no. 1, 73–86. (K. D. Magill, Jr.) **81j:20091** 20M10
- (with Pastijn, Francis) Subgroups of free idempotent generated regular semigroups. *Semigroup Forum* **21** (1980), no. 1, 1–7. (R. McFadden) **81i:20089** 20M10
- Nambu, Mitsuhiro Whistler-Alfvén turbulence. *Phys. Scripta* **22** (1980), no. 1, 81–87. (Authors' summary) **81a:82020** 82A45 (86A25)
- Nambu, Y. Hamilton-Jacobi formalism for strings. *Phys. Lett. B* **92** (1980), no. 3-4, 327–330. (Q. Shafi) **81f:81063** 81E99
- Namekata, Tsuneyuki (with Tabata, Yoshio; Nishida, Toshio) A sequential allocation problem with unknown probabilities of appearance. *Math. Japon.* **24** (1979/80), no. 4, 341–349. (Masafumi Sasaki) **81a:90076** 90B05 (90C50)
- Namekata, Toshihiko (with Iizuka, Ikuro; Kasahara, Masao) Block codes capable of correcting both additive and timing errors. *IEEE Trans. Inform. Theory* **26** (1980), no. 4, 393–400. (Authors' summary) **81g:94017** 94A24 (94B35)
- (with Sugiyama, Yasuo; Kasahara, Masao; Hirasawa, Shigeichi) Superimposed concatenated codes. *IEEE Trans. Inform. Theory* **26** (1980), no. 6, 735–736. (Authors' summary) **81k:94031** 94B15
- Namias, Victor The fractional order Fourier transform and its application to quantum mechanics. *J. Inst. Math. Appl.* **25** (1980), no. 3, 241–265. (Kurt Bernardo Wolf) **81g:44002** 44A05 (81G10)
- Namikawa, Yukihiko Toroidal degeneration of abelian varieties. II. *Math. Ann.* **245** (1979), no. 2, 117–150. (T. Oda) **81a:14019** 14K10
- Namoka, I. (with Mägel, G.) Intersection numbers and weak* separability of spaces of measures. *Math. Ann.* **249** (1980), no. 3, 273–279. (S. A. Peregrudov) **81j:28022** 28C15 (06A10, 54H99)
- Namsrai, H. Relativistic Feynman-type integrals. *Internat. J. Theoret. Phys.* **19** (1980), no. 5, 397–404. (Author's summary) **81e:81041** 81C20 (81M05)
- Namysłowski, J. M. (with Fishbane, Paul M.) Noninstantaneous $O(c)$ relativistic effects in bound states and a covariant Schrödinger equation. *Phys. Rev. D* **3** (1980), no. 8, 2406–2420. (Authors' summary) **81g:81112** 81G99 (81D25)
- (with Weber, H. J.) Bound states and scattering from bound states in the light-front field theory dynamics. *Z. Phys. A* **295** (1980), no. 3, 219–234. (G. R. Allcock) **81e:81190** 81M05 (81F20)
- Nanbara, K. (with Nakanishi, E.) A new sufficient condition of decoupling of linear time-varying systems with time delays in control and/or state variables. *Internat. J. Control* **32** (1980), no. 4, 609–624. (Authors' summary) **81k:93041** 93C50 (93C05)
- Nambu, Tokumori (with Kato, Hisako) On the existence of the continuous solution of the problem $u_t = (u^m)_{xx} + f(u)$. *Math. Rep. Kyushu Univ.* **9** (1973/74), no. 2, 73–79. (W. F. Ames) **81g:35058** 35K60
- A quasilinear degenerate parabolic equation. *Math. Rep. Kyushu Univ.* **12**

- (1979/80), no. 1, 23–28. (V. Lakshmikantham) **81b:35047** 35K65
- Nanda, Sribatsa ★ Adams completion and its applications. *Queen's Papers in Pure and Applied Mathematics*, 51. *Queen's University, Kingston, Ont.*, 1979. viii+57 pp. (From the preface) **81m:55011** 55P60 (18A40)
- (with Patel, Ujjagar) A nonlinear complementarity problem for monotone functions. *Bull. Austral. Math. Soc.* **20** (1979), no. 2, 227–231. (Hisakazu Nishino) **81i:90189a** 90C33 (47H05)
- (with Nanda, Sudarsan) A nonlinear complementarity problem in mathematical programming in Hilbert space. *Bull. Austral. Math. Soc.* **20** (1979), no. 2, 233–236. (Hisakazu Nishino) **81i:90189b** 90C33 (47H05)
- A-topology for Minkowski space. *J. Austral. Math. Soc. Ser. B* **21** (1979/80), no. 1, 53–64. (B. B. Phadke) **81d:51003** 51B20 (53C50, 83A05)
- A note on maximal and minimal causal spaces. *J. Austral. Math. Soc. Ser. B* **21** (1979/80), no. 3, 357–364. (B. B. Phadke) **81d:51004** 51B20 (53C50, 83A05)
- Adams completion for cohomology theories arising from Kan extensions. *J. Austral. Math. Soc. Ser. A* **29** (1980), no. 4, 431–438. (Harold Hastings) **81k:55020** 55P99 (18A40)
- Nanda, Sudarsan (with Nanda, Sribatsa) A nonlinear complementarity problem in mathematical programming in Hilbert space. *Bull. Austral. Math. Soc.* **20** (1979), no. 2, 233–236. (Hisakazu Nishino) **81i:90189b** 90C33 (47H05)
- (with Nayak, Krishna C.) On some paranormed function spaces. (Italian summary) *Rend. Mat.* (6) **12** (1979), no. 3–4, 431–438 (1980). (S. Simons) **81j:46008** 46A10
- Nanda, V. C. (with Narang, Asha) Smith normal form for matrices over Dedekind domains. *J. Indian Math. Soc. (N.S.)* **42** (1978), no. 1–4, 173–178 (1979). (C. Small) **81c:15014** 15A21 (10C02)
- Nandan, Krishna (with Juneja, Om Prakash; Kapoor, G. P.) On the (p, q) -order and lower (p, q) -order of an entire Dirichlet series. *Tamkang J. Math.* **9** (1978), no. 1, 47–63. (A. V. Bratišev) **81k:30031** 30D15 (30B50)
- (with Doherney, Ram Prakash; Srivastava, R. S. L.) On the generalized type and generalized lower type of an entire function with index pair (p, q) . *Indian J. Pure Appl. Math.* **11** (1980), no. 11, 1424–1433. (S. K. Bajpai) **81m:30027** 30D20
- Nandi, S. B. The exact null distribution of Wilks' criterion. *Sankhyā Ser. B* **39** (1978), no. 4, 307–315. (Nariaki Sugitani) **81k:62073** 62H10 (62H15)
- On the exact distribution of a normalized ratio of the weighted geometric mean to the unweighted arithmetic mean in samples from gamma distributions. *J. Amer. Statist. Assoc.* **75** (1980), no. 369, 217–220. (G. S. Lingappaiah) **81f:62035** 62E15 (62F05)
- On a generalized Stirling distribution of the first kind. *Pure Appl. Math. Sci.* **11** (1980), no. 1–2, 91–95. (Bernard Harris) **81j:60014** 60C05 (05A10, 60E05, 62E15)
- Nanera, T. B. (with Opicev, V. I.; Andrusiev, V. V.) Static and dynamic analysis of a law of monoresource distribution. (Russian. English summary) *Problemi Tehn. Kibernet.* **9** (1980), 15–26. (Authors' summary) **81h:90047** 90A30
- Nanjundiah, Vidyamand (with Gadgil, Sulochana; Gadgil, Madhav) On evolutionarily stable compositions of populations of interacting genotypes. *J. Theoret. Biol.* **84** (1980), no. 4, 737–759. (From the summary) **81e:92011** 92A10 (92A15)
- Nankar, M. L. History of perfect numbers. *Ganita Bhārati* **1** (1979), no. 1–2, 7–8. (Editors) **81h:10009a** 10A25 (01A60)
- See also Vaidya, A. M., **81h:10009b**
- Nanopoulos, Phoebus Mesures de probabilité sur les entiers et ensembles progressions. *Séminaire de Probabilités, XIII* (Univ. Strasbourg, Strasbourg, 1977/78), pp. 533–547. *Lecture Notes in Math.*, 721, Springer, Berlin, 1979. (J. Kubilius) **81h:10035** 10K20 (28A12)
- Nanosis, N. D. (with Georgantopoulos, G. A.; Papaioannou, A. I.) Hydromagnetic free convection flow in the Stokes problem for a porous vertical limiting surface with constant suction. *Astrophys. and Space Sci.* **70** (1980), no. 2, 377–383. (Authors' summary) **81d:76104** 76W05
- Nasom, Adil G. A short note on Joshi theorem concerning Borsuk-Ulam theorem. (Arabic summary) *Iraqi J. Sci.* **20** (1979), no. 1, 135–140. (A. V. Zarelua) **81k:55001** 55M20
- A short note on Borsuk-Ulam type theorem for connected Lie groups. (Arabic summary) *Iraqi J. Sci.* **20** (1979), no. 1, 141–144. (A. V. Zarelua) **81k:55002** 55M20
- Nasom, R. S. (with Mahanti, P. K.) Application of finite element method to bi-harmonic equation. (Arabic summary) *Iraqi J. Sci.* **19** (1978), no. 1, 131–136. (From the introduction) **81g:65156** 65N30
- (with Mahanti, P. K.; Ghobrial, I. R.) Numerical solution and error bound for the linear boundary value problem by finite difference method. *An. Univ. București Mat.* **28** (1979), 55–67. (E. L. Albasini) **81a:65079** 65L10
- Nasipkov, V. V. Systems of inhomogeneous infinite order partial differential equations. (Russian) *Mat. Zametki* **26** (1979), no. 2, 217–226, 317. (R. Vyborny) **81b:35014** 35E99 (32A99)
- Approximation of functions of several variables, with account taken of the growth of coefficients of approximating aggregates. (Russian) *Mat. Sb. (N.S.)* **111**(153) (1980), no. 1, 144–156, 160. (O. D. Gabisoniya) **81e:41008** 41A10 (41A63)
- Napier, John See Guter, R. S.; et al., **81e:01016**
- Napiérowski, M. (with Hauge, E. H.; Hemmer, P. C.) Renormalization of self-avoiding walks by nonlinear transformations. *Phys. Lett. A* **72** (1979), no. 3, 193–196. (Authors' summary) **81i:82007** 82A05
- (with Hemmer, P. C.) Combined site and bond percolation with nearest- and next-nearest-neighbour bonds. *Phys. Lett. A* **75** (1979/80), no. 3, 153–155. (Authors' summary) **81k:82034** 82A42
- Napolitano, Franco Finite p -groups in which the minimal subgroups are quasnormal. (Italian. English summary) *Rend. Circ. Mat. Palermo* (2) **28** (1979), no. 1, 44–46. (Richard Davitt) **81g:20036** 20D10 (20F26)
- Napolitano, Michele (with Messick, Roger E.) On strong slot injection into a subsonic laminar boundary layer. Special issue: computational methods in nonlinear fluid mechanics. *Comput. & Fluids* **8** (1980), no. 2, 199–212. (Authors' summary) **81d:76038** 76D10 (76G99)
- (with Rubini, F.; Vacca, G.) A fourth-order-accurate direct and inverse Cauchy integral solver. *Comput. & Fluids* **8** (1980), no. 4, 435–441. (C. Dagnino) **81j:65046** 65D30
- Nappelbaum, E. L. See Womham, W. Murray, **81f:93049b**
- Nappi, Chiara R. (with Israel, Robert B.) Exponential clustering for long-range integer-spin systems. *Comm. Math. Phys.* **68** (1979), no. 1, 29–37. (Authors' summary) **81j:82014** 82A25 (81E99)
- Narain, D. (with Sinha, B. B.) On almost paracompact manifold. *Aligarh Bull. Math.* **5/6** (1975/76), 55–61 (1977). (Lieven Vanhecke) **81c:53040** 53C15 (53B20)
- Narain, Prem (with Arya, A. S.) Partial diallel crosses based on some association schemes with three and four associate classes. *Sankhyā Ser. B* **39** (1978), no. 4, 394–399. (K. L. Sharma) **81m:62140** 62K10 (05B05)
- Narang, Asha (with Nanda, V. C.) Smith normal form for matrices over Dedekind domains. *J. Indian Math. Soc. (N.S.)* **42** (1978), no. 1–4, 173–178 (1979). (C. Small) **81c:15014** 15A21 (10C02)
- Narang, S. Limitation theorems for absolute Nörlund summability. *Proc. Indian Acad. Sci. Sect. A Math. Sci.* **88** (1979), no. 2, 115–123. (Gokulananda Das) **81e:40010** 40C99
- Narang, Tulsi Das Fixed point theorems in approximation theory. *Aligarh Bull. Math.* **3/4** (1973/74), 33–36. (From the introduction) **81a:41057** 41A65
- On distance sets. *Indian J. Pure Appl. Math.* **7** (1976), no. 10, 1137–1141. (Ivan Singer) **81a:41056** 41A65
- Different types of convexities in metric linear space. *Jyānabha* **7** (1977), 17–20. (S. Swaminathan) **81c:46003** 46A06
- Convexity of Chebyshev sets. *Nisnev Arch. Wisk.* (3) **25** (1977), no. 3, 377–402. (Author's summary) **81f:41037** 41A65 (46B99)
- On Chebyshev sets in metric linear spaces. *Math. Sem. Notes Kobe Univ.* **7** (1979), no. 3, 593–595. (L. B. Sofman) **81c:41062** 41A50 (41A65)
- Narasimhan, Gorti V. L. (with Mehta, Jatinder S.; Swamy, Paravastu A. V. B.) Estimation of a dynamic demand function for gasoline with different schemes of parameter variation. *J. Econometrics* **7** (1978), no. 3, 263–279. (Peter M. Robinson) **81a:62112** 62P20
- Application of cybernetics in economic modelling. *Proceedings of the First World Conference on Mathematics at the Service of Man (Barcelona, 1977), Vol. II*, pp. 96–116. *Univ. Politec., Barcelona*, 1980. (See **81m:9003b**) 90A99
- Narasimhan, M. S. (with Ramanan, S.) Geometry of Hecke cycles. I. C. P. *Ramanujan—a tribute*, pp. 291–345. *Tata Inst. Fund. Res. Studies in Math.*, 6, Springer, Berlin, 1978. (Knud Lønsted) **81k:14003** 14D22 (10D99, 14F05)
- Narasimhan, Raghavan (with Chandrasekharan, K.) Exponential sums associated with algebraic number fields. *Comment. Math. Helv.* **54** (1979), no. 4, 523–561. (S. A. Stepanov) **81j:10057** 10G10
- (with Fornæss, John Erik) The Levi problem on complex spaces with singularities. *Math. Ann.* **248** (1980), no. 1, 47–72. (Peter Pflug) **81f:32020** 32E10
- Narasimhan, Ramabhadran Domains of holomorphy and pseudoconvex domains. *Hyperbolic complex analysis* (Proc. All India Sem., Ramanujan Inst., Univ. Madras, Madras, 1977), pp. 128–140. *Publ. Ramanujan Inst.*, 4, Univ. Madras, Madras, 1979. (Eiichi Sakai) **81h:32019** 32D05 (32F15)
- Narayan, P. C. L. (with Vidyandhi, V.) The Hall effects on hydromagnetic flow over a permeable bed. *Acta Phys. Acad. Sci. Hungar.* **46** (1979), no. 3, 137–152. (Authors' summary) **81e:76055** 76W05 (76S05)
- Narayanan, T. V. (with Savage, I. Richard; Saxena, K. M. Lal) Young chains and rank orders. (French summary) *Canad. J. Statist.* **6** (1978), no. 1, 41–47. (J. Sarangi) **81h:62078** 62G10 (06B99)
- ★ Lattice path combinatorics with statistical applications. *Mathematical Expositions*, 23. *University of Toronto Press, Toronto, Ont.-Buffalo, N.Y.-London*, 1979. xii+106 pp. ISBN 0-8020-5406-6. (L. Vincze) **81f:60019** 60C05 (05–02, 60J15, 62G10)
- A note on randomisation. *Combinatorics, representation theory and statistical methods in groups*, pp. 153–158. *Lecture Notes in Pure and Appl. Math.*, 57, Dekker, New York, 1980. (See **81h:05003**) 62G99
- See also Combinatorics, representation theory and statistical methods in groups, **81h:05003**
- Narayanamurti, V. (with Lax, Melvin D.) Phonon magnification and the Gaussian curvature of the slowness surface in anisotropic media: detector shape effects with application to GaAs. *Phys. Rev. B* (3) **22** (1980), no. 10, 4876–4897. (Authors' summary) **81h:81123** 81Hxx (82A55)
- Narayanan, S. (with Adikesavan, A. S.) A modification of Goka's binary sequence. *Fibonacci Quart.* **17** (1979), no. 3, 212–220. (Authors' introduction) **81h:05013** 05A99 (15A33)
- Narazaki, Takashi (with Nakao, Mitsuhiro) Existence and decay of solutions of some nonlinear parabolic variational inequalities. *Internat. J. Math. Math. Sci.* **3** (1980), no. 1, 79–102. (M. Birol) **81g:35007** 35B40 (35K55, 47H05, 49A29)
- Narowich, Francis J. Analytic properties of the boundary of the numerical range. *Indiana Univ. Math. J.* **29** (1980), no. 1, 67–77. (Takayuki Furuta) **81e:47085** 47A12
- Nardone, P. (with Brout, R.; Englert, F.; Frère, J.-M.; Gunzig, E.; Truffin, C.; Spindel, Ph.) Cosmogony and the origin of the fundamental length scale. *Nuclear Phys. B* **170** (1980), no. 2, FS 1, 228–264. (Authors' summary) **81k:83054** 83F05 (85A40)
- Nardova, A. V. See Fedorov, E. S., **81g:01022**
- ryl-Nardzewski, Czesław See Ryl-Nardzewski, Czesław
- Narendra, Kumpati S. (with Valavani, Lena S.) Direct and indirect model reference adaptive control. *Automatica—J. IFAC* **15** (1979), no. 6, 653–664. (Authors' summary) **81a:93050** 93C40
- (with Peterson, Benjamin B.) Recent developments in adaptive control. *Methods and applications in adaptive control* (Proc. Internat. Sympos., Ruhr-Universität Bochum, Bochum, 1980), pp. 84–101. *Lecture Notes in Control and Information Sci.*, 24, Springer, Berlin, 1980. (See **81h:93038**) 93C40
- Stability results for adaptive identification and control. *Thirteenth Asilomar Conference on Circuits, Systems and Computers* (Pacific Grove, Calif., 1979), pp. 1–16. *IEEE, New York*, 1980. (See **81m:93004**) 93C40
- (with Valavani, Lena S.) A comparison of Lyapunov and hyperstability approaches to adaptive control of continuous systems. *IEEE Trans. Automat. Control* **25** (1980), no. 2, 243–247. (V. M. Popov) **81h:93067** 93D05 (93C40)
- (with Lin, Yuan Hao) A new error model for adaptive systems. *IEEE Trans. Automat. Control* **25** (1980), no. 3, 585–587. (Authors' summary) **81g:93069** 93C40 (68G05)
- Narciss, Louis (with Cohen, Michael A.) Fundamental unit structures: a theory of ratio scalability. *J. Math. Psych.* **20** (1979), no. 3, 193–232. (R. D. Luce) **81g:92025**

- 92A25 (06F20)
- Narimanjan, S. M. See Narimanjan, S. M.
- Narimanov, G. S. See Čečel'skiĭ, A. M. 81c:85004
- Narimanyan, S. M. Uniform distribution of random walks on topological groups. (Russian. Armenian summary) *Akad. Nauk Armjan. SSR Dokl.* 69 (1979), no. 1, 19–23. (Pierre Crépeau) 81g:60071 60J15 (60B15)
- Narita, Kiyomasa On asymptotic stability of solutions of linear stochastic differential equations. (Japanese summary) *Sci. Rep. Res. Inst. Engrg. Kanagawa Univ.* No. 1 (1978), 96–97. (Walter A. Rosenkrantz) 81c:60068 60H10
- On the law of the iterated logarithm for diffusion processes. (Japanese summary) *Rep. Fac. Engrg. Kanagawa Univ.* No. 17 (1979), 8–10. (Walter A. Rosenkrantz) 81c:60085 60J60 (60F15, 60H10)
- Narita, Mamoru (with Yoshida, Norio) Oscillation of semilinear ultrahyperbolic differential operators. *Ann. Mat. Pura Appl.* (4) 122 (1979), 289–300. (E. S. Noussair) 81f:35012 35B05 (35L80)
- Narita, Yoshihiro (with Leissa, Arthur W.) Flexural vibrations of free circular plates elastically constrained along parts of the edge. *Internat. J. Solids and Structures* 17 (1981), no. 1, 83–92. (Authors' summary) 81k:73043 73K12
- Narkiewicz, Wiesław Finite abelian groups and factorization problems. *Colloq. Math.* 42 (1979), 319–330. (J. Knopfmacher) 81i:12006 12A45 (20K01)
- (with Borevič, Z. I.; Vavilov, N. A.) Subgroups of the general linear group over a Dedekind ring. (Russian) Rings and modules, 2. *Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 94 (1979), 13–20, 149. (M. M. Murac) 81i:20053 20G35 (20H25)
- Narkun, Z. M. Addition theorems for "outer" harmonic functions in elliptic coordinates. (Russian) *Differentsial'nye Uravneniya* 15 (1979), no. 2, 357–359, 383. (J. Veselý) 81c:31006 31A35
- The summation theorem for "interior" fundamental solutions of Laplace equations in elliptic coordinates. (Russian. English summary) *Dokl. Akad. Nauk BSSR* 23 (1979), no. 12, 1080–1083, 1149. (V. M. Isakov) 81f:35030 35J05 (35C05)
- Narlikar, M. J. On a theorem of Erdős and Szemerédi. *Hardy-Ramanujan J.* 3 (1980), 41–47. (H. Halberstam) 81j:10062 10H15 (10L10)
- Narumula, V. G. Some subalgebras of topological algebras. (Russian) Singular integrals, integral equations and their applications. *Trudy Tbilis. Mat. Inst. Razmadze Akad. Nauk Gruz. SSR* 61 (1979), 78–90. (T. W. Gamelin) 81a:46053 46H10 (32E25, 46J05)
- Narnhofer, Helge On asymptotic completeness in scattering theory. *Few body systems and nuclear forces (Proc. Eighth Internat. Conf., Graz, 1978)*, 1, pp. 394–396, *Lecture Notes in Phys.*, 82, Springer, Berlin, 1978. (H. Baumgärtel) 81c:81047 81F05 (47A40, 81F10)
- Does there exist a scattering theory for time automorphism groups of C^* -algebras corresponding to two-body interactions? *J. Math. Phys.* 20 (1979), no. 12, 2502–2505. (Woodford W. Zachary) 81a:82020 82A15 (46L05)
- Scattering theory for quasiregular time automorphisms of C^* -algebras and von Neumann algebras. *Rep. Math. Phys.* 16 (1979), no. 1, 1–8. (H. Araki) 81i:46084 46L60 (81F99, 82A15)
- (with Sewell, Geoffrey L.) Equilibrium states of gravitational systems. *Comm. Math. Phys.* 71 (1980), no. 1, 1–28. (Ola Bratteli) 81c:82009 82A15 (46L60)
- Naroznyi, N. B. (with Eberly, J. H.; Sanchez-Mondragon, J. J.) Periodic spontaneous collapse and revival in a simple quantum model. *Phys. Rev. Lett.* 44 (1980), no. 20, 1323–1326. (Authors' summary) 81g:81116 81K05
- (with Sanchez-Mondragon, J. J.; Eberly, J. H.) Coherence versus incoherence: collapse and revival in a simple quantum model. *Phys. Rev. A* (3) 23 (1981), no. 1, 236–247. (Authors' summary) 81k:81123 81K05 (81C05)
- Narrowsay, John J. (with So, Kin Ming) On-line fault diagnosis of switching networks. Special issue on automatic analog fault diagnosis. *IEEE Trans. Circuits and Systems* 26 (1979), no. 7, 575–583. (R. Shirladze) 81c:94056 94C10
- Narula, Subhash C. (with Wellington, John F.) An algorithm for the minimum sum of weighted absolute errors regression. Computations for least absolute values estimation. *Comm. Statist. B—Simulation Comput.* 6 (1977), no. 4, 341–352. (See 81k:62127) 62H12 (65U05, 90C05)
- (with Wellington, John F.) Linear regression using multiple-criteria. *Multiple criteria decision making theory and application (Proc. Third Conf., Hagen/Königswinter, 1979)*, pp. 266–277, *Lecture Notes in Econom. and Math. Systems*, 177, Springer, Berlin, 1980. (Burt S. Holland) 81f:62111 62J05 (62G05)
- Narunka, M. (with Mizusawa, T.; Kajita, T.) Vibration and buckling analysis of plates of abruptly varying stiffness. *Comput. & Structures* 12 (1980), no. 5, 689–693. (Authors' summary) 81k:65016 65D07 (73K12)
- Narusawa, Uchiro Utilization of the moment generating function in the kinetic solution of plane-shock structures. *Phys. Fluids* 23 (1980), no. 8, 1510–1512. (Author's summary) 81g:76077 76L05 (82A40)
- Narula, H. N. On the neighborhood of the DOTU-matrices. (Russian. English summary) Analytic number theory and the theory of functions, 2. *Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 91 (1979), 171–179, 183. (Mary E. Gbur) 81f:10045 10E15 (10E20, 15A57)
- Nasekin, V. Ja. A method for the solution of monotonic integer linear programming problems. *Kibernetika (Kiev)* 1979, no. 5, iii, 106–109, 155. (Russian. English summary; translated as *Cybernetics* 15 (1979), no. 5, 719–723 (1980). (From the text) 81d:90079 90C10
- Nasekh, P. D. (with Maročnik, L. S.; Pelihov, N. V.) Turbulence in cosmology. IV. Asymptotic influence of long-wave disturbances on the expansion of a homogeneous and, on average, isotropic universe close to the cosmological singularity. *Astrophys. and Space Sci.* 67 (1980), no. 2, 261–272. (A. Raychaudhuri) 81f:85005 85A40
- Nash, John C. Positive Ricci curvature on fibre bundles. *J. Differential Geom.* 14 (1979), no. 2, 241–254. (John Bolton) 81k:53039 53C20
- Nash, Stephen G. (with Dahlquist, Germund; Golub, Gene H.) Bounds for the error in linear systems. *Semi-infinite programming (Proc. Workshop, Bad Honnef, 1978)*, pp. 154–172, *Lecture Notes in Control and Information Sci.*, 15, Springer, Berlin, 1979. (Jacques Dubois) 81k:65028 65F10 (90C05)
- (with Golub, Gene H.; Van Loan, C.) A Hessenberg-Schur method for the problem $AX + XB = C$. *IEEE Trans. Automat. Control* 24 (1979), no. 6, 909–913. (Authors' summary) 81a:65046 65F30 (93C05)
- Nashed, M. Z. Generalized inverse mapping theorems and related applications of generalized inverses in nonlinear analysis. *Nonlinear equations in abstract spaces (Proc. Internat. Sympos., Univ. Texas, Arlington, Tex., 1977)*, pp. 217–252, Academic Press, New York, 1978. (M. Craioveanu) 81i:58010 58C15 (47H15, 49A51, 90C30)
- Nash-Williams, C. St. J. A. The reconstruction problem. *Selected topics in graph theory*, pp. 205–236, Academic Press, London, 1978. (See 81c:05059) 05C60
- Acylic detachments of graphs. *Graph theory and combinatorics (Proc. Conf., Open Univ., Milton Keynes, 1978)*, pp. 87–97, *Res. Notes in Math.*, 34, Pitman, San Francisco, Calif., 1979. (Larry Basenispiler) 81j:05078 05C38 (05C45)
- Marriage in infinite societies in which each woman knows countably many men. *Proceedings of the Tenth Southeastern Conference on Combinatorics, Graph Theory and Computing (Florida Atlantic Univ., Boca Raton, Fla., 1979)*, pp. 103–115, *Congress. Numer.*, XXIII–XXIV, Utilitas Math., Winnipeg, Man., 1979. (E. C. Milner) 81i:04008 04A20 (05A05)
- Nashlov, F. G. Extremal functions in certain classes of entire functions. II. (Russian) *Special questions in the theory of functions (Russian)*, pp. 188–204, "Élm", Baku, 1977. (P. M. Tamrazov) 81f:30026 30D15
- Nashlov, M. H. Summability of double series by the Bernstein-Rogosinski method. (Russian) *Azerbaidzhan. Gos. Univ. Učen. Zap.* 1977, no. 4, 89–94. (M. S. Rangachari) 81j:40004 40B05 (40D25, 40G99)
- Nashlov, S. M. A nonlinear equation of Schrödinger type. (Russian) *Differentsial'nye Uravneniya* 16 (1980), no. 4, 660–670, 764. (V. E. Korepin) 81j:35033 35G25 (81C05)
- Nasif, I. F. (with Šmakov, Ju. I.) Effect of the electric field on the flow of a dilute suspension of solid dielectric particles in a flat duct. A translation of *Gidromekh.* 36 (1977), 107–113. *Fluid Mech.—Soviet Res.* 8 (1979), no. 3, 129–137. (Authors' summary) 81b:76072 76W05
- Nasir ad-Din al-Tusi See Usammar, A. U., 81c:01009 and Matveevskaja, G. P., 81j:01007
- Nasr, S. K. (with Sarhan, I.) Statistical testing of an educational credit system hypothesis. (Arabic summary) *Bull. Fac. Sci. Riyadh Univ.* (2) 8 (1977), 513–526. (Authors' summary) 81k:62147 62P15
- Nemat-Nasser, S. See Nemat-Nasser, S.
- Nassif, M. Gončarov polynomials generating functions of two complex variables. *Indian J. Pure Appl. Math.* 9 (1978), no. 6, 548–555. (Author's introduction) 81c:32003 32A15 (32E30, 41A10)
- Nassif, Nabil R. Padé-Galerkin methods for parabolic partial differential equations. *Journées "Éléments Finis" (Rennes, 1975)*, 28 pp., Univ. Rennes, Rennes, 1975. (Author's summary) 81c:65059 65N30
- Nassimi, David (with Sahni, Sartaj) An optimal routing algorithm for mesh-connected parallel computers. *J. Assoc. Comput. Mach.* 27 (1980), no. 1, 6–29. (Authors' summary) 81d:68008 68A05 (68B15)
- Năstăsescu, Constantin Modules Σ -injectifs. *Ring theory (Proc. Antwerp Conf. (NATO Adv. Study Inst.), Univ. Antwerp, Antwerp, 1978)*, pp. 729–740, *Lecture Notes in Pure and Appl. Math.*, 51, Dekker, New York, 1979. (S. S. Page) 81g:16036 16A60 (16A66)
- Décompositions primaires dans les anneaux noethériens à gauche gradués. *Symposia Mathematica, Vol. XXIII (Conf. Abelian Groups and their Relationship to the Theory of Modules, INDAM, Rome, 1977)*, pp. 251–258, Academic Press, London, 1979. (M. Kılıp) 81h:16002 16A03
- (with Albu, Toma) Some aspects of non-Noetherian local cohomology. *Comm. Algebra* 8 (1980), no. 16, 1539–1560. (Chr. U. Jensen) 81j:13014 13D30
- Conditions de finitude pour les modules. II. *Rev. Roumaine Math. Pures Appl.* 25 (1980), no. 4, 615–630. (G. Krause) 81j:16028 16A52 (16A66)
- Nasu, Masakazu Indecomposable local maps of tessellation automata. *Math. Systems Theory* 13 (1979/80), no. 1, 81–93. (Roland Vollmar) 81d:68066 68D20
- An interconnection of local maps inducing onto global maps. *Discrete Appl. Math.* 2 (1980), no. 2, 125–150. (Roland Vollmar) 81j:68068 68D20
- Nasyrov, H. Estimates of n -diameters of classes of functions with a weight in the space L_2 . (Russian) *Talkent. Gos. Univ. Sb. Nauchn. Trudov No. 573 Funktsional. Anal. (1978)*, 61–65, 110. (H. Triebel) 81k:46034 46E35 (41A46)
- Natanason, G. I. (with Žuk, V. V.) On the question of approximation in an integral metric of functions specified on an interval. (Russian. English summary) *Vestnik Leningrad. Univ. Mat. Meh. Astronom.* 1979, vyp. 3, 16–26, 121. (Z. Rubinstein) 81d:41004 41A10 (41A17)
- (with Timan, M. F.) The geometric means of the sequence of best approximations. (Russian. English summary) *Vestnik Leningrad. Univ. Mat. Meh. Astronom.* 1979, vyp. 4, 50–52, 123. (V. N. Malozemov) 81d:42003 42A05 (42A10)
- (with Žuk, V. V.) Constants in direct theorems of approximation theory. (Russian. English summary) *Vestnik Leningrad. Univ. Mat. Meh. Astronom.* 1980, vyp. 2, 5–9, 123. (A. A. Ligu) 81j:42044 42A10 (41A44, 42A50)
- Natanason, L. G. (with Beljakov, M. I.) A modification of top-down parsing. *Programirovanie* 1979, no. 5, 50–55, 80. (Russian); translated as *Programming and Comput. Software* 5 (1979), no. 5, 335–339 (1980). (Authors' summary) 81c:68107 68F25 (68B10)
- Natanason, S. M. Lobachevskii geometry and automorphisms of complex M -curves. (Russian) *Geometric methods in problems of analysis and algebra (Russian)*, pp. 130–151, *Yaroslavl. Gos. Univ., Yaroslavl*, 1978. (P. E. Newstead) 81m:30042 30F10 (14H99, 20B25)
- On the total number of ovals of four complex-isomorphic real algebraic curves. (Russian) *Uspehi Mat. Nauk* 35 (1980), no. 4(214), 184. (A. H. Wallace) 81k:14031 14J25 (14G30)
- Natarajan, Ponnammal Complete endomorphisms of a Boolean algebra. *Math. Student* 45 (1977), no. 3, 85–87 (1979). (Leo Esakia) 81m:06035 06E10
- Nath, Pran (with Arnowitz, R.) Quantum effects on the vacuum symmetries of gauge supersymmetry. *Phys. Rev. D* (3) 18 (1978), no. 8, 2759–2767. (Authors' summary) 81i:81121 81G99 (81G20)
- (with Arnowitz, R.) Supersymmetry formulated in superspace. *On the path of Albert Einstein*, pp. 103–125, *Stud. in Nat. Sciences*, 15, Plenum, New York, 1979. (See 81k:83003) 83E99
- (with Arnowitz, R.) Supergravity geometry in superspace. *Nuclear Phys. B* 165 (1980), no. 3, 462–482. (S. M. Christensen) 81a:83037 83E99 (58A99)

- Nath, Prem (with Behara, M.) On additive and nonadditive measures of directed divergence. *Kybernetika (Prague)* 16 (1980), no. 1, 1-12. (Authors' summary) **81d:94011** 94A17
- Nath, Yogendra (with Alwar, R. S.) Nonlinear dynamic analysis of orthotropic circular plates. *Internat. J. Solids and Structures* 16 (1980), no. 5, 433-443. (Authors' summary) **81b:73028** 73K10
- Nathanson, Melvyn B. Representation functions of sequences in additive number theory. *Proc. Amer. Math. Soc.* 72 (1978), no. 1, 16-20. (Author's introduction) **81g:10074** 10L05
- (with Erdős, Paul) Systems of distinct representatives and minimal bases in additive number theory. *Number theory, Carbondale 1979 (Proc. Southern Illinois Conf., Southern Illinois Univ., Carbondale, Ill., 1979)*, pp. 89-107, *Lecture Notes in Math.*, 751, Springer, Berlin, 1979. (Carl Pomerance) **81k:10089** 10L05
- Additive h -bases for lattice points. *Second International Conference on Combinatorial Mathematics (New York, 1978)*, pp. 413-414, *Ann. New York Acad. Sci.*, 319, New York Acad. Sci., New York, 1979. (Š. Znam) **81e:10041** 10L05
- Sumsets contained in infinite sets of integers. *J. Combin. Theory Ser. A* 28 (1980), no. 2, 150-155. (N. Hindman) **81j:10085** 10L02
- (with Erdős, Paul) Minimal asymptotic bases for the natural numbers. *J. Number Theory* 12 (1980), no. 2, 154-159. (J. E. Nymann) **81i:10069** 10L05
- Connected components of arithmetic graphs. *Monatsh. Math.* 89 (1980), no. 3, 219-222. (T. R. S. Walsh) **81f:05139** 05C99 10A99
- Sumsets of measurable sets. *Proc. Amer. Math. Soc.* 78 (1980), no. 1, 59-63. (H. G. Meijer) **81i:10036** 10L05 28A05
- (with Choi, S. L. G.; Erdős, Paul) Lagrange's theorem with $N^{1/3}$ squares. *Proc. Amer. Math. Soc.* 79 (1980), no. 2, 203-205. (András Sárközy) **81k:10077** 10J05
- See also Number theory, **81a:10004**
- Näther, Wolfgang Monotony relations between distribution functions and their application to experimental design. (German and Russian summaries) *Math. Operationsforsch. Statist. Ser. Statist.* 10 (1979), no. 1, 47-53. (Author's summary) **81j:62125** 62J05 (62K05)
- Nelson, J. B. (with Freese, Ralph) Finitely presented lattices. *Proc. Amer. Math. Soc.* 77 (1979), no. 2, 174-178. (M. E. Adams) **81a:06008** 06B25 03B25, 06B05
- Natjanov, V. L. (with Golovin, A. M.) Diffusion to a particle at large Péclet numbers and small Reynolds and Hartmann numbers. *Izv. Akad. Nauk SSSR Meh. Židk. Gaza* 1980, no. 1, 189-192. (Russian); translated as *Fluid Dynamics* 15 (1980), no. 1, 159-161. (Authors' summary) **81f:80005** 80A20 76W05
- Magnetohydrodynamic flow past a spinning sphere at low Reynolds and Hartmann numbers in Oseen approximation. (Russian. English summary) *Vestnik Moskov. Univ. Ser. I Mat. Meh.* 1980, no. 3, 92-96, 110. (D. ter Haar) **81j:76097** 76W05
- Natolič, D. G. (with Bašelevič, M. O.) Dynamical problems of the theory of elasticity for homogeneous anisotropic media. (Russian. Georgian and English summaries) *Trudy Tbilis. Univ.* 204 (1978), 29-46, 130. (Alexander Alenicyan) **81k:73012** 73C30 (73C03)
- Fundamental matrices of equations of steady oscillations and pseudo-oscillations of the anisotropic theory of elasticity. (Russian. Georgian and English summaries) *Sobšč. Akad. Nauk Gruz. SSR* 96 (1979), no. 1, 49-52. (B. A. Bondarenko) **81d:73008** 73C30 73D99
- The principle of limit absorption in the anisotropic theory of elasticity. (Russian. Georgian and English summaries) *Sobšč. Akad. Nauk Gruz. SSR* 96 (1979), no. 2, 309-312. (M. O. Bašelevič) **81e:73014** 73C30
- (with Džagmadze, A. Ja.; Svanadze, M. Ž.) ★Решение некоторых гранично-контактных задач теории упругости. (Russian) [Solution of some boundary-contact problems of the theory of elasticity] With Georgian and English summaries. *Tbilis. Gos. Univ.*, Tbilisi, 1980. 88 pp. (L. Jentsch) **81j:73080** 73T05
- Nasbeh, M. A. PL involutions of $K \times S^1$. (Arabic summary) *Arabian J. Sci. Engng.* 5 (1980), no. 2, 107-111. (Author's summary) **81f:57042** 57S25
- (with Abu Diak, F.) PL involutions of the Klein bottle. (Arabic summary) *Iraqi J. Sci.* 21 (1980), no. 1, 251-258. (Authors' summary) **81i:57039** 57S25
- Natsume, Hiroko The realization of abstract stratified sets. *Kodai Math. J.* 3 (1980), no. 1, 1-7. (J. N. Mather) **81e:57029** 57R40 32B20, 58A35
- Natterer, Frank Genauigkeitsfragen bei der numerischen Rekonstruktion von Bildern. (English summary) *Numerical mathematics (Sympos., Inst. Appl. Math., Univ. Hamburg, Hamburg, 1979)*, pp. 131-146, *Internat. Ser. Numer. Math.*, 49, Birkhäuser, Basel, 1979. (Author's summary) **81b:68110** 68G10
- Efficient implementation of "optimal" algorithms in computerized tomography. *Math. Methods Appl. Sci.* 2 (1980), no. 4, 545-555. (Author's summary) **81k:68068** 68G10
- Natvig, Bent A suggestion of a new measure of importance of system components. *Stochastic Process. Appl.* 9 (1979), no. 3, 319-330. (Benjamin Epstein) **81j:62147** 62N05 (90B25)
- Improved bounds for the availability and unavailability in a fixed time interval for systems of maintained, interdependent components. *Adv. in Appl. Probab.* 12 (1980), no. 1, 200-221. (R. Subramanian) **81i:62180** 62N05 (90B25)
- (with Dalen, G.) On the transient waiting times for a $GI/M/1$ priority queue. *J. Appl. Probab.* 17 (1980), no. 1, 227-234. (U. Narayan Bhat) **81a:60101** 60K25
- Natyanov, V. L. See Natjanov, V. L.
- Naudé, Gert Universal realization. *J. Comput. System Sci.* 19 (1979), no. 3, 277-289. (Stephen J. Hegner) **81b:18004** 18B20 68D30, 68D45
- Limits and adjoint situations in mathematical structures. (Afrikaans. English summary) *Tydskr. Natuurwetenskap.* 19 (1979), no. 2, 71-80. (T. de W. Jooste) **81j:00003** 00A05 (18-01)
- A note on the duality of time-varying decomposable systems. *Inform. and Control* 45 (1980), no. 3, 245-250. (Author's summary) **81i:93009** 93B07 (93C25)
- Naumenberg, M. (with Cardy, John L.; Scalapino, D. J.) Scaling theory of the Potts-model multicritical point. *Phys. Rev. B* 22 (1980), no. 5, 2560-2568. (Authors' summary) **81g:82017** 82A25 (82A67)
- Nandari, Indu (with Biswas, Suddhendu) A note on the development of some interrupted waiting time distributions. *Pure Appl. Math. Sci.* 11 (1980), no. 1-2, 83-90. (Mark Berman) **81f:60118** 60K05 (60G55)
- Naumann, Joachim Periodic solutions to evolution inequalities of a modified Navier-Stokes type. (Italian summary) *Boll. Un. Mat. Ital. B* 5 (1978), no. 2, 351-369. (James R. Ward, Jr.) **81h:47053** 47H15 34G99, 35Q10
- (with Wulst, Michael) On evolution inequalities of Bingham type in three dimensions. *II. J. Math. Anal. Appl.* 70 (1979), no. 2, 309-325. (P. S. Milojević) **81c:76082** 76A05 (35Q99)
- (with Hünlich, Rolf) On general boundary value problems and duality in linear elasticity. *II. (Czech and Russian summaries) Apl. Mat.* 25 (1980), no. 1, 11-32. (S.-F. Sburian) **81g:73004** 73C02 (35J20)
- On unilateral boundary value problems for the Navier-Stokes equations in two dimensions. *Bull. Math. Soc. Sci. Math. R. S. Roumanie (N.S.)* 24(72) (1980), no. 1, 55-72. (P. C. Fife) **81h:35040** 35Q10 (49A29, 76D05)
- Naumeko, I. V. (with Kuzemin, A. Ja.) Combinatorial methods for optimization of the distribution of resources. (Russian) *Avtomat. Sistemy Upravleniya i Priory Avtomat.* No. 54 (1980), 58-62, ii. (Authors' summary) **81j:90018** 90A10 (90B05)
- Naumenko, K. I. Optimal stabilization of linear systems with lags in control actions. (Russian) *Problems of stability of motion, analytical mechanics and control of motion (Third All-Union Četaev Conf., Irkutsk, 1977)* (Russian), pp. 211-218, 325, "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. (Author's summary) **81g:93092** 93D99
- Naumov, N. D. The tetradic method in the electrodynamics of moving media. *Radiotekhn. i Elektron.* 24 (1979), no. 10, 1960-1963. (Russian); translated as *Radio Engng. Electron. Phys.* 24 (1979), no. 10, 9-12 (1980). (Author's summary) **81g:78016** 78A35
- Naumov, V. A. (with Bromberg, M. A.; Kokotukhin, V. A.) Queueing system consisting of a chain of devices. *Avtomat. i Telemekh.* 1977, no. 3, 60-64. (Russian. English summary); translated as *Avtomat. Remote Control* 38 (1977), no. 3, part 1, 351-355. (Authors' summary) **81h:60113** 60K25 (90B22)
- (with Bašarin, G. P.) Probabilistic model of a computer system with page organization of virtual memory. (Russian) *Telephone traffic theory and networks with controllable elements* (Russian), pp. 143-154, 215, "Nauka", Moscow, 1980. (Authors' summary) **81k:68020** 68B20
- Naumov, V. V. (with Koledov, L. V.) Interpolation in a class of families of Banach spaces. (Russian) *Dokl. Akad. Nauk SSSR* 253 (1980), no. 6, 1298-1302. (V. I. Ovčinnikov) **81j:47039** 47F05 (35R05)
- Naumova, E. O. Iterative structure of nodal switching circuits. (Russian) *Information networks and their analysis* (Russian), pp. 144-147, 219, "Nauka", Moscow, 1978. (Author's summary) **81a:94046** 94C05
- Estimation of the probability of blocking of certain nodal switching circuits. (Russian) *Information networks and their analysis* (Russian), pp. 148-154, 219, "Nauka", Moscow, 1978. (Author's summary) **81a:94047** 94C05
- Naumova, N. I. NM-solutions for some cooperative four-person games with an empty C -core. (Russian. English summary) *Vestnik Leningrad. Univ. Mat. Meh. Astronom.* 1979, vyp. 4, 52-60, 123. (M. Stefănescu) **81i:90216** 90D12
- Naumova, N. M. (with Atabekov, I. U.) Contact problem for a ring supported by a shell. (Russian) *Vysisl. Metody i Programirovanie* No. 31 (1979), 140-147. (M. O. Bašelevič) **81i:73077** 73T05 (73L99)
- Naus, Joseph I. An indexed bibliography of clusters, clumps and coincidences. *Internat. Statist. Rev.* 47 (1979), no. 1, 47-78. (From the introduction) **81k:62001** 62-XX
- Naval, I. K. See Boundary value problems for nonstationary equations, **81c:35062**
- Naval, Saïed Ahmed Šerif Mixed problem for hyperbolic equations in domains with nonsmooth boundary. (Russian. English summary) *Vestnik Moskov. Univ. Ser. I Mat. Meh.* 1980, no. 3, 7-10, 106. (J. Král) **81j:35070** 35L10 (35B45, 35D10)
- Navarro, Carlos B. Brief survey of semigroup theory and its applications to evolution problems. *Stochastica* 2, no. 4, 1-34 (1978). (R. E. Showalter) **81c:34052** 34G10 (34G20, 47D05, 47H20)
- de la horra Navarro, J. See de la Horra Navarro, J.
- Navarro, José-Luis On the existence and classification of co- H -structures. *Collect. Math.* 30 (1979), no. 2, 103-111. (Shiroshi Saito) **81j:55008** 55P45
- aguilera-Navarro, V. C. See Aguilera-Navarro, V. C.
- Naveira, Antonio Martínez See Martínez Naveira, Antonio
- Navid, Nasrollah (with Willson, Alan N., Jr.) A theory and an algorithm for analog circuit fault diagnosis. Special issue on automatic analog fault diagnosis. *IEEE Trans. Circuits and Systems* 26 (1979), no. 7, 440-457. (Yilmaz Tokad) **81a:94048** 94C05
- Navia, Francis P. D. (with Zidek, James V.; Lockhart, Richard) Statistics of extremes: an alternate method with application to bridge design codes. *Technometrics* 21 (1979), no. 2, 185-191. (A. M. Hasofer) **81m:62084** 62G30 (62N99)
- Navon, I. M. (with Fairweather, G.) A linear ADI method for the shallow-water equations. *J. Comput. Phys.* 37 (1980), no. 1, 1-18. (Authors' summary) **81h:76008** 76B15 (65N10)
- Navrods'kii, V. O. (with Nakonečnii, O. G.) On minimax estimates of states of linear stochastic systems. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* 1980, no. 8, 66-71, 89. (Authors' summary) **81h:93103** 93E10 (93E11)
- Nawaf, Ghassan Effectiveness of control algorithm. *Third Formator Symposium on Mathematical Methods for the Analysis of Large-Scale Systems*, pp. 139-147, *Academia, Prague*, 1979. (See **81j:93007**) 49E20 (93A15)
- Nawaz, Sharif, M. (with Agarwalla, Srichandra) Sequential approach to multicriterion optimization. *Proceedings of the First International Conference on Mathematical Modeling (St. Louis, Mo., 1977)*, Vol. II, pp. 721-731, *Univ. Missouri-Rolla, Rolla, Mo.*, 1977. (Authors' summary) **81j:90116** 90C31
- Nawija, W. M. (with de Jonge, R.) The analysis of a conveyor-serviced production station. *European J. Oper. Res.* 6 (1981), no. 1, 67-74. (Authors' summary) **81j:90064** 90B30
- Navrocz, Jan On the existence of C' solutions of a functional equation. *Demonstratio Math.* 12 (1979), no. 4, 1027-1041. (Karol Baron) **81h:39007** 39B10
- Nayak, Krunal C. (with Nanda, Sudarsan) On some paranormed function spaces. (Italian summary) *Rend. Mat.* (6) 12 (1979), no. 3-4, 431-438 (1980). (S. Simons) **81j:46008** 46A10
- Nayak, S. K. (with Parhi, N.) On nonoscillatory behaviour of solutions of nonlinear differential equations. (Italian summary) *Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur.* (8) 65 (1978), no. 1-2, 58-62 (1979). (John R. Graef) **81g:34037** 34C10
- Nayfeh, Ali Hassan (with Khurwicz, A.) Nonlinear waves in homogeneous and heterogeneous elastic solids. (French summary) 8th International Symposium on

- Nonlinear Acoustics (École Nat. Supérieure de Chimie de Paris, Paris, 1978). *J. Physique* 40 (1979), no. 11 suppl. Colloque C-8, C8-207-C8-211. (G. A. Nariboli) **81f:73013** 73D35
(with Shaker, B. S.; Kaiser, J. E.) Transmission of sound through nonuniform circular ducts with compressible mean flows. *ALAA J.* 18 (1980), no. 5, 515-525. (Authors' summary) **81a:76036** 76N10 (76Q05)
(with Ragab, S. A.) Second-order asymptotic solution for laminar separation. *Phys. Fluids* 23 (1980), no. 6, 1091-1100. (Authors' summary) **81d:76041** 76D15
- Naylor, D. On an integral transform of the Mellin type. *J. Engrg. Math.* 14 (1980), no. 2, 93-99. (N. C. Jain) **81c:44008** 44A15 (45F10)
- Naylor, R. H. The role of experiment in Galileo's early work on the law of fall. *Ann. of Sci.* 37 (1980), no. 4, 363-378. (William R. Shea) **81m:01017** 01A45
- an-Nayrizi, Abū-l-'Abbās al-Faḍl ibn Ḥatīm. See Matvievskaja, G. P. **81j:01007**
- Nazaruk, Z. T. (with Panajuk, V. V.; Savruk, M. P.) The plane problem of diffraction of an electromagnetic field by a system of curvilinear screens. (Russian) *Dokl. Akad. Nauk SSSR* 252 (1980), no. 5, 1101-1104. (V. M. Babič) **81h:78022** 78A45
- Nazarenko, N. A. The problem of smoothing by parametric splines. (Russian) *Studies in the theory of approximation of functions and their applications* (Russian), pp. 142-145, 193. *Akad. Nauk Ukrain. SSR, Inst. Mat., Kiev, 1978.* (Gheorghe Micula) **81b:41017** 41A15
Deviation of a parametric parabolic Hermite spline from a polygonal path in the Hausdorff metric. (Russian) *The theory of functions and its applications* (Russian), pp. 150-154, 211, "Naukova Dumka", Kiev, 1979. (A. A. Pekarskii) **81c:41016** 41A15 (41A30)
(with Pereverzev, S. V.) Exact values of an approximation by Hermite splines of even degree on classes of differentiable functions. (Russian) *Mat. Zametki* 28 (1980), no. 1, 33-44, 167. (A. A. Ligan) **81m:41009** 41A15
- Nazarenko, T. I. (with Gubareva, E. B.) Interval variants of Runge-Kutta type methods for solving the Cauchy problem for ordinary differential equations. (Russian) *Numerical methods of optimization (applied mathematics)* (Russian), pp. 153-160. *Akad. Nauk SSSR Sibirsk. Otdel., Energet. Inst., Irkutsk, 1978.* (H. Shintani) **81g:65100** 65L05 (65G10)
- Nazarjan, G. A. Disjunctive partitions of sets of Boolean functions. (Russian) *Armenian summary* *Akad. Nauk Armjan. SSR Dokl.* 69 (1979), no. 2, 88-94. (Author's introduction) **81c:94051** 94C10 (68C25)
- Nazarov, A. A. An asymptotically optimal rule for forming queues from indirect observations. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* 1978, no. 6, 111-117 (Russian); translated as *Engrg. Cybernetics* 16 (1978), no. 6, 87-93. (S. Christian Albright) **81d:60104** 60K25 (90B22)
Adaptive queueing systems controlled by linear-strategy automata. *Automat. i Telemekh.* 1979, no. 5, 99-103 (Russian. English summary); translated as *Automat. Remote Control* 40 (1979), no. 5, part 2, 709-712. (Martin J. Fischer) **81b:60097** 60K25 (68C15, 93C40)
- Nazarov, B. Basis for the application of dynamic programming to the variational problems of Bolza and Mayer. (Russian) *Voprosy Vychisl. i Prikl. Mat. (Tashkent)* No. 54 (1979), 3-12, 197. (A. B. Pevnyi) **81c:49011** 49B10 (49C20, 65K05, 90C39)
- Nazarov, F. (with Nagorev, B. M.) Some hereditary properties of almost periodic functions. (Russian) *Tajiki summary* *Izv. Akad. Nauk Tadzhik. SSR Otdel. Fiz.-Mat. i Geolog.-Him. Nauk* 1979, no. 4(74), 3-10. (C. Corduneanu) **81h:43009** 43A60 (42A75)
- Nazarov, I. N. A rationality criterion for certain power series. (Russian) *Izv. Akad. Nauk UzSSR Ser. Fiz.-Mat. Nauk* 1979, no. 3, 87-88. (S. V. Kotov) **81g:10047** 10F35
- Nazarov, S. A. Asymptotic behavior with respect to a parameter of the solution to a boundary value problem that is elliptic in the sense of Agranović-Višik in a domain with conical points. (Russian) *Boundary value problems. Spectral theory* (Russian), pp. 146-167, 243-244. *Probl. Mat. Anal., 7, Leningrad. Univ., Leningrad, 1979.* (J. S. Joel) **81a:35030** 35J40 (35C20)
The method of M. I. Višik and L. A. Ljusternik in domains with conic points. (Russian) *Dokl. Akad. Nauk SSSR* 245 (1979), no. 6, 1307-1311. (L. A. Ivanov) **81g:35029** 35J30
(with Maz'ja, V. G.; Plamenetskii, B. A.) Asymptotic behavior of the solutions of elliptic boundary value problems in the case of variation of the domain near conic points. (Russian) *Dokl. Akad. Nauk SSSR* 249 (1979), no. 1, 94-96. (A. M. Il'in) **81a:35011** 35B25 (35J99)
- The superpower boundary layer in the problem of the bending of a stressed plate. (Russian. English summary) *Vestnik Leningrad. Univ. Mat. Meh. Astronom.* 1980, vyp. 1, 72-80, 120. (D. P. Raiković) **81j:73060** 73K10
- Nazárova, L. A. Polyquivers of infinite type. (Russian) *Algebra, number theory and their applications. Trudy Mat. Inst. Steklov.* 148 (1978), 175-189, 275. (Sheila Brenner) **81d:16022** 16A64
(with Ovsienko, S. A.; Rošter, A. V.) Polyquivers of finite type. (Russian) *Algebra, number theory and their applications. Trudy Mat. Inst. Steklov.* 148 (1978), 190-194, 277. (Sheila Brenner) **81d:16023** 16A64
- Nazimov, A. B. Rate of convergence of the regularization method. (Russian) *Tajiki summary* *Dokl. Akad. Nauk Tadzhik. SSR* 22 (1979), no. 10, 583-587. (Ja. I. Al'ber) **81k:65058** 65J10
- Nazrin, G. I. Topological structure of a family of solutions of the Bogoljubov equation. (Russian. English summary) *Teoret. Mat. Fiz.* 42 (1980), no. 2, 243-252. (Nicolae Angelescu) **81i:82008** 82A05 (46A50)
Description of Gibbs random fields by the generating functional method. (Russian. English summary) *Teoret. Mat. Fiz.* 42 (1980), no. 3, 383-391. (B. S. Nahapetjan) **81d:82007** 82A05
- Nazrov, Š. (with Muhidinov, N. M.) Computerized recognition of closed plane domains. (Russian) *Voprosy Vychisl. i Prikl. Mat. (Tashkent)* No. 53 (1978), 96-107, 182. (V. A. Kovalevskii) **81i:68097** 68E99 (51-04)
- Nazyrov, Z. F. (with Hruslov, E. Ja.) Perturbation of the thermal field of moving small particles. (Russian) *Studies in the theory of operators and their applications* (Russian), pp. 49-65, 177, "Naukova Dumka", Kiev, 1979. (Authors' summary) **81c:80012** 80A20
- Nederhouser, Carla C. Some limit theorems for random fields. *Comm. Math. Phys.* 61 (1978), no. 3, 293-305. (Author's summary) **81h:60125** 60K35 (60F05, 60F15, 82A05)
- Convergence of block spins defined by a random field. *J. Statist. Phys.* 22 (1980), no. 6, 673-684. (D. Szász) **81j:60032** 60F05 (60G60, 60K35, 82A05)
(with Purdy, George B.) Threshold functions for random hypergraphs. *Utilitas Math.* 17 (1980), 179-187. (Claude Benzaken) **81k:05079** 05C65 (05C99)
- Neagu, Alexandru C. Theoretical aspects in the moving frame method. (Italian summary) *Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur.* (8) 63 (1977), no. 5, 368-371 (1978). (I. Kolář) **81d:53013** 53A99 (53C10)
A geometrical interpretation for the holonomic prolongations of a principal fibre bundle. (Romanian summary) *Bul. Inst. Politehn. Iași Sect. I* 24(28) (1978), no. 3-4, 35-37. (I. Kolář) **81d:58006** 58A20 (53C10, 55R10)
Global slices in G-spaces. *An. Ştiinţ. Univ. "Al. I. Cuza" Iaşi Sect. I a Mat. (N.S.)* 25 (1979), no. 1, 71-74. **81d:57038** 57S99
- Nearing, James (with Tsai, Wu Yang) Transition-Cerenkov radiation in a slab. *Phys. Rev. D* (3) 21 (1980), no. 12, 3428-3436. (From the summary) **81e:78025** 78A40 (78A35)
- Neave, Edwin H. (with Petersen, Edward R.) A comparison of optimal and adaptive decision mechanisms in an organizational setting. *Management Sci.* 26 (1980), no. 8, 810-822. (Authors' summary) **81j:90004** 90A05 (90C40)
- Nebesky, Ladislav Graph theory and linguistics. *Applications of graph theory*, pp. 357-380. *Academic Press, London, 1979.* (See **81h:05050**) **05C99** (68E10)
On the existence of 1-factors in partial squares of graphs. (Russian summary) *Czechoslovak Math. J.* 29(104) (1979), no. 3, 349-352. (David P. Sumner) **81b:05098** 05C99
On Z-factors in squares of graphs. (Russian summary) *Czechoslovak Math. J.* 29(104) (1979), no. 4, 588-594. (G. Chartrand) **81h:05106** 05C70
On the existence of a 3-factor in the fourth power of a graph. (Czech summary) *With a loose Russian summary. Časopis Pěst. Mat.* 105 (1980), no. 2, 204-207, 209. (G. Chartrand) **81f:05130** 05C70
On squares of complementary graphs. *Math. Slovaca* 30 (1980), no. 3, 247-249. (H. A. Jung) **81m:05122** 05C99
- Nečea, A. A. A basis of generalized identities of a finite commutative local principal ideal ring. (Russian) *Algebra i Logika* 18 (1979), no. 2, 186-193, 254. (Tomáš Kepka) **81i:08008** 08B05 (13M10)
(with Mal'cev, Ju. N.) Critical rings and varieties of algebras. (Russian) *Algebra i Logika* 18 (1979), no. 3, 341-347, 386. (E. W. Kiss) **81g:16024** 16A38
- Nečea, A. P. (with Gavdzinskii, V. N.) A boundary value problem for pairs of functions that are analytic in noncoinciding regions. (Russian) *Ukrain. Mat. Ž.* 31 (1979), no. 6, 658-665, 766. (V. Mičič) **81j:30066** 30E25
- Nečea, V. M. (with Kartašev, E. M.; Šahuridin, V. I.) A class of dynamical problems of thermoelasticity in a region with moving boundaries. (Russian) *Problems in the theory of elasticity and viscoelasticity* (Russian), pp. 97-103. *Akad. Nauk SSSR, Ural. Nauch. Centr. Sverdlovsk, 1978.* (Szczepan Borkowski) **81m:73001** 73U05 (35K05)
- Nečevskii, M. L. (with Berković, L. M.) Transformation methods in nonlinear and non-steady-state problems of mechanics. (Russian) *Theory of stability and its applications* (Russian), pp. 163-172, 301, "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. (E. G. Al'breht) **81f:70023** 70K99 (34A05)
- Nečas, Jindřich An example of a nonsmooth solution of a nonlinear elliptic system with analytic coefficients and a smoothness condition. (Russian) *Proceedings of an All-Union Conference on Partial Differential Equations (Moscow State Univ., Moscow, 1976)* (Russian), pp. 174-177. *Moskov. Gos. Univ., Meh.-Mat. Fakul'tet, Moscow, 1978.* (G. Albinus) **81m:35057** 35J60 (49A22)
(with Trávníček, Luděk) Variational inequalities of elastoplasticity with internal state variables. *Theory of nonlinear operators (Proc. Fifth International Summer School, Central Inst. Math. Mech. Acad. Sci. GDR, Berlin, 1977)*, pp. 195-204. *Abh. Akad. Wiss. DDR, Abt. Math. Naturwiss. Tech.*, 1978, 6, Akademie-Verlag, Berlin, 1978. (B. A. Barendsen) **81a:73022** 73E99 (49A29)
(with Stará, J.; Švarc, R.) Classical solution to a second order nonlinear elliptic system in R^n . *Ann. Scuola Norm. Sup. Pisa Cl. Sci.* (4) 5 (1978), no. 4, 605-631. (Moshe Marcus) **81a:35038** 35J65
On the regularity of weak solutions to variational equations and inequalities for nonlinear second order elliptic systems. *Equadiff IV (Proc. Czechoslovak Conf. Differential Equations and their Applications, Prague, 1977)*, pp. 286-299. *Lecture Notes in Math.*, 703, Springer, Berlin, 1979. (H. O. Cordes) **81f:35038** 35J35 (35D10, 35J20, 49A29)
(with Gröger, Konrad) On a class of nonlinear initial value problems in Hilbert spaces. *Math. Nachr.* 93 (1979), 21-31. (N. Pachiarotti) **81h:34072** 34G20 (47H05)
(with Mawhin, Jean; Novák, Břetislav) In memoriam Professor Svatopluk Fučík. *Czechoslovak Math. J.* 30(105) (1980), no. 1, 153-162 (1 plate). (Editors) **81m:01067** 01A70
(with Oleinik, O. A.) Liouville theorems for elliptic systems. (Russian) *Dokl. Akad. Nauk SSSR* 252 (1980), no. 6, 1312-1316. (L. A. Ivanov) **81h:35065** 35J60
(with Giaquinta, M.) On the regularity of weak solutions to nonlinear elliptic systems of partial differential equations. *J. Reine Angew. Math.* 316 (1980), 140-159. (Z. C. Motzler) **81m:35056** 35J60
(with Kratochvíl, Alexander) Gradient methods for the construction of Ljusternik-Schnirelmann critical values. (French summary) *RAIRO Anal. Numér.* 14 (1980), no. 1, 43-54. (Nicola Basile) **81h:58019** 58E05 (47H17, 65J15)
- Necula, Maria-Ana (with Tănăsescu, Cristian) Algorithms for determining LODEC which has a given time function as solution. (Romanian summary) *Bul. Inst. Politehn. Bucureşti Ser. Electrotehn.* 41 (1979), no. 2, 95-105. (Authors' summary) **81b:65076** 65L99
(with Tănăsescu, Cristian) Algorithms for determining LEFD which has a given discrete time function as solution. (Romanian summary) *Bul. Inst. Politehn. Bucureşti Ser. Electrotehn.* 42 (1980), no. 2, 95-102. (Authors' summary) **81m:68004** 68J05
- corol-Nedelcu, Mariana See Corol-Nedelcu, Mariana
- Nédélec, J.-C. Méthodes d'éléments finis courbes pour la résolution des équations intégrales singulières sur des surfaces de R^2 . *Journées "Éléments Finis" (Rennes, 1975)*, 31 pp., Univ. Rennes, Rennes, 1975. (Editors) **81e:65071** 65R20 (45L10)
(with Brezzi, F.; Johnson, Claes) On the coupling of boundary integral and finite element methods. *Proceedings of the Fourth Symposium on Basic Problems of Numerical Mathematics (Plzeň, 1978)*, pp. 103-114. *Charles Univ., Prague, 1978.* (Ian Gladwell)

- 81e:65055a** 65N30 (65R99)
(with Bardos, Claude; le Roux, A. Y.) First order quasilinear equations with boundary conditions. *Comm. Partial Differential Equations* 4 (1979), no. 9, 1017-1034. (Sadakazu Aizawa) **81b:35052** 35L65 (35F30)
- (with Adam, J. C.; Gourdin Sereni, A.; Raviart, P.-A.) Study of an implicit scheme for integrating Maxwell's equations. *Comput. Methods Appl. Mech. Engrg.* 22 (1980), no. 3, 327-346. (Authors' summary) **81e:78008** 78A25 (65N30)
- Mixed finite elements in R^3 . *Numer. Math.* 35 (1980), no. 3, 315-341. (P. G. Ciarlet) **81k:65125** 65N30
- Nedjalkov, I. P.** On the application of ill-posed problems of potential theory in electrocardiography. (Russian, Bulgarian and English summaries) *Godišnik Visi. Učebn. Zaed. Tehn. Fiz.* 13 (1976), no. 2, 1-6 (1980). (Authors' summary) **81f:92014** 92A09
- (with Manov, S. S.; Nikolov, O.) On an inverse problem of the relativistic dynamics of a material point in post-Newtonian approximation. (Bulgarian and Russian summaries) *Godišnik Visi. Učebn. Zaed. Tehn. Fiz.* 14 (1977), no. 1, 69-78 (1979). (From the introduction) **81e:83010** 83C10
- (with Židkovič, E. P.; Nguyen, M.; Horomskii, B. N.) Investigation of a class of solutions for Low's equation. (Russian) *Ž. Vychisl. Mat. i Mat. Fiz.* 19 (1979), no. 4, 998-1014, 1083. (Authors' summary) **81e:81009** 81F20 (65H10, 65R20)
- Nedoma, Josef** The finite element solution of elliptic and parabolic equations using simplicial isoparametric elements. (French summary) *RAIRO Anal. Numér.* 13 (1979), no. 3, 257-289. (Authors' summary) **81f:65083** 65N30
- Complete extension of a convex function. *Czechoslovak Math. J.* 30(105) (1980), no. 1, 36-40. (E. F. Beckenbach) **81e:26008** 26A51 (26D99, 52A20)
- Nee, Viktor W.** (with da Cunha, David M.) Unsteady plane stagnation flow. (Arabic summary) *Arabian J. Sci. Engrg.* 5 (1980), no. 2, 81-90. (Authors' summary) **81d:76026** 76D05
- Neeman, Yuval** (with Šijački, Djordje) Errata: "Unified affine gauge theory of gravity and strong interactions with finite and infinite $GL(4, R)$ spinor fields" [Ann. Physics 120 (1979), no. 2, 292-315; MR 80i:81060]. *Ann. Physics* 125 (1980), no. 1, 227. (From the text) **81j:81024** 81C40
- (with Sternberg, Shlomo) Internal supersymmetry and unification. *Proc. Nat. Acad. Sci. U.S.A.* 77 (1980), no. 6, part 1, 3127-3131. (Hans Tilgner) **81k:81098** 81G20 (17A70)
- Neemann, Ursula** Der Begriff der Möglichkeit bei Bernard Bolzano. *Philos. Natur.* 17 (1978/79), no. 1, 70-89. **81f:03017** 03A05 (01A55, 03-03)
- Neerhoff, Fred L.** Reciprocity and power-flow theorems for the scattering of plane elastic waves in a half space. *Wave Motion* 2 (1980), no. 2, 99-113. (Authors' summary) **81d:73024** 73D25
- Nef, Walter** Eulers Charakteristik und die Beschränktkeit konvexer Polyeder. *J. Reine Angew. Math.* 314 (1980), 72-83. (L. G. Šaraburova) **81d:52003** 52A25 (57Q65)
- Zur Eulerschen Charakteristik allgemeiner, insbesondere konvexer Polyeder. (English summary) *Resultate Math.* 3 (1980), no. 1, 64-69. (Udo Pachner) **81e:52005** 52A25
- Nefedov, E. I.** (with Kravčenko, V. F.) A method of solving the boundary value problems of electrodynamics for domains of complex shape. (Russian) *Dokl. Akad. Nauk SSSR* 248 (1979), no. 1, 74-77. (From the text) **81b:78003** 78A25
- Nefedov, V. N.** Regularization methods for convex three-step lexicographic problems. (Russian) *Dokl. Akad. Nauk SSSR* 249 (1979), no. 5, 1060-1063. (T. R. Gičev) **81h:90135** 90C31 (26A51, 65K05)
- Neff, Thomas P.** See Bhat, Kabekode V. S., **81m:94041**
- Neffke, H.** Renewal reward processes with linear expectation functions. *Operations Research Verfahren*, 30, pp. 98-110, Hain, Meisenheim, 1979. (Mark Brown) **81e:60095** 60K05 (90B05)
- Nefli, Salih N.** Modeling the price side of econometric models: an analysis of the underlying hypotheses. *J. Econometrics* 10 (1979), no. 1, 71-84. (P. C. B. Phillips) **81e:62113** 62P20 (90A16)
- Negale, J. W.** Nuclear dynamics: the time-dependent mean-field approximation and beyond. *Theoretical methods in medium-energy and heavy-ion physics* (Proc. NATO Adv. Stud. Inst. Theoret. Nuclear Phys., Univ. Wisconsin, Madison, Wis., 1978), pp. 235-368, NATO Adv. Study Inst. Ser., Ser. B: Physics, 38, Plenum, New York, 1978. (See **81h:81030**) **81C99**
- (with Levit, S.; Paltiel, Z.) Time-dependent mean-field theory and quantized bound states. *Phys. Rev. C* (3) 21 (1980), no. 4, 1603-1625. (Authors' summary) **81a:81106** 81G35
- Neggers, Joseph** Combinatorial symbols and finite posets. *J. Combin. Inform. System Sci.* 4 (1979), no. 4, 309-342. (Ivan Rival) **81k:06004** 06A10 (05A99)
- (with Allen, Paul J.) Central perfect rings. *J. Korean Math. Soc.* 17 (1980/81), no. 1, 53-80. (George Szeto) **81k:16007** 16A10 (16A26)
- Negishi, Hiroshi** Probability inequalities of exponential type for continuous parameter processes and their applications. *Sci. Rep. Yokohama Nat. Univ. Sect. I No. 26* (1979), 17-20. (M. Csörgö) **81e:60029** 60F10 (60G10)
- Negotić, Constantin Virgil** On fuzzy systems. *Advances in fuzzy set theory and applications*, pp. 69-75, North-Holland, Amsterdam, 1979. (Jerzy Jaroń) **81e:93006** 93A13 (03E72, 90A05)
- Negrepontis, S.** Combinatorial techniques in functional analysis. *Surveys in general topology*, pp. 337-366, Academic Press, New York, 1980. (Richard A. Ald) **81a:46020** 46B20 (46E99, 54A25)
- Negro, Angelo** Errata corrigé: "Successive approximations method for magnetic field steady state nonlinear equations" [Rend. Sem. Mat. Univ. Politec. Torino 35 (1976/77), 361-372 (1978); MR 58 #8829]. *Rend. Sem. Mat. Univ. Politec. Torino* 37 (1979), no. 2, 175 (1980). (Editors) **81d:78011** 78A25 (35Q99)
- A time-periodic boundary value problem for nonlinear quasistationary Maxwell equations. (Italian summary) *Boll. Un. Mat. Ital. B* (5) 17 (1980), no. 2, 604-613. (J. S. Colonias) **81h:78003** 78A25 (78A55)
- Negurica, V. M.** Diagnosis of the technical state of sequential circuits by the method of α -tests. (Russian) *Discrete systems, formal languages and complexity of algorithms* (Russian), pp. 40-55, Inst. Kibernet., Akad. Nauk Ukrain. SSR, Kiev, 1978. (See **80d:68003**) **94C05**
- Nehari, Zeev** See **Obituary: Nehari, Zeev**, **81i:01046**
- Nehar, Erhard** Cartan-Involutionen von halbeinfachen reellen Jordan-Tripelsystemen. *Math. Z.* 169 (1979), no. 3, 271-292. (Armin Thedy) **81f:17012** 17C20
- nehova-Nehmer, V.** See **Milova-Nehmer, V.**
- Neirlich, Werner** Eine Bemerkung zur effektiven Fixpunktberechnung bei vollständigen Numerierungen. Diskrete Mathematik und ihre Anwendungen in der Mathematischen Kybernetik (10. Arbeitssim. Gebiet Diskrete Math., Wilhelm-Pieck-Univ., Rostock, 1978). *Rostock. Math. Kolloq. No. 10* (1978), 83-86. (Horst Reichel) **81e:03052** 03D45
- (with Goetze, Bernhard) The structure of loop programs and subrecursive hierarchies. *Z. Math. Logik Grundlag. Math.* 26 (1980), no. 3, 255-278. (Giorgio Ausiello) **81j:03066** 03D20 (68B05, 68C25)
- Nehse, Reinhard** (with Deumlich, Reinhard; Elster, Karl-Heinz) Recent results on separation of convex sets. (German and Russian summaries) *Math. Operationsforsch. Statist. Ser. Optim.* 9 (1978), no. 2, 273-296. (V. P. Soltan) **81m:52005** 52A05 (46A55, 90C25)
- Neiland, V. Ja.** (with Dudin, G. N.) Heat transfer in the neighborhood of a point of inflection in the leading edge of a plate in hypersonic flight. *Izv. Akad. Nauk SSSR Meh. Židk. Gaza* 1980, no. 3, 40-45 (Russian); translated as *Fluid Dynamics* 15 (1980), no. 3, 355-359. (Authors' summary) **81k:76037** 76K05
- Neimark, Ju. I.** A class of decision rules. (Russian) *Adaptive systems and their applications* (Russian), pp. 34-43, 185, "Nauka" Sibirsk. Otdel., Novosibirsk, 1978. (A. L. Rukhin) **81m:62012** 62C05 (62F10)
- The development of stochasticity in dynamical systems. (Russian) *Asymptotic methods in the theory of nonlinear oscillations* (Proc. All-Union Conf. Asymptotic Methods in Nonlinear Mech., Katsiveli, 1977) (Russian), pp. 133-141, 275, "Naukova Dumka", Kiev, 1979. (Ju. E. Gliklii) **81j:34080** 34C35 (58F13, 58F15)
- Singular integral manifolds and the appearance of stochasticity in dynamical systems. (Russian) *Problems of stability of motion, analytical mechanics and control of motion* (Third All-Union Cetaev Conf., Irkutsk, 1977) (Russian), pp. 128-134, 323, "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. (Ju. E. Gliklii) **81k:34043** 34C35 (58F13, 58F15)
- Nelander, Joseph** (with Cohen, F. R.; Moore, John C.) Decompositions of loop spaces and applications to exponents. *Algebraic topology, Aarhus 1978* (Proc. Sympos., Univ. Aarhus, Aarhus, 1978), pp. 1-12, Lecture Notes in Math., 763, Springer, Berlin, 1979. (Brayton Gray) **81g:55010** 55P35 (55Q40)
- (with Cohen, F. R.; Moore, John C.) The double suspension and exponents of the homotopy groups of spheres. *Ann. of Math.* (2) 110 (1979), no. 3, 549-565. (M. Mahowald) **81e:55021** 55Q40
- Primary homotopy theory. *Mem. Amer. Math. Soc.* 25 (1980), no. 232, iv + 67 pp. (J. F. Adams) **81b:55035** 55Q05
- Nelzetz, Lee A.** (with Hoffman, Lance J.) Fuzzy cost/benefit analysis. *Fuzzy sets* (Proc. Sympos. Policy Anal. Inform. Systems, Duke Univ., Durham, N.C., 1980), pp. 275-290, Plenum, New York, 1980. (Authors' summary) **81i:90120** 90B99 (03E72, 90A99)
- Nekricshin, A. I.** Approximation of free groups in relation to conjugacy. I. (Russian) *Semigroup varieties and semigroups of endomorphisms* (Russian), pp. 138-142, Leningrad. Gos. Ped. Inst., Leningrad, 1979. (Ju. I. Merzljakov) **81e:20032** 20E05
- Nekrutkin, V. V.** Unbiased estimates for solutions of nonlinear integral equations. (Russian) *Operations research and statistical simulation*, No. 5 (Russian), pp. 121-159, 202, Leningrad. Univ., Leningrad, 1979. (Authors' summary) **81g:65007** 65C20
- (with Pohodzei, B. B.) The use of pseudorandom numbers in the Box-Müller transformation. (Russian, English summary) *Vestnik Leningrad. Univ. Mat. Mekh. Astronom.* 1979, vyp. 3, 40-45, 122. (Gheorghe Boscan) **81b:65010** 65C10
- Nekrylova, Z. V.** Asymptotic behavior of the stochastic quasigradient method. (Russian, English summary) *Kibernetika (Kiev)* 1978, no. 3, 81-85. (G. S. Tarasenko) **81k:62152** 62L20 (90C15)
- Nekvinda, Miloslav** Memory complexity of countable functions. *Kybernetika (Prague)* 15 (1979), no. 2, 89-99. (From the introduction) **81k:68035** 68C25
- Nel, L. D.** (with Hong, S. S.) Reflexive topological semilattices and duality. *Structure of topological categories* (Proc. Conf., Univ. Bremen, Bremen, 1978), pp. 154-172, Mathematik-Arbeitspapiere, 18, Univ. Bremen, Bremen, 1979. (From the introduction) **81e:18010** 18B30 (06F30, 54B30, 54H12)
- Nelpe, B. A.** (with Dvorjaninov, G. S.; Prusov, A. V.) Generation of stationary temperature boundary layers by surface waves. *Izv. Akad. Nauk SSSR Ser. Fiz. Atmosf. i Okeana* 15 (1979), no. 3 (Russian); translated as *Izv. Acad. Sci. USSR Atmosf. Ocean. Phys.* 15 (1979), no. 3, 214-220 (1980). (Authors' summary) **81f:76019** 76D10 (76R10, 86A05)
- Nelpe, N. F.** On the problem of the existence of the solutions of the nonlinear nonangular equations of quantum field theory. *Bull. Sci. Engrg. Res. Lab. Waseda Univ.* No. 81 (1978), 96-101. (D. I. Olive) **81a:81071** 81E99 (47H15, 81F20)
- Nelkowski, H.** See **Symposium: Elastin**, **81e:83001**
- Nelson, Edward** Connection between Brownian motion and quantum mechanics. *Einstein Symposium, Berlin* (1979), pp. 168-179, *Lecture Notes in Phys.*, 100, Springer, Berlin, 1979. (Steven M. Moore) **81h:81027** 81C20 (60J65)
- Nelson, Evelyn** An elementary proof that there are no nontrivial injective lattices. *Algebra Universalis* 10 (1980), no. 2, 264-265. (Editors) **81e:06009** 06B20
- (with Banaschewski, Bernhard) Boolean powers as algebras of continuous functions. *Dissertationes Math. (Rozprawy Mat.)* 179 (1980), 51 pp. (Hugo Volger) **81i:03040** 03C20 (06E99)
- The independence of the subalgebra lattice, congruence lattice and automorphism group of an infinitary algebra. *J. Pure Appl. Algebra* 17 (1980), no. 2, 187-201. (A. A. Iskander) **81g:08003** 08A30 (08A35)
- Nelson, G. C.** (with Mead, J.) Model companions and k -model completeness for the complete theories of Boolean algebras. *J. Symbolic Logic* 45 (1980), no. 1, 47-55. (Annalisa Marcja) **81f:03047** 03C60 (03G05, 06E99)
- Nelson, Greg** (with Oppen, Derek C.) Fast decision procedures based on congruence closure. *J. Assoc. Comput. Mach.* 27 (1980), no. 2, 356-364. (Authors' summary) **81b:68012** 68B10 (68C25)
- Nelson, Lorne A.** (with Lake, Kayll) Gravitational bounce. *Phys. Rev. D* (3) 22 (1980), no. 6, 1266-1269. (Authors' summary) **81h:83043** 83F05 (58D30)
- Nelson, Paul I.** Least squares tests for discrete parameter stochastic processes. *Comm.*

- Statist. A—Theory Methods* 8 (1979), no. 3, 283–297. (C. C. Heyde) **81f:62134** 62M07 (62F03)
- Nelson, Paul, Jr. (with Meyer, Harold D.) Error analysis and convergence for the spectral synthesis method with interfaces. (German summary) *Z. Angew. Math. Phys.* 30 (1979), no. 6, 901–912. (Edward W. Larsen) **81a:82060** 82A70 (65N30)
- The effect of data errors for linear transport in slab geometry. *J. Integral Equations* 2 (1980), no. 1, 31–44. (Gh. Adam) **81i:82076** 82A70 (45L99, 65R20)
- Nelson, Peter R. (with Ramig, Pauline F.) The probability integral for a bivariate generalization of the noncentral t . *Comm. Statist. B—Simulation Comput.* 9 (1980), no. 6, 621–631. (Authors' summary) **81k:62075** 62H10
- Nelson, Philip C. Gravity with propagating pseudoscalar torsion. *Phys. Lett. A* 79 (1980), no. 4, 285–287. (Author's summary) **81j:83038** 83D05
- Nelson, R. J. (with Kantor, P.) Social decision making in the presence of complex goals, ethics and the environment. Methodological developments in social sciences. *Theory and Decision* 10 (1979), no. 1–4, 181–200. (A. Rapoport) **81e:90011** 90A08 (90A07, 90A10, 90D35)
- Nemat-Nasser, S. (with Taya, M.) Numerical studies of void growth in a necked bar. *Internat. J. Solids and Structures* 16 (1980), no. 6, 483–494. (Authors' summary) **81b:73047** 73M15 (73E99)
- See also *Mechanics today*, **81j:73003**
- Nemec, A. G. The metric dimension of complete spaces. (Russian. English summary) *Vestnik Moskov. Univ. Ser. I Mat. Meh.* 1978, no. 2, 71–74. (Author's summary) **81h:54045** 54F45 (54E50)
- On the tightness of spaces of mappings. (Russian. English summary) *Vestnik Moskov. Univ. Ser. I Mat. Meh.* 1979, no. 5, 16–19, 86. (A. Šostak) **81a:54017** 54C35
- Nemec, Amanda F. (with Koziol, James A.) On a Cramér-vonMises type statistic for testing bivariate independence. (French summary) *Canad. J. Statist.* 7 (1979), no. 1, 43–52. (M. Knott) **81a:62035** 62G10
- Némec, Petr Remarque sur les sommes directes des modules de type dénombrable. *Publ. Dép. Math. (Lyon)* 15 (1978), no. 4, 37–48. (B. Stenström) **81h:16048** 16A64
- (with Bican, Ladislav; Jambor, P.; Kepka, Tomáš) Pseudoprojective modules. (Russian summary) *Math. Slovaca* 29 (1979), no. 2, 107–115. (Wolfgang Grötz) **81h:16035** 16A50
- (with Kepka, Tomáš) Trilinear constructions of quasimodules. *Comment. Math. Univ. Carolin.* 21 (1980), no. 2, 341–354. (Orin Chein) **81g:20130** 20N05
- (with Bican, Ladislav; Jambor, P.; Kepka, Tomáš) Prime and coprime modules. *Fund. Math.* 107 (1980), no. 1, 33–45. (C. Nijā) **81k:16026** 16A53 (16A12)
- Németh, A. B. Strictly positive linear functionals and Pareto subgradients of minimal range. *Arch. Math. (Basel)* 33 (1979/80), no. 5, 466–469. (W. A. Feldman) **81f:90082** 90C25 (06F20, 46G05)
- Németh, E. (with Di Paola, J. W.) Applications of parallelisms. *Second International Conference on Combinatorial Mathematics (New York, 1978)*, pp. 153–163. *Ann. New York Acad. Sci.*, 319, New York, 1979. (Peter Hammond) **81g:05091** 05C99 (05B05)
- Németh, J. On imbedding theorems. *Fourier analysis and approximation theory (Proc. Colloq., Budapest, 1976)*, Vol. II, pp. 571–576. *Colloq. Math. Soc. János Bolyai*, 19, North-Holland, Amsterdam, 1978. (J. S. Martins) **81h:42071** 42B30 (46E35)
- Necessary and sufficient conditions for imbedding of classes of functions. *Acta Sci. Math. (Szeged)* 40 (1978), no. 3–4, 317–326. (Author's review (Zbl 397:46032)) **81k:42013** 42A99 (46E30)
- Németh, Csaba Uniformizations of certain convergence structures. (Romanian summary) *Studia Univ. Babeş-Bolyai Math.* 24 (1979), no. 1, 28–33. (D. C. Kent) **81g:54026** 54E15 (54A20)
- On almost sequential locally convex spaces. II. (Romanian summary) *Studia Univ. Babeş-Bolyai Math.* 24 (1979), no. 2, 42–45. (W. H. Ruckle) **81j:46005** 46A05 (46A15)
- Némethy, Alojz A generalization of the finite element method for quasiparabolic partial differential equations. (Russian and Slovak summaries) *Acta Fac. Rerum Natur. Univ. Comenian. Math.* 33 (1977), 117–128 (1978). (Author's introduction) **81j:65123** 65N30
- Németh, István (with Andrka, Hajnalka; Sain, I.) Completeness problems in verification of programs and program schemes. *Mathematical foundations of computer science, 1979 (Proc. Eighth Sympos., Olomouc, 1979)*, pp. 208–218. *Lecture Notes in Comput. Sci.*, 74, Springer, Berlin, 1979. (Authors' summary) **81e:68011** 68B10
- (with Hajnal, A.) Applications of universal algebra, model theory, and categories in computer science. Survey and bibliography. *CL & CL—Comput. Linguist. Comput. Lang.* 13 (1979), 251–282. (From the introduction) **81d:68012** 68B05 (03B40, 03C05)
- (with Andrka, Hajnalka) Injectivity in categories to represent all first order formulas. I. *Demonstratio Math.* 12 (1979), no. 3, 717–732. (M. M. Richter) **81h:03082** 03C99
- (with Andrka, Hajnalka) Formulas and ultraproducts in categories. *Beiträge zur Algebra und Geometrie, 8. Wiss. Beitr. Martin-Luther-Univ. Halle-Wittenberg M* 12 (1979), 133–151. (H. Herrlich) **81m:18004** 18B99 (03C20, 18A99)
- Nemetz, T. On the word-lengths of Huffman codes. *Problems Control Inform. Theory / Problemy Upravlen. Teor. Inform.* 9 (1980), no. 4, 231–242. (S. W. Golomb) **81i:94021** 94A29 (94A24)
- Nemhauser, George L. (with Hsu, Wen Lian) Easy and hard bottleneck location problems. *Discrete Appl. Math.* 1 (1979), no. 3, 209–215. (James G. Morris) **81c:90038** 90B10 (05C70, 68C25)
- (with Weber, Glenn M.) Optimal set partitioning, matchings and Lagrangian duality. *Naval Res. Logist. Quart.* 26 (1979), no. 4, 553–563. (R. L. Graves) **81g:90063** 90C09 (05A05)
- (with Fisher, Marshall L.; Wolsey, Laurence A.) An analysis of approximations for finding a maximum weight Hamiltonian circuit. *Oper. Res.* 27 (1979), no. 4, 799–809. (A. C. Shershin) **81d:90047** 05C45 (90C35, 94C15)
- Nemai, Ju. M. Three-dimensional boundary value problems of the theory of elasticity for noncanonical regions. *Prikl. Meh.* 16 (1980), no. 2, 3–39, 141 (Russian); translated as *Soviet Appl. Mech.* 16 (1980), no. 2, 85–116. (D. Durban) **81m:73016** 73C02 (01A60, 35J99)
- Nemolčanov, O. F. (with Golynčev, V. N.) Analysis of dynamic risk of malfunctioning using cubic coverings of logical circuits. *Avtomat. i Telemekh.* 1979, no. 10, 123–128 (Russian. English summary); translated as *Automat. Remote Control* 40 (1979), no. 10, part 2, 1504–1508 (1980). (Authors' summary) **81d:94033** 94C10
- Nenahov, E. I. A variant of subgradient algorithms for minimization of nonsmooth functions. (Russian) *Theory of optimal decisions (Russian)*, pp. 38–43, 109. *Akad. Nauk Ukrain. SSR, Inst. Kibernet., Kiev*, 1979. (V. V. Obuhovskii) **81g:90072** 90C25 (49D45)
- (with Rževskii, S. V.) A means of reconstructing unconditional minimization algorithms. (Russian) *Theory of optimal decisions (Russian)*, pp. 86–91, 112. *Akad. Nauk Ukrain. SSR, Inst. Kibernet., Kiev*, 1979. (G. D. Maistrovskii) **81h:65074** 65K10 (90C25)
- See also *Theory of optimal decisions*, **81d:90003**
- Nencin, G. On the adiabatic limit for Dirac particles in external fields. *Comm. Math. Phys.* 76 (1980), no. 2, 117–128. (B. Geyer) **81j:81062** 81G10 (81F15)
- Nenov, D. A. (with Epitropova, A. Ch.) A dialog system simulating the behavior of patients with blunt abdominal traumas. *Simulation of systems '79 (Proc. Ninth IMACS Congress, Sorrento, 1979)*, pp. 1003–1011. North-Holland, Amsterdam, 1980. (See **81j:68009**) 92A07 (92A25)
- Nenov, Nedjalko D. (with Hadživanov, Nikolai G.) On edgewise 2-colored graphs containing a monochromatic triangle. (Russian) *Serdica* 5 (1979), no. 3, 303–305. (Larry Basenšpiner) **81i:05069** 05C15
- Neokesarliki, V. N. (with Penev, G. D.) Adaptive control algorithms and optimization of the movement of a robot manipulator. (Russian) *Mechanics of controllable motion (Russian)*, pp. 143–159, 201. *Voprosy Meh. Process. Upravl.*, 3, Leningrad, 1979. (Authors' summary) **81e:93058** 93C40
- Nepelrova, N. N. The construction of correct programs. (Russian) Modeling languages and software for hybrid computer systems. *Voprosy Kibernet. (Moscow)* No. 46 (1978), 88–122. (Author's summary) **81e:68013** 68B10 (03F50, 68C01)
- Application of proof theory to the problem of construction of correct programs. *Kibernetika (Kiev)* 1979, no. 2, 43–48 (Russian); translated as *Cybernetics* 15 (1979), no. 2, 202–209. (Andrzej Blikle) **81c:68014** 68B10 (03F50)
- Nepomniščaja, A. Š. Generalization of LL(k)-grammars containing non-single-valued grammars, and the problem of syntactic analysis. *Programirovanie* 1979, no. 5, 18–27, 79 (Russian); translated as *Programming and Comput. Software* 5 (1979), no. 5, 309–317 (1980). (Author's summary) **81e:68093** 68F05
- Nepomniščii, G. M. The selection and extension of uniformly continuous mappings. (Russian) *Dokl. Akad. Nauk SSSR* 240 (1978), no. 6, 1289–1292. (K. Sielucki) **81b:54027** 54E15 (54C55, 54C65)
- Nepomniščii, V. A. Examples of predicates inexpressible by Σ -rudimentary formulas. (Russian. English summary) *Kibernetika (Kiev)* 1978, no. 2, 44–46. (From the introduction) **81h:03083** 03D05 (68C01)
- (with Sabel'fel'd, V. K.) Elimination of identity assignments in standard program schemata. *Programirovanie* 1979, no. 4, 34–43, 95 (Russian); translated as *Programming and Comput. Software* 5 (1979), no. 4, 249–256. (Authors' summary) **81g:68023** 68B10
- Nepomniščaya, A. Š. See Nepomniščaja, A. Š.
- Nepomniščii, V. A. See Nepomniščii, V. A.
- Neppras, E. A. Acoustic cavitation. *Phys. Rep.* 61 (1980), no. 3, 159–251. (V. P. Kalashnikov) **81j:76007** 76B10 (76Q05)
- Nerenberg, M. A. H. (with Beaudoin, Y.) Computer codes for computational assistance in the study of asymptotic stability. *Comput. Math. Appl.* 7 (1981), no. 1, 7–16. (Authors' summary) **81k:93056** 93D20 (34D05, 92A17)
- Neri, Umberto Anisotropic Sobolev theorems. (Italian summary) *Ann. Univ. Ferrara Ser. VII (N.S.)* 24 (1979), 89–98. (J. S. Martins) **81c:46025** 46E35 (31B15)
- Nerlich, Graham Is curvature intrinsic to physical space? *Philos. Sci.* 46 (1979), no. 3, 439–458. (Lawrence Sklar) **81c:00013** 00A69
- Nerode, Anil (with Shore, Richard A.) Reducibility orderings: theories, definability and automorphisms. *Math. Logic* 18 (1980), no. 1, 61–89. (C. G. Jockusch, Jr.) **81k:03040** 03D30 (03D35)
- (with Metakides, G.) Recursion theory on fields and abstract dependence. *J. Algebra* 65 (1980), no. 1, 36–59. (Viggo Stoltenberg-Hansen) **81k:03041** 03D45
- Néron, André Hauteurs et fonctions thêta. (English summary) *Rend. Sem. Mat. Fis. Milano* 46 (1976), 111–135 (1978). (M. Fried) **81k:14022** 14G25 (10B40, 10D99)
- ★Variétés abéliennes. (French) [Abelian manifolds] Cours 1965–66. Reprint. Publications Mathématiques d'Orsay. Université de Paris-Sud, Département de Mathématique, Orsay, 1979. iii + 117 pp. (Editors) **81j:14001** 14-01
- Neronov, V. S. (with Luk'janov, A. T.) On optimal control of stochastic systems with distributed parameters. (Russian) *Dynamics of control systems (Third All-Union Cetar Conf., Irkutsk, 1977)* (Russian), pp. 183–191, 341. "Nauka" Sibirsk. Otdel. Novosibirsk, 1979. (Constantin Vărsan) **81e:49023** 49B60 (93E20)
- Nerolavskii, O. M. Wigner quantification and informal deformation of the algebras of functions on \mathbb{R}^N . (Russian. English summary) *Vesci Akad. Nauk BSSR Ser. Fiz.-Mat. Nauk* 1979, no. 6, 17–20, 139. (V. N. Suško) **81k:81048** 81C99 (46F10, 58F06)
- Nersisjan, A. A. A theorem on simultaneous tangential approximation. (Russian. Armenian and English summaries) *Izv. Akad. Nauk Armjan. SSR Ser. Mat.* 13 (1978), no. 5–6, 442–447, 542. (N. I. Skiba) **81b:30070** 30E10
- Nešetřil, V. I. Solution of differential equations by the functional parameter method. (Russian) *Asymptotic methods in systems theory*, No. 9 (Russian), pp. 182–189, 242. *Irkutsk. Gos. Univ., Irkutsk*, 1976. (Stefan Balint) **81j:34101** 34E05
- Nešetřil, Jaroslav (with Rödl, Vojtěch) On Ramsey minimal graphs. (French summary) *Problèmes combinatoires et théorie des graphes (Colloq. Internat. CNRS, Univ. Orsay, Orsay, 1976)*, pp. 307–308. *Colloques Internat. CNRS, 260, CNRS, Paris*, 1978. (See **80c:05005**) 05C55
- A combinatorial construction scheme. *Fundamentals of computation theory (Proc. Conf. Algebraic, Aritih. and Categorical Methods in Comput. Theory, Berlin/Wendisch-Rietz, 1979)*, pp. 301–312. *Math. Research*, 2, Akademie-Verlag, Berlin, 1979. (Richard T. Bumby) **81e:05117** 05C99
- Amalgamation of graphs and its applications. *Second International Conference on Combinatorial Mathematics (New York, 1978)*, pp. 415–428. *Ann. New York Acad. Sci.*, 319, New York, 1979. (A. Pultr) **81m:05123** 05C99 (05C65, 18B99)

- (with Rödl, Vojtěch) Partition theory and its application. *Surveys in combinatorics* (Proc. Seventh British Combinatorial Conf., Cambridge, 1979), pp. 96–156, London Math. Soc. Lecture Note Ser., 38, Cambridge Univ. Press, Cambridge, 1979. (A. Pultr) **81m:05015** 05A17 (05-02, 05C55)
- (with Rödl, Vojtěch) On Ramsey graphs without cycles of short odd lengths. *Comment. Math. Univ. Carolin.* 20 (1979), no. 3, 565–582. (R. L. Graham) **81b:05083** (05C55 (05C38))
- (with Rödl, Vojtěch) A short proof of the existence of highly chromatic hypergraphs without short cycles. *J. Combin. Theory Ser. B* 27 (1979), no. 2, 225–227. (F. Harary) **81b:05048** 05C15 (05C65)
- (with Hell, Pavol) Cohomomorphisms of graphs and hypergraphs. *Math. Nachr.* 87 (1979), 53–61. (A. Pultr) **81b:05093** 05C99 (05C65)
- (with Hell, Pavol) On the edge-sets of rigid and corigid graphs. *Math. Nachr.* 87 (1979), 63–69. (A. Pultr) **81b:05094** 05C99 (05C35)
- Nem, Linda (with Kempf, George R.) The length of vectors in representation spaces. *Algebraic geometry* (Proc. Summer Meeting, Univ. Copenhagen, Copenhagen, 1978), pp. 233–243, *Lecture Notes in Math.*, 732, Springer, Berlin, 1979. (V. L. Popov) **81l:14032** 14L30 (20G05)
- Mumford's numerical function and stable projective hypersurfaces. *Algebraic geometry* (Proc. Summer Meeting, Univ. Copenhagen, Copenhagen, 1978), pp. 417–453, *Lecture Notes in Math.*, 732, Springer, Berlin, 1979. (Werner Kleinert) **81c:14008** 14D25
- Bar-Ness, Y. See Bar-Ness, Y.
- Neset, Rolf Joachim (with Mertens, H. J.) Über Multiplikatoren starker Konvergenz für Fourier-Entwicklungen in Banach-Räumen. *Math. Nachr.* 84 (1978), 185–194. (J. Peetre) **81a:42018** 42A45 (42B15)
- (with Wilmes, Gerhard) ★Über Ungleichungen vom Bernstein-Nikol'skii-Riesz-Typ in Banach Räumen. (German) [On inequalities of the Bernstein-Nikol'skii-Riesz type in Banach spaces] *Forschungsberichte des Landes Nordrhein-Westfalen* [Research Reports of the State of North Rhine-Westphalia], 2841. Westdeutscher Verlag, Opladen, 1979. 89 pp. ISBN 3-531-02841-3 (J. Horváth) **81b:41032** 41A17 (42B15, 47B40)
- (with Butzer, P. L.; Gieseler, S.; Kaufmann, F.; Stark, Eberhard L.) Eduard Helly (1884–1943). Eine nachträgliche Würdigung. *Jahresber. Deutsch. Math.-Verein.* 82 (1980), no. 3, 128–151. (H. Hochstadt) **81c:01028** 01A70 (01A60)
- Nester, James M. (with Gotay, Mark J.) Generalized constraint algorithm and special presymplectic manifolds. *Geometric methods in mathematical physics* (Proc. NSF-CBMS Conf., Univ. Lowell, Lowell, Mass., 1979), pp. 78–104, *Lecture Notes in Math.*, 775, Springer, Berlin, 1980. (Virgil Obădeanu) **81i:58024** 58F05 (58F06, 70G99)
- (with Gotay, Mark J.) Presymplectic Lagrangian systems. II. The second-order equation problem. *Ann. Inst. H. Poincaré Sect. A (N.S.)* 32 (1980), no. 1, 1–13. (Demeter Krupka) **81m:58033** 58F05 (70H99)
- Nesterenko, B. B. (with Vysotskii, V. V.; Grankin, E. P.) Existence and uniqueness of the solution of a system of differential equations describing a two-phase filtration process. (Russian) *Theoretical and applied questions of differential equations and algebra* (Russian), pp. 57–60, 261, "Naukova Dumka", Kiev, 1978. (Authors' summary) **81c:76044** 76S05
- Nestorov, V. S. (with Zuchenko, A. A.; Andriukienko, V. K.; Dobrianskii, V. A.) ★Математическое моделирование при оптимизации селекционно-генетических исследований. (Russian) [Mathematical simulation when optimizing breeding-genetics investigations] With an English summary. "Štince", Kishinev, 1980. 106 pp. (Publisher's description) **81h:92012** 92A10
- Nesterov, V. S. Inner functions invariant connected components. *Pacific J. Math.* 83 (1979), no. 2, 473–480. (Kenneth Stephenson) **81b:30067** 30D50 (30D55)
- Neta, Benny On determination of best-possible constants in integral inequalities involving derivatives. *Math. Comp.* 35 (1980), no. 152, 1191–1193. (J. Albrycht) **81m:26014** 26D15 (46E30, 65J99)
- Netes, V. A. Expected value of the effectiveness of discrete systems. *Avtomat. i Vychisl. Tehn. (Riga)* 1980, no. 3, 72–74, 98 (Russian); translated as *Automat. Control Comput. Sci.* 14 (1980), no. 3, 68–71. (Author's summary) **81m:90057** 90B25
- Netsova, T. M. (with Berezovskii, A. A.) Self-similar solutions of the problem of distillation of sea water. (Russian) *Theoretical and applied questions of differential equations and algebra* (Russian), pp. 41–46, 260, "Naukova Dumka", Kiev, 1978. (M. Yanovitch) **81h:76049** 76R99 (35K55, 80A20)
- Group classification and invariant solutions of the Korteweg-de Vries equation. (Russian) *Numerical-analytic methods for the solution of problems of heat conduction and electrodynamics* (Russian), pp. 151–155, 186, *Akad. Nauk Ukrain. SSR, Inst. Mat.*, Kiev, 1979. (L. A. Takhtajan (Tahadjan)) **81f:35011** 35A30 (35Q20, 76B15)
- Neto, Alcides See Lins Neto, Alcides
- Neto, Alcides See Barros-Neto, J.
- Netravali, A. N. (with Stuller, J. A.) Transform domain motion estimation. *Bell System Tech. J.* 58 (1979), no. 7, 1673–1702. (Authors' summary) **81a:94008** 94A05 (68G10)
- Nett, Edgar ★Deterministische Strategien zum Scheduling von Taskabhängigkeitsstrukturen für Mehrprozessorsysteme. (German) [Deterministic strategies for the scheduling of task-dependent structures for multiprocessor systems] *Berichte der Gesellschaft für Mathematik und Datenverarbeitung* [Reports of the Society for Mathematics and Data Processing], 122. R. Oldenbourg Verlag, Munich, 1979. 53 pp. ISBN 3-486-23611-3 (J. Martyna (Zbl 412:68032)) **81f:68048** 68C15 (90B35)
- Netsman, A. (with Adiri, I.) A dynamic priority queue with general concave priority functions. *Oper. Res.* 27 (1979), no. 6, 1088–1100. (U. Narayan Bhat) **81i:60092** 60K25 (90B22)
- Netto, Angelo Barone There are infinitely many complete prefix codes of constant length l ($l > 3$). *Theoret. Comput. Sci.* 11 (1980), no. 3, 337–339. (From the text) **81j:94026** 94B45
- Netuka, I. (with Veselý, J.) Regions of harmonicity. *Amer. Math. Monthly* 87 (1980), no. 3, 203–205. (Michèle Mastrangelo-Dehen) **81f:31008** 31B05 (31B25)
- Netzer, N. Generalized Kuratowski operators and convergence. *Topology* (Proc. Fourth Colloq., Budapest, 1978), Vol. II, pp. 877–882, *Colloq. Math. Soc. János Bolyai*, 23, North-Holland, Amsterdam, 1980. (B. T. Sims) **81m:54007** 54A05
- Neu, John See Bibliography: History of science and its cultural influences, 81j:01051
- Neu, John C. (with Cohen, Donald S.) Interacting oscillatory chemical reactors. *Bifurcation theory and applications in scientific disciplines* (Papers, Conf., New York, 1977), pp. 332–337, *Ann. New York Acad. Sci.*, 316, New York Acad. Sci., New York, 1979. (P. C. Fife) **81c:34027** 34C15 (80A30)
- The method of near-identity transformations and its applications. *SIAM J. Appl. Math.* 38 (1980), no. 2, 189–208. (Author's summary) **81m:70031** 70K30 (34C15, 35C99, 70F07)
- Large populations of coupled chemical oscillators. *SIAM J. Appl. Math.* 38 (1980), no. 2, 305–316. (C. V. Pao) **81b:49020** 45J05 (80A30)
- Neuberger, J. W. Boundary value problems for linear systems. *Proc. Roy. Soc. Edinburgh Sect. A* 83 (1979), no. 3-4, 297–302. (M. Z. Nashed) **81c:47015** 47A50 (34B05)
- Neubrunn, Tibor On semihomomorphisms and related mappings. (Slovak and Russian summaries) *Acta Fac. Rerum Natur. Univ. Comenian. Math.* 33 (1977), 133–137 (1978). (Trugio Tani) **81c:54011** 54C10
- Neubrunn, Anna Transfinite convergence and locally separable metric spaces. (Slovak and Russian summaries) *Acta Fac. Rerum Natur. Univ. Comenian. Math.* 34 (1979), 177–181. (V. Kannan) **81j:54028** 54C99 (54E65)
- Neubüser, J. See Proceedings: Conference on Crystallographic Groups, 81k:20002
- Neudecker, H. (with Magnus, Jan R.) The commutation matrix: some properties and applications. *Ann. Statist.* 7 (1979), no. 2, 381–394. (D. S. Tracy) **81f:15037** 15A69 (62H99)
- Best linear unbiased estimation of β subject to linear equality constraints in the general linear model. *Statist. Hefte (N.F.)* 20 (1979), no. 3, 176–182. (J. Kleffe) **81b:62122** 62J05 (62H12)
- A comment on: "Minimization of functions of a positive semidefinite matrix A subject to $AX=0$ " [J. Multivariate Anal. 8 (1978), no. 2, 274–281; MR 58 #3210] by B. Calvert and G. A. F. Seber. *J. Multivariate Anal.* 10 (1980), no. 1, 135–139. (Author's introduction) **81c:15027** 15A60 (62H99)
- Neugebauer, C. J. On the Hardy-Littlewood maximal function and some applications. *Trans. Amer. Math. Soc.* 259 (1980), no. 1, 99–105. (W. R. Madych) **81j:42039** 42B25 (28A15)
- Neugebauer, G. (with Kramer, Dietrich) The superposition of two Kerr solutions. *Phys. Lett. A* 75 (1979/80), no. 4, 259–261. (Authors' summary) **81m:83014** 83C15
- Recursive calculation of axially symmetric stationary Einstein field. *J. Phys. A* 13 (1980), no. 5, 1737–1740. (R. F. Bijalwal) **81f:83012** 83C20 (81A15)
- Neugebauer, O. On the orientation of pyramids. Special issue dedicated to Olaf Pedersen on his sixtieth birthday. *Centaurus* 24 (1980), 1–3. (H. W. Guggenheimer) **81k:01004** 01A15
- Neuhans, Georg Asymptotic theory of goodness of fit tests when parameters are present: a survey. (German and French summaries) *Math. Operationsforsch. Statist. Ser. Statist.* 10 (1979), no. 3, 479–494. (Gavin G. Gregory) **81f:62036** 62E15 (62G10)
- A note on computing the distribution of the norm of Hilbert space-valued Gaussian random variables. *J. Multivariate Anal.* 10 (1980), no. 1, 19–25. (M. Knott) **81d:62017** 62E20 (62G10)
- Neukirch, Jürgen On solvable number fields. *Invent. Math.* 53 (1979), no. 2, 135–164. (Jack Sonn) **81c:12009** 12A55
- Neumaier, Arnold Strongly regular graphs with smallest eigenvalue $-m$. *Arch. Math. (Basel)* 33 (1979/80), no. 4, 392–400. (E. A. Nordhaus) **81c:05118** 05C99 (05C50)
- Affine Ebenen und Tupelssysteme. (English summary) *Geom. Dedicata* 8 (1979), no. 2, 189–205. (M. J. Kallagher) **81f:51010** 51D30 (05B25)
- On transitive commutative idempotent quasigroups. *J. Austral. Math. Soc. Ser. A* 27 (1979), no. 4, 411–429. (W. D. Wallis) **81b:05016** 05B15 (20N05)
- Distances, graphs and designs. *European J. Combin.* 1 (1980), no. 2, 163–174. (J. J. Seidel) **81k:05039** 05B99 (05B20)
- t -designs. *J. Combin. Theory Ser. A* 28 (1980), no. 3, 226–248. (J.-M. Goethals) **81j:05040** 05B30
- Neuman, C. P. (with Baradello, C. S.) A series-parallel (SP) identifier with variable relaxation gains. *IEEE Trans. Automat. Control* 25 (1980), no. 3, 573–576. (Shinzo Kitamura) **81g:93020** 93B30
- Neuman, Edward Uniform approximation by some Hermite interpolating splines. *J. Comput. Appl. Math.* 4 (1978), no. 1, 7–9. (Author's summary) **81c:41017** 41A15 (65D07)
- Bounds for the norm of certain spline projections. *J. Approx. Theory* 27 (1979), no. 2, 135–145. (M. Marsden) **81j:41019** 41A15
- Convex interpolating splines of arbitrary degree. (German summary) *Numerical methods of approximation theory*, Vol. 5 (Conf., Math. Res. Inst., Oberwolfach, 1979), pp. 211–222, *Internat. Ser. Numer. Math.*, 52, Birkhäuser, Basel, 1980. (John A. Roulter) **81c:41018** 41A15 (41A05, 65D07)
- Neumann, B. H. On some group presentations. *Word problems, II* (Conf. on Decision Problems in Algebra, Oxford, 1976), pp. 297–298, *Studies in Logic and Foundations of Math.*, 95, North-Holland, Amsterdam, 1980. (Editors) **81g:20065** 20F05
- Neumann, Dean A. Topologically hyperbolic equilibria in dynamical systems. *J. Differential Equations* 37 (1980), no. 1, 49–59. (F. W. Wilson, Jr.) **81j:58070** 58F25 (34D30, 58F10)
- von Neumann, John (with Morgenstern, Oskar) ★Theory of games and economic behavior. Reprint of the 1953 third edition. Princeton University Press, Princeton, N.J., 1980. xx+641 pp. ISBN 0-691-00362-9 (Editors) **81b:90155** 90Dxx (00A69, 90-01)
- Neumann, Klaus (with Richter, Gerhard) Zur Bestimmung der asymptotischen Verteilung des Lösungsvektors zufälliger linearer Gleichungssysteme. *Serdica* 4 (1978), no. 1, 50–60. (Ludwig Arnold) **81b:60023** 60F05 (60H25)
- Eine Anwendungsmöglichkeit der Theorie zufälliger linearer Gleichungssysteme in der Baustatik. *Z. Angew. Math. Mech.* 59 (1979), no. 11, 641–643. (D. P. Radkovic) **81b:73033** 73K20
- Neumann, Michael (with Plemmons, Robert J.) Generalized inverse-positivity and splittings of M -matrices. *Linear Algebra Appl.* 23 (1979), 21–35. (A. Lee) **81j:15021** 15A48 (15A09)
- Weak stability for matrices. *Linear and Multilinear Algebra* 7 (1979), no. 3, 257–262. (J. Perda) **81b:15009** 15A21
- Automatic continuity of linear operators. *Functional analysis: surveys and recent*

- results, II (Proc. Second Conf. Functional Anal., Univ. Paderborn, Paderborn, 1979), pp. 269–296, North-Holland Math. Studies, 38, North-Holland, Amsterdam, 1980. (A. M. Sinclair) **81j:47006** 47A05
- (with Lewin, Mordechai) On the inverse M -matrix problem for $(0,1)$ -matrices. *Linear Algebra Appl.* **30** (1980), 41–50. (R. A. Mena) **81j:15004** 15A09 (05C20, 15A48)
- (with Albrecht, Ernst) Automatic continuity of generalized local linear operators. *Manuscripta Math.* **32** (1980), no. 3–4, 263–294. (F.-H. Vasilescu) **81m:46024** 46A99 (46F10, 46H99, 47B99)
- (with Varga, Richard S.) On the sharpness of some upper bounds for the spectral radii of S.O.R. iteration matrices. *Numer. Math.* **35** (1980), no. 1, 69–79. (Zdeněk Dostál) **81k:65037** 65F10
- Neumann, Olof Bemerkungen aus heutiger Sicht über Gauß' Beiträge zu Zahlentheorie, Algebra und Funktionentheorie. *NTM Schr. Geschichte Natur. Tech. Medizin* **16** (1979), no. 2, 22–39. (G. Frei-Imfeld) **81c:01024** 01A55 (12–03)
- Neumann, Peter M. A lemma that is not Burnside's. *Math. Sci.* **4** (1979), no. 2, 133–141. (Ascher Wagner) **81g:01012** 01A55 (20B05)
- Endomorphisms on infinite soluble groups. *Bull. London Math. Soc.* **12** (1980), no. 1, 13–16. (J. R. J. Groves) **81g:20071** 20F16 (20F28)
- Neumann, Walter D. Homotopy invariance of Atiyah invariants. *Algebraic and geometric topology (Proc. Sympos. Pure Math., Stanford Univ., Stanford, Calif., 1976), Part 2*, pp. 181–188, Proc. Sympos. Pure Math., XXXII, Amer. Math. Soc., Providence, R.I., 1978. (Louis H. Kauffman) **81c:57023** 57R20 (58G10)
- Errata: "Mal'cev conditions, spectra and Kronecker product" [J. Austral. Math. Soc. Ser. A **25** (1978), no. 1, 103–117; MR **58** #449]. *J. Austral. Math. Soc. Ser. A* **28** (1979), no. 4, 510. (W. Taylor) **81h:08005** 08B05
- Normal subgroups with infinite cyclic quotient. *Math. Sci.* **4** (1979), no. 2, 143–148. (Marvin Tretkoff) **81k:20054** 20F38 (57N99)
- See also Symposium: Topology, **81i:57001**
- Neumann, Lara, Victor On clique-divergent graphs. (French summary) *Problèmes combinatoires et théorie des graphes (Colloq. Internat. CNRS, Univ. Orsay, Orsay, 1976)*, pp. 313–315, Colloques Internat. CNRS, 260, CNRS, Paris, 1978. (See **80e:05005**) 05C35
- (with Lovász, László; Plummer, M. D.) Mengerian theorems for paths of bounded length. *Period. Math. Hungar.* **9** (1978), no. 4, 269–276. (From the text) **81i:05097** 05C38
- (with Wilson, Richard G.) The epireflective hull of the category of T_1 dispersed spaces. *Proc. Amer. Math. Soc.* **80** (1980), no. 2, 306–310. (Andreas Blass) **81g:54008** 54B30 (54B15)
- Neunhöffer, Helmut Mittelwertsatz der Differentialrechnung und harmonisches Mittel. *Praxis Math.* **21** (1979), no. 12, 361–363. (K. Lajkó) **81c:39003** 39B20 (26A24)
- Neuts, Marcel F. The $M/M/1$ queue with randomly varying arrival and service rates. *Opersearch* **15** (1978), no. 4, 139–157. (Nasser Hadidi) **81a:60107** 60K25
- Further results on the $M/M/1$ queue with randomly varying rates. *Opersearch* **15** (1978), no. 4, 158–168. (Nasser Hadidi) **81a:60108** 60K25
- An algorithmic solution to the $GI/M/1$ queue with group arrivals. *Cahiers Centre Études Rech. Opér.* **21** (1979), no. 2, 109–119. (U. Narayan Bhat) **81f:60135** 60K25 (90B22)
- Queues solvable without Rouché's theorem. *Oper. Res.* **27** (1979), no. 4, 767–781. (Carl M. Harris) **81h:60122** 60K25 (60J10)
- (with Ramaswami, V.) A duality theorem for phase type queues. *Ann. Probab.* **8** (1980), no. 5, 974–985. (Peter Purdue) **81m:60170** 60K25 (60K15)
- (with Ramaswami, V.) Some explicit formulas and computational methods for infinite-server queues with phase-type arrivals. *J. Appl. Probab.* **17** (1980), no. 2, 498–514. (John P. Lehoczyk) **81c:60100** 60K25
- (with Latouche, Guy) Efficient algorithmic solutions to exponential tandem queues with blocking. *SIAM J. Algebraic Discrete Methods* **1** (1980), no. 1, 93–106. (Peter Kießler) **81d:60102** 60K25 (90B22)
- Neuvonen, Timo What kind of apartments are occupied by simple groups? (Finnish. English summary) *Archivum Math.* **31** (1979), no. 4, 204–210. (Author's summary) **81f:20023** 20D05
- Neval, Paul G. On orthogonal polynomials. *J. Approx. Theory* **25** (1979), no. 1, 34–37. (T. S. Chihara) **81c:42032** 42C05
- On an extremal problem. *Proc. Amer. Math. Soc.* **74** (1979), no. 2, 301–306. (Manfred v. Golitschek) **81c:42035** 42C05 (41A05)
- (with Máté, Attila) Bernstein's inequality in L^p for $0 < p < 1$ and $(C, 1)$ bounds for orthogonal polynomials. *Ann. of Math.* (2) **111** (1980), no. 1, 145–154. (Authors' summary) **81c:42003** 42A05 (41A17)
- Nevalainen, Olli (with Teuhola, Jukka) The efficiency of two indexed priority queue algorithms. *BIT* **18** (1978), no. 3, 320–333. (Authors' summary) **81i:68050** 68C15 (68J05)
- (with Ernval, J.) Compact storage schemes for formatted files by spanning trees. *BIT* **19** (1979), no. 4, 463–475. (Authors' summary) **81a:68023** 68B15
- Nevalinna, Rolf See Dinglas, Alexander, **81k:30037** and Lehto, Olli, **81m:01065**
- Nevel'son, M. B. Convergence of moments in the stochastic approximation method. *Avtomat. i Telemekh.* **39** (1978), 83–92 (Russian. English summary); translated as *Automat. Remote Control* **39** (1978), no. 1, 224–232. (V. Dupac) **81c:62094** 62L20
- (with Mustafayev, E. H.) Asymptotically optimal stochastic approximation procedure with continuous time. *Problemy Peredachi Informatsii* **15** (1979), no. 3, 70–82 (Russian); translated as *Problems Inform. Transmission* **15** (1979), no. 3, 212–223 (1980). (V. Dupac) **81j:62169** 62L20
- Nevesenka, N. V. p -continuity of the metric projection onto convex closed sets. (Russian) *Mat. Zametki* **32** (1978), no. 6, 845–854. (G. Godini) **81a:41058** 41A65
- Neveu, A. Méthodes semi-classiques en théorie des champs. (English summary) *Problèmes théoriques liés aux nouvelles particules (Montpellier, 1977)*, pp. 319–334, Colloques Nat. CNRS, 937, CNRS, Paris, 1978. (José M. Cerveró) **81k:81102** 81E99
- Neveu, J. The filling scheme and the Chacon-Ornstein theorem. A collection of invited papers on ergodic theory. *Israel J. Math.* **33** (1979), no. 3–4, 368–377 (1980). (M. A. Akcoglu) **81e:28017** 28D99
- Neville, Donald E. Birkhoff theorems for $R + R^2$ gravity theories with torsion. *Phys. Rev. D* (3) **21** (1980), no. 10, 2770–2775. (Andrzej Trautman) **81f:83037** 83D05 (53B50)
- Newberry, A. C. R. Sensitivity analysis for polynomial curve-fitting. *Proceedings of the Seventh Manitoba Conference on Numerical Mathematics and Computing (Univ. Manitoba, Winnipeg, Man., 1977)*, pp. 497–502, Congress. Numer., XX, Utilitas Math. Winnipeg, Man., 1978. (A. Cotju) **81b:65013** 65D10
- Newbold, Paul (with Davies, Neville) Sample moments of the autocorrelations of moving average processes and a modification to Bartlett's asymptotic variance formula. *Comm. Statist. A—Theory Methods* **9** (1980), no. 14, 1473–1481. (Robert Fernholz) **81j:62175** 62M10
- Newborn, Monroe M. Recent progress in computer chess. *Advances in computers*, Vol. 11, pp. 59–117, Academic Press, New York, 1979. (See **81f:68004**) 68G05
- (with Moser, William O. J.) Placing counters to illustrate Burnside's lemma. *Math. Mag.* **52** (1979), no. 5, 305–309. (Gerard M. Enright) **81f:20031** 20D60 (10A11, 20B05)
- (with Moser, William O. J.) Optimal crossing-free Hamiltonian circuit drawings of K_n . *J. Combin. Theory Ser. B* **29** (1980), no. 1, 13–26. (W.-K. Chen) **81i:05008** 05C38 (05C45)
- el-Neuweil, Enad See El-Neuweil, Enad
- Newell, A. C. (with Flaschka, H.) Multiphase similarity solutions of integrable evolution equations. *Nonlinear partial differential equations in engineering and applied science (Proc. Conf., Univ. Rhode Island, Kingston, R.I., 1979)*, pp. 373–395, Lecture Notes in Pure and Appl. Math., 54, Dekker, New York, 1980. (Alexander A. Pankov) **81m:35112** 35Q20 (58F07)
- Newell, G. F. (with Woodside, C. M.; Paturek, B.) A diffusion approximation for correlation in queues. *J. Appl. Probab.* **17** (1980), no. 4, 1033–1047. (John P. Lehoczyk) **81i:60100** 60K25 (60J60, 90B20)
- Newell, Virginia K. See Black mathematicians and their works, **81c:00004**
- Newhouse, Sheldon E. Structural stability and bifurcation theory. *Bifurcation theory and applications in scientific disciplines (Papers, Conf., New York, 1977)*, pp. 121–126, Am. New York Acad. Sci., 316, New York Acad. Sci., New York, 1979. (S. Ju. Piljugin) **81c:58051** 58F14 (58F13)
- Lectures on dynamical systems. *Dynamical systems (C.I.M.E. Summer School, Bressanone, 1978)*, pp. 1–114, Progress in Math., 8, Birkhäuser, Boston, Mass., 1980. (M. I. Brin) **81m:58028** 58Fxx (34C35, 70G99)
- Newman, Bill (with Ward, Harold N.) The weight enumerator of a family of codes over GF(4). *IEEE Trans. Inform. Theory* **26** (1980), no. 3, 366–367. (Authors' summary) **81i:94032** 94B05
- Newman, Charles M. (with Dunlop, François) Multicomponent field theories and classical rotators. (Russian) Translated from the English by S. A. Pirogov. *Euclidean quantum field theory (Russian)*, pp. 255–274, Mat.: Nooe Zarub. Nauke, 12, "Mir", Moscow, 1978. (See **81f:81002**) 82A05 (81E10)
- Inequalities for Ising models and field theories which obey the Lee-Yang theorem. (Russian) Translated from the English by S. A. Pirogov. *Euclidean quantum field theory (Russian)*, pp. 275–287, Mat.: Nooe Zarub. Nauke, 12, "Mir", Moscow, 1978. (See **81f:81002**) 82A67 (81E10, 82A05)
- Normal fluctuations and the FK ϕ inequalities. *Comm. Math. Phys.* **74** (1980), no. 2, 119–128. (Richard S. Ellis) **81i:82070** 82A67 (82A05)
- (with Ellis, Richard S.; Rosen, Jay S.) Limit theorems for sums of dependent random variables occurring in statistical mechanics. II. Conditioning, multiple phases, and metastability. *Z. Wahrsch. Verw. Gebiete* **51** (1980), no. 2, 153–169. (D. Szász) **81g:82003** 82A05 (60F05)
- Newman, Donald J. (with Reddy, A. R.) Rational approximation. III. *J. Approx. Theory* **21** (1977), no. 2, 117–125. (From the text) **81h:30043** 30E10
- Polynomials with large partial sums. *J. Approx. Theory* **23** (1978), no. 3, 187–190. (C. Dierieck) **81i:30010a** 30C10
- Erratum: "Polynomials with large partial sums". *J. Approx. Theory* **26** (1979), no. 2, 194. (Editors) **81i:30010b** 30C10
- Rational approximations to e^x . *J. Approx. Theory* **27** (1979), no. 3, 234–235. (D. J. Leeming) **81a:41024** 41A20
- (with Reddy, A. R.) Rational approximation to x^n . II. *Canad. J. Math.* **32** (1980), no. 2, 310–316. (G. D. Taylor) **81g:41024** 41A20 (41A25)
- Newman, E. T. Deformed twistor space and H -space. *Complex manifold techniques in theoretical physics (Proc. Workshop, Lawrence, Kan., 1978)*, pp. 154–165, Res. Notes in Math., 32, Pitman, San Francisco, Calif., 1979. (Garry Ludwig) **81c:83017** 83C00 (53C55, 53C80, 83C99, 83D05)
- (with Tod, K. P.) A note on left-flat space-times. *J. Math. Phys.* **21** (1980), no. 4, 874–877. (Authors' summary) **81d:83021** 83C20 (53C50)
- Newman, J. N. The theory of ship motions. *Advances in applied mechanics*, Vol. 18, pp. 221–283, Academic Press, New York, 1978. (D. H. Hyers) **81g:76020** 76B20
- Newman, M. F. Groups of exponent dividing seventy. *Math. Sci.* **4** (1979), no. 2, 149–157. (Peter M. Neumann) **81b:20025** 20F05 (20E10, 20F50)
- Bibliography. *Burnside groups (Proc. Workshop, Univ. Bielefeld, Bielefeld, 1977)*, pp. 255–274, Lecture Notes in Math., 806, Springer, Berlin, 1980. (From the text) **81m:20036** 20Exx
- (with Leedham-Green, C. R.) Space groups and groups of prime-power order. I. *Arch. Math. (Basel)* **35** (1980), no. 1, 193–202. (Gary L. Walls) **81m:20029** 20D15 (20E18)
- (with Berger, Thomas R.; Kovács, L. G.) Groups of prime power order with cyclic Frattini subgroup. *Nederl. Akad. Wetensch. Indag. Math.* **42** (1980), no. 1, 13–18. (A. R. Camina) **81g:20037** 20D15
- Newman, Morris Matrices of finite period and some special linear equations. *Linear and Multilinear Algebra* **8** (1979/80), no. 3, 189–195. (G. N. de Oliveira) **81a:15017** 15A24 (15A36)
- On a problem suggested by Olga Taussky-Todd. *Illinois J. Math.* **24** (1980), no. 1, 156–158. (Jau-Shyong Shiue) **81h:15016** 15A36 (15A15, 15A57)
- (with Johnson, Charles R.) A note on cospectral graphs. *J. Combin. Theory Ser. B* **28** (1980), no. 1, 96–103. (J. J. Seidel) **81d:05051** 05C50
- Gergisorn revisited. *Linear Algebra Appl.* **30** (1980), 247–249. (Author's summary) **81e:15007** 15A42 (65F15)

- (with Leighton, Frank Thomson) Positive definite matrices and Catalan numbers. *Proc. Amer. Math. Soc.* 79 (1980), no. 2, 177-181. (Edward Spence) **81c:15019** 15A36 (05A15, 15A48)
- Newmann, M. M. (with Sprekav, D.) An assessment of the minimum divergence criterion. *IEEE Trans. Automat. Control* 25 (1980), no. 2, 289-290. (A. K. Mahalanabis) **81f:93069** 93E10
- Newnack, F. C. (with Dearing, P. M.) A capacitated bottleneck facility location problem. *Management Sci.* 25 (1979), no. 11, 1093-1104 (1980). (Authors' summary) **81b:90067** 90B10
- Newstead, P. E. ★Introduction to moduli problems and orbit spaces. Tata Institute of Fundamental Research Lectures on Mathematics and Physics, 51. Published for the Tata Institute of Fundamental Research, Bombay; by the Narosa Publishing House, New Delhi, 1978. vi + 183 pp. ISBN 0-387-08851-2 (G. Horrocks) **81k:14002** 14-02 (14D20)
- Some subvarieties of Grassmannians of codimension 3. *Bull. London Math. Soc.* 12 (1980), no. 3, 176-182. (L. Kaup) **81k:32020a** 32J99
- A note on the homology groups of varieties defined by s equations. *Bull. London Math. Soc.* 12 (1980), no. 3, 183-186. (L. Kaup) **81k:32020b** 32J99
- A note on the Picard groups of varieties defined by s equations. *Bull. London Math. Soc.* 12 (1980), no. 3, 187-191. (L. Kaup) **81k:32020c** 32J99
- The fundamental group of a moduli space of bundles on P^n . *Topology* 19 (1980), no. 4, 419-426. (Aigii Papantonopoulou) **81k:14017** 14F05 (14D22, 81E10)
- Newton, H. J. (with Parzen, Emanuel) Multiple time series modeling. II. Multivariate analysis. *V (Proc. Fifth Internat. Sympos., Univ. Pittsburgh, Pittsburgh, Pa., 1978)*, pp. 181-197. North-Holland, Amsterdam, 1980. (Tata Subba Rao) **81c:62171** 62M10 (93E10)
- Efficient estimation of multivariate moving average autocorrelations. *Biometrika* 67 (1980), no. 1, 227-231. (Bennett Eisenberg) **81g:62155** 62M10 (62M20)
- Newton, Isaac. See Agassi, Joseph, **81a:01031**; Tison, René, **81b:01014**; Harrison, John, **81b:01022**; Cohen, I. Bernard, **81c:01019**; Weising, Hans, **81d:01025**; Rogers, G. A. J., **81h:01005**; Dundon, Stanislaus J., **81h:01007**; Copenhagen, Brian P., **81i:01009**; McGuire, J. E., **81m:01016**; Shapiro, Alan E., **81m:01018** and Whiteside, D. T., **81m:01021**
- Newton, Roger G. The density matrix of scattered particles. With comments by William Band and James L. Park. *Found. Phys.* 9 (1979), no. 11-12, 929-935, 937-938. (V. D. Kolmanenko) **81c:81029** 81F20
- (with Cahill, Kevin) Soliton-generating differential equations in $3+1$ dimensions. Special issue on solitons in physics. *Phys. Scripta* 20 (1979), no. 3-4, 502-504. (G. L. Lamb, Jr.) **81c:35112** 35Q20 (81C05)
- Quantum action-angle variables for harmonic oscillators. *Ann. Physics* 124 (1980), no. 2, 327-346. (Author's summary) **81d:81004** 81B05 (35P25, 47A40)
- Inverse scattering. I. One dimension. *J. Math. Phys.* 21 (1980), no. 3, 493-505. (Harry E. Moses) **81m:81066a** 81F99 (34B25, 35A25, 35Q20)
- Inverse scattering. II. Three dimensions. *J. Math. Phys.* 21 (1980), no. 7, 1698-1715. (Harry E. Moses) **81m:81066b** 81F99 (34B25, 35A25, 35Q20)
- Neyman, Abraham Asymptotic values of mixed games. *Game theory and related topics (Proc. Sem., Bonn and Hagen, 1978)*, pp. 71-81. North-Holland, Amsterdam, 1979. (Mamoru Kaneko) **81c:90100** 90D13
- Neyman, Jerzy Developments in probability and mathematical statistics generated by studies in meteorology and weather modification. *Comm. Statist. A—Theory Methods* 8 (1979), no. 11, 1097-1110. (Author's summary) **81m:62198** 62P99
- Some memorable incidents in probabilistic/statistical studies. *Asymptotic theory of statistical tests and estimation (Proc. Adv. Internat. Sympos., Univ. North Carolina, Chapel Hill, N.C., 1979)*, pp. 1-32. Academic Press, New York, 1980. (Margaret P. Gessman) **81g:62004** 62-03 (01A75, 60-03)
- See also Doksum, Kjell A., **81m:01046** and Krickeberg, K., **81m:01061**
- Nehmetdinov, I. R. Sufficient conditions for the univalence of the solution of an inverse problem of the theory of filtration in an inclined reservoir. (Russian) *Trudy Sem. Krasn. Zashch. No. 15* (1978), 93-98, 217. (E. Ungureanu-David) **81k:76075** 76S05
- Nehmetdinov, T. K. See Information reception and processing in structurally complex systems, **81c:94002**
- Nemzov, V. P. (with Blank, A. M.; Firsova, T. V.) The marking of the objects of a television picture. (Russian) *Automation, analysis and pattern recognition, 1 (Russian)*, pp. 53-68, 262, "Zinatne", Riga, 1979. (Authors' summary) **81i:68101** 68G10
- Ng, C. T. Measures of information with the branching property over a graph and their representations. *Inform. and Control* 41 (1979), no. 2, 214-231. (G. O. H. Katona) **81c:94012** 94A17 (05C99, 39B99)
- Ng, Edward W. Symbolic-numeric interface: a review. *Symbolic and algebraic computation (EUROSAM '79, Internat. Sympos., Marseille, 1979)*, pp. 330-345. *Lecture Notes in Comput. Sci.*, 72, Springer, Berlin, 1979. (From the text) **81g:68059** 68C20
- See also Symbolic and algebraic computation, **81d:68005**
- Ng, Kai W. (with Bishop, L.; Fraser, Donald Alexander Stuart) Some decompositions of spherical distributions. (German, French and Russian summaries) *Statist. Hefte (N.F.)* 20 (1979), no. 1, 2-21. (C. G. Khatri) **81c:62012** 62E15 (62H10)
- (with Fraser, Donald Alexander Stuart) Multivariate regression analysis with spherical error. *Multivariate analysis, V (Proc. Fifth Internat. Sympos., Univ. Pittsburgh, Pittsburgh, Pa., 1978)*, pp. 369-386. North-Holland, Amsterdam, 1980. (Takeaki Kariya) **81c:62115** 62J05 (62H05)
- Ng, Kung Fu On a theorem of Birkhoff. *Math. Japon.* 24 (1979/80), no. 4, 331-334. (Constantin Niculescu) **81b:46010** 46A40
- An introduction to ordered spaces. *Southeast Asian Bull. Math.* 3 (1979), no. 2, 212-215. (I. Namioka) **81c:46008** 46A40 (06F20)
- A duality theory in ordered linear spaces. Proceedings of the First Franco-Southeast Asian Mathematical Conference (Nanyang Univ., Singapore, 1979). *Southeast Asian Bull. Math.* 1979, Special Issue a, 147-151. (Constantin Niculescu) **81b:46011** 46A40
- Ng, Peng Nung (with Lee, Peng Yee; Murakami, H.) Modular spaces of strongly summable functions. *Bull. Malaysian Math. Soc. (2)* 1 (1978), no. 2, 91-99. (From the introduction) **81c:46033** 46E30
- Matrix transformations on Cesàro sequence spaces of a nonabsolute type. *Tamkang J. Math.* 10 (1979), no. 2, 215-221. (Hubert Tietz) **81m:40006** 40D05 (46A45)
- Ng, S. K. (with Chan, W. L.) Normality and proper performance improvement in periodic control. *J. Optim. Theory Appl.* 29 (1979), no. 2, 215-229. (Kailash C. Kapur) **81d:49018** 49B50 (49D50)
- Ng, Seong Nam Right nucleus in right alternative algebras. *J. London Math. Soc. (2)* 21 (1980), no. 3, 456-464. (Irvin Roy Hentzel) **81m:17025** 17D99 (17A30)
- Ng, Shu Ming (with Liu, Ming Chit; Tsang, Kai Man) An improved estimate for certain Diophantine inequalities. *Proc. Amer. Math. Soc.* 78 (1980), no. 4, 457-463. (T. N. Shorey) **81f:10025** 10B45 (10F05)
- Ng, T. S. (with Qureshi, Z. H.; Goodwin, Graham C.) Optimum experimental design for identification of distributed parameter systems. *Internat. J. Control* 31 (1980), no. 1, 21-29. (E. P. Gil'bo) **81d:93069** 93E12 (62F12, 62K05)
- Ng, Vee Ming (with Haq, M. Safiul) On marginal likelihood inference for the intra-class correlation coefficient. *Comm. Statist. A—Theory Methods* 8 (1979), no. 2, 179-189. (A. P. Dawid) **81c:62101** 62H20 (62A10)
- On the estimation of parametric density functions. *Biometrika* 67 (1980), no. 2, 505-506. (Author's summary) **81h:62077** 62G05 (62A05)
- Ng, Wing Chu (with Brandt, Richard A.; Yeung, Wai Bong) Finite field equation of Yang-Mills theory. *J. Math. Phys.* 21 (1980), no. 3, 547-560. (José M. Cerveró) **81h:81061** 81E15
- Ng, Yew Kwang Toward eudaimonology: notes on a quantitative framework for the study of happiness. *Math. Social Sci.* 1 (1980/81), no. 1, 51-68. (Author's summary) **81i:90018** 90A06 (90A10)
- Nghiêm Đình Ngọc (with Yor, Marc) Champs markoviens et mesures de Gibbs sur R . (English summary) *Ann. Sci. École Norm. Sup. (4)* 11 (1978), no. 1, 29-69. (Authors' summary) **81g:60100** 60K35 (60G60, 60J99, 81E10, 82A05)
- A remark on disintegrations with almost all components non- σ -additive. *Canad. J. Math.* 31 (1979), no. 4, 786-788. (D. Preiss) **81a:28006** 28A50
- Pointwise convergence of martingales in von Neumann algebras. *Israel J. Math.* 34 (1979), no. 4, 273-280 (1980). (József Szűcs) **81g:46091** 46L50
- On the integrability of the maximal ergodic function. *Proc. Amer. Math. Soc.* 79 (1980), no. 4, 565-570. (Karl Petersen) **81f:28021** 28D10
- pham Ngoc Anh. See Pham Ngoc Anh
- pham Ngoc Dinh, Alain. See Pham Ngoc Dinh, Alain
- dô Ngoc Ziep. See Dô Ngoc Ziep
- dao min' Ngok. See Dao Min' Ngok
- Ngô Việt Trung Über die Übertragung der Ringeigenschaften zwischen R und $R[u]/(F)$. *Math. Nachr.* 92 (1979), 215-229. (Manfred Steurich) **81h:13001** 13B02 (13H10)
- Über allgemeine Hyperflächenschnitte einer algebraischen Varietät. (English summary) *Monatsh. Math.* 89 (1980), no. 4, 323-340. (Manfred Herrmann) **81m:14002** 14A10 (13H05)
- Ngo Zui Kan Motion of an ideal fluid subject to surface-tension forces and filling a vessel with a plane elastic bottom. *Izv. Akad. Nauk SSSR Meh. Tverd. Tela* 15 (1980), no. 3, 143-154. (Russian); translated as *Mech. Solids* 15 (1980), no. 3, 134-144. (From the summary) **81m:73046** 73J06 (53C45)
- Nguyen, M. (with Židkov, E. P.; Nedjalkov, I. P.; Horomakii, B. N.) Investigation of a class of solutions for Low's equation. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 19 (1979), no. 4, 998-1014, 1083. (Authors' summary) **81i:81009** 81F20 (65H10, 65R20)
- Nguyen Bk Zai (with Bahtin, I. A.) Existence of positive solutions for nonlinear equations depending on a parameter. (Russian) *Functional analysis, No. 14 (Russian)*, pp. 13-24. *Uf'iansk. Gos. Ped. Inst., Uf'iansk*, 1980. (P. P. Zabreiko) **81m:47003** 47H15 (58C40)
- Nguyen Tang The nonequilibrium Green functions and their applications to nonequilibrium systems. (Russian) *Dokl. Akad. Nauk SSSR* 251 (1980), no. 6, 1365-1367. (E. E. Tareeva) **81k:82022** 82A35 (82A15)
- (with Terleckii, Ja. P.) On the statistical determination of nonequilibrium entropy. (Russian) *Dokl. Akad. Nauk SSSR* 255 (1980), no. 1, 83-85. (V. Protopenescu) **81m:82023** 82A35 (28D20)
- Nguyen Thyong Uen. See Nguyen Thiong Uen
- Nguyen Tyong Uniform convergence of difference schemes of high-order accuracy for the Poisson equation. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 20 (1980), no. 1, 97-103, 260. (Author's summary) **81b:65119** 65Q05
- Nguyen Van Vi Some classes of problems on admissible dynamical flow with minimum time. (Russian, English summary) *Issled. Operacii i ASU No. 14* (1979), 35-47, 134. (K. V. Sahbazjan) **81f:90046** 90B10 (90C35)
- Nguyen Zai Tien (with Đặng Hùng Thắng) On symmetric stable measures on spaces l_p ($1 < p < +\infty$). (Russian summary) *Teor. Veroyatnost. i Primenen.* 25 (1980), no. 1, 119-128. (Albert Tortrat) **81f:60008** 60B11 (28C20)
- tran cao Nguyen. See Tran Cao Nguyen
- Nguyen, C. (with Bhargava, Vijay K.) Circulant codes based on the prime 29. *IEEE Trans. Inform. Theory* 26 (1980), no. 3, 363-364. (Authors' summary) **81b:94038** 94B15 (94B60)
- Nguyen, Hien Q. n -alternation deficiency of geometric rank-functions. *Discrete Math.* 21 (1978), no. 3, 273-283. (Author's summary) **81c:51004** 51D20 (05B25)
- Constructing the free erection of a geometry. *J. Combin. Theory Ser. B* 27 (1979), no. 2, 216-224. (Thomas Brylawski) **81f:05057** 05B35
- Nguyen, Hung Trung (with Banon, Gérard) Sur l'estimation récurrente de la densité et de sa dérivée pour un processus de Markov. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 286 (1978), no. 16, A691-A694. (Authors' summary) **81c:62095** 62M05 (62G05)
- Conditioning in possibility theory. *Proceedings of the 1978 IEEE Conference on Decision and Control including the 17th Symposium on Adaptive Processes (San Diego, Calif., 1979)*, pp. 1450-1453. *IEEE, New York*, 1979. (Mark A. Alzerman) **81d:93009** 93A99 (90B99, 94D05)
- Nguyen, Xuan-Xanh (with Zessin, Hans) Ergodic theorems for spatial processes. *Z. Wahrsch. Verw. Gebiete* 48 (1979), no. 2, 133-158. (J. Fritz) **81c:60061** 60C60 (60K35, 82A05)
- Nguyen Dinh Sang On an existence theorem on bordered Riemann surfaces. *Rev. Roumaine Math. Pures Appl.* 25 (1980), no. 5, 759-763. (G. G. Weill) **81m:30043** 30F20
- Nguyen Day Tien Sur le théorème des trois séries de Kolmogorov et la convergence en moyenne quadratique des martingales dans un espace de Banach. (Russian summary)

- Teor. Veroyatnost. i Primenen.* **24** (1979), no. 4, 795-807. (S. D. Chatterji) **81b:60010** 60B12 (60G42)
- Nguyen Huu Anh Classification of unimodular algebraic groups with square integrable representations. *Acta Math. Vietnam.* **3** (1978), no. 2, 75-82. (Jonathan M. Rosenberg) **81f:22620** 22E45
- Nguyen Huy Xuong (with Payan, Charles) Graphes de nombre facial 3 ou 4. (English summary) *Combinatorics* **79** (Proc. Colloq., Univ. Montréal, Montréal, Que., 1979), Part I. *Ann. Discrete Math.* **8** (1980), 129-135. (A. T. White) **81m:05066** 05C10
- (with Payan, Charles) Graphes d'intervalle d'immersion I. (English summary) *Combinatorics* **79** (Proc. Colloq., Univ. Montréal, Montréal, Que., 1979), Part I. *Ann. Discrete Math.* **8** (1980), 137-141. (A. T. White) **81m:05067** 05C10
- Nguyen Kham Khon Zielfunktionsdekomposition zum Lösen einer nichtlinearen Optimierungsaufgabe. *Wiss. Z. Tech. Hochsch. Karl-Marx-Stadt* **21** (1979), no. 7, 909-916. (Jürgen Guddat) **81j:90106** 90C30 (49D39)
- Nguyen Ky Toan (with Antipka, Adel F.) Topological solution of ordinary and partial finite difference equations. *J. Math. Phys.* **21** (1980), no. 10, 2475-2480. (Authors' summary) **81g:39092** 39A12 (15A06, 39A10)
- Nguyen Manh Diec The density of states at the band tail of a disordered system with correlations. (Russian summary) *Phys. Status Solidi (B)* **99** (1980), no. 1, 225-235. (Authors' summary) **81f:82022** 82A42 (81C35)
- Nguyen Quang Do Thong Sur le module des relations d'un p -groupe et la suite exacte d'inflation-restriction. *J. Reine Angew. Math.* **316** (1980), 110-121. (Chih-Han Sah) **81n:20064** 20J06 (12G05)
- Nguyen Quoc Son Sur l'application du second principe en présence d'une source de chaleur. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **290** (1980), no. 21, B469-B472. (Authors' summary) **81g:80001** 80A10 (49H05)
- Méthodes énergétiques en mécanique de la rupture. (English summary) *J. Mécanique* **19** (1980), no. 2, 363-386. (Authors' summary) **81f:73048** 73M05
- Nguyen Thanh Van Sur les fonctions analytiques de la forme $f(x, y) = (\sum_{|x| \leq c} A_n(x) y^n) \exp(x, y)$. *Colloque d'Analyse Harmonique et Complexe*, 4 pp. (not consecutively pagged), Univ. Aix-Marseille I, Marseille, 1977. (Walter Hengartner) **81f:32001** 32A15
- Nguyen Thuong Uen Interpolation with multiple nodes in a half-plane in the class of analytic functions of finite order. (Russian) *Teor. Funkcii Funktsional. Anal. i Prilozhen.* **29** (1978), 109-117, iv. (Authors' summary) **81i:30063** 30E05
- Nguyen To Nhu P^A -spaces and L^A -spaces. *Colloq. Math.* **41** (1979), no. 1, 67-71. (A. Sobczyk) **81i:46023** 46B20 (46B25)
- Nguyen Van Dao (with Tran Kim Chi) Construction of the solutions of nonlinear high order differential equations. *Acta Tech. CSAV* **25** (1980), no. 3, 358-368. (D. P. Gupta) **81i:34007** 34A34
- Nguyen-van-Huu A limit theorem for functionals of a Poisson process. *Comment. Math. Univ. Carolin.* **20** (1979), no. 3, 547-564. (Mark Westcott) **81e:60060** 60G55 (60F05)
- Nguyen Van Khang Zur Berechnung der dynamischen Stabilitätsbedingungen und periodischen Schwingungen des Gestells ebener Mechanismen. *Rev. Roumaine Sci. Tech. Sér. Méc. Appl.* **25** (1980), no. 2, 269-284. (Authors' summary) **81i:70012** 70K20 (70B15)
- Nguyen Van Lam Eine Abschätzung des Modulus des Grötzschschen Ringes im Raum. *Bull. Math. Soc. Sci. Math. R. S. Roumanie (N.S.)* **23**(71) (1979), no. 4, 359-366. (F. W. Gehring) **81e:30038** 30C60
- Nguyen Van Thoi (with Hoang Tuy; Le Dung Muu) Un nouvel algorithme de point fixe. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **286** (1978), no. 18, A783-A785. (Authors' summary) **81e:90090** 90C30 (55M20)
- Nguyen Van Thu A characterization of mixed-stable laws. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math.* **27** (1979), no. 7-8, 629-630 (1980). (B. Jesiak) **81k:60021** 60E07
- Multiply self-decomposable probability measures on Banach spaces. *Studia Math.* **66** (1979), no. 2, 161-175. (Albert Tortrat) **81f:60010** 60B11
- Multiply self-decomposable measures in generalized convolution algebras. *Studia Math.* **66** (1979), no. 2, 177-184. (Albert Tortrat) **81f:60011** 60B11
- Prediction problems. *Dissertationes Math. (Rozprawy Mat.)* **163** (1980), 69 pp. (A. I. Ponomarenko) **81f:60059** 60G25 (60G10)
- Nguyen-Xuan-Loc Sur la théorie des fonctions finement holomorphes. II. *Complex analysis Joensuu 1978* (Proc. Colloq., Univ. Joensuu, Joensuu, 1978), pp. 289-300. *Lecture Notes in Math.*, **747**, Springer, Berlin, 1979. (Klaus Janssen) **81k:60099** 60J45 (31A05)
- Nguyen Xuan My Some classes of semi-Thue systems. (German and Russian summaries) *Elektron. Informatsionverarb. Kybernet.* **16** (1980), no. 1-3, 3-10. (Authors' summary) **81j:68094** 68F05 (03D03)
- n -contextual grammars with syntactical invariant choice. *Found. Control Engrg.* **5** (1980), no. 1, 21-29. (S. Ginsburg) **81i:68107** 68F05
- (with Păun, Gheorghe) On the inner-contextual grammars. *Rev. Roumaine Math. Pures Appl.* **25** (1980), no. 4, 641-651. (Sorin Istrail) **81i:68110** 68F05
- Nguyen Xuan Tuyen On some exact sequences of cohomology of monoids. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math.* **27** (1979), no. 7-8, 521-523 (1980). (Charles Ching An Cheng) **81k:20100** 20M50
- Nguyen Xuan Uy Removable sets of analytic functions satisfying a Lipschitz condition. *Ark. Mat.* **17** (1979), no. 1, 19-27. (P. L. Duren) **81i:30076** 30E99 (30D50)
- An extremal problem on singular integrals. *Amer. J. Math.* **102** (1980), no. 2, 279-290. (M. Jodeit, Jr.) **81j:42035** 42B20
- Ng X. Dang See Dang, Ng X.
- nguyen to Nhu See Nguyen To Nhu
- tran van Nhung See Tran Van Nhung
- Ni, A. L. (with Ryzlov, O. S.) The structure of relaxation zones behind a shock wave in chemically active gas mixtures. (Russian) *Ž. Prikl. Meh. i Tehn. Fiz.* **1980**, no. 1, 33-45, 172. (Authors' summary) **81d:76069** 76L05 (82A40)
- Ni, Lionel M. (with Hwang, Kai) Resource optimization of a parallel computer for multiple vector processing. *IEEE Trans. Comput.* **29** (1980), no. 9, 831-836. (Authors' summary) **81g:68038** 68B20 (68C15, 90B22)
- Ni, Li Qun (with Yao, Jing Qi; Zhao, Han Zhang) Some fixed-point theorems of contractive type mappings. (Chinese. English summary) *Chinese Ann. Math.* **1** (1980), no. 1, 63-74. (J. S. W. Wong) **81k:47084** 47H10
- Ni, Wei Ming (with de Figueiredo, Djairo Guedes) Perturbations of second order linear elliptic problems by nonlinearities without Landesman-Lazer condition. *Nonlinear Anal.* **3** (1979), no. 5, 629-634. (Miroslav Krbeć) **81k:35052** 35J25 (35D05, 47H15)
- On the existence of global vortex rings. *J. Analyse Math.* **37** (1980), 208-247. (J. Norbury) **81i:76017** 76C05 (35Q20)
- Ni, Wei Tou (with Cheng, Kuo Shun) Conditions for the local existence of metric in a generic affine manifold. *Math. Proc. Cambridge Philos. Soc.* **87** (1980), no. 3, 527-534. (L. Tamassy) **81c:53021** 53B05
- Nicholls, D. F. The analysis of time series—the time domain approach. *Austral. J. Statist.* **21** (1979), no. 2, 93-120. (Roch Roy) **81h:62162** 62M10 (62M20)
- (with Hall, A. D.) The exact likelihood function of multivariate autoregressive-moving average models. *Biometrika* **66** (1979), no. 2, 259-264. (Jill Andel) **81d:62099** 62M10
- Nicholls, Peter J. Correction to: "Transitive horocycles for Fuchsian groups" [Duke Math. J. **42** (1975), 307-312; MR **51** #1792]. *Duke Math. J.* **47** (1980), no. 2, 463. (Editors) **81g:54052** 54H20
- Nichols, B. D. (with Hirt, C. W.) Adding limited compressibility to incompressible hydrocodes. *J. Comput. Phys.* **34** (1980), no. 3, 390-400. (David F. Griffiths) **81h:76044** 76N10
- Nichols, S. T. (with Dorrah, H. T.) Nonlinear parameter estimation for multivariable systems: the partitioning frame technique. *Identification and system parameter estimation (Proc. Fourth IFAC Sympos., Tbilisi, 1976)*, Part 3, pp. 2011-2026. *North-Holland, Amsterdam*, 1978. (See **80d:93010c**) 93C35
- (with Maklad, Maher S.) A new approach to model structure discrimination. *IEEE Trans. Systems Man Cybernet.* **10** (1980), no. 2, 78-84. (Authors' summary) **81h:68121** 68J10
- Nicholson, D. W. On the spectrum of a nonsingular matrix. (German summary) *Acta Mech.* **34** (1979), no. 1-2, 143-151. (Authors' summary) **81k:15014** 15A18 (65F15, 73K40)
- Eigenvalue bounds for $AB + BA$, with A, B positive definite matrices. *Linear Algebra Appl.* **24** (1979), 173-183. (M. Lotkin) **81a:15018** 15A42 (15A48)
- Nicholson, Harold See Modelling of dynamical systems, **81m:93005**
- Nicholson, W. K. (with Yaqub, Adil) A commutativity theorem for rings and groups. *Canad. Math. Bull.* **22** (1979), no. 4, 419-423. (Howard E. Bell) **81c:16045** 16A70 (20A05)
- (with Watters, J. F.) The strongly prime radical. *Proc. Amer. Math. Soc.* **76** (1979), no. 2, 235-240. (Authors' summary) **81i:16006** 16A12 (16A21)
- (with Yaqub, Adil) A commutativity theorem. *Algebra Universalis* **10** (1980), no. 2, 260-263. (Howard E. Bell) **81c:16046** 16A70
- (with Watters, J. F.; Zelmanowitz, J. M.) On extensions of weakly primitive rings. *Canad. J. Math.* **32** (1980), no. 4, 937-944. (J. Luh) **81m:16012** 16A20 (16A27)
- Nie, A. Impulse response of a step-index fiber including a gap. *Philips J. Res.* **35** (1980), no. 2, 145-156. (Authors' summary) **81d:78005** 78A10 (94A05)
- Nickel, K. The Crocco transformation for the three-dimensional Prandtl boundary layer equations. *Math. Methods Appl. Sci.* **1** (1979), no. 4, 445-452. (Jacques Mauss) **81e:76034** 76D10 (35A22, 35A30, 35Q20)
- Nickel, Laura (with Noll, Curt) The 25th and 26th Mersenne primes. *Math. Comp.* **35** (1980), no. 152, 1387-1390. (V. C. Harris) **81k:10010** 10A25
- Nickel, Paul A. A biharmonic normal operator. *Kodai Math. J.* **3** (1980), no. 1, 59-69. (B. Walsh) **81h:31015** 31C12 (31B30)
- Nikolaev, Peter (with Brown, Ronald) Exponential laws for topological categories, groupoids and groups, and mapping spaces of colimits. *Cahiers Topologie Géom. Différentielle* **20** (1979), no. 2, 179-198. (M. M. McWaters) **81d:54006** 54B30 (18B30, 54H15)
- (with Morris, Sidney A.) The extension of norms on subgroups of free topological groups. *Proc. Amer. Math. Soc.* **80** (1980), no. 1, 185-188. (M. I. Kabenjuk) **81g:22001** 22A05
- Nico, William R. See Proceedings: Conference on Semigroups in Honor of Alfred H. Clifford, **81i:20004**
- Nicol, D. A. C. (with Turner, J. R.) The Signorini problem for a Cosserat plate. *J. Int. Math. Appl.* **25** (1980), no. 2, 133-145. (Authors' summary) **81d:73056** 73K10 (65N30, 73K25)
- Nicola, Pier Carlo Irregular growth, full employment and equilibrium prices at the rate of maximum profit. (Italian. English summary) *Rend. Sem. Mat. Fis. Milano* **47** (1977), 185-204 (1979). (Authors' summary) **81a:90054** 90A14 (90A06)
- Nicolae, V. (with Chiroui, Veturia) On energy balance in the dynamics of systems with time-dependent constraints. *Rev. Roumaine Sci. Tech. Sér. Méc. Appl.* **25** (1980), no. 2, 237-242. (Authors' summary) **81d:70015** 70H35
- Nicolăescu, T. (with Cristea, Al.) Le foie normal et pathologique comme système: les hépatites aiguës et chroniques. *Proceedings of the International Symposium on Applications of Mathematics in System Theory (Univ. Brasov, Brasov, 1978)*, I, pp. 235-242. *Univ. Brasov, Brasov*, 1979. (See **81j:93006a**) 92A07
- Nicolova, M. N. (with Seljakhova, T. N.) On differential equations in a class of holomorphic functions. (Russian) *Some questions of differential and integral equations and their applications*, No. 2 (Russian), pp. 63-77, 189. *Yakutsk. Gos. Univ., Yakutsk*, 1977. (Authors' summary) **81d:30039** 30C70
- Nicolai, H. (with Aurilia, A.; Townsend, P. K.) Hidden constants: the θ parameter of QCD and the cosmological constant of $N=8$ supergravity. *Nuclear Phys. B* **176** (1980), no. 2, 509-522. (Authors' summary) **81k:83044** 83E99 (81C05)
- Nicolaidis, R. A. (with Fix, George J.; Gunzburger, Max D.) Theory and applications of mixed finite element methods. *Constructive approaches to mathematical models (Proc. Conf. in honor of R. J. Duffin, Pittsburgh, Pa., 1978)*, pp. 375-393. *Academic Press, New York*, 1979. (Manfred Dobrowolski) **81g:65148** 65N30 (65N15)
- On finite element multigrid algorithms and their use. *Mathematics of finite elements and applications, III (Proc. Third MAFELAP Conf., Brunel Univ., Uxbridge, 1978)*, pp. 459-466. *Academic Press, London*, 1979. (O. Widlund) **81g:65157** 65N30
- (with Fix, George J.; Gunzburger, Max D.) On finite element methods of the least squares type. *Comput. Math. Appl.* **5** (1979), no. 2, 87-98. (William W. Hager) **81b:65103** 65N30
- (with Fix, George J.; Gunzburger, Max D.) On mixed finite element methods for a

- class of nonlinear boundary value problems. *Computational methods in nonlinear mechanics* (Proc. Second Internat. Conf., Univ. Texas, Austin, Tex., 1979), pp. 245-260, North-Holland, Amsterdam, 1980. (Michael Engelman) **81g:65149** 65N30
- Nicolas, Jean-Louis Sur les entiers n pour lesquels il y a beaucoup de groupes abéliens d'ordre n . *Séminaire Delange-Pisot-Poitou, 18e année: 1976/77, Théorie des nombres*, Fasc. 1, Exp. No. 8, 12 pp., Secrétariat Math., Paris, 1977. (P. Erdős) **81c:10052** 10H25 (10A40, 20K01)
- Nicolas, Edmond Oscillations in cybernetic systems (with feedback). (Romanian. English summary) *Bul. Inst. Politehn. București Ser. Electrotehn.* **39** (1977), no. 4, 27-34. (Author's summary) **81b:93023** 93C15 (94C05)
- (with Constantinescu, P.; Nicorovici-Porumbaru, N. A.) Systems, models, invariance. *Proceedings of the International Symposium on Applications of Mathematics in System Theory* (Univ. Braşov, Braşov, 1978), I, pp. 133-143, Univ. Braşov, Braşov, 1979. (See **81j:93006a**) 93A05 (81B99)
- Nicolas, Edmond See Batle Nicolas, Nadal
- Niculescu, Liviu Sur un théorème de Levi-Civita-Vranceanu. *Proceedings of the National Conference on Nonholonomic Spaces* (Iasi, 1976), pp. 156-160, Ed. Acad. R.S. România, Bucharest, 1979. (Leopold Verstraeten) **81c:53024** 53B20
- (with Martin, Mircea) Einige Bemerkungen über die Deformationsalgebra zweier linearer Zusammenhänge. *Abh. Math. Sem. Univ. Hamburg* **49** (1979), 244-253. (V. Wünsch) **81a:53017** 53B05 (53C25)
- On the holomorphically subplanar curves. *An. Ştiinţ. Univ. "Al. I. Cuza" Iaşi Sect. I a Mat. (N.S.)* **25** (1979), no. 2, 345-348. (Yoshihiro Ichijyo) **81g:53028** 53C15 (53C60)
- (with Anastasie, Mihai) Directions caractéristiques associées à une paire de connexions linéaires sur une variété de Banach. *An. Ştiinţ. Univ. "Al. I. Cuza" Iaşi Sect. I a Mat. (N.S.)* **25** (1979), no. 2, 349-354. (J. Eells) **81d:58012** 58B20
- Sur la représentation géométrique des espaces de Riemann. *An. Univ. Bucureşti Mat.* **28** (1979), 69-74. (Y. Tashiro) **81i:53018** 53B20
- (with Martin, Mircea) On the (∇, F, δ) -subpaths. *Bull. Math. Soc. Sci. Math. R. S. Roumanie (N.S.)* **23**(71) (1979), no. 2, 177-182. (R. Miron) **81m:53047** 53C15
- Niculescu, M. (with Dinculeanu, Nicolae; Marcus, Solomon) ★ Analiză matematică. Vol. I. (Romanian) [Mathematical analysis. Vol. I] Fifth edition. *Editura Didactică şi Pedagogică, Bucharest*, 1980. 757 pp. (R. G. Bartle) **81k:26002a** 26-01
- (with Dinculeanu, Nicolae; Marcus, Solomon) ★ Analiză matematică. Vol. II. (Romanian) [Mathematical analysis. Vol. II] Third edition. *Editura Didactică şi Pedagogică, Bucharest*, 1980. 414 pp. (R. G. Bartle) **81k:26002b** 26-01
- Nicoletti, Giorgio Generating cryptomorphic axiomatizations of matroids. *Geometry and differential geometry* (Proc. Conf., Univ. Haifa, Haifa, 1979), pp. 110-113, *Lecture Notes in Math.*, 792, Springer, Berlin, 1980. (Jeremy Dawson) **81k:05035** 05B35
- (with Barnabei, Marilena) Axiomatizing matroids by means of the set of nongenerators. (Italian summary) *Boll. Un. Mat. Ital. A* (5) **17** (1980), no. 1, 121-127. (Thomas Brylawski) **81f:05052** 05B35
- (with Barnabei, Marilena) An interactive program for finite incidence structures. *J. Geom.* **14** (1980), no. 2, 174-181. (Authors' summary) **81i:05002** 05-04 (05B15)
- Nicola, G. (with Turner, J. W.) Effect of fluctuations on bifurcation phenomena. *Bifurcation theory and applications in scientific disciplines* (Papers, Conf., New York, 1977), pp. 251-262, *Ann. New York Acad. Sci.*, 316, New York Acad. Sci., New York, 1979. (Richard J. Field) **81f:80014** 80A30 (58E07, 60K35, 92A40)
- (with Prigogine, I.) Irreversible processes at nonequilibrium steady states and Lyapunov functions. *Proc. Nat. Acad. Sci. U.S.A.* **76** (1979), no. 12, 6060-6061. (L. A. Turski) **81f:82013** 82A35
- (with Malek-Mansour, M.) Systematic analysis of the multivariate master equation for a reaction-diffusion system. *J. Statist. Phys.* **22** (1980), no. 4, 495-512. (Authors' summary) **81j:80008** 80A30 (82A35)
- Nicol, J. F. Calculating the equation of state with the Wilson-Kogut renormalization group. *Phys. Lett. A* **73** (1979), no. 4, 303-306. (Author's summary) **81j:82004** 82A05 (81E15)
- (with Johnson, D.; Segal, Irving E.; Segal, W.) Statistical invalidation of the Hubble law. *Proc. Nat. Acad. Sci. U.S.A.* **77** (1980), no. 11, part 1, 6275-6279. (Authors' summary) **81m:85008** 85A35
- Nicolai, M. Homology of symmetric algebras. *Comm. Algebra* **7** (1979), no. 7, 657-676. (Author's summary) **81g:16012** 16A24
- Nicolò, F. (with Benfatto, G.; Cassandro, M.; Gallavotti, G.; Olivieri, E.; Presutti, E.; Scacciatelli, E.) Some probabilistic techniques in field theory. *Comm. Math. Phys.* **59** (1978), no. 2, 143-166. (Sergio Albeverio) **81e:10081** 81E15 (60G20, 60H15, 60J45, 82A05)
- (with Benfatto, G.; Cassandro, M.; Gallavotti, G.; Olivieri, E.; Presutti, E.; Scacciatelli, E.) Ultraviolet stability in Euclidean scalar field theories. *Comm. Math. Phys.* **71** (1980), no. 2, 95-130. (Francesco Guerra) **81g:81045** 81E10 (60G20)
- Nicorovici-Porumbaru, D. Numerical integration of differential equations. *Proceedings of the International Symposium on Applications of Mathematics in System Theory* (Univ. Braşov, Braşov, 1978), II, pp. 239-244, Univ. Braşov, Braşov, 1979. (Author's summary) **81m:65150** 65M10 (81C05)
- Nicorovici-Porumbaru, N. A. (with Constantinescu, P.; Nicolau, Edmond) Systems, models, invariance. *Proceedings of the International Symposium on Applications of Mathematics in System Theory* (Univ. Braşov, Braşov, 1978), I, pp. 133-143, Univ. Braşov, Braşov, 1979. (See **81j:93006a**) 93A05 (81B99)
- Niculescu, Constantin P. Absolute continuity in Banach space theory. *Rev. Roumaine Math. Pures Appl.* **24** (1979), no. 3, 413-422. (Lutz Weis) **81b:47025** 47B10 (47D30)
- A note on weakly compact operators on C^* -algebras. *Rev. Roumaine Math. Pures Appl.* **25** (1980), no. 4, 631-634. (Gilles Pisier) **81j:46093** 46L05 (46B22)
- Niculescu, Stefan P. An asymptotic renewal theorem for m -general renewal processes. *Bull. Math. Soc. Sci. Math. R. S. Roumanie (N.S.)* **22**(70) (1978), no. 1, 55-59. (Author's summary) **81d:60096** 60K05
- Niculescu, Stefan An algorithm to find Hamiltonian paths in graphs. *Bull. Math. Soc. Sci. Math. R. S. Roumanie (N.S.)* **23**(71) (1979), no. 3, 279-287. (Author's introduction) **81a:05082** 05C38 (68E10)
- Niederhieser, Peter See Meyer-Nieberg, Peter
- Niederhieser, Günter (with Reich, Ludwig) Über multiplikative Funktionen von Automorphismen des Potenzreihenrings und invariante Funktionen analytischer Iterationen. *Iterationsprobleme* (Graz, 1977), *Ber. No. 88*, 26 pp., Forschungszentrum Graz, Graz, 1978. (D. A. Lutz) **81b:39005** 39B50 (22E05, 39A10, 39B10, 58C10)
- Niederhieser, Heinrich Methoden zur Berechnung exakter Verteilungen vom Kolmogorov-Smirnov-Typ. *Ber. Math.-Statist. Sect. Forsch. Graz No. 99* (1978), i+92 pp. (Paul Deheuvels) **81k:62067** 62G30 (62C05, 62G10)
- Lattice paths with three step directions. *Proceedings of the Tenth Southeastern Conference on Combinatorics, Graph Theory and Computing* (Florida Atlantic Univ., Boca Raton, Fla., 1979), pp. 753-774, *Congress. Numer.*, XXIII-XXIV, Utilitas Math., Winnipeg, Man., 1979. (S. G. Mohanty) **81h:05012** 05A15
- Niederle, J. The unusual algebras and their applications in particle physics. *Czechoslovak J. Phys. B* **30** (1980), no. 1, 1-22. (Philip Huddleston) **81i:17003** 17B10 (17-02, 81G20)
- (with Hlavaty, L.) Casimir operators of the simplest supersymmetry superalgebras. *Lett. Math. Phys.* **4** (1980), no. 4, 301-306. (Nigel B. Backhouse) **81m:17003** 17A70 (81G20)
- Niederle, Josef Tolerance extensions in distributive lattices. *Arch. Math. (Brno)* **16** (1980), no. 2, 99-103. (R. Beazler) **81m:06033** 06D99
- (with Chajda, Ivan; Dalik, Josef; Vesely, Vitezslav; Zelinka, Bohdan) How to draw tolerance lattices of finite chains. *Arch. Math. (Brno)* **16** (1980), no. 3, 161-165. (Hartmut Höft) **81k:06007** 06B15 (05A05)
- Niederreiter, Harald Nombres pseudo-aléatoires et équirépartition. *Journées Arithmétiques de Luminy* (Colloq. Internat. CNRS, Centre Univ. Luminy, Luminy, 1978), pp. 155-164, *Astérisque*, 61, Soc. Math. France, Paris, 1979. (R. G. Stoneham) **81k:10004** 10K05 (65C10)
- Niedzwiecki, Maciej A method of identifying the nonlinear static characteristic of a dynamical object. (Polish. Russian and English summaries) *Arch. Automat. Telemek.* **25** (1980), no. 1, 51-62. (Author's summary) **81g:93022** 93B30 (93C10)
- Nieh, H. T. Gauss-Bonnet and Bianchi identities in Riemann-Cartan type gravitational theories. *J. Math. Phys.* **21** (1980), no. 6, 1439-1441. (Kenneth Dunn) **81h:83038** 83D05 (53B05)
- Nielsen, Arcadio See Glowinski, Roland, **81e:49009**
- Wils-Nielsen, A. C. See Wils-Nielsen, A. C.
- Nielsen, Dale (with Buneman, O.; Barnes, C. W.; Green, James) Principles and capabilities of 3-D, E-M particle simulations. *J. Comput. Phys.* **38** (1980), no. 1, 1-44. (Authors' summary) **81j:65022** 65C20 (76X05, 78A35)
- (with Peratt, Anthony L.; Green, James) Evolution of colliding plasmas. *Phys. Rev. Lett.* **44** (1980), no. 26, 1767-1770. (Authors' summary) **81d:76122** 76X05 (82A45, 85A05)
- Nielsen, Frank Flowgraphs. *Applications of graph theory*, pp. 59-80, Academic Press, London, 1979. (See **81h:05050**) 05C20 (50B10, 94C15)
- Nielsen, Hans Bruun (with True, Hans) Numerical investigation of the 3-dimensional stability of a convective flow in a slot. *Boundary and interior layers—computational and asymptotic methods* (Proc. Conf., Trinity College, Dublin, 1980), pp. 381-386, *Boole, Dán Laoghaire*, 1980. (See **81j:76001**) 76E15
- Nielsen, Mogens (with Plotkin, Gordon; Winskel, Glynn) Petri nets, event structures and domains. *Semantics of concurrent computation* (Proc. Internat. Symp., Eötvös, 1979), pp. 266-284, *Lecture Notes in Comput. Sci.*, 70, Springer, Berlin, 1979. (Authors' introduction) **81g:68043** 68B20
- Nielsen, N. K. Dimensional reduction and classical strings. *Nuclear Phys. B* **167** (1980), no. 1-2, 249-260. (Author's summary) **81j:81051** 81E99
- Barndorff-Nielsen, O. See Barndorff-Nielsen, O.
- Nielsen, Gregory M. Applications of a Mangeron theorem for triangular domains. (Romanian summary) *Bul. Inst. Politehn. Iaşi Sect. I* **25**(29) (1979), no. 1-2, 65-70. (Thomas A. Atchison) **81g:65015** 65D05
- (with Thomas, D. H.; Wixom, J. A.) Interpolation in triangles. *Bull. Austral. Math. Soc.* **20** (1979), no. 1, 115-130. (T. J. Rivlin) **81j:65026** 65D05 (65D10)
- The side-vertex method for interpolation in triangles. *J. Approx. Theory* **25** (1979), no. 4, 318-336. (S. Fisher) **81e:41003** 41A05 (41A63)
- Minimum norm interpolation in triangles. *SIAM J. Numer. Anal.* **17** (1980), no. 1, 44-62. (K. Jetter) **81g:65014** 65D05 (41A05)
- Nieme, Antti On bornology and Mikusiński operator theory. *Ann. Acad. Sci. Fenn. Ser. A I Math. Dissertationes No. 27* (1980), 52 pp. (L. Berg) **81d:44006** 44A40 (46A09)
- Nieme, Hannu Stationary vector measures and positive definite translation invariant bimeasures. *Ann. Acad. Sci. Fenn. Ser. A I Math.* **4** (1979), no. 2, 209-226. (L. N. Argabright) **81g:43010** 43A35 (28B05, 60G10)
- On the construction of Wold decomposition for multivariate stationary processes. *J. Multivariate Anal.* **9** (1979), no. 4, 545-559. (Franz Schmidt) **81g:60039** 60G25 (46G10)
- Nieme, Henry On the construction of the irreducible representations of the hyperalgebra of a universal Chevalley group. *Ann. Acad. Sci. Fenn. Ser. A I Math.* **5** (1980), no. 1, 17-25. (James E. Humphreys) **81k:20056** 20G05 (17B45)
- Nieme, Richard G. (with McKelvey, Richard D.) A multistage game representation of sophisticated voting for binary procedures. *J. Econom. Theory* **18** (1978), no. 1, 1-22. (Mamoru Kaneko) **81b:90017a** 90A08 (90D45)
- (with McKelvey, Richard D.) Erratum: "A multistage game representation of sophisticated voting for binary procedures". *J. Econom. Theory* **19** (1978), no. 2, 568. (Mamoru Kaneko) **81b:90017b** 90A08 (90D45)
- Nieminen, Juhani A note on relations in distributive lattices. (Slovak and Russian summaries) *Acta Fac. Rerum Natur. Univ. Comenian. Math.* **33** (1977), 7-17 (1978). (M. E. Adams) **81a:06013** 06D05 (06B05)
- On prime and principal ideals on graphs. *Arch. Math. (Brno)* **15** (1979), no. 3, 151-154. (R. A. Meller) **81f:05104** 05C38
- Betweenness and ternary operations on partial lattices. *Serdica* **5** (1979), no. 4, 374-377. (From the text) **81d:06008** 06B99
- The lattice of connected subgraphs of a connected graph. *Comment. Math. Prace Mat.* **21** (1980), no. 1, 187-193. (R. A. Meller) **81f:05111** 05C40 (06B15)
- Products of graphs and congruence relations. (Serbo-Croatian summary) *Glas. Mat. Ser. III* **15**(35) (1980), no. 1, 17-24. (R. A. Meller) **81h:05113** 05C99 (06B10)
- (with Everett, Martin) Partitions and homomorphisms in directed and undirected

- graphs. *J. Math. Sociol.* 7 (1980), no. 1, 91-111. (Authors' summary) **81e:05115** 05C99
- Nienhuis, G. (with Schuller, F.) Collisional broadening of saturated resonance fluorescence spectra by two-state atoms irradiated by monochromatic. *J. Phys. B* 13 (1980), no. 11, 2205-2216. (Authors' summary) **81m:81078a** 81G45 (81K05)
- Collisional broadening of resonance fluorescence with excitation by intense radiation of finite bandwidth. *J. Phys. B* 13 (1980), no. 11, 2217-2229. (Author's summary) **81m:81078b** 81G45 (81K05)
- Nienhuys, J. W. See Chailion, Jacques, **81f:35072**
- Niepel, L'adovit Decomposition of a complete hypergraph into factors with given diameters. (Slovak. Russian and English summaries) *Acta Fac. Rerum Natur. Univ. Comenian. Math.* 34 (1979), 21-28. (S. Znam) **81m:05085** 05C35 (05C65, 05C70)
- On decompositions of complete graphs into factors with given diameters and radii. (Russian summary) *Math. Slovaca* 30 (1980), no. 1, 3-11. (A. Rosa) **81h:05084** 05C35
- cazzani Nieri, Maria Grazia See Cazzani Nieri, Maria Grazia
- Niesl, G. (with Marinari, M. G.) On the locus where the Cohen-Macaulay type has a fixed bound. *J. London Math. Soc.* (2) 21 (1980), no. 3, 413-418. (Ulrich Orbanz) **81i:13067** 13H10 (14M05)
- Nienhuys, Wilhelm Numerical application of Euler's series transformation and its generalizations. *Numer. Math.* 34 (1980), no. 3, 271-283. (Y. L. Luke) **81g:65003** 65B99
- Nieto, Joseph I. On the peripheral spectrum. *Manuscripta Math.* 32 (1980), no. 1-2, 137-148. (J. J. Buoni) **81m:47010** 47A10 (47A30)
- Nieto, Michael Martin (with Simmons, L. M., Jr.) Analytic coherent states for generalized potentials. *Foundations of radiation theory and quantum electrodynamics*, pp. 203-218, *Plenum, New York*, 1980. (See **81i:81002**) 81C40 (81D99)
- Nieto-Vesperinas, M. (with Ross, G.; Fiddy, M. A.; Wheeler, M. W. L.) The phase problem in scattering phenomena: the zeros of entire functions and their significance. *Proc. Roy. Soc. London Ser. A* 360 (1978), no. 1700, 25-45. (Authors' summary) **81d:78028** 78A45
- Nienkerke, K. J. (with Dodd, L. R.) Adiabatic limit of the Faddeev equations. *Phys. Rev. C* (3) 21 (1980), no. 5, 1724-1732. (P. Achuthan) **81d:81088** 81F10
- Nieuwenhuis, J. W. Another application of Guignard's generalized Kuhn-Tucker conditions. *J. Optim. Theory Appl.* 30 (1980), no. 1, 117-125. (S. Stefan Tigan) **81g:90094** 90C48 (46G05, 90C30)
- van Nieuwenhuisen, P. (with Berends, F. A.; van Holten, J. W.; de Wit, B.) On field theory for massive and massless spin- $\frac{3}{2}$ particles. *Nuclear Phys. B* 154 (1979), no. 2, 261-282. (Ju. M. Širokov) **81d:81068** 81E99 (81G25)
- (with Ferrara, S.) Supergravity with and without superspace. *Ann. Physics* 127 (1980), no. 2, 274-288. (Authors' summary) **81g:83059** 83E99 (83C99)
- Unitarity of supergravity and Z_2 or $Z_3 \times Z_3$ or $Z_2 \times Z_3 \times Z_2$ gradings of gauge and ghost fields. *J. Math. Phys.* 21 (1980), no. 10, 2562-2566. (Mauro Francaviglia) **81j:83045** 83E99 (58A99)
- (with Sezgin, E.) Renormalizability properties of antisymmetric tensor fields coupled to gravity. *Phys. Rev. D* (3) 22 (1980), no. 2, 301-307. (Authors' summary) **81e:83053** 83E99
- See also Supergravity, **81j:83001**
- Nieva de del Pino, M. E. (with Kalla, Shyam Lal) Fractional integration operators that involve the H -function of two variables. (Spanish) *Acta Mexicana Cienc. Tecn.* 11/12 (1977/78), no. 31-34, 32-41. (N. Hayek Calil) **81h:44010** 44A20 (33A35)
- Niewiadomska, Magdalena On the problem of the sequential discrimination. *Demonstratio Math.* 12 (1979), no. 4, 1051-1057. (P. W. Jones) **81g:62141** 62L15 (62H30)
- Niewiarowski, Jerzy Density-preserving homeomorphisms. *Fund. Math.* 106 (1980), no. 2, 77-87. (A. M. Bruckner) **81j:26012** 26B10 (54C99)
- Nigam, A. K. (with Sinha, Kishore; Mathur, S. N.) Kronecker sum of incomplete block designs. *Utilitas Math.* 16 (1979), 157-164. (Elizabeth J. Billington) **81f:05029** 05B05 (05B20)
- Nigam, Lakshmi N. Magneto shear flow past a circular airfoil. *Bull. Calcutta Math. Soc.* 70 (1978), no. 6, 405-411. (Author's introduction) **81h:76062** 76W05
- Nigam, S. D. (with Jamal, N. G.; Kamala, V.; Prabhakara Rao, G. V.) Complementary variational principles for Poiseuille flow. *J. Math. Phys. Sci.* 13 (1979), no. 5, 469-478. (Peter Smith) **81f:76015** 76D05 (49H05)
- (with Gopalan, M. A.) Complementary principles for Poiseuille flow in a porous pipe. *J. Math. Phys. Sci.* 13 (1979), no. 6, 599-606. (H. S. P. Grisser) **81h:76022** 76D99 (49H05)
- Nigjan, S. A. The nonequivalence problem for schemata with memory. *Programirovanie* 1979, no. 5, 11-17, 79 (Russian; translated as *Programming and Comput. Software* 5 (1979), no. 5, 303-309 (1980). (Author's summary) **81e:68015** 68B10
- Nigmatullin, N. R. On the problem of reduction of ω -automata. (Russian) *Probabilistic methods and cybernetics*, No. XV (Russian), pp. 61-67, Kazan. Univ., Kazan, 1979. (Jürgen Dassow) **81i:68067** 68D40
- Nigmatullin, R. G. Matching maximality recognition in $O(m+n)$ -operations. (Russian. German and English summaries) *Rostock. Math. Kolloq.* No. 13 (1980), 49-64. (Author's summary) **81m:05111** 05C70 (90C09)
- Nijima, Koichi On the behavior of multiple solutions of some singular perturbation problem. *Funkcial. Ekvac.* 22 (1979), no. 3, 297-312. (R. K. Rathy) **81g:34073** 34E15
- Nishi, Kiyoshi (with Kobayashi, Tadashi) Recent progress on Nevanlinna theory. (Japanese) *Sūgaku* 30 (1978), no. 1, 12-22. (Hiroshi Haruki) **81j:30046** 30D35
- Nitsuma, Hiroshi (with Kimura, Tetsuzo) A note on the Noetherian integral domain with a p -basis. *TRU Math.* 15 (1979), no. 2, 1-4. (Stephen McAdam) **81e:13019** 13G05 (13B99)
- (with Kimura, Tetsuzo) Regular local ring of characteristic p and p -basis. *J. Math. Soc. Japan* 32 (1980), no. 2, 363-371. (Manfred Steurich) **81j:13022** 13H05
- Nitzi, Shyōnō On a representation of solutions of the Cauchy problem for a semilinear hyperbolic system (I). *Mem. Fac. Sci. Kōchi Univ. Ser. A Math.* 1 (1980), 69-80. (L. A. Ivanov) **81d:35055** 35L60
- Nijazov, R. G. (with Stecenko, V. Ja.) Positive invertibility and theorems localizing the spectrum of a linear operator. (Russian) *Differential and integral equations*, No. 1
- (Russian), pp. 3-8, Tadžik. Gos. Univ., Dushanbe, 1977. (From the introduction) **81j:47027** 47B55
- Estimate of the spectral radius of a linear positive operator and positive invertibility. (Russian) *Differential and integral equations*, No. 1 (Russian), pp. 89-94, Tadžik. Gos. Univ., Dushanbe, 1977. (From the introduction) **81j:47028** 47B55
- Nijkamp, Peter (with Spronk, Jaap) Interactive multiple goal programming: an evaluation and some results. *Multiple criteria decision making theory and application (Proc. Third Conf., Hagen/Königswinter, 1979)*, pp. 278-293, *Lecture Notes in Econom. and Math. Systems*, 177, Springer, Berlin, 1980. (Authors' summary) **81d:90098** 90C31 (90A05)
- (with Hartog, J. A.; Spronk, Jaap) Operational multiple goal models for large economic environmental models. *Optimization techniques (Proc. Ninth IFIP Conf., Warsaw, 1979)*, Part 2, pp. 502-512, *Lecture Notes in Control and Information Sci.*, 23, Springer, Berlin, 1980. (See **81j:49001b**) 90A30
- Nijssen, G. M. See Data base architecture, **81b:68005**
- Nikaido, Gyokai Remarks on the lower bound of a linear operator. *Proc. Japan Acad. Ser. A Math. Sci.* 56 (1980), no. 7, 321-323. (Lawrence Williams) **81m:47006** 47A05
- Niki, Hiroshi (with Sawami, Hideo; Ondoh, Tetsuya) Note on the nonstationary iterative method for the estimation of the optimum overrelaxation parameter. *J. Comput. Appl. Math.* 6 (1980), no. 2, 127-131. (Authors' summary) **81e:65016** 65F10 (65N20)
- Niki, Naoto Multifolding the normal distribution and mutual transformation between uniform and normal random variables. *Ann. Inst. Statist. Math.* 31 (1979), no. 1, 125-140. (James E. Gentle) **81f:62037a** 62E15 (65C10)
- Corrections to: "Multifolding the normal distribution and mutual transformation between uniform and normal random variables". *Ann. Inst. Statist. Math.* 31 (1979), no. 2, 349. (James E. Gentle) **81f:62037b** 62E15 (65C10)
- Machine generation of random numbers. (Japanese. English summary) *Proc. Int. Statist. Math.* 27 (1980), no. 1, 115-131. (Author's summary) **81e:65004** 65C10 (68J05)
- Nikiforov, A. F. (with Uvarov, V. B.) ★Специальные функции математической физики. (Russian) [Special functions of mathematical physics] "Nauka", Moscow, 1978. 319 pp. (A. G. Gibbs) **81b:33001** 33-02 (34E20, 41A60, 81C99)
- Nikiforov, L. V. Cumulative sums for detection of changes in random process characteristics. *Avtomat. i Telemekh.* 1979, no. 2, 48-58 (Russian; translated as *Automat. Remote Control* 40 (1979), no. 2, part 1, 192-200. (Author's summary) **81h:62105** 62M10 (93E03)
- Nikiforov, S. V. (with Hadžiivanov, Nikolai G.) Solution of a problem of P. Erdős about the maximum number of triangles with a common edge in a graph. (Russian) *C. R. Acad. Bulgare Sci.* 32 (1979), no. 10, 1315-1318. (Pavel Tomasta) **81f:05099** 05C35
- Nikiforov, V. M. (with Klimkin, V. M.) Regular nonadditive set functions. (Russian) *Kulbytov. Gos. Ped. Inst. Naučn. Trudy* 226 (1978), *Funkcional. Anal. i Differencial. Uravnenija*, 63-68. (Ivan Dobrakov) **81i:28003** 28A10 (28A12, 54H05)
- Some properties of regular nonadditive set functions. (Russian) *Functional analysis*, No. 12 (Russian), pp. 121-131, *Učjanosk. Gos. Ped. Inst., Učjanosk*, 1979. (V. N. Alekshuk) **81i:28011** 28C15
- Nikitin, E. M. A system of Markov functions. (Russian. English summary) *Vestnik Moskov. Univ. Ser. I Mat. Meh.* 1979, no. 4, 60-63, 103. (N. I. Skiba) **81i:30064** 30E05
- The Padé approximants. *Proceedings of the International Congress of Mathematicians (Helsinki, 1978)*, pp. 623-630, *Acad. Sci. Fennica, Helsinki*, 1980. (Claude Brezinski) **81d:30070** 30E10
- Nikitin, G. P. (with Morozov, E. M.) ★Метод конечных элементов в механике разрушения. (Russian) [The finite element method in fracture mechanics] "Nauka", Moscow, 1980. 255 pp. (Authors' summary) **81m:73005** 73-02 (65N30, 73E99)
- Nikishov, A. I. Problems of an intense external field in quantum electrodynamics. (Russian) *Trudy Fiz. Inst. Lebedev.* 1979, no. 111, 152-275, 279. (S. G. Mamaev) **81h:81203** 81L05 (35C20)
- Nikishov, V. I. Formation of internal waves in collapse of a homogeneous "spot" in a stratified fluid. (Russian) *Gidromekh. (Kiev)* No. 42 (1980), 11-15, 121. (Author's summary) **81e:76079** 76V05
- Nikitin, N. S. The equivalence problem in the class of GL(k)-grammars. (Russian) *Akad. Nauk Ukrain. SSR Inst. Kibernet. Preprint* No. 3 (1978), 24-32. (Boris E. Kat) **81e:68006** 68F10 (68C30)
- Nikitin, A. A. Heredity of radicals of rings. (Russian) *Algebra i Logika* 17 (1978), no. 3, 303-315, 358. (B. J. Gardner) **81e:17001** 17A65 (08B99)
- Lower radicals of some classes of rings. (Russian) *Algebra i Logika* 17 (1978), no. 5, 596-610, 623. (Harry F. Smith) **81e:17009** 17A65
- Nikitin, A. G. (with Fušić, V. I.) Reduction of the representations of the generalized Poincaré algebra by the Galilei algebra. *J. Phys. A* 13 (1980), no. 7, 2319-2330. (M. K. F. Wong) **81h:81035** 81C40 (22E70)
- (with Fušić, V. I.) Equations of motion for particles of arbitrary spin that are invariant with respect to the Galilei group. (Russian. English summary) *Teoret. Mat. Fiz.* 44 (1980), no. 1, 34-46. (Authors' summary) **81i:81050** 81D99
- (with Nakonečnii, V. V.) The invariance algebras of Dirac and Schrödinger equations. (Russian. English summary) *Ukrain. Fiz. Ž.* 25 (1980), no. 4, 618-621, 696. (J. S. Joel) **81e:81059** 81D25 (22E70, 35A30, 58G35)
- Nikitin, S. I. (with Ostrovskii, V. N.) The autoionization of high Rydberg atomic states with large orbital angular momentum. *J. Phys. B* 13 (1980), no. 10, 1961-1984. (Authors' summary) **81e:81153** 81G40
- Nikitjuk, Ž. M. (with Slon'ovskii, R. V.) Some applications of continued fractions to the solution of first-order differential equations. (Russian) *Vestnik L'ov. Politehn. Inst. No. 141 Differencial'nye Uravnenija i ih Prilozhen.* (1980), 69-71, 121. (Authors' summary) **81i:65060** 65L05
- Nikolauzko, V. M. Quadratic Lagrangians in quantum gravitation and the renormalization problem. (Russian) *Problemy Teor. Gravitacii i Element. Častic* No. 10 (1979), 66-73. (S. G. Mamaev) **81g:83032** 83C45 (53C21)
- Higgs mesons in the gauge gravitation. (Russian. English summary) *Teoret. Mat. Fiz.* 42 (1980), no. 2, 195-203. (P. K. Smrz) **81e:83042** 83C99 (81G15, 83F05)
- Nikolov, E. S. (with Samarskii, A. A.) Finite difference methods for solving elliptic equations in irregular regions. (Russian) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint* No. 63 (1979), 25 pp. (Włodzimierz Proskurowski) **81h:65100** 65N05

- (with Kaporin, I. E.) The method of fictitious unknowns for the solution of difference elliptic boundary value problems in irregular domains. (Russian) *Differentsial'nye Uravneniya* 16 (1980), no. 7, 1211-1225, 1349. (Włodzimierz Prokurovski) **81b:65108** 65N20
- Nikol'skii, I. G. Parallel translation and smoothness of the metric of spaces with bounded curvature. (Russian) *Dokl. Akad. Nauk SSSR* 250 (1980), no. 5, 1056-1058. (A. V. Pogorelov) **81d:53052** 53C70
- Nikol'skii, I. N. An approximate method for determining the length of an ellipse. (Russian) *Geometriya*, No. 2 (Russian), pp. 40-42, 157, *Rizsk. Politehn. Inst., Riga*, 1977. (R. G. Langebartel) **81i:51016** 51M25 (33A25, 65D20)
- Nikol'skii, J. Ja. (with Volkodavov, V. F.) Solution of boundary value problems for the Euler-Darboux equation in special classes. (Russian) *Proceedings of a Seminar on Differential Equations*, No. 3 (Russian), pp. 32-38, 144, *Kuibyshev. Gos. Univ., Kuibyshev*, 1977. (Todor G. Genčev) **81d:35067** 35Q05 (35L80, 35M05)
- Nikol'skii, Ju. A. (with Belonogov, V. D.; Terjaev, E. D.; Samrikov, B. M.) Estimation of aircraft parameters for design of adaptive digital control. *Identification and system parameter estimation (Proc. Fourth IFAC Symp., Tbilisi, 1976)*, Part 2, pp. 927-940, *North-Holland, Amsterdam*, 1978. (See **80d:93010b**) 93E10
- Nikol'skii, L. K. (with Boljanskii, V. G.) A computer experiment in calculation of light trajectories. (Russian) *Differentsial'nye Uravneniya* 16 (1980), no. 3, 548-550, 575-576. (K. Wódkiewicz) **81b:78001** 78A05 (93C15)
- Nikol'skii, M. L. Construction of the value of a sequential game. (Russian) *Probabilistic methods and cybernetics*, No. 14 (Russian), pp. 72-83, *Kazan. Gos. Univ., Kazan*, 1978. (T. Tobias) **81i:62148** 62L15
- Generalized sequential procedures. (Russian. Lithuanian and English summaries) *Litovsk. Mat. Sb.* 19 (1979), no. 3, 35-44, 202. (Author's summary) **81b:62097** 62L15
- Nikol'skii, N. Ja. (with Volkodavov, V. F.) Solution of the Neumann problem for the Euler-Darboux equation. (Russian) *Proceedings of a Seminar on Differential Equations*, No. 3 (Russian), pp. 28-32, 144, *Kuibyshev. Gos. Univ., Kuibyshev*, 1977. (Todor G. Genčev) **81d:35066** 35Q05 (35L80, 35M05)
- Nikol'skii, P. N. (with Bazarov, I. P.) Method of statistical operators in the theory of crystals. (Russian. English summary) *Teoret. Mat. Fiz.* 41 (1979), no. 3, 424-430. (Authors' summary) **81i:82031** 82A60
- One-particle density matrix of the crystalline state with account taken of correlations. (Russian) *Vestnik Moskov. Univ. Ser. III Fiz. Astronom.* 21 (1980), no. 3, 12-17, 93. (E. E. Tarceva) **81b:82049** 82A60 (82A15)
- Nikol'skii, V. B. (with Kazišov, A. V.) Correctness of boundary value problems for equations of gas dynamics with a nonmonotone state function. (Russian) *Čisl. Metody Meh. Splin. Sredy* 10 (1979), no. 2, *Mat. Modelirovanie*, 77-84. (V. Ju. Ljapidevskii) **81e:76056** 76N15 (35Q20)
- Nikol'skii, V. I. (with Bruk, V. M.) Estimation of the effectiveness of multicriterion systems. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* 1979, no. 4, 45-51, 218 (Russian); translated as *Engng. Cybernetics* 17 (1979), no. 4, 36-42 (1980). (Authors' summary) **81k:90007** 90A06
- Nikol'skii, Yu. A. See Nikol'skii, Ju. A.
- Nikol'skii, V. N. Some current problems of the mechanics of multiphase mixtures. (Russian) *Current problems in theoretical and applied mechanics (Proc. Fourth All-Union Congress Theoret. Appl. Mech., Kiev, 1976)* (Russian), pp. 288-306, 409-410, "*Naukova Dumka*", Kiev, 1978. (N. N. Janenko) **81j:76006** 76T05
- Volume averaging as a method of constructing mathematical models of media with internal structure. (Russian. Armenian and English summaries) *Izv. Akad. Nauk Armjan. SSR Ser. Meh. Sci.* 32 (1979), no. 4, 34-44, 74. (Vladimir Kerchman) **81k:73006** 73B99 (35R99)
- Thermodynamics of crack growth: fracture of elastic, almost-elastic, and viscous solids. *Izv. Akad. Nauk SSSR Meh. Teor. Tela* 14 (1979), no. 4, 95-106 (Russian); translated as *Mech. Solids* 14 (1979), no. 4, 81-91. (Author's summary) **81c:73051** 73M05
- See also Vortex motions in a fluid. Stability and separation of a boundary layer; free and quantum vortices. **81i:76018**
- Nikol'skii, V. I. See Nikol'skii, V. I.
- Nikol'skii, V. G. Parametric approximation of a function and monotone interpolation. (Russian) *The theory of the approximation of functions (Proc. Internat. Conf., Kabuga, 1975)* (Russian), pp. 272-275, "*Nauka*", Moscow, 1977. (V. G. Verdiev) **81g:41012** 41A10
- Nikol'skii, I. V. Stability of the transient motion of a class of nonholonomic systems. (Ukrainian. English and Russian summaries) *Viznik Kij. Univ. Ser. Mat. Meh.* No. 20 (1978), 149-155, 168. (D. P. Rašković) **81f:70021** 70K20 (34D05, 70F25)
- Nikol'skii, L. D. (with Molčanov, I. M.; Deineka, V. S.) Solution by the finite element method of the problem of the stress-deformed state of a cylindrical shell supported by stiffening ribs. (Russian) *Difference and variational-difference methods (Proc. Second Sem. Methods of Numer. Appl. Math., Novosibirsk, 1977)* (Russian), pp. 81-89, *Akad. Nauk SSSR Sibirsk. Otdel., Vyčisl. Centr., Novosibirsk*, 1977. (See **81b:65003a**) 65N30
- Nikol'skii, V. M. Synthesis of an asynchronous automaton from AND-NOT elements. (Russian) *Mathematical theory in computer design (Russian)*, pp. 67-71, *Inst. Kibernet., Akad. Nauk Ukrain. SSR, Kiev*, 1978. (Author's introduction) **81d:94039** 94C10
- Realization of automata by asynchronous logical circuits. *Kibernetika (Kiev)* 1979, no. 5, 1-21-27, 153 (Russian. English summary); translated as *Cybernetics* 15 (1979), no. 5, 627-634 (1980). (From the text) **81c:68059** 68D15 (94C15)
- (with Starostenko, V. I.) Mathematical methods in geophysics. (Ukrainian. Russian summary) *Narisi Ist. Prirod. i Tehn.* No. 25 (1979), 11-19, 114. (J. S. Joel) **81h:60003** 86A15 (01A65)
- Nikol'skii-Despotović, Danica The application of an approximation to a special operator. (Serbo-Croatian summary) *Univ. u Novom Sadu Zb. Rad. Prirod.-Mat. Fak.* 8 (1978), 1-7. (L. Berg) **81c:44005** 44A10
- (with Hadžić, Olga) Some fixed point theorems in random normed spaces. *An. Univ. Timișoara Ser. Științ. Mat.* 17 (1979), no. 1, 39-47. (Gheorghe Bocsan) **81m:47079** 47H10
- Nikolov, A. V. (with Drenska, S. B.; Ivanov, M. I.; Vaklev, J. S.) Field equation for arbitrary hadrons and parity operators. *C. R. Acad. Bulgare Sci.* 32 (1979), no. 8, 1057-1059. (L. Streit) **81a:81040** 81D25
- Nikolov, O. (with Manov, S. S.; Nedjalkov, I. P.) On an inverse problem of the relativistic dynamics of a material point in post-Newtonian approximation. (Bulgarian and Russian summaries) *Godišnik Visš. Učebn. Zased. Tehn. Fiz.* 14 (1977), no. 1, 69-78 (1979). (From the introduction) **81c:83010** 83C10
- Nikolova, Ju. A. (with Čimev, K. N.) On some classes of functions with given structural properties. (Bulgarian. Russian and French summaries) *Godišnik Visš. Učebn. Zased. Priroda Mat.* 13 (1977), no. 1, 127-136 (1978). (Authors' summary) **81a:25108** 05C99 (94C15)
- Nikolova, L. I. (with Krein, S. G.) Holomorphic functions in a family of Banach spaces, interpolation. (Russian) *Dokl. Akad. Nauk SSSR* 250 (1980), no. 3, 547-550. (V. I. Ovčinnikov) **81j:46112** 46M35 (30E05, 30G30)
- Nikolova, T. S. (with Bainov, D. D.) Theorems on the existence and uniqueness of the solution of certain systems of integro-differential equations of superneutral type. (Russian) *Izv. Vysš. Učebn. Zased. Matematika* 1978, no. 1 (188), 75-80. (A. Rodkina) (RZMat 1978:10 B455) **81i:45016** 45J05
- (with Bainov, D. D.) A boundary value problem for an infinite system of differential equations. (Russian) *Ann. Univ. Sci. Budapest. Eötvös Sect. Math.* 22/23 (1979/80), 41-47. (J. D. Kečkić) **81m:34093** 34K10
- (with Bainov, D. D.) A problem for extremal integro-differential equations with deviating argument of superneutral type. (Romanian. Romanian summary) *Bul. Inst. Politehn. București Ser. Electrotehn.* 41 (1979), no. 1, 17-22. (Nicolae Luca) **81c:45017** 45J05 (34K10)
- (with Bainov, D. D.) The periodic solutions of certain differential equations with deviating argument. (Russian) *Rev. Roumaine Sci. Tech. Sér. Méc. Appl.* 24 (1979), no. 5, 747-755. (Pavel Marușak) **81a:34064** 34K05
- (with Bainov, D. D.) Application of the method of two-sided approximations for finding periodic solutions of differential equations with deviating argument. (Russian) *Arch. Math. (Brno)* 16 (1980), no. 2, 105-113. (M. K. Grammatikopoulos) **81m:34101** 34K15 (34C25)
- (with Bainov, D. D.) Application of the method of two-sided approximations for finding periodic solutions of differential equations with deviating argument. (Russian) *Rev. Roumaine Sci. Tech. Sér. Méc. Appl.* 25 (1980), no. 2, 307-316. (R. R. Ahmerov) **81m:34094** 34K10 (34C25)
- Nikol'skaja, N. S. Approximation of functions of several variables of the classes SL^* , by Fourier sums. (Russian) *Sibirsk. Mat. Ž.* 19 (1978), no. 2, 360-369, 479. (O. D. Gabisonija) **81b:42072** 42B99 (41A65)
- Nikol'skii, E. V. Generalized, functionally invariant solutions of second-order two-dimensional equations and first-order systems. (Russian) *Dokl. Akad. Nauk SSSR* 250 (1980), no. 4, 812-815. (Megumi Saigo) **81b:35069** 35B99 (35D05)
- Nikol'skii, Ju. S. Inequalities between different seminorms of differentiable functions of several variables. (Russian) *Studies in the theory of differentiable functions of several variables and its applications, VII. Trudy Mat. Inst. Steklov.* 150 (1979), 239-264, 323. (J. Albrecht) **81j:46055** 46E35
- Nikol'skii, M. S. Some differential games with fixed time. (Russian) *Dokl. Akad. Nauk SSSR* 240 (1978), no. 2, 272-275. (From the text) **81i:90134** 90D25
- (with Berzan, S. P.) Optimality of pursuit time in linear differential games. (Russian) *Contemporary questions of applied mathematics and programming (Russian)*, pp. 9-16, 165, "*Štiinca*", Kishinev, 1979. (V. N. Burkov) **81b:90187** 90D26
- Nikol'skii, N. K. (with Gribov, M. B.) Invariant subspaces and rational approximation. (Russian. English summary) *Investigations on linear operators and the theory of functions, IX. Zap. Nauch. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 92 (1979), 103-114, 320. (J. Bulatović) **81f:47006** 47A15 (47A70)
- See also *Investigations on linear operators and the theory of functions*, **81a:30001**
- Nikol'skii, S. M. ★ Приближение функций многих переменных и теоремы вложения. (Russian) [Approximation of functions of several variables and imbedding theorems] Second edition, revised and supplemented. "*Nauka*", Moscow, 1977. 455 pp. (Editors) **81f:46046** 46E35 (41-02, 46-02)
- ★ Квадратурные формулы. (Russian) [Quadrature formulae] Third edition. With a supplement ("New results on extremal problems in the theory of quadratures") by N. P. Korneičuk. "*Nauka*", Moscow, 1979. 256 pp. (B. Bojanov) **81g:41034** 41A55 (65D32)
- See also *Theory of numbers, mathematical analysis and their applications*, **81a:00014**; *Boundary value problems of mathematical physics*, **81d:35001** and *Spectral theory of functions and operators*, **81j:00010**
- Nikol'skii, V. N. See Application of functional analysis in approximation theory, **81k:41001** and Application of functional analysis to approximation theory, **81m:46001**
- Nikula, G. Z. (with Pirumov, U. G.; Pletkina, L. V.; Rosljakov, G. S.) Three-dimensional flows of a gas in jets. (Russian) *Numerical methods in continuum mechanics. Vyčisl. Metody i Programirovanie* No. 30 (1979), 30-74. (From the text) **81a:76032** 76J99 (65N05, 76B10)
- Nikula, M. S. See *Studies in mathematical statistics*, **81j:62011**
- Nikula, V. L. (with Bel'jukov, B. A.) A two-parameter iteration process for the solution of nonlinear operator equations. (Russian) *Questions in applied mathematics (Russian)*, pp. 57-72, *Sibirsk. Energet. Inst., Akad. Nauk SSSR Sibirsk. Otdel., Irkutsk*, 1977. (H. Schwetlick) **81k:65063** 65J15 (47H17)
- Nikula, V. V. Quotient-groups of groups of automorphisms of hyperbolic forms of subgroups generated by 2-reflections. (Russian) *Dokl. Akad. Nauk SSSR* 240 (1979), no. 6, 1307-1309. (I. Dolgachev) **81d:10011** 10C02 (14J25, 51M20)
- Finite groups of automorphisms of Kählerian K3 surfaces. (Russian) *Trudy Moskov. Mat. Obšč.* 38 (1979), 75-137. (I. Dolgachev) **81c:32033** 32J15 (10C02, 10E45, 14J10, 14J25)
- Nilson, R. V. (with Hill, James M.) Mutually conjugate solutions of formally selfadjoint differential equations. *Proc. Roy. Soc. Edinburgh Sect. A* 83 (1979), no. 1-2, 93-101. (James S. Muldowney) **81a:34024** 34B25 (47E05)
- Nilson, R. H. Transient two-dimensional diffusion along a high-diffusivity lamina which bisects a half-space. *J. Engng. Math.* 14 (1980), no. 4, 263-282. (Author's summary) **81g:80006** 80A20 (76S05)
- Nilsson, Bengt Superspace action for a 6-dimensional nonextended supersymmetric Yang-Mills theory. *Nuclear Phys. B* 174 (1980), no. 2-3, 335-344. (Author's summary)

- 81i:81100** 81G25
(with Marnelius, Robert) Manifestly conformally covariant field equations and a geometrical understanding of mass. *Phys. Rev. D* (3) **22** (1980), no. 4, 830-838. (Authors' summary) **81i:81049** 81D25 (81E99)
- Nilsen, Jan S.** The emergence of a unified theory of weak and electromagnetic interactions. *Proceedings of the Symposium on the Foundations of Modern Physics (Loma-Koli, 1977)*, pp. 253-289, *Publ. Univ. Joensuu, Ser. B1*, 14, Univ. Joensuu, Joensuu, 1978. (John McEwan) **81a:81096** 81G15
- Nilsen, Nils J.** A production system for automatic deduction. *Machine intelligence, Vol. 9*, pp. 101-126, *Horwood, Chichester*, 1979. (Author's summary) **81g:68125** 68G15 (03B10)
- ★Principles of artificial intelligence. *Tioga Publishing Co., Palo Alto, Calif.*, 1980. xv + 476 pp. ISBN 0-935382-01-1 (Dusan Ondrus) **81j:68106** 68Gxx (03B35)
- Ninio, F.** (with Morgan, M. J.) A generalized Laplace formula. *Lett. Math. Phys.* **4** (1980), no. 3, 223-226. (R. Kotecky) **81i:82014** 82A15 (41A60)
- Ninomiya, Tomoko** (with Goto, Motonori; Kao, Shinji) Determination of the fittest number of truth-values and canonical forms of logical functions for a many-valued axiom set by a computer. *Proceedings of the Eighth International Symposium on Multiple-Valued Logic (Roosevelt, Ill., 1978)*, pp. 195-201, *IEEE, Long Beach, Calif.*, 1978. (Witold Lipicki) **81i:03018** 03B50 (94C99)
- Nir, Avinoam** On the slow viscous rolling of a sphere in contact with a permeable surface. *Mathematika* **27** (1980), no. 1, 104-112. (S. H. Lam) **81h:76019** 76D30
- Nirenberg, Louis** (with Brzis, Haim) Forced vibrations for a nonlinear wave equation. *Comm. Pure Appl. Math.* **31** (1978), no. 1, 1-30. (Mitsuhiko Nakao) **81i:35112** 35L70
- The use of topological, functional analytic, and variational methods in nonlinear problems. A survey on the theoretical and numerical trends in nonlinear analysis (Proc. Third Sem. Funct. Anal. Appl., Bari, 1978), II. *Confer. Sem. Mat. Univ. Bari* No. 163-168 (1979), 391-398 (1980). (Giovanni Vidossich) **81m:58026** 58E05 (47H99, 58C30)
- (with Webster, S. M.; Yang, Paul C.) Local boundary regularity of holomorphic mappings. *Comm. Pure Appl. Math.* **33** (1980), no. 3, 305-338. (Herbert Alexander) **81g:32020** 32H99
- (with Brzis, Haim; Coron, Jean-Michel) Free vibrations for a nonlinear wave equation and a theorem of P. Rabinowitz. *Comm. Pure Appl. Math.* **33** (1980), no. 5, 667-684. (R. Glassey) **81i:35013** 35B10 (35L60, 49A40, 58E05)
- Nirmal, Nallakshi** (with Krihivasan, Kamala) OL and TOL array languages. *J. Indian Inst. Sci.* **62** (1980), no. 5, 101-110. (Authors' summary) **81i:68103** 68F05
- Nisbet, R. M.** (with Gurney, W. S. C.) Age- and density-dependent population dynamics in static and variable environments. *Theoret. Population Biol.* **17** (1980), no. 3, 321-344. (S. Levin) **81j:92032** 92A15
- Nishi, Akihito** Generalized Hadamard's inequalities and their applications to statistics. *Bull. Math. Statist.* **18** (1978/79), no. 3-4, 45-49. (I. Olkin) **81a:15021** 15A45 (62H10)
- On the method of H. Chernoff in classificatory problem between two categories with specified 2nd moment ($k=0,1,2$). *Bull. Math. Statist.* **18** (1978/79), no. 3-4, 51-59. (Khurshed Alam) **81b:62077** 62H30 (62C20)
- Nishida, Goro** Works of D. Quillen. (Japanese) Special issue: International Congress of Mathematicians (Helsinki, 1978). *Sūgaku* **31** (1979), no. 1, 29-33. (Editors) **81m:01070** 01A70 (55-03)
- Nishida, Kazuo** (with Matsui, Kunihiko) Notes on the Riemann-Roch theorem on open Riemann surfaces. *J. Math. Kyoto Univ.* **20** (1980), no. 4, 735-748. (Tatsuo Fujiie) **81k:30066** 30F30
- Nishida, Kenji** (with Marubayashi, Hidetoshi) Overings of Krull orders. *Osaka J. Math.* **16** (1979), no. 3, 843-851. (William D. Blair) **81f:16006** 16A08 (16A18)
- Nishida, Shigeo** (with Miyagi, Mitsunobu) Transmission characteristics of dielectric tube leaky waveguide. *IEEE Trans. Microwave Theory Tech.* **28** (1980), no. 6, 536-541. (Authors' summary) **81g:78038** 78A50
- Nishida, Takaaki** (with Kawashima, Shuichi; Matsumura, Akitaka) On the fluid-dynamical approximation to the Boltzmann equation at the level of the Navier-Stokes equation. *Comm. Math. Phys.* **70** (1979), no. 2, 97-124. (M. Drăganu) **81h:76048** 76P05 (76D05, 82A05)
- (with Matsumura, Akitaka) The initial value problem for the equations of motion of viscous and heat-conductive gases. *J. Math. Kyoto Univ.* **20** (1980), no. 1, 67-104. (A. A. Arsen'ev) **81g:35108** 35Q20 (35K55, 76N15)
- Nishida, Toshio** (with Namekata, Tsuneyuki; Tabata, Yoshio) A sequential allocation problem with unknown probabilities of appearance. *Math. Japon.* **24** (1979/80), no. 4, 341-349. (Masafumi Sasaki) **81a:90076** 90B05 (90C50)
- (with Serikawa, Yuichi; Yoneyama, Kanji) n queues in tandem attended by a single server. *Rep. Statist. Appl. Res. Univ. Japan. Sci. Engrs.* **26** (1979), no. 1, 14-19. (Ralph L. Disney) **81k:60100** 60K25
- (with Takeda, Eiji) Multiple criteria decision problems with fuzzy domination structures. *Fuzzy Sets and Systems* **3** (1980), no. 2, 123-136. (Authors' summary) **81a:90024** 90A06
- (with Ichimori, Tetsuo; Ishii, Hiroaki) Flow in a network with a check node. (Japanese summary) *J. Oper. Res. Soc. Japan* **23** (1980), no. 2, 111-117. (Authors' summary) **81e:90041** 90B10
- (with Ichimori, Tetsuo; Ishii, Hiroaki) Finding the weighted minimax flow in a polynomial time. (Japanese summary) *J. Oper. Res. Soc. Japan* **23** (1980), no. 3, 268-272. (Authors' summary) **81j:90049** 90B10 (68C25)
- (with Yoneyama, Kanji; Yuasa, T.) A queueing system with c random additional service channels. *Z. Angew. Math. Mech.* **60** (1980), no. 1, 57-59. (S. Christian Albricht) **81m:60174** 60K25 (60J27)
- Nishigori, T.** Microscopic theory of memory functions. *Phys. A* **100** (1980), no. 2, 266-276. (G. A. Skorobogatov) **81g:82056** 82A50
- Nishiguchi, Isoharu** (with Okabe, Masayuki; Yamada, Yoshiaki) Basis transformation of trial function space in Lagrange interpolation. *Comput. Methods Appl. Mech. Engrg.* **23** (1980), no. 1, 85-99. (Authors' summary) **81e:65006** 65D05
- (with Okabe, Masayuki; Yamada, Yoshiaki) Reconsideration of rectangular Lagrange families with hierarchy-ranking bases. *Comput. Methods Appl. Mech. Engrg.* **23** (1980), no. 3, 369-390. (Authors' summary) **81g:65159** 65N30
- Nishihara, Katsumoto** (with Makar, Malak; Uji, Masataka; Mima, Kunioki) Parametric instabilities in two-electron temperature plasma by laser. *Tech. Rep. Osaka Univ.* **30** (1980), no. 1517-1550, 129-136. (Authors' summary) **81f:76054** 76X05
- Nishihara, Kenji** (with Kakita, Takao; Tamamura, Chiharu) Time decay and scattering for some nonlinear wave equation. *Publ. Res. Inst. Math. Sci.* **15** (1979), no. 3, 749-766. (R. Glassey) **81f:35079** 35L70 (35L15, 35P30)
- Nishihara, Masaru** On injective analytic mappings of infinite-dimensional complex manifolds. *Mem. Fac. Sci. Kyushu Univ. Ser. A* **33** (1979), no. 1, 179-200. (G. Comte) **81e:58010** 58B12 (32F30, 46G20)
- Nishihara, Yoshiyuki** (with Kaneko, Asao; Tsuruoka, Kunitoshi; Hattori, Mitsuhiro) Logical clock synchronization method for duplicated database control. *NEC Res. Develop. No. 58* (1980), 89-98. (Authors' summary) **81g:68029** 68B15 (90B35)
- Nishijima, Kazuhiko** (with Okawa, Masanori; Tesima, Kiusau) Anomalous dimensions of composite particles. *Progr. Theoret. Phys.* **63** (1980), no. 3, 999-1015. (From the summary) **81i:81096** 81G05
- Nishikawa, Kiyoshi** (with Deguchi, Kisaburo) Extension of the complex-coordinate method to molecular electronic resonances in the adiabatic approximation. I, II. *J. Phys. B* **13** (1980), no. 17, L511-L514, L515-L518. (Authors' summary) **81h:81168** 81G55
- Nishikawa, Mitsuru** Exponential image in the Lorentz group $O(2,1)$. *Bull. Fukuoka Univ. Ed. III* **29** (1979), 9-19. (J.-P. Antoine) **81e:22013** 22E43 (81C40)
- Nishikawa, Seiki** (with Morita, Shigeyuki; Sato, Hajime) On a special kind of Γ -foliation. (Japanese) *Sūgaku* **31** (1979), no. 2, 110-125. (Hideki Omori) **81e:57029** 57R30 (57R20, 58H05, 58H10)
- On the Neumann problem for the nonlinear parabolic equation of Eells-Sampson and harmonic mappings. *Math. Ann.* **249** (1980), no. 2, 177-190. (John C. Wood) **81k:58031** 58E20 (35K55, 58G11)
- Nishimori, Toshiyuki** SRH-decompositions of codimension-one foliations and the Godbillon-Vey classes. *Tōhoku Math. J. (2)* **32** (1980), no. 1, 9-34. (John Cantwell) **81e:57030** 57R30
- Nishimura, Hirokazu** Sequential method in propositional dynamic logic. *Acta Inform.* **12** (1979), no. 4, 377-400. (R. E. Ladner) **81i:03019** 03B60 (68C01)
- Is the semantics of branching structures adequate for nonmetric Ockhamist tense logics? *J. Philos. Logic* **8** (1979), no. 4, 477-478. (Steve Kuhn) **81i:03023** 03B45
- On the completeness of chronological logics with modal operators. *Z. Math. Logik Grundlag. Math.* **25** (1979), no. 6, 487-496. (R. Parikh) **81i:03022** 03B45
- Sequential method in quantum logic. *J. Symbolic Logic* **45** (1980), no. 2, 339-352. (M. J. Męczyński) **81h:03122** 03G12 (81B10)
- A preservation theorem for tense logic. *Z. Math. Logik Grundlag. Math.* **26** (1980), no. 4, 331-335. (John R. Chidgey) **81i:03024** 03B45 (03C40)
- Saturated and special models in modal logic theory with applications to the modal and de re hierarchies. *Z. Math. Logik Grundlag. Math.* **26** (1980), no. 6, 481-490. (N. C. A. da Costa) **81k:03023** 03B45 (03C99)
- Nishimura, Kazuo** On the uniqueness theorems by Arrow and Hahn. *J. Econ. Theory* **21** (1979), no. 2, 348-352. (Hildegard Dierker) **81d:90027** 90A14
- Nishimura, Kiyohiko Gijichi** A note on the global stability in dynamical economic systems. *Econom. Lett.* **4** (1979/80), no. 2, 95-98. (P. Kischka) **81f:90033** 90A16 (58F10)
- Nishimura, T.** (with Kanoh, Hideaki) Periodic oscillations of matrix Riccati equations in time-invariant systems. *IEEE Trans. Automat. Control* **25** (1980), no. 4, 749-755. (Authors' summary) **81i:93121** 93E20 (93C45)
- Nishimura, Yasuichiro** Immersion analytique d'une famille de surfaces de Riemann ouvertes. *Publ. Res. Inst. Math. Sci.* **14** (1978), no. 3, 643-654. (R. Michael Range) **81a:32007** 32C10
- Problème d'extension dans la théorie des fonctions entières d'ordre fini. *J. Math. Kyoto Univ.* **20** (1980), no. 4, 635-650. (Pierre Lelong) **81m:32002** 32A15
- Nishimura, Yoshiyuki** (with Bailey, J. E.) On the dynamics of Cooper-Helmstetter-Donachie prokaryote populations. *Math. Biosci.* **51** (1980), no. 3-4, 305-328. (Authors' summary) **81i:92020** 92A15
- Nishino, Toshio** Prolongements analytiques au sens de Riemann. (English summary) *Bull. Soc. Math. France* **107** (1979), no. 1, 97-112. (L. Keen) **81a:30025** 30F25
- Nishino, Yoshio** On differential operators associated with quadratic first integrals of simple dynamical systems. *Tensor (N.S.)* **33** (1979), no. 1, 49-54. (Takayuki Nōno) **81g:58015** 58F05 (58G15, 70F99, 81C99)
- Nishio, K.** Characterization of Lebesgue-type decomposition of positive operators. *Acta Sci. Math. (Szeged)* **42** (1980), no. 1-2, 143-152. (J. P. Williams) **81f:47019** 47A62
- Nishioka, Keiji** Algebraic differential equations of Clairaut type from the differential-algebraic standpoint. *J. Math. Soc. Japan* **31** (1979), no. 3, 553-559. (J. L. Johnson) **81h:12028** 12H05 (58A15)
- Nishioka, T.** (with Atluri, S. N.) Numerical modeling of dynamic crack propagation in finite bodies, by moving singular elements. I. Formulation. *Trans. ASME Ser. E J. Appl. Mech.* **47** (1980), no. 3, 570-576. (Authors' summary) **81g:73109a** 73M05 (65N30)
- (with Atluri, S. N.) Numerical modeling of dynamic crack propagation in finite bodies, by moving singular elements. II. Results. *Trans. ASME Ser. E J. Appl. Mech.* **47** (1980), no. 3, 577-582. (Authors' summary) **81g:73109b** 73M05 (65N30)
- Nishisato, Shizuhiko** (with McDonald, Roderick P.; Torii, Yukihiko) Some results on proper eigenvalues and eigenvectors with applications to scaling. *Psychometrika* **44** (1979), no. 2, 211-227. (C. Hayashi) **81b:62078** 62H99 (62-07)
- Nishitani, Tatsuo** On the \mathcal{E} -well posedness for the Goursat problem with constant coefficients. *J. Math. Kyoto Univ.* **20** (1980), no. 1, 179-190. (J. Vaillant) **81k:35029** 35E15 (35L30)
- Nishitani, Togo** Some examples relating surface area and the area integral. *Real Anal. Exchange* **4** (1978/79), no. 1, 58-65. (U. D'Ambrosio) **81f:28008** 28A75 (49F25)
- (with Grinblat, L. S.) Partition of topological spaces into zero-dimensional subsets. *Rocky Mountain J. Math.* **10** (1980), no. 4, 671-678. (Stojan Nedev) **81m:54065** 54F45 (54A25)
- Nishitani, Yasunasa** (with Mimura, Masayasu; Yamaguti, Masaya) Some diffusive prey and predator systems and their bifurcation problems. *Bifurcation theory and applications in scientific disciplines (Papers, Conf., New York, 1977)*, pp. 490-510, *Ann. New York Acad. Sci.*, 316, New York Acad. Sci., New York, 1979. (E. D. Conway) **81a:35050** 35K55 (35B32, 92A15)

- Nishiwa, Kimimasa Constant coefficient differential operators with slowly spreading solutions. *Math. Ann.* 245 (1979), no. 2, 101-115. (D. K. Cohoon) **81j:35027** 35E05 (35K22)
- Explicit formulae for solutions of Schrödinger equations with quadratic Hamiltonians. *Proc. Japan Acad. Ser. A Math. Sci.* 56 (1980), no. 8, 362-366. (Edmond Combet) **81m:35026** 35E05 (58G15, 81C05)
- Nishiyama, Noriyuki (with Miyazaki, Shigeki) Analysis for minimizing weighted mean flow-time in flow-shop scheduling. (Japanese summary) *J. Oper. Res. Soc. Japan* 23 (1980), no. 2, 118-133. (Authors' summary) **81e:90051** 90B35
- Nishiyama, Selya (with Iwasaki, Masaharu; Fukutome, Hideo; Yamamura, Masatoshi) A variational foundation of the improper Hartree-Bogoliubov formalism. *Progr. Theoret. Phys.* 64 (1980), no. 2, 558-567. (Authors' summary) **81j:81069** 81G35
- Nishizawa, Kiyoko On closed subalgebras between A and H^∞ . *Tokyo J. Math.* 3 (1980), no. 1, 137-140. (Balmohan V. Limaye) **81m:46076** 46J15 (30D55)
- Nishizeki, Takao Lower bounds on the cardinality of the maximum matchings of graphs. *Proceedings of the Ninth Southeastern Conference on Combinatorics, Graph Theory, and Computing (Florida Atlantic Univ., Boca Raton, Fla., 1978)*, pp. 527-547. *Congress. Numer., XXI, Utilitas Math., Winnipeg, Man., 1978*. (Douglas D. Grant) **81d:05041** 05C35
- (with Baybars, Ilker) Lower bounds on the cardinality of the maximum matchings of planar graphs. *Discrete Math.* 28 (1979), no. 3, 255-267. (Brian Alspach) **81a:05079** 05C35 (05C10)
- A 1-tough non-Hamiltonian maximal planar graph. *Discrete Math.* 30 (1980), no. 3, 305-307. (Vaclav Chvátal) **81i:05099** 05C45 (05C10)
- (with Asano, Takao; Watanabe, Takahiro) An upper bound on the length of a Hamiltonian walk of a maximal planar graph. *J. Graph Theory* 4 (1980), no. 3, 315-336. (Jean-Claude Bermond) **81h:05090** 05C45
- (with Takamizawa, K.; Saito, Nobuyuki) An algorithm for finding a short closed spanning walk in a graph. *Networks* 10 (1980), no. 3, 249-263. (Claude Benzenen) **81k:05074** 05C45 (68C25)
- Nisimov, E. R. On the class of two-dimensional scalar supersymmetric models with higher quantum conservation laws. (Russian summary) *Bulgar. J. Phys.* 6 (1979), no. 6, 604-609. (From the text) **81a:83041** 83E99 (81E99, 83C45)
- (with Pačeva, S. I.) Generalized nonlinear sigma models and universality in three dimensions. I. "Soft mass" renormalization of the $1/N$ expansion. (Russian summary) *Bulgar. J. Phys.* 6 (1979), no. 6, 610-622. (Authors' summary) **81a:81064** 81E15
- (with Pačeva, S. I.) Phase transition and particle spectrum in three-dimensional generalized nonlinear sigma models and Higgs models from $1/N$ expansion. *C. R. Acad. Bulgare Sci.* 32 (1979), no. 11, 1475-1478. (Don Weingarten) **81h:81158** 81G25 (82A25)
- (with Pačeva, S. I.) Generalized nonlinear sigma models and universality in three dimensions. II. Scaling limit and critical behaviour. (Russian summary) *Bulgar. J. Phys.* 7 (1980), no. 1, 16-27. (Authors' summary) **81m:81049** 81E99 (81G20)
- Nisio, Makiko On nonlinear semigroups for Markov processes associated with optimal stopping. *Appl. Math. Optim.* 4 (1977/78), no. 2, 143-169. (Robert Kertz) **81a:60057** 60G40 (47D05, 60J35, 93E20)
- Nisnevich, E. A. A properness theorem for Galois cohomology over function fields. (Russian. English summary) *Dokl. Akad. Nauk BSSR* 23 (1979), no. 12, 1065-1068, 1148. (J. Browkin) **81k:14037** 14L15 (12A60, 20G10)
- Nisnevich, E. R. See Nisimov, E. R.
- Nistal, J. L. See Freire Nistal, J. L.
- Nistri, P. (with Conti, G.; Massabò, I.) Set-valued perturbations of differential equations at resonance. *Nonlinear Anal.* 4 (1980), no. 6, 1031-1041. (V. Lakshmikantham) **81m:34079** 34G20 (34A60)
- Nitk, Ana The behavior of ultraproducts of modules under passage to fractions. (Romanian. English summary) *Bul. Inst. Politehn. București Ser. Chim.-Metal.* 41 (1979), no. 1, 3-5. (Author's summary) **81i:16024** 16A64 (03C60)
- On submodules of a product of modules. (Romanian. French summary) *Stud. Cerc. Mat.* 32 (1980), no. 2, 209-211. (I. Gy. Maurer) **81k:16028** 16A53
- Nitk, Zbigniew Explosions in completely unstable flows. I. Preventing explosions. *Trans. Amer. Math. Soc.* 245 (1978/79), 43-61. (Michał Krych) **81e:58030** 58F10
- Explosions in completely unstable flows. II. Some examples. *Trans. Amer. Math. Soc.* 245 (1978/79), 63-88. (Michał Krych) **81e:58031** 58F10
- Periodic and limit orbits and the depth of the center for piecewise monotone interval maps. *Proc. Amer. Math. Soc.* 80 (1980), no. 3, 511-514. (Frederick R. Marotto) **81j:58068** 58F22 (54H20)
- See also Global theory of dynamical systems, **81j:58002**
- Nitescu, Cătălina On conformal curvature tensor relative to the metric semisymmetric connection. (Romanian summary) *Bul. Inst. Politehn. Iași Sect. I* 25(29) (1979), no. 1-2, 61-64. (A. Sharfuddin) **81k:53013** 53B15
- Nitka, Krystyna Identification of distributed parameter systems by orthogonal series method. (Russian summary) *Systems Sci.* 5 (1979), no. 2, 153-159 (1980). (Author's summary) **81g:93023** 93B30
- Nitche, Joachim A. L_∞ -convergence of finite element approximation. *Journées "Éléments Finites" (Rennes, 1975)*, Exp. No. 6, 18 pp., Univ. Rennes, Rennes, 1975. (Rolf Rannacher) **81e:65058** 65N30
- On L_∞ -convergence of finite element approximations to the solution of a nonlinear boundary value problem. *Topics in numerical analysis, III (Proc. Roy. Irish Acad. Conf., Trinity Coll., Dublin, 1976)*, pp. 317-325. Academic Press, London, 1977. (From the introduction) **81i:65094** 65N30
- Finite element approximations to the one-dimensional Stefan problem. *Recent advances in numerical analysis (Proc. Sympos., Math. Res. Center, Univ. Wisconsin, Madison, Wis., 1978)*, pp. 119-142. *Publ. Math. Res. Center Univ. Wisconsin*, 41, Academic Press, New York, 1978. (From the introduction) **81h:65114** 65N30
- L_∞ -error analysis for finite elements. *Mathematics of finite elements and applications, III (Proc. Third MAFELAP Conf., Brunel Univ., Uxbridge, 1978)*, pp. 173-186. Academic Press, London, 1979. (V. Thomée) **81f:65084** 65N30
- Finite element approximations for free boundary problems. *Computational methods in nonlinear mechanics (Proc. Second Internat. Conf., Univ. Texas, Austin, Tex., 1979)*, pp. 341-360. North-Holland, Amsterdam, 1980. (Michael J. O'Carroll) **81i:65095** 65N30 (35R35, 92A09)
- Approximation des eindimensionalen Stefan-Problems durch finite Elemente. *Proceedings of the International Congress of Mathematicians (Helsinki, 1978)*, pp. 923-928. *Acad. Sci. Fennica, Helsinki, 1980*. (W. C. Rheinboldt) **81f:65095** 65N30
- Nitsure, Nitin A generalization of the Newton-Cartan theory of gravitation. *Indian J. Pure Appl. Math.* 11 (1980), no. 6, 805-818. (Carl Brans) **81i:83046** 83D05 (83E15)
- Nitti, L. (with Pellicoro, M.; Villani, M.) Lower bounds for quantum energy levels through statistical mechanics methods. *J. Math. Phys.* 21 (1980), no. 4, 834-839. (Authors' summary) **81d:81025** 81C12 (41A21, 49G10, 81C30)
- Nitzan, Abraham (with Ortoleva, Peter) Scaling and Ginzburg criteria for critical bifurcations in nonequilibrium reacting systems. *Phys. Rev. A* (3) 21 (1980), no. 5, 1735-1755. (Authors' summary) **81a:80099** 80A30 (82A25)
- (with Salamon, Peter; Andersen, Bjarne; Berry, R. Stephen) Minimum entropy production and the optimization of heat engines. *Phys. Rev. A* (3) 21 (1980), no. 6, 2115-2129. (Authors' summary) **81i:80092** 80A10
- Nitzan, Shmuel (with Farkas, Daniel R.) The Borda rule and Pareto stability. A comment on: "Social choice theory: a re-examination" [*Econometrica* 45 (1977), no. 1, 53-89; MR 56 #14836] by A. Sen. *Econometrica* 47 (1979), no. 5, 1305-1306. (Maurice Salles) **81d:90011** 90A08 (92A20)
- Nitschke, Heinz-Michael (with Harborth, Heiko) Solution of Irving's Ramsey problem. *Glasgow Math. J.* 21 (1980), no. 2, 187-197. (J. Bosák) **81i:05162** 05C55
- Niu, Shun Chen (with Chiang, Dalen T.) On the distribution of time to first system failure. *J. Appl. Probab.* 17 (1980), no. 2, 481-489. (Peter Franken) **81g:60067** 60K10 (62N05, 90B25)
- Bounds for the expected delays in some tandem queues. *J. Appl. Probab.* 17 (1980), no. 3, 831-838. (Benjamin Melamed) **81i:60093** 60K25
- A single server queueing loss model with heterogeneous arrival and service. *Oper. Res.* 28 (1980), no. 3, part 1, 584-593. (S. Christian Albright) **81i:60168** 60K25 (60J27)
- Nivat, Maurice (with Cousineau, Guy) On rational expressions representing infinite rational trees: application to the structure of flow charts. *Mathematical foundations of computer science, 1979 (Proc. Eighth Sympos., Olomouc, 1979)*, pp. 567-580. *Lecture Notes in Comput. Sci.*, 74, Springer, Berlin, 1979. (From the text) **81g:68011** 68B05 (68E10)
- (with Autebert, Jean-Michel; Beauquier, Joffroy; Boasson, Luc) Quelques problèmes ouverts en théorie des langages algébriques. (English summary) *RAIRO Inform. Théor.* 13 (1979), no. 4, 363-378. (Editors) **81i:68078** 68F05
- (with Mauer, H. A.) Rational bijection of rational sets. *Acta Inform.* 13 (1980), no. 4, 365-378. (S. Ginsburg) **81h:68072** 68F05
- (with Boasson, Luc) Adherences of languages. *J. Comput. System Sci.* 20 (1980), no. 3, 285-309. (Authors' summary) **81i:68054** 68F05
- (with Arnold, André) Metric interpretations of infinite trees and semantics of nondeterministic recursive programs. *Theoret. Comput. Sci.* 11 (1980), no. 2, 181-205. (Authors' summary) **81g:68016** 68B10 (68E10)
- Niven, Ivan (with Zuckerman, Herbert S.) An introduction to the theory of numbers. Fourth edition. John Wiley & Sons, New York-Chichester-Brisbane, 1980. xii+335 pp. ISBN 0-471-02851-7 (J. B. Roberts) **81j:10001** 10-01
- Nixon, David Observations on the strained coordinate method for transonic flows. *AIAA J.* 18 (1980), no. 3, 341-342. (Author's introduction) **81h:76039** 76H05 (65D99)
- Nisette, N. Une classe d'espaces affines généralisés. *Abh. Math. Sem. Univ. Hamburg* 49 (1979), 18-36. (G. Pickert) **81e:51006** 51A15
- Niznik, Carol A. A congestion-capacity product for computer communication networks. *J. Combin. Inform. System Sci.* 4 (1979), no. 3, 205-210. (Author's summary) **81g:94077** 94C99 (68A05)
- A numerical analysis of two-point boundary value problem algorithms. *J. Comput. Appl. Math.* 6 (1980), no. 3, 201-211. (Auréli Galántai) **81m:65136** 65L10
- Niznik, L. P. Inverse scattering problems for hyperbolic equations. (Russian) *Proceedings of an All-Union Conference on Partial Differential Equations (Moscow State Univ., Moscow, 1976)* (Russian), pp. 177-179. *Moskov. Gos. univ. Mek.-Mat. Fakul'tet, Moscow, 1978*. (See **80f:35002**) 35P25 (35L99, 35R30)
- (with Tarasov, V. G.) Inverse scattering problem for a transport equation that is discrete in directions. (Russian) *Ukrain. Mat. Z.* 32 (1980), no. 5, 678-683. (D. ter Haar) **81k:35162** 35R30 (35Q20, 82A70)
- Nitnikov, A. I. A continuous addition theorem for Meijer G-functions. (Russian) *Functional analysis, No. 13 (Russian)*, pp. 102-106. *Uf'yanovsk. Gos. Ped. Inst., Uf'yanovsk, 1979*. (J. Ławrynowicz) **81j:33003** 33A35 (22E43)
- (with Vilenkin, N. Ja.) Integral relations for Meijer G-functions and representations of the n -dimensional Lorentz group. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1979, no. 5, 13-19. (Tom H. Koornwinder) **81h:22012** 22E43 (33A75)
- Njaga, V. I. Perturbation of singular operators with piecewise-continuous coefficients. (Russian) *Studies in functional analysis and differential equations (Russian)*, pp. 64-68, 79, "Shtiinca", Kishinev, 1978. (V. B. Smirnova) **81h:45004** 45E05 (47G05)
- Dependence of the Noether property of singular operators with shift on the presence of angular points on the contour. (Russian) *Contemporary questions of applied mathematics and programming (Russian)*, pp. 99-102, 169, "Shtiinca", Kishinev, 1979. (N. K. Karapetjan) **81g:47014** 47A53
- Singular integral equations in weighted spaces. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1979, no. 2, 73-75. (V. S. Pliidi) **81a:45003** 45E05 (47A53)
- Njang, S. (with Mangeron, Dumitru Ion; Sestopal, A. F.; D'Ambrosio, Ubristan) Contribution to the problem of the asymptotic behavior of the number of eigenvalues. I. The estimation of certain expansions in Bessel functions. (Russian. Romanian summary) *Bul. Inst. Politehn. Iași Sect. I* 25(29) (1979), no. 3-4, 9-16. (P. Günther) **81j:10078** 10J25 (35P20, 58G25)
- N'jama, C. See Newman, Charles M.
- hoghe-Nlend, Henri See Hoghe-Nlend, Henri
- Noailles, Joseph Contrôle distribué et impulsif dans les équations d'évolution: formulation d'un problème et existence de solutions. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 6, A283-A284. (Author's summary) **81e:49006** 49A27

- Contrôle distribué et impulsif dans les équations d'évolution. Approximation et applications. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 8, A375-A378. (Author's summary) **81c:49031** 49D39 (49A27)
- Noakes, J. L. Spherical fibrations. *Bull. Amer. Math. Soc. (N.S.)* 3 (1980), no. 2, 853-856. (R. K. Lashof) **81f:59019** 55R25 (55R05)
- Flows on fibre bundles. *Trans. Amer. Math. Soc.* 259 (1980), no. 2, 629-635. (Michael J. Field) **81f:58032** 58F25 (55R10)
- Nöbauer, W. (with Dörninger, Dietmar) Local polynomial functions on lattices and universal algebras. *Colloq. Math.* 42 (1979), 83-93. (H. Lausch) **81f:06012** 06B99 (08A40, 12C99)
- Nobert, Yves (with Laporte, Gilbert) A cutting planes algorithm for the m -salesmen problem. *J. Oper. Res. Soc.* 31 (1980), no. 11, 1017-1023. (Authors' summary) **81j:90123** 90C35 (90C10)
- Nobile, Augusto On saturations of embedded analytic rings. *Illinois J. Math.* 24 (1980), no. 3, 483-525. (José L. Vicente) **81k:14005** 14B05 (32B30)
- Nobili, L. (with de Felice, Fernando; Calvani, M.) Charged singularities: repulsive effects. *J. Phys. A* 13 (1980), no. 7, 2401-2409. (Authors' summary) **81e:83040** 83C99 (83C50)
- (with Calvani, M.; de Felice, Fernando) Photon trajectories in the Kerr-Newman metric. *J. Phys. A* 13 (1980), no. 10, 3213-3219. (Authors' summary) **81h:83006** 83C10
- (with de Felice, Fernando; Calvani, M.) Charged singularities: the causality violation. *J. Phys. A* 13 (1980), no. 12, 3635-3641. (Authors' summary) **81j:83012** 83C20
- Noble, B. (with Hussain, M. A.; Pu, S. L.) Stress singularity at the vertex of a flat wedge-shaped crack by variational method. *Transactions of the Twenty-Fifth Conference of Army Mathematicians (Johns Hopkins Univ., Baltimore, Md., 1979), pp. 483-502, ARO Rep. 80, 1, U. S. Army Res. Office, Research Triangle Park, N.C., 1980. (Authors' summary) 81a:73043* 73M05 (49G05)
- Nocedal, Jorge Updating quasi-Newton matrices with limited storage. *Math. Comp.* 35 (1980), no. 151, 773-782. (Auréli Galántai) **81g:65077** 65K05 (90C30)
- Nocilla, Silvio Systems with clearances with two degrees of freedom: study of the steady forced vibrations. (Italian. English summary) *Mem. Accad. Sci. Torino Cl. Sci. Fis. Mat. Natur.* (5) 1 (1977), no. 1-4, 1-19. (Piero Bassanini) **81c:70019** 70K99
- Concerning a nonlinear integral equation with a singular kernel and mean value. (Italian. English summary) *Riv. Mat. Univ. Parma* (4) 5 (1979), part 2, 647-661 (1980). (C. Avramescu) **81m:45012** 45G05
- Noda, Kazuo A correction and a supplement to: "On a Bayes decision procedure for a selection of a subpopulation" [Proc. Inst. Statist. Math. 26 (1979), no. 2, 125-132; MR 80h:62018]. (Japanese. English summary) *Proc. Inst. Statist. Math.* 27 (1980), no. 1, 133-134. (Author's summary) **81f:62049** 62F07
- Noda, Ryuzaburo On orthogonal arrays of strength 4 achieving Rao's bound. *J. London Math. Soc.* (2) 19 (1979), no. 3, 385-390. (N. Ito) **81a:05019** 05B15
- Noether, Emmy See Cheng, K. N., **81k:01030**
- Noether, Gottfried E. A brief survey of nonparametric statistics. *Studies in statistics*, pp. 39-65, *MAA Studies in Math.*, 19, Math. Assoc. America, Washington, D.C., 1978. (See **80f:62002**) 62Gxx
- Noetzel, Andrew S. A generalized queueing discipline for product form network solutions. *J. Assoc. Comput. Mach.* 26 (1979), no. 4, 779-793. (Adam Wolisz) **81a:60109** 60K25 (68C15, 90B22)
- Nof, Doron The influence of varying bathymetry on inertial boundary currents. (Russian summary) *Teluz* 32 (1980), no. 3, 284-295. (From the summary) **81e:86003** 86A05
- Nogami, Yoshiko The set-compound one-stage estimation in the nonregular family of distributions over the interval $(0, \theta)$. *Ann. Inst. Statist. Math.* 30 (1978), no. 1, 35-43. (R. S. Singh) **81g:62011** 62C10 (62F15)
- Nogi, Shigeji (with Fukui, Kiyoshi) Power combining ladder network with many active devices. *IEEE Trans. Microwave Theory Tech.* 28 (1980), no. 10, 1059-1067. (Authors' summary) **81i:94022** 94C05
- Nogin, M. V. (with Kapšiv, O. O.) The second fundamental problem for an elastic space with two cuts on the spherical surface. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* No. 3 (1980), 10-14, 89. (L. Jentsch) **81g:73017** 73C99 (45B05)
- Noguchi, Akira (with Sakai, Kiyoshi) Dark soliton in long and short wave resonant interaction. *J. Phys. Soc. Japan* 49 (1980), no. 5, 2009-2013. (Authors' summary) **81m:35131** 35Q20 (76B25)
- Noguchi, Juniro Supplement to: "Holomorphic curves in algebraic varieties" [Hiroshima Math. J. 7 (1977), no. 3, 833-853; MR 58 #28688]. *Hiroshima Math. J.* 10 (1980), no. 1, 229-231. (From the text) **81m:32032** 32H99
- Noguchi, N. (with Maekawa, Takayoshi) Fermi quantization in the representation of $SO(n)$. *J. Math. Phys.* 21 (1980), no. 7, 1659-1661. (R. L. Ingraham) **81g:81033** 81C40
- Noguchi, Shitchi (with Araki, Tatsuo) Bijective global functions of finite cellular automata with complete group-graph connection. *Systems-Comput.-Controls* 9 (1978), no. 2, 68-77. (Authors' summary) **81j:68067** 68D20
- (with Miyabe, Hiroshi) Study of multiprogramming system with storage hierarchy. *Systems-Comput.-Controls* 9 (1978), no. 6, 26-34 (1980). (Authors' summary) **81i:68019** 68A05
- (with Tanaka, Akio; Sugawara, Kenji) Properties of analogue neural networks. *J. Cybernet.* 10 (1980), no. 4, 265-281. (H. C. Tuckwell) **81f:92015** 92A09 (45K05)
- Noguchi, Taisuke (with Shimodaira, Kazuo; Michikawa, Yoshimasa; Matsuzaki, Toshio; Kuwabara, Hideo; Suzuki, Hideo; Takagi, Shigeo; Matsuoka, Motohisa; Oya, Shinichi) Perspective of study of history of mathematics. (Japanese) Special issue on the 20th anniversary of Sôgaku Kenkyû. *Sôgaku Kenkyû* No. 80 (1979), 3-75. (K. Inoue) **81b:01006** 01A27
- casas-Nogués, Philippe See Casas-Nogués, Philippe
- casas-Nogués, Pierrette See Casas-Nogués, Pierrette
- Nohel, John A. On some nonlinear Volterra functional differential equations. *An. Ştiinţ. Univ. "Al. I. Cuza" Iaşi Sect. I a Mat. (N.S.)* 25 (1979), suppl., 115-123. (Gustaf Gripenberg) **81k:45020** 45N05 (34K30)
- A nonlinear hyperbolic Volterra equation occurring in viscoelastic motion. *Transactions of the Twenty-Fifth Conference of Army Mathematicians (Johns Hopkins Univ., Baltimore, Md., 1979), pp. 177-184, ARO Rep. 80, 1, U. S. Army Res. Office, Research Triangle Park, N.C., 1980. (R. Muki) 81h:73019* 73F99 (45D05)
- Noid, D. W. (with Koszykowski, M. L.; Marcus, R. A.) Semiclassical calculation of eigenvalues for a three-dimensional system. *J. Chem. Phys.* 73 (1980), no. 1, 391-395. (Authors' summary) **81d:81035** 81C99 (34B25, 58F19)
- Nori, Takashi On S -closed subspaces. (Italian summary) *Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur.* (8) 64 (1978), no. 2, 157-162. (From the introduction) **81j:54002** 54A05
- Properties of almost c -continuous functions. *J. Korean Math. Soc.* 15 (1978/79), no. 2, 109-115. (Anne K. Steiner) **81a:54015** 54C08
- Nearly-compact spaces and almost-compact mappings. (French summary) *Rend. Circ. Mat. Palermo* (2) 28 (1979), no. 1, 108-114. (Anne K. Steiner) **81b:54022** 54D30 (54C10)
- A note on extremally disconnected spaces. *Proc. Amer. Math. Soc.* 79 (1980), no. 2, 327-330. (Robert F. Wheeler) **81e:54030** 54D10 (54G05)
- di Nola, Antonio (with Sessa, Salvatore) A topological interpretation of certain operators of the algebra of complex Boolean elements. (Italian. English summary) *Ricerca* (4) (Napoli) 28 (1977), no. 2, 3-13 (1978). (Richard A. Alò) **81i:54025** 54F99 (54A99, 94C10)
- Nold, Annett The infective number at equilibrium for a communicable disease. *Math. Biosci.* 46 (1979), no. 1-2, 131-138. (From the summary) **81e:92014** 92A15
- Nolden, E. (with Derese, L.) Design of linear feedback laws for bilinear systems. *Internat. J. Control* 31 (1980), no. 2, 219-237. (Authors' summary) **81a:93071** 93D15 (93D05)
- (with Derese, L.) Rejection of multiplicative disturbances. (French summary) With comments by C. Melin. *RAIRO Automat.* 14 (1980), no. 3, 233-253. (Authors' summary) **81h:93022** 93C05 (93D05)
- Noll, Curt (with Nickel, Laura) The 25th and 26th Mersenne primes. *Math. Comp.* 35 (1980), no. 152, 1387-1390. (V. C. Harris) **81k:10010** 10A25
- Noll, Helga A note on resolution: how to get rid of factoring without losing completeness. *5th Conference on Automated Deduction (Les Arcs, 1980), pp. 250-263, Lecture Notes in Comput. Sci.*, 87, Springer, Berlin, 1980. (Author's summary) **81k:68070** 68G15 (03B35)
- Noll, John E. Abstraction and modality. *Philos. Stud.* 38 (1980), no. 2, 111-127. (Editors) **81k:03009** 03A05 (00A25, 03B45)
- Nolte, L. W. (with Hodgkins, W. S.) On relationships between detection and estimation theory. *Pattern recognition and signal processing (Proc. NATO Adv. Study Inst., Paris, 1978), pp. 133-165, NATO Adv. Study Inst. Ser., Ser. E: Appl. Sci.*, 29, Sijthoff & Noordhoff, Alphen aan den Rijn, 1978. (See **80f:68076**) 94A05
- Nolte, Wolfgang Gruppen mit Involutionen, welche Quadricken bestimmen. *Arch. Math. (Basel)* 33 (1979/80), no. 2, 177-182. (Francis Buekenhout) **81a:51003** 51A30 (20G15)
- (with Günther, Georg) Defining relations in orthogonal groups of characteristic two. *Canad. J. Math.* 31 (1979), no. 6, 1217-1246. (F. D. Veldkamp) **81f:20054** 20G15 (10C30)
- Erweiterte Spiegelungsgruppen metrischer Vektorräume. (English summary) *J. Geom.* 14 (1980), no. 1, 1-22. (E. W. Ellers) **81g:51007** 51F15 (20H15)
- Nomachi, Yukio Some sequential procedures about one-parameter exponential distributions. *Mem. Fac. Sci. Kôchi Univ. Ser. A Math.* 1 (1980), 81-101. (Dennis D. Wackerly) **81i:62144** 62L12
- A note on the interval estimation for the mean of normal distribution with known coefficient of variation. *Mem. Fac. Sci. Kôchi Univ. Ser. A Math.* 1 (1980), 103-110. (Rasul A. Khan) **81f:62060** 62F25
- Nomakuchi, Keitaro On the characterization of generalized inverses by bordered matrices. *Linear Algebra Appl.* 33 (1980), 1-8. (J. J. Buoni) **81f:15006** 15A09 (15A48)
- Noman, Kamran (with Jones, Ronald W.) A model of trade and unemployment. *General equilibrium, growth, and trade*, pp. 297-322, Academic Press, New York, 1979. (See **81m:90004**) 90A99
- Nomizu, Katsumi (with Dajczer, Marcos) On sectional curvature of indefinite metrics. II. *Math. Ann.* 247 (1980), no. 3, 279-282. (V. G. Kopp) **81e:53047** 53C50
- Nomoflov, V. E. Quasistationary Rayleigh waves on the surface of an inhomogeneous anisotropic elastic body. (Russian) *Dokl. Akad. Nauk SSSR* 247 (1979), no. 5, 1107-1111. (A. S. Alekseev) **81a:73017** 73D20
- Propagation of quasistationary Rayleigh waves in a nonuniform anisotropic elastic medium. (Russian. English summary) Mathematical questions in the theory of wave propagation, 10. *Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 89 (1979), 234-245, 295. (N. Cristescu) **81c:73016** 73D20
- Nomura, Yasutoshi Some homotopy groups of real Stiefel manifolds in the metastable range. III. *Sci. Rep. College Gen. Ed. Osaka Univ.* 28 (1979), no. 1, 1-26. (J. F. Adams) **81i:55015a** 55Q52 (57T20)
- Some homotopy groups of real Stiefel manifolds in the metastable range. IV. *Sci. Rep. College Gen. Ed. Osaka Univ.* 28 (1979), no. 2, 35-60. (J. F. Adams) **81i:55015b** 55Q52 (57T20)
- On the desuspension of Whitehead products. *J. London Math. Soc.* (2) 22 (1980), no. 2, 374-384. (C. S. Hoo) **81f:55013** 55Q15
- Nonnenmacher, Theo F. On the kinetics of spinodal decomposition. *Z. Phys. B* 38 (1980), no. 4, 327-333. (Author's summary) **81d:82071** 82A70 (82A25)
- Nôno, Kiyoharu Holomorphy and boundedness of separately holomorphic functions. *Bull. Fukuoka Univ. Ed. III* 29 (1979), 33-41. (J. Siciak) **81e:32016** 32D15
- Separately holomorphic functions on a product space of an infinite number of complex planes. *Bull. Fukuoka Univ. Ed. III* 29 (1979), 43-49. (J. Siciak) **81k:32013** 32D15
- Nôno, Takayuki (with Mimura, Fumitake) Dynamical symmetries. V. *Bull. Fukuoka Univ. Ed. III* 28 (1978), 7-16. (Demeter Krupka) **81b:58018** 58F05
- (with Mimura, Fumitake) Material symmetries. I. *Bull. Fukuoka Univ. Ed. III* 29 (1979), 21-31. (Demeter Krupka) **81g:58033** 58F35 (22E70, 73B99)
- Novoa, A. N. (with Stojanov, S. K.) A vector-valued criterion optimization method. *Optimization techniques (Proc. Ninth IFIP Conf., Warsaw, 1979), Part 1, pp. 499-507, Lecture Notes in Control and Information Sci.*, 22, Springer, Berlin, 1980. (Authors' summary) **81m:90101** 90C31
- Nonoyama, Shigeki (with Tam, Tzyh Jong) Structure and realization of decomposable

- biplane systems. *Recent developments in variable structure systems, economics and biology* (Proc. US-Italy Sem., Taormina, 1977), pp. 252-259, *Lecture Notes in Econom. and Math. Systems*, 162, Springer, Berlin, 1978. (K. B. Datta) **81h:93020** 93B15
(with Tarn, Tzyh Jong) An algebraic structure of discrete-time biplane systems. *Proceedings of the 1978 IEEE Conference on Decision and Control including the 17th Symposium on Adaptive Processes* (San Diego, Calif., 1979), pp. 139-150, *IEEE, New York*, 1979. (Authors' summary) **81c:93058** 93C55
- Nordlund, J. (with Dunfield, L. G.) Real-space renormalization-group transformation for semi-infinite Ising systems. *Phys. Rev. B* (3) **22** (1980), no. 5, 2586-2593. (Authors' summary) **81g:82019** 82A25 (82-04, 82A67)
(with Dunfield, L. G.) Real-space renormalization-group analysis for finite ferromagnetic systems. *Phys. Rev. B* (3) **22** (1980), no. 9, 4430-4444. (Authors' summary) **81h:82065** 82A67 (81E15)
- Noon, Robert E. (with Basili, Victor R.) A comparison of the axiomatic and functional models of structured programming. *IEEE Trans. Software Engng.* **6** (1980), no. 5, 454-465. (Authors' summary) **81g:68017** 68B10
- Noor, A. S. A. (with Cornish, William H.) Bands and modular lattices. *Math. Sem. Notes Kobe Univ.* **7** (1979), no. 2, 309-326. (Ann Miller Millman) **81c:06011** 06C05
- Noor, Ahmed K. (with Peters, Jeanne M.) Nonlinear analysis via global-local mixed finite element approach. *Internat. J. Numer. Methods Engrg.* **15** (1980), no. 9, 1363-1380. (Authors' summary) **81g:65158** 65N30
- Noor, Khalida Inayat (with Noor, M. Aslam) Iterative methods for a class of variational inequalities. *Numerical analysis of singular perturbation problems* (Proc. Conf., Math. Inst., Catholic Univ., Nijmegen, 1978), pp. 441-448, *Academic Press, London*, 1979. (P. S. Milojević) **81h:47085** 47H17 (47H05, 49A29)
(with Noor, M. Aslam) Iterative methods for variational inequalities and nonlinear programming. *Third Symposium on Operations Research* (Univ. Mannheim, Mannheim, 1978), Section I, pp. 455-463, *Operations Research Verfahren*, 31, Hain, Meisenheim, 1979. (Nobuo Sannomiya) **81c:90081** 90C30 (49D37)
(with Noor, M. Aslam) A generalization of the Lax-Milgram lemma. *Canad. Math. Bull.* **23** (1980), no. 2, 179-184. (Erich Miersemann) **81h:47047** 47H05 (49A27, 49G05)
(with Noor, M. Aslam) Finite element methods for nonlinear variational inequalities. *Comment. Math. Univ. St. Paul.* **28** (1980), no. 1, 93-99. (N. Gass) **81f:65086** 65N30 (49A29, 65K10)
On a subclass of close-to-convex functions. *Comment. Math. Univ. St. Paul.* **29** (1980), no. 1, 25-28. (Evelyn M. Silvia) **81k:30016** 30C45
(with Thomas, D. K.) Quasiconvex univalent functions. *Internat. J. Math. Math. Sci.* **3** (1980), no. 2, 255-266. (K. S. Padmanabhan) **81f:30010** 30C45
On the Hankel determinants of close-to-convex univalent functions. *Internat. J. Math. Math. Sci.* **3** (1980), no. 3, 447-481. (Evelyn M. Silvia) **81k:30020** 30C50 (30C45)
- Noor, M. Aslam (with Noor, Khalida Inayat) Iterative methods for a class of variational inequalities. *Numerical analysis of singular perturbation problems* (Proc. Conf., Math. Inst., Catholic Univ., Nijmegen, 1978), pp. 441-448, *Academic Press, London*, 1979. (P. S. Milojević) **81h:47085** 47H17 (47H05, 49A29)
(with Noor, Khalida Inayat) Iterative methods for variational inequalities and nonlinear programming. *Third Symposium on Operations Research* (Univ. Mannheim, Mannheim, 1978), Section I, pp. 455-463, *Operations Research Verfahren*, 31, Hain, Meisenheim, 1979. (Nobuo Sannomiya) **81c:90081** 90C30 (49D37)
Error bounds for mixed finite element methods. *C. R. Math. Rep. Acad. Sci. Canada* **2** (1980), no. 5, 227-230. (Authors' summary) **81h:65115** 65N30
(with Noor, Khalida Inayat) A generalization of the Lax-Milgram lemma. *Canad. Math. Bull.* **23** (1980), no. 2, 179-184. (Erich Miersemann) **81h:47047** 47H05 (49A27, 49G05)
(with Noor, Khalida Inayat) Finite element methods for nonlinear variational inequalities. *Comment. Math. Univ. St. Paul.* **28** (1980), no. 1, 93-99. (N. Gass) **81f:65086** 65N30 (49A29, 65K10)
- Noor, Muhammad, S. A test of convergence of the expansion of the screening charge density for impurity ions in semiconductors. (German summary) *Phys. Status Solidi (B)* **100** (1980), no. 2, 445-450. (Authors' summary) **81h:82042** 82A55 (78A55)
- Norback, John P. (with Morris, James G.) Fitting hyperplanes by minimizing orthogonal deviations. *Math. Programming* **19** (1980), no. 1, 102-105. (Authors' summary) **81c:65007** 65D10
- Norberg, Ragnar The credibility approach to experience rating. *Scand. Actuar. J.* **1979**, no. 4, 181-221. (Gregory Taylor) **81c:62109** 62P05
- Norbury, J. (with Cumberbatch, E.) Capillary modification of the singularity at a free-streamline separation point. *Quart. J. Mech. Appl. Math.* **32** (1979), no. 3, 303-312. (K. K. Pun) **81c:76007** 76B10 (35Q99)
- Nordahl, T. E. (with Scheiblich, H. E.) Projective bands. *Algebra Universalis* **11** (1980), no. 2, 139-148. (V. S. Krishnan) **81k:08007** 08B30 (06A12, 20M07)
- Nordberg, Lemart Asymptotic normality of maximum likelihood estimators based on independent, unequally distributed observations in exponential family models. *Scand. J. Statist.* **7** (1980), no. 1, 27-32. (R. Ponnappalli) **81c:62028** 62F10 (62F12)
- Norden, A. P. (with Ahlroff, F. S.) Intrinsic geometry of analytic surfaces of a space of nondegenerate null-pairs. (Russian) *Izv. Vys. Učebn. Zaved. Matematika* **1978**, no. 8, 19-30. (Vladislav Goldberg) **81m:53016** 53A40
(with Sevryn, L. N.; Saikin, Ju. A.) Valentin Konstantinovič Ivanov (on the occasion of his seventieth birthday). (Russian) *Izv. Vys. Učebn. Zaved. Matematika* **1978**, no. 11(198), 3-5. (Editors) **81g:01019a** 01A70
(with Zabolot, Ja. I.; Eskin, L. D.; Grigor'ev, S. V.; Begovatov, E. A.) Al'bert Valentinovič Sul'din (on the occasion of his fiftieth birthday). (Russian) *Izv. Vys. Učebn. Zaved. Matematika* **1978**, no. 12, 3-5. (Editors) **81m:01071** 01A70
- Nordgren, E. A. (with Radjabalipour, Mehdi; Radjavi, Heydar; Rosenthal, Peter) On invariant operator ranges. *Trans. Amer. Math. Soc.* **251** (1979), 389-398. (E. Gerlach) **81c:47010** 47A15 (47A05, 47D25)
(with Hadwin, Donald W.; Radjavi, Heydar; Rosenthal, Peter) An operator not satisfying Lomonosov's hypothesis. *J. Funct. Anal.* **38** (1980), no. 3, 410-415. (Hong W. Kim) **81m:47013** 47A15
- Nordhaus, E. A. (with Alavi, Y.; Behzad, M.) Minimal separating sets of maximum size. *J. Combin. Theory Ser. B* **28** (1980), no. 2, 180-183. (A. G. Thomason) **81f:05105** 05C40
- Norgela, S. A. Herbrand deduction-search strategies in predicate calculus. II. (Russian. Lithuanian and English summaries) *Litovsk. Mat. Sb.* **19** (1979), no. 1, 161-167, 232. (Gábor Dévid) **81h:03013** 03B35 (68G15)
On approximation of some classes in the classical predicate calculus by decidable classes. I. (Russian. Lithuanian and English summaries) *Litovsk. Mat. Sb.* **20** (1980), no. 1, 135-143, 219. (Roman Murawski) **81h:03016** 03B25
- Norguet, François See *Functions of several complex variables*, **81j:32062**
- Nori, M. V. Varieties with no smooth embeddings. *C. P. Ramanujam—a tribute*, pp. 241-246, *Tata Inst. Fund. Res. Studies in Math.*, 8, Springer, Berlin, 1978. (Daniel Comenetz) **81a:14063** 14E25
- Norimoto, Yoshiki Kodaira vanishing theorem and Chern classes for δ -manifolds. *Proc. Japan Acad. Ser. A Math. Sci.* **54** (1978), no. 4, 107-108. (James B. Carrell) **81h:32003** 32C35 (32L20, 58A12)
- Norkin, V. I. Two random search algorithms for the minimization of nondifferentiable functions. (Russian) *Mathematical methods in operations research and reliability theory* (Russian), pp. 36-40, *Akad. Nauk Ukrain. SSR, Inst. Kibernet. Kiev*, 1978. (V. N. Igolkina) **81h:90115** 90C15 (65K10)
- Normak, Peeter Purity in the category of M -sets. *Semigroup Forum* **20** (1980), no. 2, 157-170. (M. Gould) **81f:20097** 20M50
- Norman, A. C. (with Moore, P. M. A.) The initial design of a vector based algebra system. *Symbolic and algebraic computation (EUROSAM '79, Internat. Sympos., Marseille, 1979)*, pp. 258-265, *Lecture Notes in Comput. Sci.*, 72, Springer, Berlin, 1979. (Authors' summary) **81h:68043** 68C20 (68B15)
- Norman, James E. (with Tolley, H. Dennis) Time on trial estimates with bivariate risks. *Biometrika* **66** (1979), no. 2, 285-291. (Ibrahim A. Ahmad) **81f:62148** 62N05
- Norman, Michael L. (with Wilson, James R.; Barton, Robert T.) A new calculation on rotating protostar collapse. *Astrophys. J.* **239** (1980), no. 3, part 1, 968-981. (Authors' summary) **81h:85097** 85A15
- Normann, Dag Recursion in 2E and a splitting theorem. *Essays on mathematical and philosophical logic* (Proc. Fourth Scandinavian Logic Sympos. and First Soviet-Finnish Logic Conf., Jyväskylä, 1976), pp. 275-285, *Synthese Library*, 122, Reidel, Dordrecht, 1979. (S. S. Wainer) **81h:03052** 03D65
A note on reflection. *Math. Scand.* **45** (1979), no. 1, 5-12. (Douglas Cenzer) **81h:03046** 03D65 (03D75)
- Norov, K. (with Abdullaev, S. K.) A multidimensional singular integral in an infinite domain with a border. (Russian. Tajiki summary) *Dokl. Akad. Nauk Tadzhik. SSR* **22** (1979), no. 7, 399-403. (B. S. Rubin) **81f:42019** 42B20
- Norrie, D. H. (with de Vries, G.) An introduction to finite element analysis. *Academic Press [Harcourt Brace Jovanovich, Publishers], New York-London*, 1978. xiii+301 pp. ISBN 0-12-521660-2 (Ian Gladwell) **81m:6502b** 65-01 (65N30)
- Norris, A. (with Achenbach, J. D.; Viswanathan, K.) An inversion integral for crack-scattering data. *Wave Motion* **1** (1979), no. 4, 299-316. (Alok Nath Chakrabarti) **81h:73042** 73M05 (73D25)
- Norris, C. W. (with Sehgal, V. M.) On the solution of a functional equation. *Math. Japon.* **23** (1978/79), no. 5, 525-527. (Authors' summary) **81h:54037** 54H25
- Norris, Eugene M. The structure of an idempotent relation. *Semigroup Forum* **18** (1979), no. 4, 319-329. (Gérard Lopez) **81c:06006** 06A99
- Norris, L. K. (with Davis, W. R.) Infinitesimal homology group structure and geometrization. *Ann. Inst. H. Poincaré Sect. A (N.S.)* **31** (1979), no. 4, 387-398 (1980). (Andrzej Trautman) **81h:81075** 81E10 (53B50, 83C99)
(with Davis, W. R.) The infinitesimal homology group structure of Einstein-Maxwell space-times. (Italian and Russian summaries) *Nuovo Cimento B* (11) **53** (1979), no. 2, 209-232. (George Debnay) **81c:83023** 83C40 (53C05, 58G30, 81E10)
(with Davis, W. R.) Gauge formulations of gravitation and their fundamental relationship to Riemannian homology structure. *Lett. Nuovo Cimento* (2) **27** (1980), no. 4, 122-128. (J. R. Vanstone) **81h:83053** 83E99 (53B50)
- Norsett, Syvert P. (with Wanner, G.; Hairer, E.) Order stars and stability theorems. *BIT* **18** (1978), no. 4, 475-489. (Rolf Jetsch) **81h:65070** 65L07 (41A21, 65L05)
(with Wanner, G.) The real-pole sandwich for rational approximations and oscillation equations. *BIT* **19** (1979), no. 1, 79-94. (Hans-Peter Blatt) **81h:65040** 65L05 (65D15, 65L07)
Collocation and perturbed collocation methods. *Numerical analysis* (Proc. 8th Biennial Conf., Univ. Dundee, Dundee, 1979), pp. 119-132, *Lecture Notes in Math.*, 773, Springer, Berlin, 1980. (Abbas I. Abdel-Karim) **81h:65078** 65L05
- Norstad, Folke Convexity of means and growth of certain subharmonic functions. *Ark. Mat.* **16** (1978), no. 2, 141-152. (A. V. Bratčev) **81f:31003** 31A05
- North, Gerald R. Analytical models of the earth's macroclimate. *Proceedings of the First International Conference on Mathematical Modeling* (St. Louis, Mo., 1977), Vol. IV, pp. 2291-2302, *Univ. Missouri-Rolla, Rolla, Mo.*, 1977. (See **81h:90005**) **86A10**
- North, Philip M. (with Morgan, Byron J. T.) Modelling heron survival using weather data. (French summary) *Biometrics* **35** (1979), no. 3, 667-681. (John M. Karon) **81c:92016** 92A17
- Northover, Francis H. (with Ross, Bertram) Fractional calculus and derivatives of complex order. *Bull. Malaysian Math. Soc.* (2) **2** (1979), no. 2, 111-117. (R. Bittner) **81h:44008** 44A40 (26A33)
(with Ross, Bertram) Application of derivatives of complex order in the theory of operators of fractional order $d^{3/2}/dx^{3/2}$. (Russian) *Differentsial'nye Uravneniya* **15** (1979), no. 11, 1987-1992, 2108. (S. G. Samko) **81g:34013** 34A25 (26A33)
- Norton, J. P. Structural zeros in the modal matrix and its inverse. *IEEE Trans. Automat. Control* **25** (1980), no. 5, 980-981. (C. E. Langenhop) **81m:58025** 15A90 (93B05, 93C15)
Normal-mode identifiability analysis of linear compartmental systems in linear stages. *Math. Biosci.* **50** (1980), no. 1-2, 95-115. (Authors' summary) **81h:93019** 93B30 (92A09, 93C45)
- Norton, R. E. On the equations of state in many-body theory. *High-energy physics in the Einstein centennial year*, pp. 221-245, *Stud. in Nat. Sciences*, 16, Plenum, New York, 1979. (Authors' summary) **81f:81094** 81Hxx

- Norton, S. P. (with Conway, J. H.) Monstrous moonshine. *Bull. London Math. Soc.* 11 (1979), no. 3, 308–339. (Stephen D. Smith) **81j:20028** 20D08 (10D12)
- Norton, Stephen J. Reconstruction of a two-dimensional reflecting medium over a circular domain: exact solution. *J. Acoust. Soc. Amer.* 67 (1980), no. 4, 1266–1273. (Author's summary) **81a:76040** 76Q05 (78A10)
- Nortover, Francis See Northover, Francis H.
- macedonika-Nomika, Olga See Macedonika-Nomika, Olga
- Nosonov, L. H. Quantum theorem of corresponding states and spin-polarized quantum systems. (French summary) *J. Physique* 41 (1980), no. 7, Colloq. C-7, C7-1–C7-12. (Author's summary) **81g:82015** 82A15 (81J05)
- Nosenko, Ju. L. Comparison of linear methods of summation of double Fourier series. (Russian) *Metric questions of the theory of functions and mappings, No. VI* (Russian), pp. 89–101, "Naukova Dumka", Kiev, 1975. (See **80j:30003**) 42B05
- Conditions of Sidon type for integrability of double trigonometric series. (Russian) *Theory of functions and mappings* (Russian), pp. 132–149, 179, "Naukova Dumka", Kiev, 1979. (O. D. Gabisonija) **81f:42013** 42B05
- Nosko, V. P. See Seher, G. A. F., **81j:62128**
- Noskov, B. N. Long-period perturbations in satellite motion caused by oblateness of the Earth's atmosphere. (Russian. English summary) *Moskov. Gos. Univ. Trudy Gos. Astronom. Inst. Sternberg*, 49 (1980), 130–155. (Author's summary) **81g:70031** 70M05
- Noskov, G. A. The cancellation problem for a ring of polynomials. (Russian) *Sibirsk. Mat. Z.* 19 (1978), no. 6, 1413–1414, 1440. (Author's summary) **81g:13005** 13B25 (10A99)
- Noskov, V. N. Lengths of minimal single diagnostic tests that monitor the operation of inputs of logic circuits. (Russian) *Diskret. Analiz* No. 32 *Metody Diskret. Analiza v Sintez Upravl. Sistem* (1978), 40–51, 96. (Author's summary) **81c:94052** 94C10
- Universal tests for diagnostics of a class of defects in combination circuits. (Russian) *Diskret. Analiz* No. 33 *Metody Diskret. Anal. v Resenii Ekstremal. Zadach* (1979), 41–52, 109–110. (Author's summary) **81c:94040** 94C10
- Noskov, V. V. The largest independent sets in graphs and constructive coding problems. (Russian) *Problemy Kibernet. No. 36* (1979), 33–54, 279. (H.-J. Voss) **81i:05093** 05C35 (94B60)
- Nommes, J. C. Paramétrix du problème de Cauchy pour une classe de systèmes hyperboliques à caractéristiques réelles involutives de multiplicité variable. *Séminaire Goulaouic-Schwartz* (1978/1979), Exp. No. 8, 9 pp., *École Polytech., Palaiseau*, 1979. (Rémi Vaillancourt) **81d:35052** 35L40 (35S05)
- Paramétrix du problème de Cauchy pour une classe de systèmes hyperboliques symétrisables à caractéristiques involutives de multiplicité variable. *Comm. Partial Differential Equations* 5 (1980), no. 1, 1–22. (Maria Cinquini-Cibrario) **81i:35169** 35S10
- Nosov, V. A. Solution of a problem of Cauchy type for an equation of hyperbolic type. (Russian) *Differentsial'nye Uravneniya* (Ryazan) No. 14 (1979), 128–137. (Author's summary) **81h:35056** 35L65
- Nosova, E. G. (with Feinberg, V. Z.) T-complete ultrametric spaces and their auto-isometry groups. (Russian. English summary) *Dokl. Akad. Nauk BSSR* 24 (1980), no. 1, 15–18, 91–92. (Jan Chvalina) **81d:54033** 54H20 (20B25, 54E40, 54E52)
- van Nostrand, R. Craig See Van Nostrand, R. Craig
- Notestine, Ronald D. (with Wollkind, David J.; Maurer, Robert N.) A continuum model appropriate for nonlinear analysis of the solidification of a pure metal. *Applied nonlinear analysis* (Proc. Third Internat. Conf., Univ. Texas, Arlington, Tex., 1978), pp. 657–668, *Academic Press, New York*, 1979. (E. E. Tarveva) **81c:82025** 82A25 (80A20, 82A65)
- Nougues-Sainte-Beuve, Marie-France Some topological properties of vector measures with bounded variation and its applications. *Ann. Mat. Pura Appl.* (4) 116 (1978), 317–379. (Igor Kluváněk) **81d:46050** 46G10 (28B05, 28C05, 46E27)
- Mesures vectorielles localement à variation bornée: quelques propriétés et applications. *Travaux Sémin. Anal. Convexe* 8 (1978), no. 2, exp. no. 12, 60 pp. (Igor Kluváněk) **81d:46051** 46G10 (28B05, 28C05, 46E27)
- Noui-Mehdi, Samir Caractérisations algébriques des singularités de Thom-Boardman de courbes planes. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 24, A1127–A1130. (Bernard Teissier) **81i:32006** 32B30 (32C40)
- Nourrigat, Jean François (with Helffer, B.) Hypocoellipticité pour des groupes nilpotents de rang de nilpotence 3. *Comm. Partial Differential Equations* 3 (1978), no. 8, 643–743. (David S. Tartakoff) **81d:35016** 35H05 (22E30, 58G05)
- (with Helffer, B.) Opérateurs différentiels hypoelliptiques et groupes nilpotents. *Séminaire Goulaouic-Schwartz* (1978/1979), Exp. No. 5, 16 pp., *École Polytech., Palaiseau*, 1979. (David S. Tartakoff) **81c:58058** 58G05 (22E27, 22E30, 58H05)
- (with Helffer, B.) Caractérisation des opérateurs hypoelliptiques homogènes invariants à gauche sur un groupe de Lie nilpotent gradué. *Comm. Partial Differential Equations* 4 (1979), no. 8, 899–958. (Aroldo Kaplan) **81i:35034** 35H05 (22E27, 58G05)
- Noussair, Ezzat S. The oscillatory behaviour of a second order nonlinear equation with damping. *Ann. Mat. Pura Appl.* (4) 120 (1979), 215–227. (G. J. Butler) **81c:34034** 34C15
- (with Swanson, Charles A.) Positive solutions of semilinear Schrödinger equations in exterior domains. *Indiana Univ. Math. J.* 28 (1979), no. 6, 993–1003. (W. Allegretto) **81h:35031** 35J60 (85A05)
- (with Nababan, S.) Existence theorems for optimal control of quasilinear parabolic partial differential equations. *J. Austral. Math. Soc. Ser. B* 21 (1979/80), no. 1, 90–101. (H. S. P. Grisser) **81d:49003** 49A22
- On the existence of solutions of nonlinear elliptic boundary value problems. *J. Differential Equations* 34 (1979), no. 3, 482–495. (Jean Mawhin) **81c:35053** 35J65
- (with Sloan, Ian H.; Burn, B. J.) Projection methods for equations of the second kind. *J. Math. Anal. Appl.* 69 (1979), no. 1, 84–103. (Authors' summary) **81i:65046** 65J10 (47H17)
- (with Swanson, Charles A.) Oscillation of semilinear elliptic inequalities by Riccati transformations. *Canad. J. Math.* 32 (1980), no. 4, 908–923. (V. B. Headley) **81j:35045** 35J60 (35B05)
- (with Swanson, Charles A.) Positive solutions of quasilinear elliptic equations in exterior domains. *J. Math. Anal. Appl.* 75 (1980), no. 1, 121–133. (J. R. Kuttler) **81j:35007** 35B05 (35J10)
- (with Swanson, Charles A.) Semilinear Schrödinger equations in exterior domains. *Nonlinear Anal.* 4 (1980), no. 3, 635–637. (From the text) **81i:35045** 35J10 (81C05)
- Novák, Břetislav (with Mawhin, Jean; Nečas, Jindřich) In memoriam Professor Svatopluk Fučík. *Czechoslovak Math. J.* 30(105) (1980), no. 1, 153–162 (1 plate). (Editors) **81m:01067** 01A70
- Novák, Frank A. (with Rice, Stuart A.) The influence of rotational motion on intersystem crossing in isolated molecules. *J. Chem. Phys.* 73 (1980), no. 2, 858–864. (Authors' summary) **81k:81112** 81G50
- Novák, Jiří On certain minimal systems of k -tuples. (French summary) *Problèmes combinatoires et théorie des graphes* (Colloq. Internat. CNRS, Univ. Orsay, Orsay, 1976), pp. 317–320, *Colloques Internat. CNRS*, 260, CNRS, Paris, 1978. (Authors' summary) **81b:05067** 05C35 (05B05)
- Novák, Joseph A. Some recent work on the assertoric syllogistic. *Notre Dame J. Formal Logic* 21 (1980), no. 2, 229–242. (Stewart Shapiro) **81h:03027** 03B20 (01A20, 03-03)
- Novák, Ladislav A. (with Milić, Mirko M.) Explicit form of Lagrangian equations for nonlinear RLC networks containing memristors. *Univ. Beograd. Publ. Elektrotehn. Fak. Ser. Elektron. Telekomun. Automat.* No. 118–128 (1978), 49–52. (Authors' summary) **81c:94038** 94C05
- (with Milić, Mirko M.) Formulation of new equations from scalar generating functions for nonlinear RLC networks with memristors. *Univ. Beograd. Publ. Elektrotehn. Fak. Ser. Elektron. Telekomun. Automat.* No. 118–128 (1978), 53–61. (Authors' summary) **81c:94036** 94C05
- (with Milić, Mirko M.) Extension of formulation of Lagrangian and anti-Lagrangian equations through nonlinear multipoint decomposition. *Proceedings of the Fourth International Symposium on Network Theory* (Ljubljana, 1979), pp. 235–240, *Georgi, St.-Saphorin*, 1979. (Authors' summary) **81c:94037a** 94C05
- (with Milić, Mirko M.) Extension of formulation of Lagrangian and anti-Lagrangian equations through nonlinear multipoint decomposition. *Univ. Beograd. Publ. Elektrotehn. Fak. Ser. Elektron. Telekomun. Automat.* No. 129–135 (1979), 35–40. (Authors' summary) **81c:94037b** 94C05
- Novák, Vilém Assessing of weights of parameters using the calculus of fuzzy sets. (Czech. English summary) *Ekonom.-Mat. Obzor* 16 (1980), no. 1, 1–12. (Milan Mareš) **81d:03057** 03E72 (93A15)
- Novello, M. (with d'Olivai, L. B. S.) Nonlinear viscous cosmology. *Acta Phys. Polon. B* 11 (1980), no. 1, 3–13. (R. L. Ingraham) **81c:83057** 83F05 (76D05, 83C55)
- (with Araujo, R. A.) Qualitative analysis of homogeneous universes. *Phys. Rev. D* (3) 22 (1980), no. 2, 260–266. (Authors' summary) **81c:83036** 83C55 (76D05, 83F05)
- Noverraz, Philippe Sur la mesure gaussienne des ensembles polaires en dimension infinie. *Séminaire Pierre Lelong-Henri Skoda (Analyse), Année 1976/77*, pp. 203–213, *Lecture Notes in Math.*, 694, Springer, Berlin, 1978. (G. Coeuré) **81d:46054** 46G20 (28C20, 32K99)
- Approximation of plurisubharmonic functions. *Approximation theory and functional analysis* (Proc. Internat. Sympos. Approximation Theory, Univ. Estadual de Campinas, Campinas, 1977), pp. 343–349, *North-Holland Math. Studies*, 35, North-Holland, Amsterdam, 1979. (Martin Schottenloher) **81j:46070** 46G20 (32F05)
- Novic, Bradley Bayes sequential estimation of a Poisson rate: a discrete time approach. *Ann. Statist.* 8 (1980), no. 4, 840–844. (P. W. Jones) **81c:62091** 62L12 (62F15)
- Novick, Melvin R. (with Lindley, Dennis V.) Fixed-state assessment of utility functions. *J. Amer. Statist. Assoc.* 74 (1979), no. 366, part 1, 306–311. (F. J. Giron) **81a:90038** 90A10 (62A99)
- Novikov, A. A. On stopping times of semistable diffusion processes. (Russian) *Probability theory* (Papers, VIIth Semester, Stefan Banach Internat. Math. Center, Warsaw, 1976), pp. 203–209, *Banach Center Publ.*, 5, PWN, Warsaw, 1979. (M. A. Šašlavič) **81i:60066** 60G40 (60J60)
- Optimal interpolation of partially observed two-dimensional random fields. (Russian) *Probability theory* (Papers, VIIth Semester, Stefan Banach Internat. Math. Center, Warsaw, 1976), pp. 211–220, *Banach Center Publ.*, 5, PWN, Warsaw, 1979. (O. A. Glonti) **81g:60040** 60G25
- Conditions for uniform integrability of continuous nonnegative martingales. (Russian. English summary) *Teor. Veroyatnost. i Primenen.* 24 (1979), no. 4, 821–825. (Dominique Lepingle) **81f:60068** 60G44
- Novikov, B. V. 0-cohomology of semigroups. (Russian) *Theoretical and applied questions of differential equations and algebra* (Russian), pp. 185–188, 268, "Naukova Dumka", Kiev, 1978. (L. Bokut') **81g:20127** 20M50
- Novikov, I. D. (with Braginškil, V. B.; Griščuk, L. P.; Doroshevič, A. G.; Menskil, M. B.; Sažin, M. V.; Zel'dovič, Ja. B.) On the electromagnetic detection of gravitational waves. *Gen. Relativity Gravitation* 11 (1979), no. 6, 407–409 (1980). (Authors' summary) **81d:83026** 83C35
- (with Starobinskii, A. A.) Quantum-electrodynamic effects inside a charged black hole and the problem of Cauchy horizons. *Ž. Eksp. Teoret. Fiz.* 78 (1980), no. 1, 3–19. (Russian); translated as *Soviet Phys. JETP* 51 (1980), no. 1, 1–9. (Authors' summary) **81c:83043** 83C99
- Novikov, L. A. (with Guk, V. M.) Regularization of integrals with power singularities of fractional order. (Russian) *Vestnik L'ov. Politehn. Inst. No. 141* *Differentsial'nye Uravneniya i ih Prilozhenia* (1980), 23–24, 113. (Authors' summary) **81i:65022** 65D32 (65B10)
- Novikov, N. F. (with Il'in, E. V.; Medvedev, A. V.) On nonparametric algorithms of optimization. *Modelling and optimization of complex systems* (Proc. IFIP-TC 7 Working Conf., Novosibirsk, 1978), pp. 198–206, *Lecture Notes in Control and Information Sci.*, 18, Springer, Berlin, 1979. (Authors' introduction) **81a:90121** 90C15
- Novikov, S. Ja. (with Semenov, E. M.; Tokarev, E. V.) The structure of subspaces of the spaces $\Lambda_p(\varphi)$. (Russian) *Dokl. Akad. Nauk SSSR* 247 (1979), no. 3, 552–554. (Aleksandr Mekler) **81j:46042** 46E30
- Bessel systems of Lorentz spaces. (Russian) *Dokl. Akad. Nauk UzSSR* 1980, no. 1, 7–8. (Ivan Singer) **81m:46048** 46E30
- Novikov, S. P. Periodic solutions and algebraic geometry. *Mathematical problems in theoretical physics* (Proc. Internat. Conf., Univ. Rome, Rome, 1977), pp. 222–228, *Lecture Notes in Phys.*, 80, Springer, Berlin, 1978. (Hélène Airault) **81i:35148** 35Q20 (14H40, 58F07)
- New applications of algebraic geometry to nonlinear equations and inverse

- problems. *Nonlinear evolution equations solvable by the spectral transform* (Internat. Sympos. Acad. Lincei, Rome, 1977), pp. 84–96. Res. Notes in Math., 26, Pitman, London, 1978. (Hélène Airault) **81i:35149** 35Q20 (14K30, 58F07)
- (with Dubrovin, B. A.; Fomenko, A. T.) ★ *Сопеременные геометрии* (Russian) [Modern geometry] Методы и приложения. [Methods and applications] "Nauka", Moscow, 1979. 760 pp. (I. Vaisman) **81i:53001** 53-01 (00A69, 57-01, 58-01, 81-01)
- (with Bogojavlenskii, O. I.) Finite-dimensional oscillatory models in the general theory of relativity and in gas dynamics. (Russian. English summary) Boundary value problems of mathematical physics and related questions in the theory of functions, 11. *Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* **84** (1979), 7–15, 309–310, 316. (Michael P. Ryan, Jr.) **81i:85002** 85A15 (34C40, 58F30, 83F05)
- (with Zaharov, V. E.; Manakov, S. V.; Pitaevskii, L. P.) ★ *Теория солитонов* (Russian) [Theory of solitons] Метод обратного рассеяния. [The method of the inverse problem] "Nauka", Moscow, 1980. 320 pp. (Eugene Gutkin) **81i:35112** 35Q99 (35P25, 58F07, 76B99, 81C05)
- See also *Euclidean quantum field theory*, **81i:81002**
- Novikov, S. V. (with Suprun, V. P.) A lower bound for the number of inputs of micromodules in minimal circuits. (Russian. English and German summaries) *Elektron. Informatsionverarb. Kibernet.* **15** (1979), no. 5–6, 265–270. (Authors' summary) **81i:94063** 94C10
- (with Oleksin, S. V.) On the covering of a set of arithmetic progressions. (Russian. English summary) *Vesci Akad. Nauk BSSR Ser. Fiz.-Mat. Nauk* **1979**, no. 6, 25–27, 139. (J. B. Roberts) **81i:10076** 10L20 (05B40)
- Synthesis of programmable logic matrix circuits. (Russian. English summary) *US i M—Uspokojajščie Slazemy i Maliny* **1980**, no. 3(47), 94–97, 149, 150. (Author's summary) **81i:94043** 94C10
- Novikov, V. A. Existence and nonexistence theorems for a class of equations of variable type. (Russian) *Dokl. Akad. Nauk SSSR* **253** (1980), no. 6, 1311–1313. (Megumi Saigo) **81i:35067** 35K65
- Novikov, V. V. (with Makarov, G. I.) The effect of high-altitude inhomogeneities of the atmosphere on the eigenvalues of normal waves in the problem of diffraction of radio waves around the spherical earth. (Russian) *Problems in the diffraction and propagation of waves*, No. 17 (Russian), pp. 3–38, 208. *Leningrad. Univ., Leningrad*, 1979. (A. S. Alekseev) **81i:78028** 78A45 (86A35)
- Novikova, A. M. (with Motovilov, I. A.; Ševčenko, S. I.) Heat-stressed state of a rectangular plate under the action of a multistage heat source. (Russian) *Dinamika i Prochnost' Masin* **No. 31** (1980), 89–96, 3. (Authors' summary) **81i:73124** 73U05 (80A20)
- Novikova, N. G. (with Burdjuk, V. Ja.) Steiner's problem on finite sets. (Russian) *Mat. Zametki* **28** (1980), no. 4, 583–588, 636. (E. J. F. Primrose) **81i:52022** 52A40 (80B30)
- Novikova, N. S. (with Volkova, N. I.) Absolute summability of degree p of series that are connected with Fourier series, by triangular matrix methods. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* **1980**, no. 1, 45–49. (M. F. Timan) **81i:42019** 42A28
- Novodvorsky, Mark E. Automorphic L -functions for symplectic group $GSp(4)$. *Automorphic forms, representations and L -functions* (Proc. Sympos. Pure Math., Oregon State Univ., Corvallis, Ore., 1977), Part 2, pp. 87–95. *Proc. Sympos. Pure Math., XXXIII, Amer. Math. Soc., Providence, R.I.*, 1979. (O. M. Fomenko) **81i:10032** 10D24 (12A67, 22E55)
- Novokreščanova, L. D. (with Ėpštejn, G. L.) Formation of aggregates in parallel solution of a transport problem. (Russian) *Mosk. Inst. Inž. Železnodorozh. Transporta Trudy* **No. 640 Prikl. Mat. i Zadachi Železnodorozh. Transporta** (1979), 147–149, 160. (Authors' summary) **81i:90073** 90C10
- Novokuznetsov, V. Ju. Asymptotic behavior as $t \rightarrow \infty$ of the solution of the Cauchy problem for a nonlinear Schrödinger equation. (Russian) *Dokl. Akad. Nauk SSSR* **251** (1980), no. 4, 799–802. (V. E. Korepin) **81i:81015** 81C05 (35B40, 35Q20)
- Novotný, J. (with Horský, J.) On the dynamics of the plane-symmetric solutions in general relativity. (Czech summary) *Scripta Fac. Sci. Natur. UJEP Brumensis—Phys.* **9** (1979), no. 6, 69–74. (H. A. Buchdahl) **81i:83014** 83C15
- Novozhilov, A. I. Step functions and their application to the study of discontinuous processes. (Russian) *Izv. Akad. Nauk Kirgiz. SSR* **1979**, no. 3, 16–28, 106. (Author's summary) **81i:65028** 65D15 (41A99)
- Novozhilov, V. V. See *Calculation of three-dimensional constructions*, **81i:73043** and *Mechanics of controllable motion*, **81i:70002**
- Novruzov, A. A. Behavior of solutions on the boundary of second-order uniformly elliptic equations. (Russian) *Studies in some questions of the constructive theory of functions and differential equations* (Russian), pp. 65–72. *Azerbaidžan. Inst. Nefti i Himii, Baku*, 1974. (See **80d:00021**) 35J15
- Behavior of solutions of degenerate second-order quasilinear elliptic equations. (Russian) *Studies in some questions of the constructive theory of functions and differential equations* (Russian), pp. 73–77. *Azerbaidžan. Inst. Nefti i Himii, Baku*, 1974. (See **80d:00021**) 35J70
- (with Ibragimov, A. I.) The criterion of regularity of a boundary point for quasilinear parabolic equations. (Russian) *Dokl. Akad. Nauk SSSR* **244** (1979), no. 1, 29–32. (P. P. Zabrejko) **81i:35062** 35K20
- (with Mamedov, I. T.) On R -identity of second-order elliptic and parabolic operators. (Russian) *Dokl. Akad. Nauk SSSR* **253** (1980), no. 6, 1314–1317. (R. Guenther) **81i:35042** 35J25 (35K20)
- Novy, Luboš See *Science in Czechoslovakia*, **81i:01032**
- Nowacki, Witold Thermal stresses in anisotropic bodies. *Thermomechanics in solids* (Proc. Sympos., Internat. Centre Mech. Sci., Udine, 1974), pp. 25–54. *CISM Courses and Lectures*, 223, Springer, Vienna, 1977. (See **80e:73072**) 73C25 (73U05)
- Nowacki, Zbigniew Monotonicity of multiplicative functions. *Colloq. Math.* **41** (1979), no. 1, 147–151. (Paula A. Kemp) **81i:10006** 10A20
- Nowaczyk, Adam Categorical languages and variable-binding operators. *Studia Logica* **37** (1978), no. 1, 27–39. (From the text) **81i:03055** 03B60
- Nowak, Miron A simplified method of integrating the equation of the lifting surface and its connection with a certain system of lifting lines. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Tech.* **27** (1979), no. 1, 63–68. (Author's summary) **81i:76006** 76B05
- Nowak, Sławomir Remarks on some shape properties of the components of movable continua. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math.* **27** (1979), no. 3–4, 315–319. (J. Segal) **81i:54035** 54F43 (54F45)
- Nowak, Werner-Georg Über die Anzahl der Gitterpunkte in verallgemeinerten Kreissektoren. (English summary) *Monatsh. Math.* **87** (1979), no. 4, 297–307. (Ekkehard Krätzel) **81i:10062** 10J25
- Einige spezielle metrische Resultate zur quantitativen Theorie der Gleichverteilung modulo 1. *Anz. Österreich. Akad. Wiss. Math.-Natur. Kl.* **117** (1980), no. 1, 12–16. (Robert F. Tichy) **81i:10096** 10K05
- Zur Gleichverteilung mod 1 der Potenzen von Quaternionen mit Norm größer als 1. *Arch. Math. (Basel)* **34** (1980), no. 3, 243–248. (Robert F. Tichy) **81i:10085** 10K05
- A nonconvex generalization of the circle problem. *J. Reine Angew. Math.* **314** (1980), 136–145. (Ekkehard Krätzel) **81i:10060** 10J25
- Nowak, Władysław Diffraction by a conducting ellipsoid. Generalized theory of Mie. (Polish summary) *Bull. Soc. Sci. Lett. Łódź* **29** (1979), no. 8, 9 pp. (Author's summary) **81i:78010** 78A45
- Nowak, Zbigniew (with Rup. Kazimierz) Application of the Laplace transform to the method of averaging of functional corrections. (Polish. Russian and English summaries) *Mech. Teoret. Stos.* **18** (1980), no. 1, 71–86. (Authors' summary) **81i:80005** 80A20
- Nowak, Zenon Staggered grid method for determining the time-dependent two-dimensional flows of a viscous fluid. (Polish. English and Russian summaries) *Mechanics and computers*, Vol. 2 (Polish), pp. 287–299. PWN, Warsaw, 1980. (See **81i:73006**) 76D99 (65N99)
- Nowakowska, Maria Fuzzy concepts: their structure and problems of measurement. *Advances in fuzzy set theory and applications*, pp. 361–387. North-Holland, Amsterdam, 1979. (Manfred Kochen) **81i:94054** 94D05 (03E72, 92A25)
- Psychological factors in decision making: new decision models. *Multiple criteria decision making theory and application* (Proc. Third Conf., Hagen/Königswinter, 1979), pp. 294–313. *Lecture Notes in Econom. and Math. Systems*, 177, Springer, Berlin, 1980. (A. Rapoport) **81i:90021** 90A10 (90A08, 90D35, 92A25)
- Verbal copies. *Polish Acad. Sci. Inst. Philos. Sociol. Bull. Sect. Logic* **9** (1980), no. 1, 16–22. (P. Štěpánek) **81i:60095** 68F20 (03B99)
- Nowakowski, Jerzy (with Trautman, Andrzej) Natural connections on Stiefel bundles are sourceless gauge fields. *J. Math. Phys.* **19** (1978), no. 5, 1100–1103. (C. S. Sharma) **81i:58020** 58D30 (53C05, 53C80, 81E10)
- Nowell, W. O., Jr. Tubular neighborhoods of Hilbert cube manifolds. *Pacific J. Math.* **83** (1979), no. 1, 231–252. (J. W. Maxwell) **81i:57011** 57N20 (57N40)
- Nowicka, Krystyna Some integral-functional equation with an unknown function of several variables. *Demonstratio Math.* **12** (1979), no. 3, 615–637. (I. Fenyő) **81i:45021** 45N05 (39B70)
- Nowicki, Eugeniusz (with Popkiewicz, Maciej) A method for planning continuous experiments with regard to cost. (Polish. English and Russian summaries) *Prace Nauk. Inst. Cybernet. Tech. Politech. Wrocław. Ser. Stud. Materiaby No. 26 Wybrane Problemy Teorii Eksperymentu i Identyfikacji Obiektów* (1978), 17–30. (Authors' summary) **81i:90105** 90B99
- Time-optimal control of a complex of dynamic independent operations. (Polish. Russian and English summaries) *Arch. Automat. Telemek.* **25** (1980), no. 1, 97–108. (Author's summary) **81i:93044** 93C10
- Nowicki, M. A diagnostic model for any-type-fault test generation in switching circuits. (French and German summaries) *Digital Process.* **6** (1980), no. 1, 69–74. (Author's summary) **81i:94040** 94C10
- Nowicki, Tadeusz (with Stańczak, Wiesław) On some class of algorithms used for determination of minimal groups in cliques. *Proceedings of the International Symposium on Applications of Mathematics in System Theory* (Univ. Braço, Braço, 1978), II, pp. 275–280. *Univ. Braço, Braço*, 1979. (Authors' summary) **81i:05079** 05C25 (68E10, 92A20)
- (with Stańczak, Wiesław) A methodology for preliminary estimation of the number of telephone exchanges in an urban multiechange network. (Polish. English, French, German and Russian summaries) *Rozprawy Elektrotech.* **26** (1980), no. 2, 525–540. (Authors' summary) **81i:90053** 90B22
- Nowinski, J. L. Bilateral bounds for the solution of a generalized biharmonic boundary value problem. *SIAM J. Appl. Math.* **39** (1980), no. 2, 193–200. (Cornelius O. Horgan) **81i:73061** 73K10 (31A30, 35J40, 73C30)
- Nowosad, Krzysztof (with Malinowski, Krzysztof; Strulak, Michał) Simplification of models of linear systems using the continued fractions method and the application of simplified models. (Polish. Russian and English summaries) *Arch. Automat. Telemek.* **24** (1979), no. 3, 351–370. (Authors' summary) **81i:93063** 93C99
- Nowosad, Pedro (with Tovar, Raul) The Carleman-Smithies theory of integral operators for reflexive Orlicz spaces. *Integral Equations Operator Theory* **2** (1979), no. 3, 388–406. (P. M. Anselone) **81i:45002** 45B05 (45P05, 47G05)
- (with Brietzke, Eduardo) Existence of optimal distribution of fuel in nuclear reactors. *Seminar on Numerical Analysis and its Applications to Continuum Physics* (Rio de Janeiro, 1980), pp. 9–17. *Soc. Brasil. Mat., Rio de Janeiro*, 1980. (From the introduction) **81i:49032** 49G05 (82A77, 93C20)
- (with Tovar, Raul) Spectral inequalities and G -functions. *Linear Algebra Appl.* **31** (1980), 179–197. (M. Lotkin) **81i:15021** 15A42 (15A60, 45I05)
- Noye, B. J. An introduction to finite difference techniques. *Numerical simulation of fluid motion* (Proc. Internat. Conf. Numerical Simulation of Fluid Dynamic Systems, Monash Univ., Melbourne, 1976), pp. 1–112. North-Holland, Amsterdam, 1978. (See **81i:76005**) 76-04 (65P05)
- (with Tronson, K. C. S.) Finite difference techniques applied to the simulation of tides and currents in gulfs. *Numerical simulation of fluid motion* (Proc. Internat. Conf. Numerical Simulation of Fluid Dynamic Systems, Monash Univ., Melbourne, 1976), pp. 285–355. North-Holland, Amsterdam, 1978. (See **81i:76005**) 76B15 (65P05, 86A05)
- (with Teubner, M. D.) Tidal and thermal propagation in a tidal estuary. *Numerical simulation of fluid motion* (Proc. Internat. Conf. Numerical Simulation of Fluid Dynamic Systems, Monash Univ., Melbourne, 1976), pp. 383–405. North-Holland, Amsterdam, 1978. (See **81i:76005**) 76B15 (65P05, 86A05)
- Finite difference schemes for the solution of linearised wind effect equations. *Numerical simulation of fluid motion* (Proc. Internat. Conf. Numerical Simulation of Fluid

- Dynamic Systems, Monash Univ., Melbourne, 1976*, pp. 435-451, North-Holland, Amsterdam, 1978. (See **81a:76005**) 76C15 (65P05)
- (with Webber, B.; Rienecker, M. M.; Teubner, M. D.) Comparison of some finite difference and analytical methods of solving tidal propagation equations. *Numerical simulation of fluid motion (Proc. Internat. Conf. Numerical Simulation of Fluid Dynamic Systems, Monash Univ., Melbourne, 1976)*, pp. 453-465, North-Holland, Amsterdam, 1978. (See **81a:76005**) 76B15 (65P05)
- Noye, John** See Numerical simulation of fluid motion, **81a:76005**
- Noyes, H. Pierre** (with Bastin, Ted; Amson, John; Kilmister, Clive W.) On the physical interpretation and the mathematical structure of the combinatorial hierarchy. *Internat. J. Theoret. Phys.* **18** (1979), no. 7, 445-488 (1980). (S. Bugajski) **81e:81009** 81B05 (81G25)
- Noz, Marilyn E.** (with Kim, Y. S.; Oh, S. H.) A simple method for illustrating the difference between the homogeneous and inhomogeneous Lorenz groups. *Amer. J. Phys.* **47** (1979), no. 10, 892-897. (Carl Wulfman) **81e:22022** 22E43 (81D25)
- Nozaki, A.** Sorting using networks of deques. *J. Comput. System Sci.* **19** (1979), no. 3, 309-315. (Author's summary) **81h:68076** 68E05
- (with Hikita, T.) Corrigenda: "A completeness criterion for spectra" [SIAM J. Comput. **6** (1977), no. 2, 285-297; MR 57 #2759]. *SIAM J. Comput.* **8** (1979), no. 4, 656. (From the text) **81d:94053** 94C99
- Nozicka, F.** (with Grygarová, Libuše) Über asymptotische Berührung von konvexen Mengen. *Z. Angew. Math. Mech.* **58** (1978), no. 7, T471-T473. (Editors) **81a:52005** 52A20 (90C25)
- Spherical mappings of convex sets and convex parametrical optimization. *Survey of mathematical programming (Proc. Ninth Internat. Math. Programming Symp., Budapest, 1976)*, Vol. 1, pp. 299-306, North-Holland, Amsterdam, 1979. (J. Stoer) **81i:90170** 90C25 (52A99)
- Ntafos, S. C.** (with Hakimi, S. Louis) On path cover problems in digraphs and applications to program testing. *IEEE Trans. Software Engrg.* **5** (1979), no. 5, 520-529. (Juris Borzovs) **81c:68015** 68B10 (68C25, 68E10)
- Nuñart, David** On the order convergence of stochastic processes. (Spanish) *Proceedings of the First Spanish-Portuguese Mathematical Conference (Madrid, 1973)* (Spanish), pp. 647-655, Consejo Sup. Inv. Cient., Madrid, 1977. (Evarist Giné) **81m:60068** 60G17 (60G07)
- Nuñart Rodón, David** (with Bonet, E.) Interpolation and forecasting in Poisson's processes. *Stochastica* **2** (1978), no. 3, 36-40 (1977). (O. Gulyás) **81f:62140** 62M20 (60G25)
- (with Sanz, Marta) Caractérisation des martingales à deux paramètres indépendantes du chemin. 8e École d'Été de Calcul des Probabilités de Saint-Flour (Saint-Flour, 1978). *Ann. Sci. Univ. Clermont Math.* No. 17 (1979), 96-104. (Authors' summary) **81k:60056** 60G44
- (with Sanz, Marta) A Markov property for two-parameter Gaussian processes. *Stochastica* **3** (1979), no. 1, 1-16. (M. Zakai) **81i:60066** 60J25 (60G60)
- Nucci, Maria Clara** (with Balli, Raffaele) The rotations of a gyrostatic satellite in a circular orbit. (Italian. English summary) *Rend. Mat.* (6) **12** (1979), no. 3-4, 493-500 (1980). (P. Hagedorn) **81g:70030** 70M05 (70E05)
- Nudel'man, A. A.** (with Krein, M. G.) Direct and inverse problems for the frequencies of boundary dissipation of a nonuniform string. (Russian) *Dokl. Akad. Nauk SSSR* **247** (1979), no. 5, 1046-1049. (R. C. Gilbert) **81d:34018** 34B25 (47B44, 81C05)
- van Nuffelen, Cyriel** See Van Nuffelen, Cyriel
- Nugmanov, Z. H.** Method for calculating surface velocity of arbitrary wing in ideal fluid. *Izv. Vysk. Uchebn. Zaved. Aviacion. Tehn.* **22** (1979), no. 4, 35-40 (Russian); translated as *Soviet Aeronaut.* **22** (1979), no. 4, 28-32. (Author's summary) **81g:76004** 76B05
- Nullier, B. M.** (with Kamyleva, G. A.) A class of mixed periodic problems of elasticity theory solvable in quadratures. (Russian) *Dokl. Akad. Nauk SSSR* **249** (1979), no. 2, 311-314. (B. A. Bondarenko) **81f:73008** 73C35
- (with Spesivceva, L. F.) On a class of problems for elastic regions weakened by an inhomogeneous inclusion. *Izv. Akad. Nauk SSSR Meh. Tverd. Tela* **14** (1979), no. 2, 46-52 (Russian); translated as *Mech. Solids* **14** (1979), no. 2, 47-53. (Authors' summary) **81d:73010** 73C40
- Nunata, Shigeru** (with Matsumoto, Makoto) On Finsler spaces with a cubic metric. *Tensor (N.S.)* **33** (1979), no. 2, 153-162. (Hideo Izumi) **81h:53024** 53B40
- Nummela, Eric C.** Cayley's theorem for topological groups. *Amer. Math. Monthly* **87** (1980), no. 3, 202-203. (M. I. Kabenjuk) **81i:22001** 22A05
- The completion of a topological group. *Bull. Austral. Math. Soc.* **21** (1980), no. 3, 407-417. (K. H. Hofmann) **81m:22001** 22-02 (01A60, 22-03, 22A05, 54E99)
- Nummelin, E.** A general failure model: optimal replacement with state dependent replacement and failure costs. *Math. Oper. Res.* **5** (1980), no. 3, 381-387. (Author's summary) **81k:90044** 90B25
- van Nuenen, J. A. E. E.** (with Wessels, Jaap) A note on dynamic programming with unbounded rewards. *Management Sci.* **24** (1977/78), no. 5, 576-580. (From the text) **81i:90202** 90C40 (90C39)
- Nunn, J. D. M.** The homotopy types of finite H -spaces. *Topology* **18** (1979), no. 1, 17-28. (J. F. Adams) **81h:55022** 55P45
- Nunokawa, Mamoru** On the starlike boundary of univalent functions. (Japanese) *Sūgaku* **31** (1979), no. 3, 255-256. (N. Saita) **81e:30023** 30C45
- Nunziante, Diana** Dirichlet problem for elliptic operators in bounded domains of \mathbb{R}^n with conical points. (Italian. English summary) *Rend. Accad. Sci. Fis. Mat. Napoli* (4) **46** (1979), 231-252 (1980). (Z. C. Motteler) **81m:35051** 35J40
- Nunziato, Jace W.** (with Walsh, Edward K.) On ideal multiphase mixtures with chemical reactions and diffusion. *Arch. Rational Mech. Anal.* **73** (1980), no. 4, 285-311. (Hilmi Demiray) **81e:73005** 73B05 (73S99, 80A30)
- Nurges, U.** Comparative analysis of the canonical forms of multidimensional linear systems. (Russian. Estonian and English summaries) *Eesti NSV Tead. Akad. Toimetised Füüs.-Mat.* **29** (1980), no. 3, 272-281, 346. (Author's summary) **81i:93017** 93B10 (93C05)
- Nuriev, R. M.** Information-logic connections in program schemes over arrays. *Kibernetika (Kiev)* **1979**, no. 1, 78-86 (Russian); translated as *Cybernetics* **15** (1979), no. 1, 90-100. (From the text) **81a:68016** 68B10 (68C05)
- Subdivided loops upon arrays. *Programirovanie* **1979**, no. 3, 33-43, 95 (Russian); translated as *Programming and Comput. Software* **5** (1979), no. 3, 173-181. (Author's summary) **81c:68008** 68B05
- Nurlybaev, A. N.** A Boolean function. (Russian) *The theory of nonregular curves in various geometric spaces (Russian)*, pp. 62-69, Kazah. Gos. Univ., Alma-Ata, 1979. (P. Štěpánek) **81f:03013** 03B05 (03B50)
- On the construction of a reduced disjunctive normal form by the Nelson method. (Russian) *The theory of nonregular curves in various geometric spaces (Russian)*, pp. 70-74, Kazah. Gos. Univ., Alma-Ata, 1979. (P. Štěpánek) **81f:03014** 03B05 (03B50)
- Nurminskii, E. A.** (with Lemaréchal, Claude) Sur la différentiabilité de la fonction d'appui du sous-différentiel approché. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **290** (1980), no. 18, A855-A858. (Jean-Paul Penot) **81m:46060** 46G05 (90C25)
- Nürnberg, Günther** Unicity and strong unicity in approximation theory. *J. Approx. Theory* **26** (1979), no. 1, 54-70. (F. Deutsch) **81a:41059** 41A65
- Strong uniqueness of best approximations and weak Chebyshev systems. *Quantitative approximation (Proc. Internat. Symp., Bonn, 1979)*, pp. 255-266, Academic Press, New York, 1980. (Joseph M. Lambert) **81k:41027** 41A65 (41A15)
- Continuous selections for the metric projection and alternation. *J. Approx. Theory* **28** (1980), no. 3, 212-226. (B. O. Björnström) **81i:41017** 41A30
- Nonexistence of continuous selections of the metric projection and weak Chebyshev systems. *SIAM J. Math. Anal.* **11** (1980), no. 3, 460-467. (F. Deutsch) **81d:41041** 41A65 (47H99)
- Nuruboev, M.** Some boundary value problems for a system of equations of composite type in three-dimensional space. (Russian) *Differentsial'nye Uravneniya* **16** (1980), no. 1, 179-182, 191. (H. Marcinkowska) **81d:35062** 35M05
- Nurzanov, O. D.** (with Samoilenko, A. M.) The Bubnov-Galerkin method for construction of periodic solutions of a Volterra type integro-differential equation. (Russian) *Differentsial'nye Uravneniya* **15** (1979), no. 8, 1503-1517, 1535. (M. Tvrdý) **81b:45021** 45J05
- Nurzanov, T.** The property of having a fixed sign for forms of higher order. (Russian) *Theoretical and applied problems of mathematics and mechanics (Russian)*, pp. 177-181, 244, "Nauka" Kazah. SSR, Alma-Ata, 1979. (Author's summary) **81a:93074** 93D20 (34D05)
- Nusayr, Abdul-Majid** Propagation of waves in rectangular ducts with sinusoidal undulations. *J. Acoust. Soc. Amer.* **67** (1980), no. 5, 1472-1476. (W. D. Lakin) **81m:76014** 76B99 (76Q05)
- Nussbaum, Roger D.** A Hopf global bifurcation theorem for retarded functional differential equations. *Trans. Amer. Math. Soc.* **238** (1978), 139-164. (Author's summary) **81h:34082** 34K15 (47H15, 58F14)
- Periodic solutions of nonlinear autonomous functional differential equations. *Functional differential equations and approximation of fixed points (Proc. Summer School and Conf., Univ. Bonn, Bonn, 1978)*, pp. 283-325, Lecture Notes in Math., 730, Springer, Berlin, 1979. (R. B. Grafton) **81g:34090** 34K05 (34K15)
- Uniqueness and nonuniqueness for periodic solutions of $x'(t) = -g(x(t-1))$. *J. Differential Equations* **34** (1979), no. 1, 25-54. (M. Iolov) **81f:34073** 34K15
- Nussenzeig, H. M.** (with Davidovich, Luiz) Theory of natural line shape. *Foundations of radiation theory and quantum electrodynamics*, pp. 83-108, Plenum, New York, 1980. (See **81i:81002**) 81K05
- Nussinov, Ruth** (with Piczenik, George; Griggs, Jerrold R.; Kleitman, Daniel J.) Algorithms for loop matchings. *SIAM J. Appl. Math.* **35** (1978), no. 1, 68-82. (Authors' summary) **81e:92009** 92A09
- Nute, Donald E.** Algebraic semantics for conditional logics. *Rep. Math. Logic* No. 10 (1978), 79-101 (1979). (Gary M. Hargreave) **81k:03029** 03B99 (03G99)
- Extensional equivalence of simple and general utilitarian principles. *Notre Dame J. Formal Logic* **20** (1979), no. 1, 32-36. (From the text) **81h:90020** 90A10
- (with Fetzer, James H.) Syntax, semantics, and ontology: a probabilistic causal calculus. Single-case probabilities. *Synthese* **40** (1979), no. 3, 453-495. (Stephen Read) **81g:03015** 03B45 (03B55)
- Conversational scorekeeping and conditionals. *J. Philos. Logic* **9** (1980), no. 2, 153-166. (Audrey McKinney) **81g:03019** 03B45 (03A05)
- Nuttall, J.** Sets of minimum capacity, Padé approximants and the bubble problem. *Bifurcation phenomena in mathematical physics and related topics (Proc. NATO Advanced Study Inst., Cargèse, 1979)*, pp. 185-201, NATO Adv. Study Inst. Ser., Ser. C: Math. and Phys. Sci., 54, Reidel, Dordrecht, 1980. (See **81f:00012**) 76B10
- (with Singh, S. R.) Continuation of partial-wave two-cluster atomic scattering amplitudes. *Comm. Math. Phys.* **72** (1980), no. 1, 1-13. (Authors' summary) **81d:81091** 81F10 (35P25)
- Nuttle, Henry L. W.** (with Baker, Kenneth R.) Sequencing independent jobs with a single resource. *Naval Res. Logist. Quart.* **27** (1980), no. 3, 499-510. (Authors' summary) **81i:90105** 90B35
- Nuyts, J.** (with Brihaye, Y.) Invariance properties of Yang equations and applications. *J. Math. Phys.* **21** (1980), no. 4, 909-912. (Authors' summary) **81d:81047** 81E10 (35Q20, 53C05, 58E20, 58G10)
- Nwokah, Olu D. I.** A note on the stability of multivariable systems. *Internat. J. Control* **31** (1980), no. 3, 587-592. (Author's summary) **81f:93060** 93D15 (93C35)
- A recurrent issue on the extended Nyquist array. *Internat. J. Control* **31** (1980), no. 3, 609-614. (Author's summary) **81f:93048** 93C35
- Nye, J. F.** (with Thorndike, A. S.; Cooley, C. R.) The structure and evolution of flow fields and other vector fields. *J. Phys. A* **11** (1978), no. 8, 1455-1490. (Author's summary) **81m:58022** 58C28 (57R45, 76C99, 86A35, 86A99)
- Optical caustics and diffraction catastrophes. *Structural stability in physics (Proc. Internat. Symposia Appl. Catastrophe Theory and Topological Concepts in Phys., Inst. Inform. Sci., Univ. Tübingen, Tübingen, 1978)*, pp. 54-60, Springer Ser. in Synergetics, 4, Springer, Berlin, 1979. (From the summary) **81a:78003** 78A05 (78A45)
- Structural stability in evolving flow fields. *Structural stability in physics (Proc. Internat. Symposia Appl. Catastrophe Theory and Topological Concepts in Phys., Inst. Inform. Sci., Univ. Tübingen, Tübingen, 1978)*, pp. 134-140, Springer Ser. in Synergetics, 4, Springer, Berlin, 1979. (D. K. Arrowsmith) **81a:57026** 57R25 (58C27)
- (with Thorndike, A. S.) Events in evolving three-dimensional vector fields. *J. Phys. A* **13** (1980), no. 1, 1-14. (D. K. Arrowsmith) **81a:57025** 57R25 (58C27)
- See also Feynman, Richard R.; et al. **81a:78001c**

- Nygard, Nils O. (with Lang, William E.) A short proof of the Rudakov-Safarevič theorem. *Math. Ann.* 251 (1980), no. 2, 171-173. (G. Horrocks) **81i:14024** 14J25
- Nylen, Peter J. The topological structure of the tangent and cotangent bundles on the long line. The Proceedings of the 1979 Topology Conference (Ohio Univ., Athens, Ohio, 1979). *Topology Proc.* 4 (1979), no. 1, 271-276 (1980). (Hans G. Bothe) **81i:58012** 58A30 (57R22)
- Order-theoretic base axioms. *Surveys in general topology*, pp. 367-398, Academic Press, New York, 1980. (J. E. Vaughan) **81i:54041** 54G99 (54-02)
- Some normal Moore spaces. *Topology (Proc. Fourth Colloq., Budapest, 1978)*, Vol. II, pp. 883-903. *Colloq. Math. Soc. János Bolyai*, 23, North-Holland, Amsterdam, 1980. (William G. Fleissner) **81i:54057** 54E30
- A provisional solution to the normal Moore space problem. *Proc. Amer. Math. Soc.* 78 (1980), no. 3, 429-435. (William G. Fleissner) **81i:54044** 54E30 (03E35, 54A35)
- (with Ismail, Mohammad) On spaces in which countably compact sets are closed, and hereditary properties. *Topology Appl.* 11 (1980), no. 3, 281-292. (S. P. Franklin) **81i:54043** 54D50 (54D55)
- Nykowski, Ireneusz (with Kersten, Grzegorz; Michalowski, Wojciech) On a certain sensitivity analysis in linear programming problems. I. (Polish. English and Russian summaries) *Przeegl. Statyst.* 25 (1978), no. 4, 495-516 (1979). (Authors' summary) **81i:90102** 90C05
- Nyman, J. E. (with Leahy, W. J.) A note on a theorem of Lindström. *Linear and Multilinear Algebra* 8 (1979/80), no. 3, 259-260. (Editors) **81i:05008** 05A05 (94B40)
- Nyrup, Kristian (with Mayoh, Brian H.) Map grammars: cycles and the algebraic approach. *Graph-grammars and their application to computer science and biology (Internat. Workshop, Bad Honnef, 1978)*, pp. 331-340. *Lecture Notes in Comput. Sci.*, 73, Springer, Berlin, 1979. (Authors' summary) **81i:68104** 68F05
- Nysanav, A. N. The unity of the abstract and the concrete in the development of mathematics. (Russian. English summary) *Voprosy Filos.* 1980, no. 8, 89-96, 185. (Stanislav Gluskov) **81i:00007** 00A25
- Nymor, E. Motion of two-phase filtering channel flow. (Russian) *Dokl. Akad. Nauk UzSSR* 1980, no. 6, 15-17. (Vladimir Kerchman) **81i:76080** 76T05
- Nylander, Eva On multiplicatively k -thin sets. (Slovak and Russian summaries) *Acta Fac. Rerum Natur. Univ. Comenian. Math.* 34 (1979), 165-168. (Anthony A. Gioia) **81i:10009** 10A20
- Oakes, David Matched pairs in independent Poisson processes. *J. Appl. Probab.* 16 (1979), no. 4, 780-793. (N. P. Leont'eva) **81i:60054** 60G55 (60K05)
- Ortiz-Oncas, Elena See Friglit-Oncas, Elena
- Oates-Williams, Sheila (with Street, Anne Penfold) Balanced binary arrays. I. The square grid. *Combinatorial mathematics, VI (Proc. Sixth Austral. Conf., Univ. New England, Armidale, 1978)*, pp. 165-198. *Lecture Notes in Math.*, 748, Springer, Berlin, 1979. (Severino V. Gervacio) **81i:05034a** 05B30
- (with Street, Anne Penfold) Balanced binary arrays. II. The triangular grid. *Ars Combin.* 8 (1979), 65-84. (Severino V. Gervacio) **81i:05034b** 05B30
- (with Street, Anne Penfold) Balanced binary arrays. III. The hexagonal grid. *J. Austral. Math. Soc. Ser. A* 28 (1979), no. 4, 479-498. (Severino V. Gervacio) **81i:05034c** 05B30
- Ohda, A.-S. F. (with Allam, M. A.; El-Samman, A.-R. A.) Contributions of the correlation functions to the optical constants. (Arabic summary) *Proc. Math. Phys. Soc. Egypt* No. 46 (1978), 35-42. (Andrzej Zardecki) **81i:82053** 82A55 (78A10)
- Ohdeam, V. Derivations-distributions. *An. Univ. Timisoara Ser. Stiint. Mat.* 16 (1978), no. 1, 63-68 (1979). (Josiane Lehmann-Lejeune) **81i:58010** 58A30 (58F06)
- Ohita, Mario See Minimal submanifolds and geodesics. **81i:53002**
- Okubo-Ohe, O. See Okubo-Ohe, O.
- Ohel, Jorge (with Vander Weide, James) On the decentralized capital budgeting problem under uncertainty. *Management Sci.* 25 (1979), no. 9, 873-883 (1980). (Authors' summary) **81i:90063** 90A15
- Obenbach, Robert L. See Smith, Gary; et al. **81i:62131**
- Obert, Kirti K. Spectral mapping theorem for essential spectra. *Rev. Roumaine Math. Pures Appl.* 25 (1980), no. 3, 365-373. (R. G. Bartle) **81i:47007** 47A10 (47A50)
- Obertoffler, J. (with Cailliez, J.) Les sous-groupes paraboliques de $SU(p, q)$ et $Sp(n, R)$ et applications à l'étude des représentations. *Analyse harmonique sur les groupes de Lie (Sém., Nancy-Strasbourg, 1976-1978)*, II, pp. 51-106. *Lecture Notes in Math.*, 739, Springer, Berlin, 1979. (J. Smidit) **81i:22014** 22E45
- (with Cailliez, J.) Séries complémentaires associées à certains paraboliques de $SU(n, n)$. *Analyse harmonique sur les groupes de Lie (Sém., Nancy-Strasbourg, 1976-1978)*, II, pp. 107-121. *Lecture Notes in Math.*, 739, Springer, Berlin, 1979. (J. Smidit) **81i:22015** 22E45
- Oberhofer, W. Die Nichtkonsistenz der M.-L. Schätzer im "switching regression" problem. *Metrika* 27 (1980), no. 1, 1-13. (Frederick N. Fritsch) **81i:62122** 62J05 (62F99)
- Oberle, Hans Joachim Numerical computation of singular control problems with application to optimal heating and cooling by solar energy. *Appl. Math. Optim.* 5 (1979), no. 4, 297-314. (Authors' summary) **81i:93044** 93C10 (65K10)
- Oberlin, Daniel M. Singular measures and l^p Fourier transforms. *Israel J. Math.* 34 (1979), no. 1-2, 115-120 (1980). (Benjamin B. Wells) **81i:43006** 43A15 (43A25)
- Translation-invariant operators of weak type. *Pacific J. Math.* 85 (1979), no. 1, 155-164. (Walter R. Bloom) **81i:43007** 43A22
- A Rudin-Carleson theorem for uniformly convergent Taylor series. *Michigan Math. J.* 27 (1980), no. 3, 309-313. (B. A. Taylor) **81i:46082** 46J15 (30B30)
- Obermair, G. M. (with Schellhuber, H. J.) First-principles calculation of diamagnetic band structure. *Phys. Rev. Lett.* 45 (1980), no. 4, 276-279. (Authors' summary) **81i:82057** 82A60 (81C99)
- Oberman, R. M. M. Comments on: "Modular replacement of combinational switching networks" [IEEE Trans. Comput. C-24 (1975), no. 1, 29-48; MR 54 #9882] by D. C. Schmidt and G. Metz. With a reply by Schmidt and Metz. *IEEE Trans. Comput.* 29 (1980), no. 1, 59-61. (K. L. Kodandapani) **81i:94053** 94C10
- Obermann, P. (with Baumgärtel, H.) Betrachtungen zu Gauß aus der Sicht der Mathematischen Physik. *Festakt und Tagung aus Anlaß des 200. Geburtstages von Carl Friedrich Gauß (Berlin, 1977)*, pp. 83-91. *Abh. Akad. Wiss. DDR, Abt. Math. Naturwiss. Tech.*, 1978, 3, Akademie-Verlag, Berlin, 1978. (D. J. Struik) **81i:01013** 01A55 (45-03, 49-03)
- Oberquelle, Horst Nets as a tool in teaching and in terminology work. *Net theory and applications (Proc. Adv. Course General Net Theory Processes Systems, Hamburg, 1979)*, pp. 482-506. *Lecture Notes in Comput. Sci.*, 84, Springer, Berlin, 1980. (Boleslaw Mikolajczak) **81i:68080** 68E10 (68D90)
- Obi, Chike Analytical theory of nonlinear oscillations. IX. Limit oscillations and unbounded solutions of equations of the second order. *Ann. Mat. Pura Appl.* (4) 120 (1979), 139-157. (H. C. Howard) **81i:34032** 34C25 (34C11)
- Obiena, E. U. Some separable non-Archimedean topological vector spaces. *Ann. Fac. Sci. Univ. Nat. Zaire (Kinshasa) Sect. Math.-Phys.* 4 (1978), no. 1, 75-82. (L. Narici) **81i:46099** 46P05
- Obnosov, Ju. V. Solution of a homogeneous power Hilbert problem with constant index. (Russian) *Trudy Sem. Krasn. Zashch. No. 15* (1978), 99-107, 217. (Zbigniew Binderman) **81i:30059** 30E25 (45E05)
- On the solution of the linear Hilbert problem in a special case. (Russian) *Izv. Vysl. Ucheb. Zaved. Matematika* 1979, no. 9, 29-40. (S. A. Tersenov) **81i:30052** 30E25
- Obolavill, E. A generalized Cauchy-Riemann system on multidimensional Euclidean space. (Russian) *Kompleksnyy Analiz i ikh primeneniye na partielle Differentsialnyye Uravneniya (Tagung, Martin-Luther-Universität, Halle, 1976)*. *Wiss. Beitr. Martin-Luther-Univ. Halle-Wittenberg M* 27 (1977), 36-39. (From the text) **81i:30084** 30G20 (30D05)
- Obolskii, A. Ju. Stability of the solutions of comparison systems. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A No. 8* (1979), 607-611, 686. (A. I. Kir'janen) **81i:34041** 34D20
- Obrazova, E. I. (with Skljarkuk, F. I.) Nonlinear parametric oscillations of a cylindrical tank with a fluid. *Izv. Akad. Nauk SSSR Meh. Teord. Tela* 14 (1979), no. 4, 133-145 (Russian); translated as *Mech. Solids* 14 (1979), no. 4, 115-126. (Author's summary) **81i:73035** 73J06 (73D35, 73L20)
- Obrechikoff, N. See Obrechikoff, Nikola
- Obrecht, Enrico (with Bove, Antonio; Franchi, Bruno) An elliptic boundary value problem with unbounded coefficients in a half space. (Italian summary) *Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur.* (8) 65 (1978), no. 6, 265-268 (1979). (From the introduction) **81i:35044** 35J40
- (with Bove, Antonio; Franchi, Bruno) An initial-boundary value problem with mixed lateral conditions for heat equation. (Italian summary) *Ann. Mat. Pura Appl.* (4) 121 (1979), 277-307. (Mario Primicerio) **81i:35058** 35K05 (35D05, 80A20)
- Obrenski, Thomas E. On the choice of starting point in stochastic approximation. *J. Amer. Statist. Assoc.* 74 (1979), no. 367, 700-702. (V. Fabian) **81i:62090** 62L20
- Obrechikoff, Nikola See Dimovski, Ivan Hristov; et al. **81i:44002**
- Obretenov, Apostol A class of discrete distributions and their application to a simple random walk. (Russian) *Serdica* 4 (1978), no. 2-3, 250-259. (Gh. Oprisan) **81i:60028** 60E99 (60K05)
- Obrezkov, O. I. (with Abugov, D. I.) Acoustic wave generation and amplification by thermal processes. I. Basic relations of thermoacoustics. *Izv. Vysl. Ucheb. Zaved. Aviacion. Tehn.* 23 (1980), no. 1, 3-8 (Russian); translated as *Soviet Aeronaut.* 23 (1980), no. 1, 1-5. (Authors' summary) **81i:76055** 76Q05
- O'Brian, Walter H. Russell on Leibniz. (German summary) *Studia Leibnitiana* 11 (1979), no. 2, 159-222. (F. C. Kreiling) **81i:01010** 01A60 (00A25, 01A70, 03A05)
- O'Brien, G. L. Pairwise independent random variables. *Ann. Probab.* 8 (1980), no. 1, 170-175. (J. Galambos) **81i:60011** 60C05 (65C10)
- A limit theorem for sample maxima and heavy branches in Galton-Watson trees. *J. Appl. Probab.* 17 (1980), no. 2, 539-545. (A. R. Moncayo) **81i:60077** 60I80
- Scaling transformations for $\{0, 1\}$ -valued sequences. *Z. Wahrsch. Verw. Gebiete* 53 (1980), no. 1, 35-49. (U. Krengel) **81i:28011** 28D05 (60G10)
- O'Brien, G. M. (with Hogan, P. A.) On the motion of rotating bodies in linearized gravity. *Phys. Lett. A* 72 (1979), no. 6, 395-397. (Authors' summary) **81i:83018** 83C25
- A note on twisting type- N solutions. *J. Phys. A* 13 (1980), no. 5, L143-L145. (S. Hacyan) **81i:83014** 83C15
- Equations of motion in linearized gravity: charged rotating sources. *J. Phys. A* 13 (1980), no. 5, 1747-1754. (Authors' summary) **81i:83014** 83C10 (83C25)
- An Einstein-Maxwell field with null fluid present. *Phys. Lett. A* 77 (1980), no. 2-3, 105-106. (Authors' summary) **81i:83015** 83C15 (83C50)
- O'Brien, James J. (with Camerlengo, Alejandro L.) Open boundary conditions in rotating fluids. *J. Comput. Phys.* 35 (1980), no. 1, 12-35. (P. C. Jain) **81i:76076** 76U05
- O'Brien, R. E. Perturbation of controllable systems. *Proceedings of the 1978 IEEE Conference on Decision and Control including the 17th Symposium on Adaptive Processes (San Diego, Calif., 1979)*, pp. 286-289. *IEEE, New York, 1979*. (Authors' summary) **81i:93013** 93B05 (93B35, 93C25)
- O'Brien, Ralph G. A general ANOVA method for robust tests of additive models for variances. *J. Amer. Statist. Assoc.* 74 (1979), no. 368, 877-880. (M. L. Tiku) **81i:62127** 62J10
- O'Brien, Richard C. (with McCartney, Philip W.) A separable Banach space with the Radon-Nikodým property that is not isomorphic to a subspace of a separable dual. *Proc. Amer. Math. Soc.* 78 (1980), no. 1, 40-42. (Fumio Hiai) **81i:46035** 46B22
- O'Brien, Vivian Fully-developed forced convection in rectangular ducts and illustrations of some general inequalities. (French summary) *Z. Angew. Math. Phys.* 30 (1979), no. 6, 913-928. (A. K. Singh) **81i:76052** 76R05
- Obuhovskii, V. V. (with Borisov, Ju. G.; Gelfman, B. D.; Myškin, A. D.) Topological methods in the theory of fixed points of multivalued mappings. (Russian) *Uspehi Mat. Nauk* 35 (1980), no. 1(211), 59-126, 255. (Gencho Skordev) **81i:55004** 55M20 (55M25)
- Ocampo, Julio C. (with Sorraín, Oscar M.; Boggio, R.; Rafael) Continuous and discontinuous Markov-chain models for mastitis infection. *Math. Biosci.* 52 (1980), no. 3-4, 277-287. (Authors' summary) **81i:92041** 92A15 (60J20, 92A07)
- O'Carroll, L. A note on strongly E -reflexive inverse semigroups. *Proc. Amer. Math. Soc.* 79 (1980), no. 3, 352-354. (John W. Hogan) **81i:20116** 20M10
- O'Carroll, M. J. A variational principle for ideal flow over a spillway. *Internat. J. Numer. Methods Engrg.* 15 (1980), no. 5, 767-772. (Authors' summary) **81i:76007** 76B10
- Occorsio, Mario Rosario (with Mastroianni, Giuseppe) A generalization of the Stancu operator. (Italian. English summary) *Rend. Accad. Sci. Fis. Mat. Napoli* (4) 45 (1978), 495-511 (1979). (D. D. Stancu) **81i:41034** 41A36 (41A10)

- Ochiai, Mitsuyuki Heegaard diagrams and Whitehead graphs. *Math. Sem. Notes Kobe Univ.* 7 (1979), no. 3, 573–591. (G. Peter Scott) **81e:57003** 57M15 (57N10)
- Ochiai, Shoji Note on the symmetric functions. *Bull. Nara Univ. Ed. Natur. Sci.* 27 (1978), no. 2, 1–3. (Donald M. Davis) **81a:55030** 55S10 (05A10)
- On the action of the Steenrod reduced powers in a polynomial Hopf algebra over the Steenrod algebra. *Bull. Nara Univ. Ed. Natur. Sci.* 28 (1979), no. 2, 1–3. (Harvey Margolis) **81e:55026** 55S10
- Ochiai, T. (with Furuta, K.; Kajiwara, H.) Modelling of human control action in man-machine system. *Simulation of systems '79 (Proc. Ninth IMACS Congress, Sorrento, 1979)*, pp. 611–616, North-Holland, Amsterdam, 1980. (Authors' summary) **81m:93047** 93C40 (49E99)
- Ochiai, Takashi Cone structures and positive currents. *Osaka J. Math.* 16 (1979), no. 3, 605–616. (Robert M. Hardt) **81d:32019** 32C30 (49F20, 58A25)
- (with Kobayashi, Shoshichi) Holomorphic projective structures on compact complex surfaces. *Math. Ann.* 249 (1980), no. 1, 75–94. (Takao Fujita) **81g:32021** 32J15
- (with Kasue, Atsushi) On holomorphic sections with slow growth of Hermitian line bundles on certain Kähler manifolds with a pole. *Osaka J. Math.* 17 (1980), no. 3, 677–690. (Haruo Kitahara) **81k:53059** 53C55 (32L05)
- Ochoa, J. The Diophantine equation $b_0 y^2 - b_1 y^2 + b_2 y - b_3 = x^2$. (Spanish) *Gaceta Mat.* (1) (Madrid) 30 (1978), no. 5-6, 139–141. (R. Steiner) **81e:10015** 10B10
- Ochirov, M. N. Summation of orthogonal series by the Riesz method. (Russian) *Application of the methods of functional analysis to problems of mathematical physics and numerical analysis (Russian)*, pp. 100–107, Akad. Nauk SSSR Sibirsk. Otdel. Inst. Mat., Novosibirsk, 1979. (A. Oleviski) **81i:42026** 42C15
- Ockendon, J. R. Differential equations and industry. *Math. Sci.* 5 (1980), no. 1, 1–12. (F. J. Murray) **81b:00010** 00A69
- O'Connell, James R., Jr. (with Beard, Jacob T. B., Jr.; West, Karen I.) Perfect polynomials over $\mathbb{GF}(q)$. (Italian summary) *Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur.* (8) 62 (1977), 283–291. (From the introduction) **81i:12022** 12C05
- O'Connell, R. F. (with Wallace, G. L.) Energy flow vector of the electromagnetic field. (French summary) *Canad. J. Phys.* 58 (1980), no. 6, 744–745. (Authors' summary) **81h:78007** 78A25 (78A40)
- (with Barker, B. M.) Removal of acceleration terms from the two-body Lagrangian to order c^{-4} in electromagnetic theory. (French summary) *Canad. J. Phys.* 58 (1980), no. 12, 1659–1666. (Authors' summary) **81h:78005** 78A35
- (with Ford, G. W.) Absorption of radiation in a magnetoplasma and application to the laser-fusion process. *Phys. Rev. A* (3) 22 (1980), no. 1, 295–300. (Magdi M. Shourci) **81e:76008** 76X05 (82A45)
- O'Connor, Thomas A. Convex combinations of homomorphisms. *J. Math. Anal. Appl.* 78 (1980), no. 1, 36–40. (G. Maltese) **81m:46078** 46K05 (43A35)
- Oda, Juhachi (with Yamazaki, Kouetsu) A procedure to obtain a fully stressed shape of elastic continuum. *Internat. J. Numer. Methods Engrg.* 15 (1980), no. 7, 1095–1105. (Authors' summary) **81d:73066** 73K40
- Oda, Moriya (with Kokawa, Masasumi; Nakamura, Kahei) Fuzziness and catastrophe in estimation and decision processes. *Advances in fuzzy set theory and applications*, pp. 463–480, North-Holland, Amsterdam, 1979. (Zdeněk Ertinger) **81e:58020** 58C28 (90A05, 92A25, 94D05)
- (with Shimomura, Tsutomu; Womack, Baxter F.) Concept structure and its distortion in the communication and formation process of morality concept. *Fuzzy sets (Proc. Sympos. Policy Anal. Inform. Systems, Duke Univ., Durham, N.C., 1980)*, pp. 369–389, Plenum, New York, 1980. (Authors' summary) **81i:92027** 92A25
- Oda, Taduo ★ Torus embeddings and applications. Based on joint work with Katsuya Miyake. Tata Institute of Fundamental Research Lectures on Mathematics and Physics, 57. Published for the Tata Institute of Fundamental Research, Bombay; by Springer-Verlag, Berlin-New York, 1978. xi + 175 pp. ISBN 3-540-08852-0 (I. Dolgachev) **81e:14001** 14-02 (14E35, 14K20, 14M17, 32J15)
- (with Oort, Frans) Supersingular abelian varieties. *Proceedings of the International Symposium on Algebraic Geometry (Kyoto Univ., Kyoto, 1977)*, pp. 595–621, Kinokuniya Book Store, Tokyo, 1978. (Neal Koblitz) **81i:14023** 14K10 (14L15)
- Oda, Takayuki A note on the Tate conjecture for $K3$ surfaces. *Proc. Japan Acad. Ser. A Math. Sci.* 56 (1980), no. 6, 296–300. (Kenneth A. Ribet) **81j:14013** 14G13 (10D30, 14J20)
- Odarić, M. O. (with Odarić, O. M.) Oscillatory properties of the solutions of nonlinear second-order differential equations with retarded argument. (Russian) *Asymptotic behavior of solutions of functional-differential equations (Russian)*, pp. 83–95, 156, Akad. Nauk Ukrain. SSR, Inst. Mat., Kiev, 1978. (Pavol Marušiač) **81b:34066** 34K15
- Odarić, O. M. (with Odarić, M. O.) Oscillatory properties of the solutions of nonlinear second-order differential equations with retarded argument. (Russian) *Asymptotic behavior of solutions of functional-differential equations (Russian)*, pp. 83–95, 156, Akad. Nauk Ukrain. SSR, Inst. Mat., Kiev, 1978. (Pavol Marušiač) **81b:34066** 34K15
- (with Derkač, V. P.; Korsunskii, V. M.; Grabovskii, B. O.) An integral equation describing the interaction between the accelerated electron flow and the target. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A No. 12* (1979), 1031–1035, 1070. (L. B. Rall) **81f:45024** 45L10 (78A35)
- Odds, Tom See Graham, Ronald L.
- Oddie, Graham (with Howson, Colin) Miller's so-called paradox of information. *British J. Philos. Sci.* 30 (1979), no. 3, 253–261. (Glenn Shafer) **81d:62003** 62A15 (03B10)
- Odell, C. (with Guesserie, Roger) On economic games which are not necessarily superadditive. Solution concepts and application to a local public good problem with few agents. *Econom. Lett.* 3 (1979), no. 4, 301–306. (Authors' summary) **81a:90173** 90D40 (90A15)
- Odell, E. A normalized weakly null sequence with no shrinking subsequence in a Banach space not containing ℓ_1 . *Compositio Math.* 41 (1980), no. 2, 287–295. (R. C. James) **81g:46016** 46B10 (46B20)
- Odell, Patrick L. A model for dimension reduction in pattern recognition using continuous data. *Pattern Recognition* 11 (1979), no. 1, 51–54. (Author's summary) **81a:68102** 68G10 (62H30)
- Oden, Gregg C. Fuzzy propositional approach to psycholinguistic problems: an application of fuzzy set theory in cognitive science. *Advances in fuzzy set theory and applications*, pp. 409–420, North-Holland, Amsterdam, 1979. (J. S. Joel) **81a:92023** 92A25 (03E72, 68G10)
- Oden, J. Tinsley Existence theorems and approximations in nonlinear elasticity. *Nonlinear equations in abstract spaces (Proc. Internat. Sympos., Univ. Texas, Arlington, Tex., 1977)*, pp. 265–274, Academic Press, New York, 1978. (John M. Ball) **81e:73020** 73C30 (73K25)
- (with LeTallec, P.) On the existence of hydrostatic pressure in regular finite deformations of incompressible hyperelastic solids. *Nonlinear partial differential equations in engineering and applied science (Proc. Conf., Univ. Rhode Island, Kingston, R.I., 1979)*, pp. 1–13, Lecture Notes in Pure and Appl. Math., 54, Dekker, New York, 1980. (R. R. Huilgol) **81g:73057** 73G05 (49B22)
- (with Bernadou, Michel) Théorème d'existence pour une classe de problèmes non linéaires de coques peu profondes. (English summary) *C. R. Acad. Sci. Paris Sér. A-1* 290 (1980), no. 21, A1025–A1028. (Authors' summary) **81g:73096** 73L99 (47H10, 49A29)
- See also Computational methods in nonlinear mechanics, **81e:73002**
- Odinec, V. P. A lemma of Banach on peak functions. (Russian) *Comment. Math. Prati. Mar.* 21 (1980), no. 1, 195–201. (Edward Azofof) **81m:46044** 46E25 (54C30)
- Odlyzko, A. M. (with Lagarias, J. C.; Montgomery, H. L.) A bound for the least prime ideal in the Chebotarev density theorem. *Invent. Math.* 54 (1979), no. 3, 271–296. (Larry J. Goldstein) **81b:12013** 12A75 (10H08)
- (with Sloane, N. J. A.) New bounds on the number of unit spheres that can touch a unit sphere in n dimensions. *J. Combin. Theory Ser. A* 26 (1979), no. 2, 210–214. (Peter Gruber) **81d:52010** 52A45 (05B40, 94B30)
- (with Bombieri, Enrico; Hunt, D. C.) Thompson's problem ($\sigma^2=3$). Appendix by A. Odlyzko and D. Hunt. *Invent. Math.* 58 (1980), no. 1, 77–100. (Stephen D. Smith) **81f:20019** 20D05
- (with Guibas, Leo J.) Long repetitive patterns in random sequences. *Z. Wahrsch. Verw. Gebiete* 53 (1980), no. 3, 241–262. (Endre Csáki) **81m:60047** 60F15 (60C05)
- Odnovolova, T. N. (with Sjivavko, M. S.) Representation of the solution of a class of nonlinear Fredholm equations by branching integral continued fractions. (Russian) *Vestnik L'vov. Politehn. Inst. No. 141* *Diferentsial'nye Uravnenija i ih Prilozhen.* (1980), 86–88, 124. (Authors' summary) **81i:65108** 65R20 (45L10)
- Odosi, R. W. K. The distribution of integral and prime-integral values of systems of full-normal polynomials and affine-decomposable polynomials. *Mathematika* 26 (1979), no. 1, 80–87. (Larry J. Goldstein) **81c:12023** 12A75 (10H15)
- O'Donnell, Michael A programming language theorem which is independent of Peano arithmetic. *Conference Record of the Eleventh Annual ACM Symposium on Theory of Computing (Atlanta, Ga., 1979)*, pp. 176–188, ACM, New York, 1979. (Author's summary) **81d:68015** 68B05 (03D15, 03F30, 68C25)
- O'Donnell, William J. A theorem concerning octagonal numbers. *J. Recreational Math.* 12 (1979/80), no. 4, 271–272. (Editors) **81f:10018** 10A35
- Odoux, J. (with Ramis, E.; Deschamps, C.) ★ Cours de mathématiques spéciales. Vol. 2. (French) [Course on special mathematics. Vol. 2] *Algèbre et applications à la géométrie*. Masson, Paris, 1979. viii + 297 pp. ISBN 2-225-63404-1 (B. Artmann) **81a:15002** 15-01 (51-01)
- Odulo, A. B. Long nonlinear waves in a rotating ocean of variable depth. (Russian) *Dokl. Akad. Nauk SSSR* 248 (1979), no. 6, 1439–1442. (Author's summary) **81d:76015** 76B15 (76C20, 86A05)
- (with Muzylev, S. V.) Waves in a rotating stratified liquid near a sloping shore. (Russian) *Dokl. Akad. Nauk SSSR* 250 (1980), no. 2, 331–335. (From the text) **81e:76078** 76U05 (76V05, 86A05)
- Odyncel, Michal (with Kudrewicz, Jacek) Oscillations of slowly varying amplitude, phase and constant component in some class of nonlinear autonomous systems. *Proceedings of the Fourth International Symposium on Network Theory (Ljubljana, 1979)*, pp. 57–62, Georgi, St.-Saphorin, 1979. (Authors' summary) **81c:93038** 93C10
- van Oeffelen, M. P. J. (with Eijkman, E. G. J.; Jongma, H. J.; Vintcent, J.) Identification of figural elements in a visual domain. *Biol. Cybernet.* 38 (1980), no. 4, 213–221. (Authors' summary) **81j:92054** 92A27 (68G10)
- Oehmke, Robert H. Some elementary structure theorems for a class of Lie-admissible algebras. *Proceedings of the Second Workshop on Lie-Admissible Formulations (Sci. Center, Harvard Univ., Cambridge, Mass., 1979)*, Part B. *Hadronic J.* 3 (1979/80), no. 1, 293–319. (M. L. Tomber) **81h:17025** 17D99 (17A20, 81C99)
- Oeljeklaus, Eberhard (with Huckleberry, Alan T.) Sur les espaces analytiques complexes presque homogènes. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 10, A447–A448. (Authors' summary) **81c:32057** 32M10
- (with Huckleberry, Alan T.) A characterization of complex homogeneous cones. *Math. Z.* 170 (1980), no. 2, 181–194. (D. N. Ahiezer) **81b:32017** 32M10
- Oelschlägel, Dieter (with Süss, Herbert) Fehlerabschätzung bei einem speziellen quadratischen Optimierungsproblem. *Z. Angew. Math. Mech.* 59 (1979), no. 9, 482–483. (Authors' summary) **81j:65067** 65G10 (65K10)
- (with Süss, Herbert) Behandlung spezieller Optimierungsprobleme mit intervallanalytischen Methoden. *Beiträge Numer. Math.* 8 (1980), 121–129. (Authors' summary) **81f:65054** 65K10
- (with Bendzulla, Claus; Süss, Herbert) Intervallarithmetik—Rechentchnische Realisierung und Anwendung in der Optimierung. *Wiss. Z. Tech. Hochsch. Leuna-Merseburg* 22 (1980), no. 1, 65–69. (G. Alefeld) **81g:65056** 65G10
- (with Wörfel, Friedrich) Lineare Mehrschrittverfahren zur Lösung impliziter Differentialgleichungssysteme I. Ordnung. *Wiss. Z. Tech. Hochsch. Leuna-Merseburg* 22 (1980), no. 1, 70–79. (J. Sprekels) **81g:65118** 65L99
- Oesterlé, Joseph Travaux de Ferrero et Washington sur le nombre de classes d'idéaux des corps cyclotomiques. *Séminaire Bourbaki (1978/79) (French)*, Exp. No. 535, pp. 170–182, Lecture Notes in Math., 770, Springer, Berlin, 1980. (Wells Johnson) **81i:12005** 12A35
- Oettli, Karl Werner The method of feasible directions for continuous minimax problems. *Survey of mathematical programming (Proc. Ninth Internat. Math. Programming Sympos., Budapest, 1976)*, Vol. 1, pp. 505–512, North-Holland, Amsterdam, 1979. (G. Opler) **81h:49019** 49B40 (49D37, 90C30)
- O'Farrell, Anthony G. A regular uniform algebra with a continuous point derivation of infinite order. *Bull. London Math. Soc.* 11 (1979), no. 1, 41–44. (H. G. Dales) **81i:46002** 46J10

- Estimates for capacities, and approximation in Lipschitz norms. *J. Reine Angew. Math.* **311/312** (1979), 101–115. (David W. Kammler) **81d:30071** 30E10 (41A30, 46J99)
- (with Preskenis, Kenneth J.) Approximation of polynomials in two complex variables. *Math. Ann.* **246** (1979/80), no. 3, 225–232. (Thomas Bloom) **81c:32018** 32E30 (32E20)
- Real parts of analytic functions. *Proc. Roy. Irish Acad. Sect. A* **79** (1979), no. 16, 173–178. (Volker Wrobel) **81c:46046** 46J15
- Offord, Cyril (with Jacob, Mathias) Les fonctions aléatoires dans le disque unité. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **290** (1980), no. 8, A367–A369. (D. J. Eustice) **81i:42028** 42C10 (30B10, 30D35, 60G17)
- Ofiejewski, J. (with Białynicki-Birula, Iwo) Collisions of gaussons. *Acta Phys. Polon. B* **9** (1978), no. 9, 759–775. (Authors' summary) **81d:81015** 81C05 (35Q20, 65P05)
- Oganesjan, A. O. Local solvability and hypoellipticity for a class of second-order equations. (Russian. Armenian summary) *Akad. Nauk Armjan. SSR Dokl.* **70** (1980), no. 2, 85–91. (K. A. Jagdžjan) **81j:35006** 35A07 (35H05)
- Oganesjan, G. K. On series of independent random variables. (Russian. Armenian and English summaries) *Izv. Akad. Nauk Armjan. SSR Ser. Mat.* **12** (1977), no. 5, 358–364, 416. (Gábor J. Székely) **81d:60040** 60F15
- Oganesjan, G. R. Mixed problems for weakly hyperbolic equations with two independent variables. (Russian. Armenian and English summaries) *Izv. Akad. Nauk Armjan. SSR Ser. Mat.* **14** (1979), no. 5, 369–390, 404. (A. Džuraev) **81j:35099** 35L35
- Oganesjan, G. U. The solvability of the word problem for semigroups with a defining relation of the form $A = B/C$. (Russian. Armenian and English summaries) *Izv. Akad. Nauk Armjan. SSR Ser. Mat.* **14** (1979), no. 4, 288–291, 315. (André Lentin) **81g:20106** 20M05
- Oganesjan, A. E. The virial theorem and the trace formula in the Friedrichs model. (Russian) *Mathematical analysis and probability theory* (Russian), pp. 127–131, 218. "Naukova Dumka", Kiev, 1978. (Boris Pavlov) **81m:47017** 47A40 (47B38)
- Oganesjan, G. G. (with Bagdov, A. G.) Propagation of modulated nonlinear waves in a relaxing gas-liquid mixture. *Izv. Akad. Nauk SSSR Meh. Židk. Gaza* **1980**, no. 1, 133–143 (Russian); translated as *Fluid Dynamics* **15** (1980), no. 1, 108–116. (Ph. Mathieu) **81j:76034** 76V05 (76B15, 76T05)
- Oganesjan, V. K. Combinatorial principles in the stochastic geometry of random fields of segments. (Russian. Armenian summary) *Akad. Nauk Armjan. SSR Dokl.* **68** (1979), no. 3, 150–154. (W. J. Firey) **81c:60011** 60D05 (53C65)
- Oganesjan, G. G. See Oganesjan, G. G.
- Ogata, Yoshihiko Maximum likelihood estimates of incorrect Markov models for time series and the derivation of AIC. *J. Appl. Probab.* **17** (1980), no. 1, 59–72. (Kenneth N. Berk) **81j:62137** 62M10 (62M20)
- Ogawa, Hajimu Energy decay for solutions of ultrahyperbolic inequalities. *J. Differential Equations* **34** (1979), no. 1, 74–83. (M. H. Protter) **81c:35011** 35B40 (35L99)
- Ogawa, Hirokatsu (with Agui, Takeshi; Nakajima, Masayuki) Optimal position of measurements in linear stochastic distributed-parameter system by scanning. *Systems-Comput.-Controls* **9** (1978), no. 5, 16–22 (1980). (From the summary) **81j:93054** 93E10
- Ogawa, Junjiro Experimental randomization in statistical inference. *Recent developments in statistical inference and data analysis* (Proc. Internat. Conf., Inst. Statist. Math., Tokyo, 1979), pp. 237–246, North-Holland, Amsterdam, 1980. (Ch'ing Shui Ch'eng) **81m:62142** 62K10
- Ogawa, Kiyoshi (with Horie, Mikio; Funabashi, Hiroaki; Kobayashi, Hiroshi) A displacement analysis of plane multilink mechanisms with clearances and tolerances. *Bull. JSME* **23** (1980), no. 183, 1522–1529. (Authors' summary) **81m:70006** 70B99
- Ogawa, Shigeyoshi Remarks on the B-shifts of generalized random processes. *Proceedings of the International Symposium on Stochastic Differential Equations* (Res. Inst. Math. Sci., Kyoto Univ., Kyoto, 1976), pp. 327–339, Wiley, New York, 1978. (Ronald F. Fox) **81m:60069** 60G20
- Ogawa, Shiro (with Kida, Sôsburo; Arioka, Shigekatsu) On some conditions for polynomial interpolation. *Math. Japon.* **24** (1979/80), no. 6, 627–634. (Franz-Jürgen Delvos) **81c:41004** 41A05 (41A63)
- (with Arioka, Shigekatsu; Kida, Sôsburo) On orthogonal polynomials in two variables and Gaussian cubature formulas. *Math. Japon.* **25** (1980), no. 3, 255–277. (I. P. Mysovskikh) **81c:65028** 65D32 (41A55, 42C05)
- Ogawa, Wataru Boundary behavior of Dirichlet solutions at regular boundary points. *Hokkaido Math. J.* **9** (1980), no. 1, 107–111. (J. Donig) **81h:31001** 31A20 (30E25)
- Ogden, R. D. (with Våg, S.) Harmonic analysis of a nilpotent group and function theory of Siegel domains of type II. *Adv. in Math.* **33** (1979), no. 1, 31–92. (A. Korányi) **81f:22016** 22E30 (22E45, 32M10, 43A80, 81D05)
- Ogden, R. W. (with Haughton, D. M.) Bifurcation of inflated circular cylinders of elastic material under axial loading. I. Membrane theory for thin-walled tubes. *J. Mech. Phys. Solids* **27** (1979), no. 3, 179–212. (Authors' summary) **81b:73007a** 73C50 (35B32)
- (with Haughton, D. M.) Bifurcation of inflated circular cylinders of elastic material under axial loading. II. Exact theory for thick-walled tubes. *J. Mech. Phys. Solids* **27** (1979), no. 5–6, 489–512. (Authors' summary) **81b:73007b** 73C50 (35B32)
- (with Haughton, D. M.) Bifurcation of rotating thick-walled elastic tubes. *J. Mech. Phys. Solids* **28** (1980), no. 1, 59–74. (Xanthippi Markenscoff) **81j:73050** 73H05 (35B32, 58E07)
- (with Haughton, D. M.) Bifurcation of finitely deformed rotating elastic cylinders. *Quart. J. Mech. Appl. Math.* **33** (1980), no. 3, 251–265. (Authors' summary) **81k:73016** 73C50 (58E07, 73M10)
- Ogimoto, K. (with Johnston, G. W.) Sound radiation from a finite length unflanged circular duct with uniform axial flow. I. Theoretical analysis. *J. Acoust. Soc. Amer.* **68** (1980), no. 6, 1858–1870. (Authors' summary) **81k:76058a** 76Q05
- (with Johnston, G. W.) Sound radiation from a finite length unflanged circular duct with uniform axial flow. II. Computed radiation characteristics. *J. Acoust. Soc. Amer.* **68** (1980), no. 6, 1871–1883. (Authors' summary) **81k:76058b** 76Q05
- Ogino, Katsuya Decentralized approach for electric generating system development—energy supply-social siting concern interaction. *Optimization techniques* (Proc. Ninth IFIP Conf., Warsaw, 1979), Part 2, pp. 536–545, Lecture Notes in Control and Information Sci., 23, Springer, Berlin, 1980. (See **81j:49011b**) 90A30
- Ogish, O. V. A nonlinear method of approximate calculation of definite integrals. (Russian) *Mat. Metody i Fiz.-Meh. Pojuz No. 11* (1980), 28–31, 120. (A. Lupag) **81g:41035** 41A55 (65D30)
- Ogish, Koichi (with Tachibana, Shun-ichi) Kaehler manifolds of positive curvature operator. *Proc. Amer. Math. Soc.* **78** (1980), no. 4, 548–550. (H. Jacobowitz) **81c:53063** 53C55
- Ogizorelli, M. N. See Ogizorelli, Mehmet Namik
- Okubo-Ogrodnic, Barbara See Luka-Ogrodnic, Barbara
- Ogura, Hirohumi Wave functions of collective octupole vibration. *Progr. Theoret. Phys.* **63** (1980), no. 2, 498–515. (T. Sasakawa) **81c:81065** 81Hxx (17B99, 22E70, 33A45)
- Ogura, Yukio (with Kageyama, Seiji) On a limit theorem for branching one-dimensional diffusion processes. *Publ. Res. Inst. Math. Sci.* **16** (1980), no. 2, 355–376. (N. H. Bingham) **81m:60145** 60J60 (58G25, 58G32, 60J65)
- Ogus, Arthur F-crystals and Griffiths transversality. *Proceedings of the International Symposium on Algebraic Geometry* (Kyoto Univ., Kyoto, 1977), pp. 15–44, Kinokuniya Book Store, Tokyo, 1978. (G. Horrocks) **81i:14015** 14F30 (14G20)
- Supersingular K3 crystals. *Journées de Géométrie Algébrique de Rennes (Rennes, 1978), Vol. II*, pp. 3–86, Astérisque, 64, Soc. Math. France, Paris, 1979. (G. Horrocks) **81e:14024** 14J25 (14B10, 14F30)
- See also Deligne, Pierre, **81c:12009**
- Oguztorelli, Mehmet Namik (with Bondarenko, B. A.; Leung, K. V.; Mangeron, Dumitru Ion) Mathematical analyses. Studies on polylinear equations. I. (Italian. French summary) *Math. Notae* **26** (1977/78), 13–20. (Editors) **81j:35110** 35Q99
- (with Krivovoin, L. E.; Leung, K. V.; Musuriev, T.) Problèmes à la frontière aux autocontrôles concernant une classe d'équations intégrodifférentielles aux opérateurs hyperboliques. (Romanian and English summaries) *Bul. Univ. Galați Fasc. II Mat. Fiz. Mec. Teoret.* **1** (1978), 7–13. (Thomas S. Angell) **81j:45021** 45K05 (93C20)
- (with Stein, R. B.; Andreassen, S.) Mathematical analysis of optimal multichannel filtering for nerve signals. *Biol. Cybernet.* **32** (1979), no. 1, 19–24. (Authors' summary) **81h:92009** 92A09 (94A34)
- (with Bainov, D. D.; Krivovoin, L. E.; Leung, K. V.) Investigation of nonlinear Mangeron polywave systems with heredity and control within the limits of integration. (Russian. Romanian summary) *Bul. Inst. Politehn. Iași Sect. I* **25(29)** (1979), no. 1–2, 9–15. (A. P. Soldatov) **81c:35087** 35L75 (45K05)
- (with Stein, R. B.; Parmiggiani, F.) Linear and nonlinear analysis of mammalian motor control. *Mathematical modelling in biology and ecology* (Proc. Sympos., Preterita, 1979), pp. 4–22, Lecture Notes in Biomath., 33, Springer, Berlin, 1980. (See **81j:92001**) 92A09
- (with Leung, K. V.) Analysis and numerical solution of a functional differential equation. *Appl. Math. Comput.* **6** (1980), no. 4, 289–307. (V. Sree-Hari-Rao) **81g:34097** 34K15 (65Q05)
- (with Şuhubi, E. S.; Leung, K. V.) Wave propagation in dissipative or dispersive nonlinear media: a numerical approach. *Appl. Math. Comput.* **6** (1980), no. 4, 309–334. (P. M. Gupta) **81j:76012** 76B15 (65P05)
- Modelling and simulation of vertebrate retina. *Biol. Cybernet.* **37** (1980), no. 1, 53–61. (Authors' summary) **81f:92005** 92A07
- (with O'Mara, K. S.) Modelling and simulation of vertebrate retina: extended network. *Biol. Cybernet.* **38** (1980), no. 1, 9–17. (Authors' summary) **81h:92004** 92A07
- (with Şuhubi, E. S.; Teymur, M.) An initial value problem in the theory of nonlinear wave propagation. *Nonlinear Anal.* **4** (1980), no. 4, 781–789. (Alan Jeffrey) **81c:35080** 35L67 (73B15)
- Oh, K. P. A diffusion model for fatigue crack growth. *Proc. Roy. Soc. London Ser. A* **367** (1979), no. 1728, 47–58. (Kazimierz Sobczyk) **81k:73111** 73M10 (65P05)
- Oh, S. H. (with Kim, Y. S.; Noz, Marilyn E.) A simple method for illustrating the difference between the homogeneous and inhomogeneous Lorentz groups. *Amer. J. Phys.* **47** (1979), no. 10, 892–897. (Carl Wulman) **81c:23022** 22E43 (81D25)
- O'Hagan, A. On outlier rejection phenomena in Bayes inference. *J. Roy. Statist. Soc. Ser. B* **41** (1979), no. 3, 358–367. (I. Guttman) **81d:62030** 62F15
- Ohara, Hiroyoshi (with Kobayashi, Hideaki) A synthesizing method for large parallel circuits with a network of smaller ones. *IEEE Trans. Comput.* **27** (1978), no. 8, 753–757. (Authors' summary) **81c:68022** 68B20 (68A05)
- Ohara, Shinomuke (with Iwamiya, Toshiyuki; Takahashi, Tadayasu) On periodic travelling wave solutions to nonlinear dispersive equations. *Bull. Sci. Engrg. Res. Lab. Waseda Univ.* **No. 87** (1979), 84–89. (Alan Jeffrey) **81b:35091** 35Q99 (35B10)
- Ohe, Syunichiro (with Ohmatsu, Shigeru; Soeda, Takashi) Fixed-interval smoothing for a linear distributed parameter system. *Internat. J. Systems Sci.* **10** (1979), no. 11, 1219–1233. (Agostino Villa) **81c:93079** 93E10 (93E11)
- Ohezu, S. P. (with Osipov, Ju. S.; Krjajimskii, A. V.) Control problems in systems with distributed parameters. (Russian) *Dynamics of control systems* (Third All-Union Conference, Irkutsk, 1977) (Russian), pp. 199–208, 341, "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. (Authors' summary) **81b:93041** 93C20 (93E05)
- Ohkawa, Tetsumuke (with Kato, Mitsuyoshi; Kojima, Sadayoshi; Yamasaki, Masayuki) The Matsumoto tripling for compact simply connected 4-manifolds. *Tôhoku Math. J.* **(2)** **31** (1979), no. 4, 525–535. (Michael Freedman) **81b:57006** 57N65
- Ohkubo, Motoaki Concatenated codes for multiple access channels. *IEEE Trans. Inform. Theory* **26** (1980), no. 2, 217–220. (Authors' summary) **81d:94017** 94A24
- Ohlhoff, H. J. K. Discrete functors. *Questiones Math.* **4** (1980/81), no. 1, 71–81. (Giuseppe Conte) **81j:18001** 18A05 (18A40)
- Ohmatsu, Shigeru (with Nagamine, H.; Soeda, Takashi) The optimal filtering problem for a discrete-time distributed parameter system. *Internat. J. Systems Sci.* **10** (1979), no. 7, 735–749. (B. D. Donevski) **81b:93073** 93E11 (93C55)
- (with Kikuchi, Akira; Soeda, Takashi) The optimal smoothing estimators based on the Wiener-Hopf theory. *Internat. J. Systems Sci.* **10** (1979), no. 11, 1203–1217. (Agostino Villa) **81c:93078** 93E10 (93E11)
- (with Ohe, Syunichiro; Soeda, Takashi) Fixed-interval smoothing for a linear distributed parameter system. *Internat. J. Systems Sci.* **10** (1979), no. 11, 1219–1233. (Agostino Villa) **81c:93079** 93E10 (93E11)
- Ohtsuki, Katsumi Direct recursive estimation of noise statistics. *Control and dynamic systems*, Vol. 16, pp. 249–297, Academic Press, New York, 1980. (See **81j:93002**) 93E10

- Ohno, Katsuhisa** (with Kimura, Toshikazu; Mine, Hisashi) Diffusion approximation for $GI/G/1$ queueing systems with finite capacity. I. The first overflow time. (Japanese summary) *J. Oper. Res. Soc. Japan* 22 (1979), no. 1, 41–68. (Authors' summary) **81j:60106a** 60K25
- (with Kimura, Toshikazu; Mine, Hisashi) Diffusion approximation for $GI/G/1$ queueing systems with finite capacity. II. The stationary behaviour. (Japanese summary) *J. Oper. Res. Soc. Japan* 22 (1979), no. 4, 301–320. (Authors' summary) **81j:60106b** 60K25
- Ohno, Taijiro** A weak equivalence and topological entropy. *Publ. Res. Inst. Math. Sci.* 16 (1980), no. 1, 289–298. (Peter Walters) **81g:54053** 54H20 (28D10, 54C70, 54H25)
- Ohnuki, Y.** (with Kamefuchi, S.) Remarks on the uncertainty relation for a Bose-like oscillator. *Z. Phys. C* 2 (1979), no. 4, 367–371. (A. Terry Amos) **81a:81039** 81D05
- (with Kamefuchi, S.) Generalized Grassmann algebras with applications to Fermi systems. *J. Math. Phys.* 21 (1980), no. 4, 601–608. (J. Niederle) **81g:15035a** 15A75 (81Hxx)
- (with Kamefuchi, S.) Para-Grassmann algebras with applications to para-Fermi systems. *J. Math. Phys.* 21 (1980), no. 4, 609–616. (J. Niederle) **81g:15035b** 15A75 (81Hxx)
- Ohring, Samuel** (with Teiste, John) The direct matrix imbedding technique for computing three-dimensional potential flow about arbitrarily shaped bodies. *Comput. Methods Appl. Mech. Engrg.* 21 (1980), no. 3, 315–336. (Authors' summary) **81b:76013** 76B20 (65N05)
- Ohri, Ján** The argument delay and oscillatory properties of differential equation of n th order. *Czechoslovak Math. J.* 29(104) (1979), no. 2, 268–283. (George W. Johnson) **81j:34126** 34K15
- Sufficient conditions for the oscillation of n th order nonlinear delay differential equation. With a loose Russian summary. *Czechoslovak Math. J.* 30(105) (1980), no. 3, 490–497. (I. Kiguradze) **81k:34075** 34K15
- Ohrenčák, V. I.** An estimate of the solutions of differential equations and inequalities in a Banach space with a K -linear. (Russian) *Approximate and qualitative methods in the theory of differential and functional-differential equations* (Russian), pp. 41–49, 109, *Akad. Nauk Ukrain. SSR, Inst. Mat., Kiev*, 1979. (I. Kubiacyk) **81g:34086** 34G20
- Ohnawa, Takeo** Finiteness theorems on weakly 1-complete manifolds. *Publ. Res. Inst. Math. Sci.* 15 (1979), no. 3, 853–870. (Claudio Rea) **81g:32024** 32L15 (32F10)
- Ohnaga, Setsumi** Towards intelligent interactive systems. *Methodology of interaction* (Proc. IFIP Workshop, Seillac, 1979), pp. 339–360, North-Holland, Amsterdam, 1980. (Author's summary) **81k:68074** 68G20
- Ohnumi, Noboru** (with Matusita, Kameo) A criterion for choosing the number of clusters in cluster analysis. *Recent developments in statistical inference and data analysis* (Proc. Internat. Conf., Inst. Statist. Math., Tokyo, 1979), pp. 203–213, North-Holland, Amsterdam, 1980. (See **81j:62009**) 62H30
- Ohno, Haruto** The Hewitt realcompactification of products. *Trans. Amer. Math. Soc.* 263 (1981), no. 2, 363–375. (M. Hušek) **81c:54043** 54D60 (54B10)
- Ohno, Hiroshi** (with Hosono, Yasuhiko; Kase, Shigeo) Sequential sampling plans for the doubly exponential characteristics with known standard deviation. *Bull. Univ. Osaka Prefect. Ser. A* 28 (1979), no. 2, 189–198 (1980). (Mayer Alvo) **81b:62140** 62L10
- Ohno, Kichiro** On the abelian extensions over some Galois number fields. *Bull. Fac. Gen. Ed. Gifu Univ.* No. 15 (1979), 5–9. (Pierre Damey) **81c:12017** 12A55
- Ohno, M.** (with Hatakeyama, K.; Iwashige, H.; Yoshino, N.) A statistical theory on the general random noise of arbitrary distribution type with quantized level and its actual application. (German and French summaries) *Acustica* 46 (1980), no. 2, 201–209. (G. Paria) **81m:76034** 76Q05 (60G99)
- Ohno, Takao** Phase transition of a two-component sine-Gordon system in two dimensions. *Prog. Theoret. Phys.* 63 (1980), no. 3, 785–796. (Author's summary) **81b:82004** 82A25
- Ohno, Tomoko** ★Evolution and variation of multigene families. With a foreword by Motoo Kimura. Lecture Notes in Biomathematics, 37. Springer-Verlag, Berlin-New York, 1980. iv + 131 pp. ISBN 3-540-09998-0 (Susan Wilson) **81k:92001** 92-02 (92A10)
- Ohno, Toyomi** (with Mabuchi, Tetsuo) Sub-optimization for singular control problems based on the decomposition method. *Mem. Defense Acad.* 19 (1979), no. 2-4, 71–76. (Benson Kurtaran) **81f:49033** 49D27 (93A15)
- Ohnaka, Katsuro** (with Kato, Toyonori) Morita contexts and equivalences. *J. Algebra* 61 (1979), no. 2, 360–366. (Wolfgang Gröze) **81f:16058** 16A90
- Commutative rings all of whose modules are QF-3'. *Proceedings of the 12th Symposium on Ring Theory* (Hokkaido Univ., Sapporo, 1979), pp. 24–29, *Okayama Univ., Okayama*, 1980. (M. Teply) **81g:16034** 16A53 (13C11, 16A30, 16A63)
- Commutative rings of which all radicals are left exact. *Comm. Algebra* 8 (1980), no. 16, 1505–1512. (M. Teply) **81k:16031** 16A63 (16A53)
- Ohnishi, Kazuhiro** (with Toyoda, Toshihisa) Estimation of regression coefficients after a preliminary test for homoscedasticity. *J. Econometrics* 12 (1980), no. 2, 150–159. (V. K. Srivastava) **81g:62123** 62J05
- Ohno, Kohel** (with Kitagawa, Genshiro; Akaike, Hirotugu) Realization of an adaptive controller through locally stationary autoregressive model fitting. (Japanese. English summary) *Proc. Inst. Statist. Math.* 27 (1980), no. 1, 95–105. (Authors' summary) **81d:93055** 93E03 (93C40)
- Ohuchi, Arima** (with Kaji, Ikuo) Algorithms for optimal allocation problems having quadratic objective function. (Japanese summary) *J. Oper. Res. Soc. Japan* 23 (1980), no. 1, 64–80. (Authors' summary) **81a:90141** 90C30 (90B05)
- Ohya, Fumimasa** (with Nakamura, Akihiro; Watanabe, Hiroshi) On some properties of functions in weighted Bergman spaces. *Proc. Fac. Sci. Tokai Univ.* 15 (1980), 33–44. (Manfred Stoll) **81i:30084** 30H05
- Ohya, Masanori** Dynamical process in linear response theory. *Rep. Math. Phys.* 16 (1979), no. 3, 305–315. (D. A. Dubin) **81i:82015** 82A15 (46L55)
- Oh, K.** (with Sayama, H.; Takamatsu, T.) Multimodality analysis of a class of multistage allocation problems. *J. Optim. Theory Appl.* 25 (1978), no. 1, 33–48. (Authors' summary) **81f:90095** 90C30 (49D99, 80A30, 90B05)
- Ohishi, Shin'ichi** Relationship between Hirota's method and the inverse spectral method—the Korteweg-de Vries equation's case. *J. Phys. Soc. Japan* 47 (1979), no. 3, 1037–1038. (G. L. Lamb, Jr.) **81c:35011** 35A25 (35Q20, 76B15)
- The Korteweg-de Vries equation under slowly decreasing boundary condition. *J. Phys. Soc. Japan* 48 (1980), no. 1, 349–350. (Mark J. Ablowitz) **81a:35091** 35Q20 (76B25, 81G99)
- Ohmura, J.** (with Betts, D. D.; Marland, L. G.) Susceptibilities of the $S = \frac{1}{2}$ XY model on the square lattice at $T = 0$. *Phys. Lett. A* 79 (1980), no. 2-3, 193–195. (Author's summary) **81i:82071** 82A67
- Oja, Erkki** On the convergence of an associative learning algorithm in the presence of noise. *Internat. J. Systems Sci.* 11 (1980), no. 5, 629–640. (Author's summary) **81d:93075** 93E20 (68G05)
- Ojanguren, M.** (with Knus, M. A.; Sridharan, R.) Quadratic forms and Azumaya algebras. *J. Reine Angew. Math.* 303/304 (1978), 231–248. (From the introduction) **81h:15016** 15A63 (16A16)
- Ojha, Ramhit** A note on the M -projective curvature tensor. *Indian J. Pure Appl. Math.* 1 (1977), no. 12, 1531–1534. (M. Okumura) **81b:53023** 53B35
- Ojika, Takeo** (with Welsh, Wayne) A numerical method for the solution of multipoint problems for ordinary differential equations with integral constraints. *J. Math. Anal. Appl.* 72 (1979), no. 2, 500–511. (Uri Ascher) **81d:65047** 65L10
- (with Welsh, Wayne) Multipoint boundary value problems with discontinuities I. Algorithms and applications. *J. Comput. Appl. Math.* 6 (1980), no. 2, 133–143. (Authors' summary) **81c:65053** 65L10
- (with Welsh, Wayne) Multipoint boundary value problems with discontinuities II. Convergence of the initial value adjusting method. *J. Comput. Appl. Math.* 6 (1980), no. 3, 183–187. (Authors' summary) **81j:65097** 65L10
- On quadratic convergence of the initial value adjusting method for nonlinear multipoint boundary value problems. *J. Math. Anal. Appl.* 73 (1980), no. 1, 192–203. (Uri Ascher) **81d:65048** 65L10
- Ojima, Izumi** (with Kugo, Taichiro) Local covariant operator formalism of nonabelian gauge theories and quark confinement problem. *Progr. Theoret. Phys. Suppl.* No. 66 (1979), 130 pp. (Authors' summary) **81b:81019** 81E10 (81G05)
- Ojo, M. O.** (with George, E. Olusegun) On a generalization of the logistic distribution. *Ann. Inst. Statist. Math.* 32 (1980), no. 2, 161–169. (G. S. Lingappaiah) **81k:62018** 62E15
- Oka, Mutsuo** (with Sakamoto, Koichi) Product theorem of the fundamental group of a reducible curve. *J. Math. Soc. Japan* 30 (1978), no. 4, 599–602. (Richard Randell) **81h:14019** 14H30 (14H20, 57M05)
- On the topology of the Newton boundary. II. Generic weighted homogeneous singularity. *J. Math. Soc. Japan* 32 (1980), no. 1, 65–92. (I. Dolgachev) **81i:32007** 32B30 (14B05, 57Q45, 57R45, 58F20)
- Oka, Shichirō** Finite complexes whose self-homotopy equivalences form cyclic groups. *Mem. Fac. Sci. Kyushu Univ. Ser. A* 34 (1980), no. 1, 171–181. (Donald W. Kahn) **81c:55010** 55P10
- Oka, Shinsai** Dimension of finite unions of metric spaces. *Math. Japon.* 24 (1979/80), no. 4, 351–362. (S. A. Peregrudov) **81d:54028** 54F45
- Oka, Yukimasa** (with Nakagami, Yoshiomi) On Connes spectrum Γ of a tensor product of actions on von Neumann algebras. *Yokohama Math. J.* 26 (1978), no. 2, 189–200. (David Promislow) **81f:46076** 46L10
- Okabe, Masayuki** (with Yamada, Yoshiaki; Nishiguchi, Isoharu) Basis transformation of trial function space in Lagrange interpolation. *Comput. Methods Appl. Mech. Engrg.* 23 (1980), no. 1, 85–99. (Authors' summary) **81c:65006** 65D05
- (with Yamada, Yoshiaki; Nishiguchi, Isoharu) Reconsideration of rectangular Lagrange families with hierarchy-ranking bases. *Comput. Methods Appl. Mech. Engrg.* 23 (1980), no. 3, 369–390. (Authors' summary) **81g:65159** 65N30
- Okabe, Takayoshi** (with Ukai, Seiji) On classical solutions in the large in time of two-dimensional Vlasov's equation. *Osaka J. Math.* 15 (1978), no. 2, 245–261. (V. Lakshmikantham) **81i:35007** 35A07 (35K45, 45K05, 82A45)
- Okabe, Yasunori** Innovation processes associated with stationary Gaussian processes with application to the problem of prediction. *Nagoya Math. J.* 70 (1978), 81–104. (V. S. Mandrekar) **81c:60055** 60G25
- On a stationary Gaussian process with T -positivity and its associated Langevin equation and S -matrix. *J. Fac. Sci. Univ. Tokyo Sect. IA Math.* 26 (1979), no. 1, 115–165. (T. Hida) **81i:60049** 60G15 (81E10)
- Okada, Jumpei** (with Ikeda, Kensuke; Matsuoka, Masahiro) Theory of cooperative cascade emission. I. Linear stochastic theory. *J. Phys. Soc. Japan* 48 (1980), no. 5, 1636–1645. (Authors' summary) **81k:81120a** 81K05
- (with Ikeda, Kensuke; Matsuoka, Masahiro) Theory of cooperative cascade emission. II. Nonlinear evolution. *J. Phys. Soc. Japan* 48 (1980), no. 5, 1646–1654. (Authors' summary) **81k:81120b** 81K05
- Okada, Kenkichi** Phase diagram and critical point. *Bull. Nagoya Inst. Tech.* 31 (1979), 135–144. (Author's summary) **81j:82015** 82A25 (58E05)
- Okada, Masami** Intégrales de volume et fonction maximale pour les fonctions plurisousharmoniques dans la boule. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 7, A407–A409. (Jacques Vauthier) **81c:32039** 32F05 (32A35, 42B15)
- Intégrales de volume et fonction maximale pour les fonctions plurisousharmoniques dans la boule. (English summary) *Bull. Sci. Math. (2)* 104 (1980), no. 2, 197–204. (J. Siciak) **81k:31013** 31C10 (32F05, 42B25)
- Okada, Norio** On convergence to diffusion processes of Markov chains related to population genetics. *Adv. in Appl. Probab.* 11 (1979), no. 4, 673–700. (Frank J. S. Wang) **81m:60149** 60J70 (92A10)
- Okada, Susumu** (with Okazaki, Yoshiaki) On measure-compactness and Borel measure-compactness. *Osaka J. Math.* 15 (1978), no. 1, 183–191. (Richard Haydon) **81c:28008** 28C15
- Okada, Toshinao** Closure algebras and compact spaces. *Math. Japon.* 25 (1980), no. 3, 355–357. (J. Karasik) **81m:54008** 54A05 (54D30)
- Okaji, Takashi** The local solvability of partial differential operator with multiple characteristics in two independent variables. *J. Math. Kyoto Univ.* 20 (1980), no. 1, 125–140. (S. Cinquini) **81i:35005** 35A07
- Okamoto, Hisao** (with Nagano, Katsuhiko; Karasudani, Takashi; Mori, Hazime) Reduced equations of motion for generalized fluxes and forces in the continued-fraction expansion. *Progr. Theoret. Phys.* 63 (1980), no. 6, 1904–1916. (Authors' summary) **81g:82009** 82A05

- Okamoto, Kazuo** Déformation d'une équation différentielle linéaire avec une singularité irrégulière sur un tore. *J. Fac. Sci. Univ. Tokyo Sect. 1A Math.* 26 (1979), no. 3, 501-518. (G. R. Sell) **81c:34009** 34A20 (14D05)
- Painlevé's equations. (Japanese) *Sûgaku* 32 (1980), no. 1, 30-43. (A. Morimoto) **81h:58051** 58F18 (34A99)
- Okamoto, Kiyosato** (with Kashiwara, Masaki; Kowata, Atsuhiko; Minemura, K.; Ōhima, Toshio; Tanaka, Makoto) Eigenfunctions of invariant differential operators on a symmetric space. *Ann. of Math.* (2) 107 (1978), no. 1, 1-39. (Kenneth Johnson) **81f:43013** 43A80 (22E30)
- Okamoto, Mamoru** (with Fujikoshi, Yasunori) Perturbation of a matrix function and its application to multivariate analysis. *J. Japan Statist. Soc.* 6 (1976), no. 2, 33-37. (Authors' summary) **81m:62088** 62H10 (15A99)
- (with Kawai, Nobuyuki) A generalization of the ridge function theorem. *Math. Japon.* 24 (1979/80), no. 2, 175-178. (Stanley L. Selove) **81a:62069** 62J07
- (with Aoyanagi, Hatsuho) Canonical factor analysis in the random model. *Math. Japon.* 24 (1979/80), no. 5, 541-547. (Alain Pousse) **81h:62107** 62H25
- (with Isogawa, Yoshiaki) Linear prediction in the factor analysis model. *Biometrika* 67 (1980), no. 2, 482-484. (Nagao Mori) **81h:62081** 62H25
- Okamoto, Shizuchi** (with Yosida, Kōsaku) A note on Mikusiński's operational calculus. *Proc. Japan Acad. Ser. A Math. Sci.* 56 (1980), no. 1, 1-3. (R. Bittner) **81d:44010** 44A40
- Okamoto, Yumji** (with Matsumoto, Hiroyuki; Nakahara, Ichiro) Thick plate subjected to torsional impact by a rigid circular cylinder. *Bull. JSME* 23 (1980), no. 181, 1081-1085. (Authors' summary) **81g:73073** 73K10
- Okamura, Y.** (with Chen, J. T.; Jacoby, M.; Fujita, Shigeji) Exact results in the theory of correlated walks. *Acta Phys. Austriaca* 51 (1979), no. 3-4, 225-228. (B. S. Nahapetian) **81c:82064** 82A05 (82A42)
- (with Blaisten-Barojas, E.; Fujita, Shigeji) Theory of atomic diffusion in cubic crystals with impurities based on the correlated-walks theory. *Phys. Rev. B* (3) 22 (1980), no. 4, 1638-1644. (Authors' summary) **81g:82065** 82A60 (82A42, 82A70)
- Okawa, Masanori** Renormalization of the spontaneously broken gauge theories. *Progr. Theoret. Phys.* 60 (1978), no. 4, 1175-1189. (Author's summary) **81j:81046** 81E15
- (with Seo, Koichi) Field-strength description of nonabelian gauge theories. *Phys. Rev. D* (3) 21 (1980), no. 6, 1614-1619. (Authors' summary) **81a:81057** 81E10
- (with Nishijima, Kazuhiko; Tesima, Kiusau) Anomalous dimensions of composite particles. *Progr. Theoret. Phys.* 63 (1980), no. 3, 999-1015. (From the summary) **81g:81096** 81G05
- Okazaki, Akihiko** (with Tatemichi, Aritoshi) On the equations of motion of multilayer cylindrical shells with viscoelastic damping layer. (Japanese. English summary) *Bull. Nagoya Inst. Tech.* 31 (1979), 247-253. (Authors' summary) **81j:73069** 73L20 (35J60)
- Okazaki, Hiromitsu** Undefinability of cardinality in Zermelo set theory with urelements. (Japanese. English summary) *Mem. Fac. Ed. Kumamoto Univ. Natur. Sci.* No. 27 (1978), 3-13. (Editors) **81c:03043** 03E35
- Some remarks on Gödel's memorandum for the cardinality of the continuum. *Kumamoto J. Sci. (Math.)* 14 (1980/81), no. 1, 81-84. (James Baumgartner) **81g:04001** 04A20 (04A30)
- Okazaki, Katsumichi** (with Hirano, Yoshitaro) Vibration of cracked rectangular plates. *Bull. JSME* 23 (1980), no. 179, 732-740. (Authors' summary) **81d:73059** 73K12 (73M05)
- Okazaki, Motoaki** Theoretical study for accelerated two-phase flow. I. Constant-area flow. *Bull. JSME* 23 (1980), no. 178, 536-544. (Author's summary) **81g:76102** 76T05
- Okazaki, Yoshiaki** (with Okada, Susumu) On measure-compactness and Borel measure-compactness. *Osaka J. Math.* 15 (1978), no. 1, 183-191. (Richard Haydon) **81e:28008** 28C15
- Wiener integral by stable random measure. *Mem. Fac. Sci. Kyushu Univ. Ser. A* 33 (1979), no. 1, 1-70. (W. A. Woyczyński) **81a:60010** 60B11 (28C20, 46G99)
- Admissible translates of measures on a topological group. *Mem. Fac. Sci. Kyushu Univ. Ser. A* 34 (1980), no. 1, 79-88. (Patrick L. Brockett) **81h:28014** 28C10 (60B15)
- Okazawa, Noboru** Singular perturbations of m -accretive operators. *J. Math. Soc. Japan* 32 (1980), no. 1, 19-44. (T. Kato) **81g:47035** 47B44 (47A55, 47H06)
- O'Keefe, M.** (with Wong, Pak Ken) A smallest graph of girth 10 and valency 3. *J. Combin. Theory Ser. B* 29 (1980), no. 1, 91-105. (W. G. Brown) **81h:05085** 05C35
- O'Keefe, M.** (with Hyde, B. G.) Plane nets in crystal chemistry. *Philos. Trans. Roy. Soc. London Ser. A* 295 (1980), no. 1417, 553-618. (R. L. E. Schwarzenberger) **81g:05052** 05B45 (51F15, 82A60)
- Okeke, C. C.** Exact solutions for linear matrix equations. *Matrix Tensor Quart.* 30 (1979/80), no. 2, 51-54. (D. P. Rašković) **81h:15003** 15A06 (15A09)
- Okniński, Jan** Spectrally finite and semilocal group rings. *Comm. Algebra* 8 (1980), no. 6, 533-541. (Uno Kajulaid) **81d:20007** 20C07 (16A27)
- Semilocal skew group rings. *Proc. Amer. Math. Soc.* 80 (1980), no. 4, 552-554. (E. Formanek) **81k:16012** 16A26 (16A46)
- Okochi, Hiroko** A note on asymptotic strong convergence of nonlinear contraction semigroups. *Proc. Japan Acad. Ser. A Math. Sci.* 56 (1980), no. 3, 83-84. (G. F. Webb) **81h:47059** 47H20
- Okoh, Frank** No system of uncountable rank is purely simple. *Proc. Amer. Math. Soc.* 79 (1980), no. 2, 182-184. (M. F. Smiley) **81e:15028** 15A78 (15A21, 34D10)
- Okuma, Seichi** Generalized heapsort. *Mathematical foundations of computer science*, 1980 (Proc. Ninth Sympos., Rydzyna, 1980), pp. 439-451. *Lecture Notes in Comput. Sci.*, 88, Springer, Berlin, 1980. (See **81h:68003**) **68E05** (68B15)
- Okunev, Christian** (with Schneider, Michael; Spindler, Heinz) ★Vector bundles on complex projective spaces. Progress in Mathematics, 3. Birkhäuser, Boston, Mass., 1980. vii+389 pp. ISBN 3-7643-3000-7 (Werner Kleinert) **81h:14001** 14-02 (14D20, 14F05, 32G13, 81C30)
- Okushi, Takanori** (with Oyama, Kimiyuki) High-accuracy WKB analyses of a -power graded-core fibers. *IEEE Trans. Microwave Theory Tech.* 28 (1980), no. 8, 839-845. (I. Kay) **81h:78027** 78A50 (34E20)
- Okaz, A. I.** Two-dimensional gauge fields with independent stress values at each point. (Russian. English summary) *Theoret. Mat. Fiz.* 44 (1980), no. 2, 172-188. (E. Wiczeorek) **81h:81064** 81E10 (81C35)
- Okseidal, Bernt** A Wiener test for integrals of Brownian motion and the existence of smooth curves in nowhere dense sets. *J. Funct. Anal.* 36 (1980), no. 1, 72-87. (Michèle Mastrangelo-Dehen) **81d:31015** 31B99 (32A99, 60J65)
- Okubo, W.** Some properties of block matrices of models based on hierarchical and crossed classifications. *Biometrical J.* 20 (1978), no. 5, 439-457. (George P. H. Styan) **81h:62137** 62K10 (15A69)
- Ökten, F.** (with Akçağ, Ş.) Some properties of a parallel null 1-plane. (Turkish summary) *J. Pure Appl. Sci.* 11 (1978), no. 1, 23-32 (1980). (Brian O. J. Tupper) **81h:53020** 53B30 (83C99)
- Okubo, Akira** ★Diffusion and ecological problems: mathematical models. An extended version of the Japanese edition, *Ecology and diffusion*. Translated by G. N. Parker. Biomathematics, 10. Springer-Verlag, Berlin-New York, 1980. xiii+254 pp. ISBN 3-540-09620-5 (J. P. Kernevez) **81i:92025** 92A17 (35K55)
- Okubo, Katsunori** Some theorems on $S_2(K)$ metric spaces. *Rep. Math. Phys.* 16 (1979), no. 3, 401-408. (R. Miron) **81h:53025** 53B40 (83C99)
- Okubo, Kazuyoshi** On a generalized numerical range. *J. Hokkaido Univ. Ed. Sect. II A* 29 (1978/79), no. 2, 7-10. (H. P. Rogosinski) **81h:47004** 47A12
- Okubo, Susumu** Octonion, pseudo-alternative, and Lie-admissible algebras. *Hadrone J.* 2 (1979), no. 1, 39-66. (S. V. Pölniceanu) **81a:17002** 17A30 (17D99)
- See also *Applications of Lie-admissible algebras in physics*, **81h:81040**
- Okuguchi, Koji** Matrices with dominant diagonal blocks and economic theory. *J. Math. Econom.* 5 (1978), no. 1, 43-52. (Author's summary) **81f:15033** 15A57 (15A60, 90A14)
- On the stability of the Stackelberg oligopoly equilibrium. *Econom. Lett.* 3 (1979), no. 4, 321-325. (Author's summary) **81a:90055** 90A14
- (with Hadjimichalakis, Michael G.) The stability of a generalized Tobin model. *Rev. Econom. Stud.* 46 (1979), no. 1, 175-178. (V. V. Kondratiev) **81h:90044** 90A16
- Okumura, Atsumi** (with Amari, Masahiko) Optimum design of elastic-plastic column. *Bull. JSME* 23 (1980), no. 178, 501-509. (Authors' summary) **81g:73070** 73K05
- Okumura, Kohshi** (with Kishima, Akira) Analysis of nonlinear oscillations in three-phase circuits by discrete Fourier transform. *Mem. Fac. Engrg. Kyoto Univ.* 41 (1979), no. 4, 356-373. (Authors' summary) **81a:94049** 94C05
- Okun, L. B.** Theta particles. *Nuclear Phys. B* 173 (1980), no. 1, 1-12. (Author's summary) **81h:81094** 81G05
- Okura, Hiroyuki** On the spectral distributions of certain integro-differential operators with random potential. *Osaka J. Math.* 16 (1979), no. 3, 633-666. (Philip J. Feinilver) **81a:60085** 60J45
- Okuyama, Hiroshi** (with Sakuma, Motoyoshi) On the Poincaré series of a local ring reduced modulo its socle. *J. Math. Tokushima Univ.* 13 (1979), 1-6. (W. Vogel) **81h:13007** 13H10 (13D03, 14B99)
- Okuyama, Tetsuro** (with Wajima, Masayuki) Irreducible characters of p -solvable groups. *Proc. Japan Acad. Ser. A Math. Sci.* 55 (1979), no. 8, 309-312. (Karin Erdmann) **81g:20023** 20C20
- Some remarks on p -blocks of finite groups. *Hokkaido Math. J.* 9 (1980), no. 2, 175-178. (Stephen D. Smith) **81m:20015** 20C20 (20D20)
- Oláh, D.** See *Problems of numerical analysis and systems programming*, **81g:65010**
- Oláh, Rudolf** Note on the oscillation of linear delay differential equations. *Arch. Mech.* (Brno) 16 (1980), no. 4, 213-216. (G. Ladas) **81m:34162** 34K15 (34C10)
- Olanda, Domenico** (with Mazzocca, Francesco) Ruled systems in combinatorial spaces. (Italian. English summary) *Rend. Mat.* (6) 12 (1979), no. 2, 221-229. (G. Tallini) **81h:50043** 05B25
- Olariu, Angela** Generalization of the notion of a compact operator. (Romanian summary) *Bul. Univ. Galați Fac. II Mat. Fiz. Mec. Teoret.* 2 (1979), 33-40. (R. W. Cross) **81g:47023** 47B05
- Olariu, Eleferie** (with Antohe, St.) Über Homomorphismen und Kongruenzen von Graphen. (Romanian and French summaries) *Bul. Univ. Galați Fac. II Mat. Fiz. Mec. Teoret.* 1 (1978), 15-23. (W. Dörfler) **81h:05107** 05C99
- (with Suciu, Gh.) Dauerstabile und kritisch imperfekte Graphen. *An. Univ. Timișoara Ser. Științ. Mat.* 17 (1979), no. 1, 59-64. (Carsten Thomassen) **81h:05082** 05C15
- Eine Charakterisierung der den Matrixspielen zugeordneten Graphen. (Romanian and French summaries) *Bul. Univ. Galați Fac. II Mat. Fiz. Mec. Teoret.* 2 (1979), 41-45. (G. A. Heuer) **81g:06096** 90D05 (05C50)
- Others, Dirk J.** (with Herterich, Klaus) The spectral energy transfer from surface waves to internal waves. *J. Fluid Mech.* 92 (1979), no. 2, 349-379. (E. Meister) **81h:76012** 76B15 (35Q05, 86A05)
- Others, Wilhelm** See *Michling, Horst*, **81h:91043**
- Olhová, Andrej** W. General dynamical systems with heredity. *Functional differential systems and related topics* (Proc. First Internat. Conf., Białogóra, 1979), pp. 232-237. *Higher College Engrg., Zielona Góra*, 1980. (C. Corduneanu) **81m:34009** 34K05 (93B05)
- (with Sikora, Andrzej) On sensitivity minimization for linear control system. *Optimization techniques* (Proc. Ninth IFIP Conf., Warsaw, 1979), Part 1, pp. 342-349. *Lecture Notes in Control and Information Sci.*, 22, Springer, Berlin, 1980. (Authors' summary) **81m:93027** 93B35 (93B50)
- (with Żak, Stanisław H.) Controllability and observability problems for linear functional-differential systems. *Found. Control Engrg.* 5 (1980), no. 2, 79-89. (Authors' summary) **81g:93017** 93B05 (93B07)
- (with Gosiewski, A.) The effects of feedback delays on the performance of multivariable linear control systems. *IEEE Trans. Automat. Control* 25 (1980), no. 4, 729-735. (Authors' summary) **81h:93044** 93C35 (93C05)
- See also *Kurman, K. J.*, **81d:93051**
- Olmos, Olcina, J. L.** See *Olmos, Olcina, J. L.*
- Olderog, Ernst-Rüdiger** (with Langmaack, Hans) Present-day Hoare-like systems for programming languages with procedures: power, limits and most likely extensions. *Automata, languages and programming* (Proc. Seventh Internat. Coll., Noordwijkerhout, 1980), pp. 363-373. *Lecture Notes in Comput. Sci.*, 85, Springer, Berlin, 1980. (Authors' conclusion) **81h:68020** 68B05
- Oldham, Edward U.** See *Barkin, Ju. V.*, **81g:70014**
- Oleari, C.** (with Amar, V.; Dozzio, U.) Causal propagation in second-order relativistic

- wave equations. (Italian and Russian summaries) *Nuovo Cimento B* (11) **58** (1980), no. 1, 34-44. (Piero de Montoni) **81i:81012** 81C05 (35Q99)
- O'Leary, Dianne P.** Linear programming problems arising from partial differential equations. *Sparse Matrix Proceedings 1978 (Sympos. Sparse Matrix Comput., Knoxville, Tenn., 1978)*, pp. 25-40. *SIAM, Philadelphia, Pa.*, 1979. (R. H. Bartels) **81g:90060** 90C05 (65K05)
- The block conjugate gradient algorithm and related methods. *Linear Algebra Appl.* **29** (1980), 293-322. (Jan Zitzko) **81i:65027** 65F10 (90C20)
- Oleinik, M. V.** See Oleinik, M. V.
- Oleinik, O. A.** The behavior of solutions of elliptic and parabolic systems in unbounded domains. (Russian) *Proceedings of an All-Union Conference on Partial Differential Equations (Moscow State Univ., Moscow, 1976)* (Russian), pp. 188-191. *Moskoo. Gos. Univ., Meh.-Mat. Fakul'tet, Moscow*, 1978. (See **80f:35002**) 35J45 (35K40)
- (with Nečas, Jindřich) Liouville theorems for elliptic systems. (Russian) *Dokl. Akad. Nauk SSSR* **252** (1980), no. 6, 1312-1316. (L. A. Ivanov) **81i:35065** 35J60
- (with Isai'jan, G. A.) Behavior at infinity of the solutions of the Neumann problem for a second-order elliptic equation in an unbounded domain. (Russian) *Uspehi Mat. Nauk* **35** (1980), no. 4(214), 197-198. (R. Kodnár) **81m:35043** 35J25
- Oleksandróv, I. M.** (with Pahar'eva, N. O.) On p -wave functions with wave-logarithmic characteristic p . (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* **1980**, no. 4, 23-26, 98. (A. Borzymowski) **81i:30074** 30E25 (35L99)
- (with Pahar'eva, N. O.) p -wave functions and their application to a problem of plasticity theory. (Russian. English summary) *Vysli. Prikl. Mat. (Kiev) No. 40* (1980), 86-93, 159-160. (T. Kubo) **81h:73024** 73E99 (30E25)
- Oleksin, S. V.** (with Novikov, S. V.) On the covering of a set of arithmetic progressions. (Russian. English summary) *Vesci Akad. Nauk BSSR Ser. Fiz.-Mat. Nauk* **1979**, no. 6, 25-27, 139. (J. B. Roberts) **81g:10076** 10L20 (05B40)
- Oles, A. M.** (with Chao, K. A.) Spin and charge polarization around magnetic impurities in metals. *Z. Phys. B* **38** (1980), no. 2, 147-152. (Authors' summary) **81d:82058** 82A65
- Olesen, Dorte** (with Pedersen, Gert Kjaergård) Applications of the Connes spectrum to C^* -dynamical systems. *J. Funct. Anal.* **30** (1978), no. 2, 179-197. (Ola Bratteli) **81i:46076a** 46L05
- (with Landstad, Magnus B.; Pedersen, Gert Kjaergård) Towards a Galois theory for crossed products of C^* -algebras. *Math. Scand.* **43** (1978), no. 2, 311-321 (1979). (Authors' introduction) **81i:46074** 46L05
- A classification of ideals in crossed products. *Math. Scand.* **45** (1979), no. 1, 157-167. (Ola Bratteli) **81i:46083** 46L40
- (with Pedersen, Gert Kjaergård) Applications of the Connes spectrum to C^* -dynamical systems. II. *J. Funct. Anal.* **36** (1980), no. 1, 18-32. (Ola Bratteli) **81i:46076b** 46L05
- (with Pedersen, Gert Kjaergård) On a certain C^* -crossed product inside a W^* -crossed product. *Proc. Amer. Math. Soc.* **79** (1980), no. 4, 587-590. (Richard I. Loeb) **81i:46075** 46L05 (46L55)
- Olesen, P.** (with Ambjørn, J.) On the formation of a random color magnetic quantum liquid in QCD. *Nuclear Phys. B* **170** (1980), no. 1 FS 1, 60-78. (Authors' summary) **81i:81075** 81G05
- (with Ambjørn, J.) A color magnetic vortex condensate in QCD. *Nuclear Phys. B* **170** (1980), no. 2, FS 1, 265-282. (Authors' summary) **81i:81092** 81G05 (81J05)
- (with Ambjørn, J.; Felsager, B.) Kinematics of periodic structures in $SU(N)$ gauge theories. *Nuclear Phys. B* **175** (1980), no. 2, 349-364. (M. Carmeli) **81m:81040** 81E10 (53C05, 57R20)
- Oliger, Joseph** Constructing stable difference methods for hyperbolic equations. *Numerical methods for partial differential equations (Proc. Adv. Sem., Math. Res. Center, Univ. Wisconsin, Madison, Wis., 1978)*, pp. 255-271. *Publ. Math. Res. Center Univ. Wisconsin, 42, Academic Press, New York, 1979*. (Philip Brenner) **81i:65102** 65M05 (65M10)
- On the initial-boundary value problem for the equations of gas dynamics. *Transactions of the Twenty-Fifth Conference of Army Mathematicians (Johns Hopkins Univ., Baltimore, Md., 1979)*, pp. 417-425. *ARO Rep. 80, 1, U. S. Army Res. Office, Research Triangle Park, N.C.*, 1980. (Authors' summary) **81g:76081** 76N15 (35L65)
- Olinik, M. V.** A nonlinear multiply connected problem with a free boundary. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A No. 6* (1979), 416-420, 492. (J. Vesely) **81i:31013** 31B20 (35R35, 49F22)
- Olinik, I. D.** The distribution of some functionals of the trajectories of a semicontinuous walk with an absorbing boundary. (Russian) *Akad. Nauk Ukrain. SSR Inst. Mat. Preprint No. 13 O Nekotorykh Funktsional'nykh Shchazh. Process.* (1978), 21-28. (D. V. Gusak) **81i:60069** 60J30
- Oliver, V. L.** (with Singh, Jagbir) On minimum variance unbiased estimation and characterization of probability densities. *Optimizing methods in statistics (Proc. Internat. Conf., Indian Inst. Tech., Bombay, 1977)*, pp. 435-442. *Academic Press, New York, 1979*. (I. A. Melamed) **81i:62019** 62E10 (62F10)
- Eigenvalues of the Laplacian and uniqueness in the Minkowski problem. *J. Differential Geom.* **14** (1979), no. 1, 93-98 (1980). (V. T. Fomenko) **81j:53058** 53C45 (58G25)
- On compact submanifolds with nondegenerate parallel normal vector fields. *Pacific J. Math.* **83** (1979), no. 2, 481-493. (Ju. Burago) **81c:53050** 53C40
- A note on the asymptotic behaviour of the sum of principal radii of curvature on noncompact complete hypersurfaces. *Proc. Amer. Math. Soc.* **77** (1979), no. 3, 381-384. (C.-C. Hsiung) **81b:53038** 53C40
- Olmos, H.** (with Hudaib, V. N.) The Banach-Steinhaus theorem and duality in subcategories of a category of topological modules over topological rings. (Russian) *Taifent. Gos. Univ. Sb. Nauchn. Trudov No. 573 Funktsional. Anal.* (1978), 65-71, 110. (B. R. Gelbaum) **81i:46087** 46M99 (18B99)
- Olin, Philip** Urn models and categoricity. *J. Philos. Logic* **7** (1978), no. 3, 331-345. (Editors) **81h:03081** 03C90 (03C55)
- Olin, Robert F.** (with Thomson, James E.) Some index theorems for subnormal operators. *J. Operator Theory* **3** (1980), no. 1, 115-142. (John B. Conway) **81i:47031** 47B20
- de swaan Oliva, Abraham See de Swaan Oliva, Abraham
- Oliva, Pietro** (with Caligaris, Ottavio) Nonconvex control problems in Banach spaces. *Appl. Math. Optim.* **5** (1979), no. 4, 315-329. (Rolf Klötzler) **81a:49003** 49B27 (93C25)
- Oliva, W. M.** An example of a Morse-Smale retarded functional differential equation. *4th Latin-American School of Mathematics (Lima, 1978)*, pp. 315-317. *IV ELAM, Lima, 1979*. (M. C. Irwin) **81j:34127** 34K15 (58F09)
- The Levin-Nohel equation on the torus. *Functional differential equations and bifurcation (Proc. Conf., Inst. Cienc. Mat. São Carlos, Univ. São Paulo, São Carlos, 1979)*, pp. 317-321. *Lecture Notes in Math.*, **799**, Springer, Berlin, 1980. (K. E. Swick) **81m:58043** 58F10 (34K15, 45J05)
- d'Oliveira, J. B. S.** (with Novello, M.) Nonlinear viscous cosmology. *Acta Phys. Polon.* **8** **11** (1980), no. 1, 3-13. (R. L. Ingraham) **81e:83057** 83F05 (76D05, 83C55)
- Olive, Gloria** Binomial functions and combinatorial mathematics. *J. Math. Anal. Appl.* **7** (1979), no. 2, 460-473. (Daniel I. A. Cohen) **81a:05011** 05A19 (05A10)
- A combinatorial approach to generalized powers. *J. Math. Anal. Appl.* **74** (1980), no. 1, 270-285. (Edward A. Bender) **81i:05008** 05A10
- d'Oliveira, Augusto Brandão** (with Gerck, Edgardo) Continued fraction calculation of the eigenvalues of tridiagonal matrices arising from the Schrödinger equation. *J. Comput. Appl. Math.* **6** (1980), no. 1, 81-82. (Authors' summary) **81d:65018** 65F15
- Oliveira, F. Aleixo** Numerical solution of two-point boundary value problems and spline functions. *Numerical methods (Third Colloq., Keszthely, 1977)*, pp. 471-490. *Colloq. Math. Soc. János Bolyai, 22, North-Holland, Amsterdam, 1980*. (T. R. Hopkins) **81m:65137** 65L10 (65D07)
- tiago de Oliveira, J. See Tiago de Oliveira, J.
- de Oliveira, José Carlos F. See De Oliveira, José Carlos F.
- de Oliveira, M. C.** Density in the C^0 topology of structurally stable dynamical systems. (Portuguese) *Proceedings of the Eleventh Brazilian Mathematical Colloquium (Poços de Caldas, 1977)*. Vol. II (Portuguese), pp. 651-664. *Inst. Mat. Pura Apl., Rio de Janeiro, 1978*. (See **80c:00010b**) 58F10
- Nonsingular structural stable flows on three-dimensional manifolds. *Functional differential equations and bifurcation (Proc. Conf., Inst. Cienc. Mat. São Carlos, Univ. São Paulo, São Carlos, 1979)*, pp. 322-333. *Lecture Notes in Math.*, **799**, Springer, Berlin, 1980. (Clark Robinson) **81m:58044** 58F10 (58F18)
- Oliveira, P. Murilo** (with de Queiroz, S. L. A.; Riera, Rosane; Chaves, C. M.) Bond percolation in a square lattice in presence of a "magnetic field". *J. Phys. A* **13** (1980), no. 7, 2457-2463. (Authors' summary) **81e:82039** 82A42 (81E15, 82A67)
- Oliver, D. R.** (with Davis, W. R.) On the role of certain symmetry properties in relativistic kinetic theory and thermodynamics. *Ann. Inst. H. Poincaré Sect. A (N.S.)* **30** (1979), no. 4, 339-351. (O. K. Davjani) **81a:83022** 83C55 (82A30)
- Oliver, J.** A note on the signs of truncated Chebyshev polynomials. *BIT* **18** (1978), no. 2, 233-235. (Authors' summary) **81h:41002** 41A10 (65G05)
- (with Ruffhead, A.) A characterization of certain optimal collocation points for numerical differentiation. *BIT* **20** (1980), no. 3, 385-388. (Authors' summary) **81i:65023** 65D25
- On the application of Newbery's transformation to the Reinsch polynomial evaluation scheme. *J. Comput. Appl. Math.* **6** (1980), no. 1, 43-52. (C. W. Clenshaw) **81i:65055** 65G05 (65D20)
- An algorithm for numerical differentiation of a function of one real variable. *J. Comput. Appl. Math.* **6** (1980), no. 2, 145-160. (Authors' summary) **81i:65009** 65D25 (26-04)
- The selection of interpolation points in the numerical approximation of second and third order derivatives. *J. Comput. Appl. Math.* **6** (1980), no. 3, 229-239. (K. Jetter) **81m:65030** 65D25
- Oliver, R. K.** On Bieberbach's analysis of discrete Euclidean groups. *Proc. Amer. Math. Soc.* **80** (1980), no. 1, 15-21. (William Harvey) **81k:20067** 20H15 (22E40, 51M20)
- Oliver, Robert** (with Petrie, Ted) G surgery in the homotopy category and $K_0(Z(G))$. *Geometric applications of homotopy theory (Proc. Conf., Evanston, Ill., 1977)*, I, pp. 361-374. *Lecture Notes in Math.*, **657**, Springer, Berlin, 1978. (Czes Kosniowski) **81i:57033** 57R67 (57S17)
- Free compact group actions on products of spheres. *Algebraic topology, Aarhus 1978 (Proc. Sympos., Univ. Aarhus, Aarhus, 1978)*, pp. 539-548. *Lecture Notes in Math.*, **763**, Springer, Berlin, 1979. (C. B. Thomas) **81i:55005** 55M35 (57S15)
- SK_1 of p -adic group rings. *Bull. Amer. Math. Soc. (N.S.)* **3** (1980), no. 2, 863-866. (Bruce A. Magurn) **81g:16035** 16A54 (18F25)
- SK_1 for finite groups rings. I. *Invent. Math.* **57** (1980), no. 2, 183-204. (Hans Opolka) **81i:18031** 18F25 (12A57, 16A54)
- Oliveri, U.** (with Aiena, P.) Generalized Riesz operators on Banach spaces. (Italian) *Rend. Sem. Mat. Univ. Padova* **61** (1979), 303-312 (1980). (M. M. Day) **81e:47019** 47B05
- Olivié, H.** On the relationship between son-trees and symmetric binary B-trees. *Inform. Process. Lett.* **10** (1980), no. 1, 4-8. (Authors' introduction) **81a:68070** 68E10
- Oliver, Jean-Pierre** (with Serrato, Dany) Catégories de Dedekind. Morphismes transitifs dans les catégories de Schröder. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **290** (1980), no. 20, A939-A941. (Authors' summary) **81g:18009** 18B99
- Olivier, Philip D.** (with Saeks, Richard) Nonlinear state decomposition. *IEEE Trans. Circuits and Systems* **27** (1980), no. 11, 1113-1121. (Authors' summary) **81j:93034** 93C25 (93B30)
- Olivieri, E.** (with Benfatto, G.; Cassandro, M.; Gallavotti, G.; Nicolò, F.; Presutti, E.; Scacciatelli, E.) Some probabilistic techniques in field theory. *Comm. Math. Phys.* **59** (1978), no. 2, 143-166. (Sergio Albeverio) **81e:81081** 81E15 (60G20, 60H15, 60A45, 82A05)
- (with Benfatto, G.; Cassandro, M.; Gallavotti, G.; Nicolò, F.; Presutti, E.; Scacciatelli, E.) Ultraviolet stability in Euclidean scalar field theories. *Comm. Math. Phys.* **71** (1980), no. 2, 95-130. (Francesco Guerra) **81g:81045** 81E10 (60G20)
- Olivos, J.** (with Gales, E.) Comportement itératif des fonctions à multiseuil. (English summary) *Inform. and Control* **45** (1980), no. 3, 300-313. (C. Moraga) **81m:94032** 94C10 (33A70)
- Olkin, Ingram** (with Marshall, Albert W.) ★Inequalities: theory of majorization and its applications. Mathematics in Science and Engineering, **143**. Academic Press [Harcourt Brace Jovanovich, Publishers], New York-London-Toronto, Ont., 1979. xx + 569 pp. ISBN 0-12-473750-1 (Michael O. Albertson) **81b:00002** 00A05 (05-02, 15A42, 15A45, 52A40, 60E15, 65-02)

- (with Gibbons, Jean D.; Sobel, Milton) A subset selection technique for scoring items on a multiple choice test. *Psychometrika* 44 (1979), no. 3, 259-270. (S. Panchapakesan) **81g:62046** 62F07 (62P15, 92A25)
- Olligier, Jean** See **Moulin Olligier, Jean**
- Ollenschaw, Kathleen** A note on space-filling polyhedra. *Bull. Inst. Math. Appl.* 15 (1979), no. 11-12, 306-308. (H. S. M. Coxeter) **81c:52007** 52A25 (52A40)
- Ollero, Anibal** (with Baptista, L. F. B.) Fuzzy methodologies for interactive multicriteria optimization. *IEEE Trans. Systems Man Cybernet.* 10 (1980), no. 7, 355-365. (Authors' summary) **81j:90110** 90C31
- Ollero y Carmona, Diego** See **Vilaplana, J.-P.**, **81m:01001**
- Ollgren, Alexander** On multilevel-graph grammars. *Graph-grammars and their application to computer science and biology (Internat. Workshop, Bad Honnef, 1978)*, pp. 341-349. *Lecture Notes in Comput. Sci.*, 73, Springer, Berlin, 1979. (Author's introduction) **81d:68105** 68F05
- Olm, V.** Hypothesis testing for the parameter of a linear regression model belonging to a given ellipsoid. (Russian, Estonian and English summaries) *Eesti NSV Tead. Akad. Toimetised Füüs.-Mat.* 28 (1979), no. 2, 101-106. (H. Toutenburg) **81m:62127** 62J05 (62F04)
- Olmsted, W. E.** Boundary controllability of the temperature in a long rod. *Internat. J. Control* 31 (1980), no. 3, 593-600. (Author's summary) **81d:93014** 93B05 (80A20)
- Diffusion systems reacting at the boundary. *Quart. Appl. Math.* 38 (1980/81), no. 1, 51-59. (Mario Primicerio) **81h:80012** 80A30 (35K50)
- Olsnecki, M. A.** (with Perelomov, A. M.) Quantum systems that are connected with root systems, and radial parts of Laplace operators. (Russian) *Funktsional. Anal. i Prilozhen.* 12 (1978), no. 2, 57-65, 96. (Yasuhiro Asao) **81a:43014** 43A85 (58G99)
- Olsnik, A. Ju.** Groups with cyclic subgroups. (Russian) *C. R. Acad. Bulgare Sci.* 32 (1979), no. 9, 1165-1166. (Ju. I. Merzjakov) **81b:20023** 20E07
- An infinite simple torsion-free Noetherian group. (Russian) *Izv. Akad. Nauk SSSR Ser. Mat.* 43 (1979), no. 6, 1328-1393. (S. M. Vovsi) **81t:20033** 20E15 (20F05)
- Olsnik, G. L.** Construction of unitary representations of infinite-dimensional classical groups. (Russian) *Dokl. Akad. Nauk SSSR* 250 (1980), no. 2, 284-288. (A. Verona) **81f:22037** 22E65
- Olsnik, V. P.** (with Osadchenko, V. K.) Two-dimensional Fourier integrals containing Bessel functions. (Russian) *Theoretical and applied questions of differential equations and algebra (Russian)*, pp. 188-195, 269. "Naukova Dumka", Kiev, 1978. (D. P. Gupta) **81f:42015** 42B10 (44A15)
- Olser, Geert Jan** (with Wishart, David) Discontinuous Stackelberg solutions. *Internat. J. Systems Sci.* 10 (1979), no. 12, 1359-1368. (Authors' summary) **81h:90186** 90D25
- Comments on: "Time optimal feedback control for small disturbances" [IEEE Trans. Automat. Control 23 (1978), no. 6, 1095-1099; MR 80d:93060] by L. D. Meeker. With a reply by Meeker. *IEEE Trans. Automat. Control* 25 (1980), no. 1, 136-137. (Author's summary) **81g:93066** 93C35
- (with Bajaj, Tamer) Mixed Stackelberg strategies in continuous-kernel games. *IEEE Trans. Automat. Control* 25 (1980), no. 2, 307-309. (Authors' summary) **81a:90160** 90D05
- Olsen, Gunnar Hans** On simplices and the Poulsen simplex. *Functional analysis: surveys and recent results, II (Proc. Second Conf. Functional Anal., Univ. Paderborn, Paderborn, 1979)*, pp. 31-52. *North-Holland Math. Studies*, 38, North-Holland, Amsterdam, 1980. (Peter Dods) **81f:46013** 46A55 (46B20)
- Olson, Harold** See **Hanche-Olsen, Harald**
- Olson, James H.** Akcoglu's ergodic theorem for uniform sequences. *Canad. J. Math.* 32 (1980), no. 4, 880-884. (Michael Lin) **81k:47010** 47A35 (28D05)
- The individual ergodic theorem for contractions with fixed points. *Canad. Math. Bull.* 23 (1980), no. 1, 115-116. (Kenneth R. Berg) **81g:47006** 47A35 (28D15)
- Olson, O. H.** (with Christiansen, Peter L.) Return effect for rotationally symmetric solitary wave solutions to the sine-Gordon equation. *Phys. Lett. A* 68 (1978), no. 2, 185-188. (Authors' summary) **81m:81011** 81C05 (35Q20)
- On the break-up of quasisoliton solutions to the sine-Gordon equation in one and more dimensions. *Phys. Lett. A* 74 (1979), no. 1-2, 18-20. (Author's summary) **81k:81017** 81C05 (65P05)
- (with Samuelsen, M. R.) Rotationally symmetric breather-like solutions to the sine-Gordon equation. *Phys. Lett. A* 77 (1980), no. 2-3, 95-99. (Authors' summary) **81h:81019** 81C05 (35Q20)
- Olszewski, V. V.** See **Proceedings: All-Union School-Seminar on Statistical Hydroacoustics**, **81a:90010**
- Olson, D. M.** (with Jenkins, T. L.) A note on upper radicals generated by simple rings. *Period. Math. Hungar.* 11 (1980), no. 1, 81-85. (W. G. Leavitt) **81f:16015** 16A21 (17A65)
- Olson, David E.** Deterministic systems modeling: tensor product model approximation to continuous systems. *Proceedings of the Second International Conference on Mathematical Modelling (St. Louis, Mo., 1979)*, Vol. I, II, pp. 635-644. Univ. Missouri-Rolla, Rolla, Mo., 1980. (Author's summary) **81m:65147** 65L99
- Olson, Jerome A.** (with Schmidt, Peter; Waldman, Donald M.) A Monte Carlo study of estimators of stochastic frontier production functions. Specification and estimation of frontier production, profit and cost functions. *J. Econometrics* 13 (1980), no. 1, 67-82. (See **81k:62157**) 62P20
- Olson, Loren D.** The trace of Frobenius for elliptic curves with complex multiplication. *Algebraic geometry (Proc. Summer Meeting, Univ. Copenhagen, Copenhagen, 1978)*, pp. 454-476. *Lecture Notes in Math.*, 732, Springer, Berlin, 1979. (M. A. Kenku) **81h:10018** 10D23 (10D25, 14K07)
- Olson, Jera B.** Lower defect groups. *Comm. Algebra* 8 (1980), no. 3, 261-288. (P. Donovan) **81g:20024** 20C20
- Olson, Ulf** Maximum likelihood estimation of the polychoric correlation coefficient. *Psychometrika* 44 (1979), no. 4, 443-460. (D. G. Kabe) **81g:62100** 62H10 (62E15, 62H17)
- Olzak, Zbigniew** Certain property of the Ricci tensor on Sasakian manifolds. *Colloq. Math.* 40 (1978/79), no. 2, 235-237. (T. J. Willmore) **81a:53047** 53C25
- Nearly Sasakian manifolds. *Tensor (N.S.)* 33 (1979), no. 3, 277-286. (S. Takizawa) **81h:53048** 53C25
- On contact metric manifolds. *Tôhoku Math. J. (2)* 31 (1979), no. 2, 247-253. (V. Mihova-Nehmer) **81h:53032** 53C15
- Olszewski, P.** (with Borzymowski, A.) Some properties of generalized thermal potentials in a noncylindrical domain. *Serdica* 4 (1978), no. 1, 3-11. (Michèle Mastrangelo-Dehen) **81f:31010** 31B15 (31B35)
- Oltmans, Octav** Sur les fonctions convexes définies sur des ensembles convexes bornés de \mathbb{R}^n . (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 18, A837-A838. (Jean-Pierre Crouzeix) **81f:26006** 26A51
- Oltkar, B. C.** Right cyclically ordered groups. *Canad. Math. Bull.* 23 (1980), no. 1, 67-70. (F. D. Pedersen) **81e:06028** 06F15
- Olver, F. W. J.** (with Clenshaw, C. W.) An unrestricted algorithm for the exponential function. *SIAM J. Numer. Anal.* 17 (1980), no. 2, 310-331. (A. M. Cohen) **81k:65020** 65D20
- Asymptotic approximations and error bounds. *SIAM Rev.* 22 (1980), no. 2, 188-203. (L. Berg) **81c:41071** 41A60 (65D20)
- Olver, Peter J.** Euler operators and conservation laws of the BBM equation. *Math. Proc. Cambridge Philos. Soc.* 85 (1979), no. 1, 143-160. (Alexander A. Pankov) **81m:35128** 35Q20 (58F07)
- See also **Sattinger, David H.**, **81c:58022**
- O'Malley, Richard J.** (with Weil, C. E.) Iterated L_p derivatives. *Bull. Inst. Math. Acad. Sinica* 6 (1978), no. 1, 93-99. (Authors' summary) **81h:26003** 26A24
- (with Fleissner, R.) Conditions implying the summability of approximate derivatives. *Colloq. Math.* 41 (1979), no. 2, 257-263. (D. K. Dutta) **81m:26002** 26A24
- Insertion of Baire $\ast 1$, Darboux functions. *Rev. Roumaine Math. Pures Appl.* 24 (1979), no. 10, 1445-1448. (A. M. Bruckner) **81c:26004** 26A15
- O'Malley, Robert E., Jr.** \star Singular perturbation analysis for ordinary differential equations. Communication of the Mathematical Institute, Rijksuniversiteit Utrecht, 5. *Rijksuniversiteit Utrecht, Mathematical Institute, Utrecht*, 1977. i + 59 pp. (Editors) **81j:34103** 34E15
- (with Flaherty, Joseph E.) The numerical solution of singular singularly-perturbed initial value problems. *Numerical analysis of singular perturbation problems (Proc. Conf., Math. Inst., Catholic Univ., Nijmegen, 1978)*, pp. 151-180 (loose errata), Academic Press, London, 1979. (Erich Bohll) **81d:65050** 65L99
- (with Flaherty, Joseph E.) On the numerical integration of two-point boundary value problems for stiff systems of ordinary differential equations. *Boundary and interior layers—computational and asymptotic methods (Proc. Conf., Trinity College, Dublin, 1980)*, pp. 93-102. Boole, Dún Laoghaire, 1980. (Authors' summary) **81m:65134** 65L10
- (with Flaherty, Joseph E.) Analytical and numerical methods for nonlinear singular singularly-perturbed initial value problems. *SIAM J. Appl. Math.* 38 (1980), no. 2, 225-248. (Hussain S. Nur) **81f:34059** 34E15 (65L05)
- O'Malley, Thomas J.** S-subgroups of the real hyperbolic groups. *Canad. J. Math.* 32 (1980), no. 1, 246-256. (M. Rajagopalan) **81c:22020** 22E40
- Oman, Samuel D.** Estimating a proportion when sampling from a subpopulation. *Comm. Statist. B—Simulation Comput.* 9 (1980), no. 1, 81-101. (J. M. Bernardo) **81h:62066** 62F15 (62D05)
- Omanadze, R. Š.** On reducibility to the class of recursively enumerable sets. (Russian. Georgian and English summaries) *Sobch. Akad. Nauk Gruz. SSR* 91 (1978), no. 3, 549-552. (A. N. Degiev) **81c:03044** 03D30
- Q-reducibility. (Russian. Georgian and English summaries) *Sobch. Akad. Nauk Gruz. SSR* 95 (1979), no. 1, 29-32. (G. N. Kobzev) **81h:03045** 03D25
- O'Mara, K. S.** (with Ögütörel, Mehmet Namık) Modelling and simulation of vertebrate retina: extended network. *Biol. Cybernet.* 38 (1980), no. 1, 9-17. (Authors' summary) **81h:92004** 92A07
- Omarov, A. I.** Δ -minimality and the finite cover property. (Russian) *The theory of nonregular curves in various geometric spaces (Russian)*, pp. 74-76. *Kazakh. Gos. Univ., Alma-Ata*, 1979. (M. A. Talčin) **81i:03044** 03C45
- Omarov, B.** (with Baizhanov, B. S.) Restriction of a theory to a formula. (Russian) *The theory of nonregular curves in various geometric spaces (Russian)*, pp. 9-11. *Kazakh. Gos. Univ., Alma-Ata*, 1979. (M. A. Talčin) **81i:03039** 03C30
- (with Baizhanov, B. S.) On finite diagrams. (Russian) *The theory of nonregular curves in various geometric spaces (Russian)*, pp. 11-15. *Kazakh. Gos. Univ., Alma-Ata*, 1979. (M. A. Talčin) **81i:03040** 03C35
- (with Baizhanov, B. S.) Omitting models. (Russian. Kazakh summary) *Izv. Akad. Nauk Kazah. SSR Ser. Fiz.-Mat.* 1980, no. 1, 57-59, 93. (O. V. Belegradek) **81g:03035** 03C15
- Omata, Sigeru** See **Ohmura, Shigeru**
- O'Meara, K. C.** Quotient rings of symmetric and universal group algebras. *Comm. Algebra* 8 (1980), no. 3, 235-260. (Uno Kalljula) **81d:20008** 20C07 (16A08, 16A27)
- O'Meara, O. T.** A survey of the isomorphism theory of the classical groups. *Ring theory and algebra, III (Proc. Third Conf., Univ. Oklahoma, Norman, Okla., 1979)*, pp. 225-242. *Lecture Notes in Pure and Appl. Math.*, 55, Dekker, New York, 1980. (B. R. McDonald) **81m:10045** 10C30 (15A78)
- On indecomposable quadratic forms. *J. Reine Angew. Math.* 317 (1980), 120-156. (Hans-Jochen Bartels) **81i:10027** 10C05 (10E45)
- Omero, C.** (with Percacci, R.) Generalized nonlinear σ -models in curved space and spontaneous compactification. *Nuclear Phys. B* 165 (1980), no. 2, 351-364. (J. H. Rawnsley) **81e:81071** 81E10 (58E20)
- Omodeo, E. G.** (with Ferro, A.; Schwartz, Jacob T.) Decision procedures for some fragments of set theory. *5th Conference on Automated Deduction (Les Arcs, 1980)*, pp. 88-96. *Lecture Notes in Comput. Sci.*, 87, Springer, Berlin, 1980. (See **81h:08006**) 68C20 (68B10)
- Omote, Minoru** (with Michihiro, Y.; Wadati, Miki) A Bäcklund transformation of the axially symmetric stationary Einstein-Maxwell equations. *Phys. Lett. A* 79 (1980), no. 2-3, 141-142. (From the summary) **81h:83032** 83C50 (35A25, 53A35, 58A15)
- (with Inoue, Kazuhiko; Kobayashi, Masanori) Quantization of a spin- $\frac{1}{2}$ field interacting with the electromagnetic field. *Prog. Theoret. Phys.* 63 (1980), no. 4, 1413-1428. (Authors' summary) **81d:81104** 81G10 (81D25, 83E99)
- Omoto, Hideo** (with Nakano, Shigeo) Local deformations of isolated singularities associated with negative line bundles over abelian varieties. *Nagoya Math. J.* 75 (1979),

- 41-70. (G. Trautmann) **81h:32030** 32G07 (32L15)
- O Murchadha, Niall** Killing vectors and maximal slicing in general relativity. *Phys. Lett. A* **77** (1980), no. 2-3, 103-104. (Author's summary) **81i:83025** 83C40 (58D25)
- Ondak, Tetsuya** (with Niki, Hiroshi; Sawami, Hideo) Note on the nonstationary iterative method for the estimation of the optimum overrelaxation parameter. *J. Comput. Appl. Math.* **6** (1980), no. 2, 127-131. (Authors' summary) **81i:65016** 65F10 (65N20)
- Onegor, L. A.** (with Leonov, A. I.) Approximate calculation of multidimensional singular integrals with Hilbert-type kernels. (Russian) *Izv. Vys. Ucheb. Zaved. Matematika* **1979**, no. 11, 55-60. (M. I. Levin) **81g:65026** 65D30
- O'Neill, Patrick E.** (with Beeler, Michael D.) Some new van der Waerden numbers. *Discrete Math.* **28** (1979), no. 2, 135-146. (L. C. Egan) **81d:05003** 05A05 (05C15, 10L20)
- O'Neill, T. M.** Cooling of a pure electron plasma by cyclotron radiation. *Phys. Fluids* **23** (1980), no. 4, 725-731. (B. Buti) **81i:82021** 82A45 (76X05)
- A confinement theorem for nonneutral plasmas. *Phys. Fluids* **23** (1980), no. 11, 2216-2218. (Author's summary) **81i:76090** 76X05
- O'Neill, C. J.** (with Downs, T.) A numerical accuracy consideration in polynomial deflation. *Math. Comp.* **32** (1978), no. 144, 1144-1146. (Authors' summary) **81g:65060** 65H05 (65G05)
- O'Neill, John D.** Covers of abelian groups. *Math. J. Okayama Univ.* **20** (1978), no. 2, 115-121. (K. M. Rangaswamy) **81d:20047** 20K27
- Rings covered by proper ideals. *Comm. Algebra* **8** (1980), no. 6, 505-515. (J. C. Robson) **81h:16033** 16A48
- O'Neill, Terence J.** Distribution-free estimation of cure time. *Biometrika* **66** (1979), no. 1, 184-187. (John Kalbfleisch) **81g:62176** 62P10 (92A15)
- The general distribution of the error rate of a classification procedure with application to logistic regression discrimination. *J. Amer. Statist. Assoc.* **75** (1980), no. 369, 154-160. (Margaret P. Gessaman) **81d:62056** 62H30
- Ong, B. G.** (with Campbell, L. Lorne) Estimation of frequencies of sinusoids in the presence of noise. (French summary) *Canad. J. Statist.* **7** (1979), no. 1, 11-19. (Pham Dinh Tuan) **81h:62106** 62M10
- Ong, S. H.** (with Lee, P. A.) The noncentral negative binomial distribution. *Biometrical J.* **21** (1979), no. 7, 611-627. (D. A. Sprott) **81i:62032** 62E15
- Ong, Sing Cheong** Invariant operator ranges of nest algebras. *J. Operator Theory* **3** (1980), no. 2, 195-201. (E. Gerlach) **81i:47008** 47A15 (47D25)
- Ong, Warren** (with Russek, Arnold) Simple asymptotic wave function for a continuum Dirac electron. *Phys. Rev. A* (3) **17** (1978), no. 1, 120-124. (Authors' summary) **81i:81157** 81G45
- Onishchenko, O. G.** Plasma waves propagating along a magnetic field in a strongly anisotropic relativistic plasma. *Astrofizika* **15** (1979), no. 2, 253-267. (Russian); translated as *Astrophysics* **15** (1979), no. 2, 169-178. (Author's summary) **81i:85004** 85A30 (76W05)
- Onitskii, A. L.** See Adams, John Frank, **81d:22001**
- Onitskii, V.** (with Dmitriev, V. I.) Determination of indicators of operating efficiency of multimodal systems with relative priorities and an arbitrary law of distribution of servicing time. (Russian) *Trudy Moskov. Orden. Lenin. Energet. Inst.* **10** (1979), 36-40, 155. (Authors' summary) **81i:90082** 90B22 (60K25)
- Onitskii, V. Ja.** (with Grilik'ii, D. V.) The nonstationary sonic field around a hollow empty elastic sphere. (Russian) *Mat. Metody i Fiz.-Meh. Polja* **11** (1980), 51-56, 121. (Authors' summary) **81i:76036** 76Q05 (73D99)
- Onitschenko, O. G.** See Onitskii, O. G.
- Onishi, Yoshimoto** (with Sone, Yoshio) Kinetic theory of slightly strong evaporation and condensation. Hydrodynamic equation and slip boundary condition for finite Reynolds number. *J. Phys. Soc. Japan* **47** (1979), no. 5, 1676-1685. (Carlo Cercignani) **81i:82034** 82A40 (76T05)
- Omewee, C. W.** Pointwise differentiation on local fields. *Harmonic analysis in Euclidean spaces* (Proc. Sympos. Pure Math., Williams Coll., Williamstown, Mass., 1978), Part 2, pp. 329-331. Proc. Sympos. Pure Math., XXXV, Part 2, Amer. Math. Soc., Providence, R.I., 1979. (W. R. Wade) **81h:43010** 43A70 (12B40)
- Ono, Akira** Note on the Morrey-Sobolev-type imbedding theorems in the strong $\mathcal{E}^{p,\lambda}$ spaces. *Math. Rep. Kyushu Univ.* **11** (1977/78), no. 1, 31-37. (Pavel Doktor) **81d:46034** 46E35 (46E30)
- Ono, J.** (with Kodama, Yukihiro) On fine shape theory. *Fund. Math.* **105** (1979/80), no. 1, 29-39. (Maria Moszyńska) **81d:57014** 57N25 (54C56, 55P55)
- Ono, Osamu** (with Kobayashi, Seiji) Stability of composite systems with structural connections. (Japanese. English summary) *Systems and Control* **24** (1980), no. 4, 273-277. (From the summary) **81d:93049** 93D05 (90A16, 92A17, 93A15)
- Ono, Takashi** On the group of automorphisms of a Hopf map. *Nagoya Math. J.* **79** (1980), 131-140. (Bruce H. Edwards) **81h:10030** 10C01
- Ono, Y.** (with Entel, P.; Mühlischlegel, B.) On the electrical conductivity of intermediate valence compounds. *Z. Phys. B* **38** (1980), no. 3, 227-234. (Authors' summary) **81d:82051** 82A55
- Onofri, E.** (with Marchesini, Giovanni) Planar limit for $SU(N)$ symmetric quantum dynamical systems. *J. Math. Phys.* **21** (1980), no. 5, 1103-1110. (M. Demuth) **81i:81024** 81C12
- A modified Bar-Dargut equation with polynomial eigenfunctions. *J. Math. Phys.* **21** (1980), no. 10, 2511-2520. (C. Carton-Lebrun) **81i:81018** 81C05 (45E05, 81G05)
- (with Casartelli, M.; Marchesini, Giovanni) A singular integral operator arising from $1/N$ expansions: analytical and numerical results. *J. Phys. A* **13** (1980), no. 4, 1217-1225. (R. Kotěcký) **81f:47050** 47G05 (81E15)
- (with Mondello, M.) Planar limit of the singlet spectrum for $SU(N)$ -invariant quantum Hamiltonians by the quantum collective field method. *Phys. Lett. B* **98** (1981), no. 4, 277-279. (Authors' summary) **81i:81048** 81E99
- Oppenack, Ju. N.** On the question of constructing a model of optimal distribution of the blood flow in the tissues of the human organism. (Russian) *Theory of optimal decisions* (Russian), pp. 80-86, 111. *Akad. Nauk Ukrain. SSR, Inst. Kibernet., Kiev*, 1979. (G. S. Ladde) **81i:92004** 92A07
- Oppenack, Nelson** (with Tibboas, P.) On the conditional asymptotic stability for a nonlinear ordinary differential equation. *An. Acad. Brasil. Ciênc.* **51** (1979), no. 2, 187-190. (A. I. Kir'jane) **81d:34040** 34D05
- (with Spezamiglio, Adalberto) Qualitative properties of certain ordinary differential systems. *Functional differential equations and bifurcation* (Proc. Conf., Inst. Ciênc. Mat. São Carlos, Univ. São Paulo, São Carlos, 1979), pp. 334-347. *Lecture Notes in Math.* **799**, Springer, Berlin, 1980. (K. R. Schneider) **81m:34044** 34C10
- (with Pavlu, Luiz Carlos) Invariance, asymptotic behavior and stability properties for ordinary differential equations. *Tôhoku Math. J. (2)* **32** (1980), no. 2, 217-224. (M. Rama Mohana Rao) **81m:34066** 34D10 (34C10)
- Omaki, Akira** Non-Newtonian effect and long-range correlation in shear flow in two dimensions. *Phys. Lett. A* **70** (1979), no. 1, 31-33. (Author's summary) **81g:76002** 76A05
- Onyszkiewicz, Z.** Connection between the nonlinear response of a system and the maximum of entropy. *Acta Phys. Polon. A* **58** (1980), no. 1, 3-8. (Author's summary) **81i:82023** 82A35
- Theory of collinear metamagnetism. I. Unified treatment of field- and temperature-induced metamagnets. *Phys. A* **103** (1980), no. 1-2, 226-256. (Author's summary) **81i:82072a** 82A67
- Theory of collinear metamagnetism. II. High density expansion method. *Phys. A* **103** (1980), no. 1-2, 257-273. (Author's summary) **81i:82072b** 82A67
- Theory of collinear metamagnetism. III. Magnons spectrum by renormalized high density expansion. *Phys. A* **103** (1980), no. 1-2, 274-294. (Author's summary) **81i:82072c** 82A67
- New model exhibiting metamagnetic transitions in absence of magnetic field. (German summary) *Phys. Status Solidi (B)* **100** (1980), no. 1, 297-302. (Author's summary) **81i:82022** 82A25
- min-Oo** See Min-Oo
- Oodaira, Hiroshi** Note on Freidlin-Wentzell type estimates for stochastic processes. *Measure theory applications to stochastic analysis* (Proc. Conf., Res. Inst. Math., Oberwolfach, 1977), pp. 145-153. *Lecture Notes in Math.*, **695**, Springer, Berlin, 1978. (Author's introduction) **81i:60048** 60G15 (60F10)
- Oohashi, Tsunemichi** Some representation for inverses of band matrices. *TRU Math.* **14** (1980), no. 2, 39-47. (Author's summary) **81i:15005** 15A09 (39A10)
- Ootaki, Akira** Openness of loci, P-excellent rings and modules. *Hiroshima Math. J.* **10** (1980), no. 2, 419-436. (Carla Massaza) **81i:13008** 13H99 (14M10)
- Ooms, Alfons I.** On Frobenius Lie algebras. *Comm. Algebra* **8** (1980), no. 1, 13-52. (F. W. Lemire) **81i:17011** 17B05
- Oono, Yoshitsugu** (with Kohda, Tohru; Yamazaki, Hideki) Disorder parameter for chaos. *J. Phys. Soc. Japan* **48** (1980), no. 3, 738-745. (Authors' summary) **81i:82023** 82A25 (58F13)
- Oort, Frans** (with Oda, Tadao) Supersingular abelian varieties. *Proceedings of the International Symposium on Algebraic Geometry* (Kyoto Univ., Kyoto, 1977), pp. 595-621. Kinokuniya Book Store, Tokyo, 1978. (Neal Koblitiz) **81i:14023** 14K10 (14L15)
- Oosterhoff, J.** (with van Zwet, W. R.) A note on contiguity and Hellinger distance. *Contributions to statistics*, pp. 157-166. Reidel, Dordrecht, 1979. (A. Spätaru) **81i:60037** 60F05 (62E20, 62F05)
- (with Groeneboom, P.) ★Bahadur efficiency and small-sample efficiency: a numerical study. *Aldeling Mathematische Statistik* [Department of Mathematical Statistics], **68**. Mathematisch Centrum, Amsterdam, 1980. ii+30 pp. (Authors' summary) **81d:62021** 62F05 (62G20)
- Opabin, G. A.** A complex of programs for a parametric synthesis of precision electromechanical systems. (Russian) *Theory of stability and its applications* (Russian), pp. 284-292, 304. "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. (Author's summary) **81i:78029** 78A55
- Opatrný, J.** (with Chvátilová, J.) Two results on the bandwidth of graphs. *Proceedings of the Tenth Southeastern Conference on Combinatorics, Graph Theory and Computing* (Florida Atlantic Univ., Boca Raton, Fla., 1979), pp. 263-273. Congress. Numer., XXIII-XXIV, Utilitas Math., Winnipeg, Man., 1979. (Authors' summary) **81i:05064** 05C05 (05C35)
- Opfer, Gerhard** (with Anselone, P. M.) Numerical integration of weakly singular functions. *Numerische Integration* (Tagung, Math. Forschungsinst., Oberwolfach, 1978), pp. 11-43. Internat. Ser. Numer. Math., **45**. Birkhäuser, Basel, 1979. (S. Dubuc) **81i:65034** 65D32
- Conformal mappings onto prescribed regions via optimization techniques. *Numer. Math.* **35** (1980), no. 2, 189-200. (D. Gaier) **81i:30015** 30C30
- Opial, Zdzisław** Mathematization of people's activities. (Polish) *Wiadom. Mat.* (2) **21**, no. 2, 138-148 (1979). (L. W. Szczerba) **81i:00008** 00A25 (01A05)
- Opolcer, V. I.** (with Andrusievich, V. V.; Naneva, T. B.) Static and dynamic analysis of a law of monoresource distribution. (Russian. English summary) *Problemy Tehn. Kibernet.* **9** (1980), 15-26. (Authors' summary) **81h:90047** 90A30
- Opolka, Hans** (with Lorenz, Falko) Einfache Algebren und projektive Darstellungen über Zahlkörpern. *Math. Z.* **162** (1978), no. 2, 175-182. (I. Reiner) **81m:12025** 12E15 (16A16, 20C25)
- The twisted group algebra of a finite nilpotent group over a number field. *Glasgow Math. J.* **20** (1979), no. 1, 55-61. (M. E. Keating) **81i:16015** 16A26 (12A57, 16A46, 20C05)
- Irreducible projective representations of finite nilpotent groups over number fields. *J. Algebra* **60** (1979), no. 1, 181-198. (Jürgen Ritter) **81d:20012** 20C25 (12A57)
- Die verschränkte Gruppenalgebra einer endlichen Gruppe über einem Zahlkörper. *J. Algebra* **63** (1980), no. 1, 259-263. (Jürgen Ritter) **81i:20010** 20C25 (12A57, 16A27)
- Zur Auflösung zahlentheoretischer Knoten. *Math. Z.* **173** (1980), no. 1, 95-103. (Robert Perlis) **81m:12012** 12A55 (12A60)
- Oppen, Derek C.** (with Nelson, Greg) Fast decision procedures based on congruence closure. *J. Assoc. Comput. Mach.* **27** (1980), no. 2, 356-364. (Authors' summary) **81i:68012** 68B10 (68C25)
- Oppenheim, A. K.** (with Barenblatt, G. I.; Guirguis, R. H.; Kamel, M. M.; Kuhl, A. L.; Zel'dovich, Ja. B.) Self-similar explosion waves of variable energy at the front. *J. Fluid Mech.* **99** (1980), no. 4, 841-858. (Authors' summary) **81i:76063** 76L05
- Oppenheimer, J. Robert** On Albert Einstein. *Einstein*, pp. 44-49. Harvard Univ. Press, Cambridge, Mass., 1979. (See **81i:01053**) 01A70
- Oppermann, R.** (with Jüngling, K.) Effects of spin interactions in disordered electrons

- systems: loop expansions and exact relations among local gauge invariant models. *Z. Phys. B* 38 (1980), no. 2, 93-109. (Authors' summary) **81d:82038** 82A42
- Oprisa, C. A. A note on the mean of the N th order statistic of a sample from the exponential distribution. *Metron* 35 (1977), no. 1-2, 149-151 (1979). (Authors' summary) **81m:62031** 62E15 (62G30)
- Oprea, Vasile (with Georgiev, Georgi Iv.) ★Varietăți diferențiabile finite și infinite dimensionale. Vol. II. (Romanian) [Finite- and infinite-dimensional differentiable manifolds. Vol. II] With an English summary. *Editura Academiei Republicii Socialiste România, Bucharest*, 1979. 294 pp. (Tudor S. Rădui) **81j:58001** 58-01 (53-01)
- The d -characteristic classes of the complex vector bundles. *Rev. Roumaine Math. Pures Appl.* 25 (1980), no. 3, 375-383. (Th. Friedrich) **81g:53024** 53C05 (32L10, 57R20)
- O'Rourke, L. (with Houston, P.) On the zeros of the Higgs field for axially symmetric multimonopole configurations. *Phys. Lett. B* 93 (1980), no. 1-2, 151-154. (Authors' summary) **81d:81054** 81E10 (53C05)
- (with Houston, P.) On the charge distribution of static axial and mirror symmetric monopole systems. *Phys. Lett. B* 94 (1980), no. 2, 153-156. (Authors' summary) **81f:81059** 81E99
- Orszag, Mircea The role of Gauss' equation in plane motion with free and wet surfaces. *Rev. Roumaine Sci. Tech. Sér. Méc. Appl.* 24 (1979), no. 6, 871-875. (Ju. L. Rodin) **81k:30060** 30E25 (76S05)
- On motion in a permeable, homogeneous and isotropic dam. (Romanian) *Stud. Cerc. Mec. Apl.* 38 (1979), no. 6, 791-805. (E. Ungureanu-David) **81m:76040** 76S05
- An application of the finite difference equation method. *Rev. Roumaine Sci. Tech. Sér. Méc. Appl.* 25 (1980), no. 2, 301-305. (Authors' summary) **81d:76090** 76S05 (65M05)
- A class of filtration motions with a free surface. (Romanian) *Stud. Cerc. Mec. Apl.* 39 (1980), no. 1, 3-28. (E. Ungureanu-David) **81m:76040a** 76S05
- Orava, P. Jussi (with Halme, Aarne; Hämäläinen, Raimo P.) Polynomial operators for nonlinear modelling and analysis of dynamical systems. Topics in systems theory. *Acta Polytech. Scand. Math. Comput. Sci. Ser. No. 31* (1979), 128-137. (Authors' summary) **81m:93015** 93B05 (93A20)
- Oravov, Dž. The first boundary value problem for a nonlinear equation of mixed type in three dimensions. (Russian. Turkish and English summaries) *Izv. Akad. Nauk Turkm. SSR Ser. Fiz.-Tehn. Him. Geol. Nauk* 1979, no. 5, 12-16. (A. M. Nahušev) **81h:35072** 35M05
- Oravov, M. B. Some properties of analytic operator-valued functions of two arguments. (Russian) *Uspehi Mat. Nauk* 33 (1978), no. 4(202), 221-222. (P. A. Kučment) **81a:47017** 47A55
- Completeness of elementary solutions in the problem of steady-state oscillations of an elastic rectangular plate. (Russian) *Funkcional. Anal. i Prilozhen.* 14 (1980), no. 1, 77-78. (R. V. Dudučava) **81j:35090** 35P20 (35D10)
- Orbach, Abraham (with Fischl, Robert) Performance index sensitivity of optimal control of first order in time- and space-distributed parameter systems. *IEEE Trans. Automat. Control* 25 (1980), no. 2, 314-316. (Authors' summary) **81a:93054** 93C50
- Orban, John (with Wolfe, Douglas A.) Distribution-free partially sequential placement procedures. *Comm. Statist. A—Theory Methods* 9 (1980), no. 9, 883-904. (Nanak Chand) **81g:62138** 62L10 (62G10)
- Orchard, H. J. (with Sussman-Fort, S. E.) Canonical structures for lossless one-ports. *IEEE Trans. Circuits and Systems* 27 (1980), no. 9, 772-778. (Authors' summary) **81h:94029** 94C05
- Orchil, Jean Leibniz et l'irénisme d'Antoine Arnauld. *Leibniz in Paris* (1672-1676) (Sympos. G. W. Leibniz Soc./CNRS, Chantilly, 1976). Vol. II (French), pp. 15-20. *Studia Leibnitiana Suppl., XVIII, Steiner, Wiesbaden*, 1978. (See **81m:01022b**) 01A45
- Ord, G. (with Gaunt, D. S.; Martin, J. L.; Torrie, G. M.; Whittington, S. G.) Restricted valence site animals on the simple cubic lattice. *J. Phys. A* 13 (1980), no. 5, 1791-1797. (C. A. Hurst) **81g:82073** 82A67
- (with Whittington, S. G.) Lattice decorations and pseudocontinuum percolation. *J. Phys. A* 13 (1980), no. 9, L307-L310. (Authors' summary) **81h:82036** 82A42 (60K35)
- Ord, Keith (with Cliff, Andrew; Haggett, Peter) Graph theory and geography. *Applications of graph theory*, pp. 293-326, Academic Press, London, 1979. (See **81h:95050**) 86A99 (05C99)
- Orlov, Alex A study of pivot probabilities in LP tableaux. *Survey of mathematical programming (Proc. Ninth Internat. Math. Programming Sympos., Budapest, 1976)*, Vol. 2, pp. 141-154. North-Holland, Amsterdam, 1979. (R. Jagannathan) **81m:90069** 90C05 (90C15)
- A step toward probabilistic analysis of simplex method convergence. *Math. Programming* 19 (1980), no. 1, 3-13. (Authors' summary) **81e:90060** 90C05
- Orlov, A. A. (with Džuljakjan, G. V.) Parsing algorithm for indexed languages. (Russian. Armenian summary) *Akad. Nauk Armjan. SSR Dokl.* 69 (1979), no. 1, 24-29. (I. M. Havel) **81i:68122** 68F25
- Orlov, Edward T. (with Thomas, Barbara V. Smith) Sequential conditions and free topological groups. *Proc. Amer. Math. Soc.* 79 (1980), no. 2, 319-326. (M. Rajagopalan) **81c:54042** 54D55 (22A99, 54G20)
- Orlov, Janusz A. (with Panzar, John C.) On the nonexistence of Pareto superior outlay schedules. *Bell J. Econom.* 11 (1980), no. 1, 351-354. (Authors' summary) **81h:90033** 90A14
- Orechia, Ferruccio The conductor of curves with reduced tangent cone. *C. R. Math. Rep. Acad. Sci. Canada* 1 (1978/79), no. 4, 215-218. (Allen B. Altman) **81d:14006** 14H20 (14H45)
- On some groups of the K -theory of affine varieties. (Italian) *Ann. Mat. Pura Appl.* (4) 123 (1980), 203-217. (Barry H. Dayton) **81j:13012** 13D15 (14C35)
- On the groups SK_0 and NK_0 of some affine surfaces. (Italian. English summary) *Boll. Un. Mat. Ital. B* (5) 17 (1980), no. 2, 528-538. (Barry H. Dayton) **81k:14018** 14F15 (18F25)
- O'Reilly, Federico J. (with Diaz, Joaquín) Correction to: "On a criterion for simultaneous extrapolation in nonfull rank normal regression" [Ann. Statist. 4 (1976), no. 3, 625-628; MR 54 #3986] by O'Reilly. *Ann. Statist.* 8 (1980), no. 5, 1177-1178. (Editors) **81j:62126** 62J05
- (with Mielke, Paul W., Jr.) Asymptotic normality of MRPP statistics from invariance principles of U -statistics. *Comm. Statist. A—Theory Methods* 9 (1980), no. 6, 629-637. (P. K. Sen) **81f:62041** 62E20 (60F17)
- O'Reilly, John Two time-scale feedback stabilization of linear time-varying singularly perturbed systems. *J. Franklin Inst.* 308 (1979), no. 5, 465-474. (R. E. O'Malley, Jr.) **81h:93049** 93D15 (93C50)
- Optimal low-order feedback controllers for linear discrete-time systems. *Control and dynamic systems*, Vol. 16, pp. 335-367, Academic Press, New York, 1980. (See **81j:93082**) 93C55
- Dynamical feedback control for a class of singularly perturbed linear systems using a full-order observer. *Internat. J. Control* 31 (1980), no. 1, 1-10. (Richard M. Hawkes) **81h:93050** 93D15
- The deadbeat control of linear multivariable systems with inaccessible state. *Internat. J. Control* 31 (1980), no. 4, 645-654. (Authors' summary) **81d:93035** 93C35
- O'Reilly, M. J. (with Farrell, P. A.; Hegarty, A. F.; Miller, John J. H.; Sloane, A. A.) Numerical results for singularly perturbed linear and quasilinear differential equations using a coarse grid. *Boundary and interior layers—computational and asymptotic methods (Proc. Conf., Trinity College, Dublin, 1980)*, pp. 275-280, Boole, Din Loughairs, 1980. (From the introduction) **81m:65132** 65L10
- O'Reilly, N. (with Byrne, P. C.) Frequency-domain condition for the existence of a Lyapunov functional for the problem of Lurie. *IEEE Trans. Automat. Control* 25 (1980), no. 3, 555-557. (From the summary and introduction) **81g:93079** 93D05
- Oren, Samuel S. A combined variable metric-conjugate gradient algorithm for a class of large scale unconstrained minimization problems. *Optimization techniques (Proc. 8th IFIP Conf., Würzburg, 1977)*, Part 2, pp. 107-115, Lecture Notes in Control and Information Sci., 7, Springer, Berlin, 1978. (Authors' summary) **81g:90084** 90C30 (65K05)
- (with Rothkopf, Michael H.) A closure approximation for the nonstationary $M/M/s$ queue. *Management Sci.* 25 (1979/80), no. 6, 522-534. (B. W. Stuck) **81c:60101** 60K25
- (with Smith, Stephen A.) Reliability growth of repairable systems. *Naval Res. Logist. Quart.* 27 (1980), no. 4, 539-547. (Authors' summary) **81m:62182** 62N05 (90B25)
- Oren, Tuncer I. See *Methodology in systems modelling and simulation*, **81c:68079a**
- Orevkov, V. P. Lower bounds for lengthening complexity of deductions after cut-elimination. (Russian. English summary) Studies in constructive mathematics and mathematical logic, VIII. *Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 88 (1979), 137-162, 242-243. (A. S. Kuzičev) **81i:03087** 03F20
- Three ways of recognizing nonessential formulas in sequents. (Russian. English summary) Studies in constructive mathematics and mathematical logic, VIII. *Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 88 (1979), 163-175, 243-244. (A. S. Kuzičev) **81i:03096** 03F50
- Orey, Steven (with Jain, Naresh C.) Vague convergence of sums of independent random variables. A collection of invited papers on ergodic theory. *Israel J. Math.* 33 (1979), no. 3-4, 317-348 (1980). (Roy V. Erickson) **81f:60032** 60F05 (60B10)
- (with Jain, Naresh C.) Domains of partial attraction and tightness conditions. *Ann. Probab.* 8 (1980), no. 3, 584-599. (B. Jesiak) **81m:60035** 60F05 (60G50)
- Orfanidis, Sophocles J. Discretizing the sine-Gordon equation: geometrical and group theoretical aspects. *Nonlinear partial differential equations in engineering and applied science (Proc. Conf., Univ. Rhode Island, Kingston, R.I., 1979)*, pp. 285-298, *Lecture Notes in Pure and Appl. Math.*, 54, Dekker, New York, 1980. (A. M. Vinogradov) **81h:35150** 35Q20 (58A15, 58F07)
- Group-theoretical aspects of the discrete sine-Gordon equation. *Phys. Rev. D* 3 (1980), no. 6, 1507-1512. (Yvette Kosmann-Schwarzbach) **81h:81079** 81E99 (35A30, 35Q20, 39A12, 81C40)
- α models of nonlinear evolution equations. *Phys. Rev. D* 3 (1980), no. 6, 1513-1522. (V. E. Korepin) **81d:81016** 81C05 (35C05, 35G20, 35Q20, 58F07)
- Orszag, László M. See *Cruz Orive, László M.*
- Ortiz, J. (with Liszka, T.) The finite difference method at arbitrary irregular grids and its application in applied mechanics. *Comput. & Structures* 11 (1980), no. 1-2, 83-95. (A. O. Garder) **81d:65058** 65N05 (73K99)
- Orland, H. (with De Dominicis, C.; Gabay, M.; Garel, T.) White and weighted averages over solutions of Thouless Anderson Palmer equations for the Sherrington Kirkpatrick spin glass. (French summary) *J. Physique* 41 (1980), no. 9, 923-930. (B. Derrida) **81i:62051** 82A55 (82A25)
- Polymer expansion of the quantum many-body problem. *Phys. Lett. A* 76 (1980), no. 3-4, 213-218. (R. L. Ingraham) **81m:82013** 82A15 (81M05)
- Orlans, N. (with Calahan, D. A.) A sparsity-oriented approach to the design of mechanical systems. *Problem analysis in science and engineering (Conf., Univ. Waterloo, Ont., 1975)*, pp. 361-389, Academic Press, New York, 1977. (See **80h:00004**) 73K40
- Orlandi, E. (with de Mottoni, Piero; Tesi, Alberto) Asymptotic behavior for a system describing epidemics with migration and spatial spread of infection. *Nonlinear Anal.* 3 (1979), no. 5, 663-675. (From the introduction) **81a:92015** 92A15 (35K55)
- Orlicz, Władysław See *Banach, Stefan*, **81f:46001**
- Orlik, Peter (with Solomon, Louis) Combinatorics and topology of complements of hyperplanes. *Invent. Math.* 56 (1980), no. 2, 167-189. (M. Sebastiani) **81e:32015** 32C40 (05A99, 06B99)
- (with Solomon, Louis) Unitary reflection groups and cohomology. *Invent. Math.* 59 (1980), no. 1, 77-94. (Peter Giblin) **81m:32017** 32C40 (57S17)
- Orlin, James B. (with Bartholdi, John J. III; Ratliff, H. Donald) Cyclic scheduling via integer programs with circular ones. *Oper. Res.* 28 (1980), no. 5, 1074-1085. (Authors' summary) **81i:90142** 90C10
- Orlov, A. G. (with Rasina, I. V.) Sufficient optimality conditions for complex systems. (Russian) *Problems of stability of motion, analytical mechanics and control of motion (Third All-Union Cetare Conf., Irkutsk, 1977)* (Russian), pp. 257-261, 326, "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. (Authors' summary) **81g:49023** 49B34
- Orlov, A. I. ★Устойчивость в социально-экономических моделях. (Russian) [Stability in socio-economic models] Проблемы Советской Экономики. [Problems in Soviet Economics] "Nauka", Moscow, 1979. 296 pp. (Hans Keiding) **81g:62181** 62P99 (90-02, 90A16)

- Statistics of objects of a nonnumerical nature and expert estimates. (Russian) *Expert estimates. Voprosy Kibernet. (Moscow)* No. 58 (1979), 17-33. (Author's summary) **81k:62089** 62H99
- Grouping correction for the correlation coefficient. (Russian) *Ekonom. i Mat. Metody* 16 (1980), no. 4, 800-801. (Jifí Andél) **81m:62102** 62H20
- Orlov, Konstantin** The different solutions of the partial differential equations and the comparing of them. *I. Mat. Vesnik* 2(15)(30) (1978), no. 2, 179-186. (E. S. Noussair) **81c:35018** 35A99
- Application of the approximate analytic prolongment to the boundary problems of the partial differential equations. *Mat. Vesnik* 3(16)(31) (1979), no. 1, 61-64. (H. Kumano-go) **81m:35012** 35A20
- Orlov, S. V.** (with Mel'nikov, V. N.) Nonsingular cosmology as a quantum vacuum effect. *Phys. Lett. A* 70 (1979), no. 4, 263-265. (Authors' summary) **81h:83033** 83C99
- Orlov, V. M.** (with Mišin, I. V.) The optical transfer functions of the atmosphere. *Izv. Akad. Nauk SSSR Ser. Fiz. Atmosf. i Okeana* 15 (1979), no. 3 (Russian); translated as *Izv. Acad. Sci. USSR Atmosf. Ocean. Phys.* 15 (1979), no. 3, 183-188 (1980). (Authors' summary) **81e:26018** 86A35
- Pervezanov-Orlov, V. S.** See **Pervezanov-Orlov, V. S.**
- Orlova, M. G.** (with Babenko, K. I.; Siebunov, V. A.) Periodic flows, close to the Poiseuille flow in a flat channel. (Russian. English summary) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 55* (1978), 37 pp. (Authors' summary) **81j:76020** 76D05 (35Q20)
- Orlovskii, D. G.** (with Lizorkin, P. I.) Some interpolation formulas for trigonometric and exponential polynomials and estimates associated with them. (Russian) *Theory of cubature formulas and the application of functional analysis to problems of mathematical physics* (Russian), pp. 60-71, 166, *Trudy Sem. S. L. Soboleva*, No. 1, 1976, *Akad. Nauk SSSR Sibsk. Otdel., Inst. Mat., Novosibirsk*, 1976. (Authors' summary) **81d:42005** 42A15
- Orlovskii, S. A.** On formalization of a general fuzzy mathematical problem. *Fuzzy Sets and Systems* 3 (1980), no. 3, 311-321. (Author's summary) **81d:90004** 90A05 (90A06, 90C15, 90C31)
- Orman, Gabriel** Some results concerning the structure of context-free grammars. (Romanian summary) *Bul. Univ. Braşov Ser. C* 19 (1977), 31-35 (1978). (S. Marcus) **81c:68060** 68F05
- An automata realization of the functions associated with a derivation. (Romanian. English summary) *Bul. Univ. Braşov Ser. C* 20 (1978), 107-113. (Author's summary) **81c:68103** 68F10 (03D10)
- On the existence of a class of formal grammars. *Proceedings of the International Symposium on Applications of Mathematics in System Theory* (Univ. Braşov, Braşov, 1978), II, pp. 115-125, *Univ. Braşov, Braşov*, 1979. (See **81j:93006**) 68F05
- Ormoscadi, R. N.** Mappings that are locally perfect and complete in the sense of Čech. (Russian. Georgian and English summaries) *Soobšč. Akad. Nauk Gruz. SSR* 93 (1979), no. 3, 541-544. (A. I. Baširov) **81b:54014** 54C10 (54F45)
- Ornstein, Donald S.** A survey of some recent results in ergodic theory. *Studies in probability theory*, pp. 229-262, *MAA Studies in Math.*, 18, *Math. Assoc. America, Washington, D.C.*, 1978. (Peter Walters) **81c:28012** 28D05 (58F11)
- (with Smorodinsky, Meir) Continuous speed changes for flows. *Israel J. Math.* 31 (1978), no. 2, 161-168. (Authors' summary) **81i:28021** 28D15 (58F25)
- Oróńko, Ju. B.** Finite propagation rate and essential selfadjointness of certain differential operators. (Russian) *Funkcional. Anal. i Priložen.* 13 (1979), no. 3, 95-96. (L. A. Ivanov) **81g:35066** 35L30 (47F05)
- Selfadjointness of the minimal Schrödinger operator with potential belonging to $L_{1,loc}$. *Rep. Math. Phys.* 15 (1979), no. 2, 163-172. (Woodford W. Zachary) **81b:35020** 35J10 (81C05)
- Orosel, Gerhard O.** A reformulation of the Austrian theory of capital and its application to the debate on reswitching and related paradoxes. *Z. Nationalökonom.* 39 (1979), no. 1-2, 1-31. (From the introduction) **81c:90056** 90A14
- Orsatti, A.** (with Menini, C.) Duality over a quasi-injective module and commutative \mathbb{F} -reflexive rings. *Symposia Mathematica, Vol. XXIII (Conf. Abelian Groups and their Relationship to the Theory of Modules, INDAM, Rome, 1977)*, pp. 145-179, *Academic Press, London*, 1979. (David W. Sharpe) **81c:13009** 13C10
- Orsingher, Enzo** (with Battaglia, Francesco) Record values in Poisson and randomized Poisson models. (French summary) *Publ. Inst. Statist. Univ. Paris* 24 (1979), no. 3-4, 69-78. (Alan F. Karr) **81f:60075** 60G55 (60K30)
- (with Battaglia, Francesco) A doubly stochastic Poisson model of randomly spreading planar regions. (Italian. English and French summaries) *Statistica (Bologna)* 39 (1979), no. 4, 539-555. (Authors' summary) **81g:60103** 60K99 (62P10, 92A15)
- Orsini, R.** (with Albano, A. M.) A tree search approach to the M -partition and knapsack problems. *Comput. J.* 23 (1980), no. 3, 256-261. (Authors' summary) **81i:90140** 90C10 (68C25, 68E05)
- Orsted, Bent** A model for an interacting quantum field. *J. Funct. Anal.* 36 (1980), no. 1, 53-71. (A. M. Jaffe) **81c:81038** 81E10 (58D25)
- Composition series for analytic continuations of holomorphic discrete series representations of $SU(n, n)$. *Trans. Amer. Math. Soc.* 260 (1980), no. 2, 563-573. (Wulf Rossmann) **81g:22020** 22E45 (05A10, 43A85, 81C40)
- Orszag, Steven A.** (with Deville, Michel) Spectral calculation of the stability of the circular Couette flow. *Approximation methods for Navier-Stokes problems* (Proc. Sympos., Univ. Paderborn, Paderborn, 1979), pp. 159-176, *Lecture Notes in Math.*, 771, *Springer, Berlin*, 1980. (From the introduction) **81g:76050** 76E10 (65P05)
- (with Gottlieb, David) High resolution spectral calculations of inviscid compressible flows. *Approximation methods for Navier-Stokes problems* (Proc. Sympos., Univ. Paderborn, Paderborn, 1979), pp. 381-398, *Lecture Notes in Math.*, 771, *Springer, Berlin*, 1980. (Authors' summary) **81g:76078** 76L05 (65P05)
- (with McCrory, Robert L.) Spectral methods for multidimensional diffusion problems. *J. Comput. Phys.* 37 (1980), no. 1, 93-112. (Authors' summary) **81g:65135** 65N10 (80A20, 82A70)
- (with McLaughlin, John B.) Evidence that random behavior is generic for nonlinear differential equations. *Phys. D* 1 (1980), no. 1, 68-79. (P. J. Holmes) **81d:58041** 58F13 (34C30, 58F11, 70J20)
- Ortega, J. M.** A characterization of local Banach algebras of finite dimension. (Spanish. English summary) *Publications of the García de Galdeano Mathematics Seminar, 24 (Spanish)*, pp. 5-10, *Consejo Sup. Inc. Cient., Zaragoza*, 1977. (J. Kyle) **81d:46060** 46H10
- Ortega-Aramburu, Joaquín M.** Some applications of a holomorphic functional calculus in infinite dimension. (Spanish) *Collect. Math.* 29 (1978), no. 3, 197-209. (Author's introduction) **81j:46078** 46H30 (46G20)
- Ortel, Marvin** Integral means and the theorem of Hamilton, Reich and Strebel. *Complex analysis Joensuu 1978* (Proc. Colloq., Univ. Joensuu, Joensuu, 1978), pp. 301-308, *Lecture Notes in Math.*, 747, *Springer, Berlin*, 1979. (C. L. Bena) **81b:30046** 30C75
- (with Besack, Paul R.; Hughes, Edward) Rotund complex normed linear spaces. *Proc. Amer. Math. Soc.* 75 (1979), no. 1, 42-44. (Ka Sing Lau) **81e:46013** 46B20
- Ortiz, Eduardo L.** Polynomial and rational approximation of boundary layer problems with the Tau method. *Boundary and interior layers—computational and asymptotic methods* (Proc. Conf., Trinity College, Dublin, 1980), pp. 387-391, *Boole, Dún Laoghaire*, 1980. (Author's summary) **81m:65138** 65L10
- Ortner, Norbert** Sur la convolution des distributions. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 12, A533-A536. (Jean Lavoine) **81e:46025** 46F10
- Ortolani, F.** (with Bendazzoli, G. L.; Evangelisti, S.; Fano, G.) A variational method for second-order properties in atoms and molecules. (Italian and Russian summaries) *Nuovo Cimento B* (11) 55 (1980), no. 2, 283-290. (Authors' summary) **81e:81167** 81G55
- Ortoleva, Peter** (with Bose, S.) A hard sphere model of chemical reaction in condensed media. *Phys. Lett. A* 69 (1978/79), no. 5, 367-369. (Authors' summary) **81h:80008** 80A30 (82A35)
- Discussion paper: bifurcations and perturbed attractors in physicochemical systems. *Bifurcation theory and applications in scientific disciplines* (Papers, Conf., New York, 1977), pp. 350-356, *Ann. New York Acad. Sci.*, 316, *New York Acad. Sci., New York*, 1979. (C. V. Pao) **81c:92019** 92A40 (58F13, 80A99)
- (with Nitzan, Abraham) Scaling and Ginzburg criteria for critical bifurcations in nonequilibrium reacting systems. *Phys. Rev. A* (3) 21 (1980), no. 5, 1735-1755. (Authors' summary) **81a:80009** 80A30 (82A25)
- Orton, Marion** The generalized Abel equations for Schwartz distributions. *SIAM J. Math. Anal.* 11 (1980), no. 3, 596-611. (B. S. Rubin) **81k:46048** 46F12 (44A40, 45P05)
- Ortuzar, J. D.** (with Williams, H. C. W. L.) Random utility theory and the structure of travel choice models. *Bull. Inst. Math. Appl.* 15 (1979), no. 11-12, 294-297. (F. Beichel) **81i:90025** 90A10 (90B20)
- Ortyński, Augustyn** On complemented subspaces in direct sums of locally bounded F -spaces. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math.* 27 (1979), no. 3-4, 269-272. (P. Wojtaszczyk) **81a:46006** 46A06
- Oruđer, G. A.** Determination of a convergence domain for some improper integrals. (Russian. Azerbaijani and English summaries) *Izv. Akad. Nauk Azerbaidžan. SSR Ser. Fiz.-Tehn. Mat. Nauk* 1978, no. 5, 38-45. (F. I. Ibragimov) **81k:40004** 40A10 (26A42)
- Growth of entire functions. (Russian. Azerbaijani and English summaries) *Akad. Nauk Azerbaidžan. SSR Dokl.* 35 (1979), no. 5, 13-16. (V. I. Gavrilov) **81i:30027** 30D15 (30B50)
- Order and type of entire functions. (Russian. Azerbaijani and English summaries) *Akad. Nauk Azerbaidžan. SSR Dokl.* 35 (1979), no. 7, 14-18. (A. V. Bratišev) **81c:30006** 30B50 (30D20)
- Oruđer, G. N.** (with Mamedov, R. G.) Saturation classes of linear operators giving a high order of approximation in a space. (Russian) *Studies in some questions of the constructive theory of functions and differential equations* (Russian), pp. 8-18, *Azerbaidžan. Inst. Nefti i Himii, Baku*, 1974. (See **80d:00021**) 41A35
- Characteristic of classes of functions in a space metric. (Russian) *Studies in some questions of the constructive theory of functions and differential equations* (Russian), pp. 25-31, *Azerbaidžan. Inst. Nefti i Himii, Baku*, 1974. (See **80d:00021**) 46E99
- Oruđer, S. R.** The connection between best approximations of a function by quasipolynomials and its R -order, R -type. (Russian) *Azerbaidžan. Gos. Univ. Učen. Zap.* 1979, no. 1, 18-28. (V. A. Tkačenko) **81j:30039** 30D10
- Oryšič, Ja. I.** (with Batjuk, Ju. K.) Convergence of an integral continued fraction of Euler type in the space $C[a, b]$. (Russian) *Vestnik L'vov. Politehn. Inst. No. 141* *Differencial'nye Uravnenija i ih Priložen.* (1980), 7-8, 110. (Authors' summary) **81i:40002** 40A15
- Osada, Masayuki** A remark on thin sets in an open unit disk. *J. Hokkaido Univ. Ed. Sect. II A* 30 (1979/80), no. 2, 93-95. (M. Hervé) **81i:31005** 31A20
- Osadčenko, V. K.** (with Ol'sanskii, V. P.) Two-dimensional Fourier integrals containing Bessel functions. (Russian) *Theoretical and applied questions of differential equations and algebra* (Russian), pp. 188-195, 269, "Naukova Dumka", Kiev, 1978. (D. P. Gupta) **81f:42015** 42B10 (44A15)
- Osaki, Shunji** (with Nakagawa, Toshio) Optimum ordering policies with lead time for an operating unit. (French summary) *RAIRO Rech. Opér.* 12 (1978), no. 4, 383-393, 1. (From the introduction) **81i:90090** 90B25
- (with Takeda, Masaharu) A two-unit paralleled redundant system with bivariate exponential failure law and allowed down time. *Cahiers Centre Études Rech. Opér.* 21 (1979), no. 1, 55-62. (Peter Franken) **81b:60009** 60K10 (62N05, 90B25)
- (with Kaio, Naoto) Discrete time ordering policies with minimal repair. (French summary) *RAIRO Rech. Opér.* 14 (1980), no. 3, 257-263. (Authors' summary) **81i:90068** 90B25 (90B05)
- Osawa, Hideo** (with Doi, Makoto) A variation of the $GI/M/1$ queue utilizing idle time. *Rep. Statist. Appl. Res. Un. Japan. Sci. Engrs.* 25 (1978), no. 3, 11-20. (D. C. McNickel) **81a:60110** 60K25 (68C15)
- Osawa, T.** (with Bruch, L. W.) Perturbation theory of interaction dipoles. *Molecular Phys.* 40 (1980), no. 2, 491-507. (Authors' summary) **81e:81168** 81G55
- Osborn, Howard** Base spaces. *Indiana Univ. Math. J.* 28 (1979), no. 5, 745-755. (D. B. Fuks) **81i:55017** 55R15 (57R22)
- Osborn, J. Marshall** (with Racine, Michel) Jordan rings with nonzero socle. *Trans. Amer. Math. Soc.* 251 (1979), 375-387. (I. P. Šestakov) **81a:17009** 17C10
- (with Racine, Michel) Prime Jordan P.I. algebras with nonzero socle and Jordan division algebras. *J. Algebra* 62 (1980), no. 2, 249-261. (I. P. Šestakov) **81h:17021** 17C10

- Osborn, John E.** (with Babuška, I.) Analysis of finite element methods using mesh dependent norms. *Constructive approaches to mathematical models (Proc. Conf. in honor of R. J. Duffin, Pittsburgh, Pa., 1978)*, pp. 251-265, Academic Press, New York, 1979. (Authors' summary) **81h:65095** 65N30
- (with Kolata, William) Nonselfadjoint spectral approximation and the finite element method. *Functional analysis methods in numerical analysis (Proc. Special Session, Annual Meeting, Amer. Math. Soc., St. Louis, Mo., 1977)*, pp. 115-133, *Lecture Notes in Math.*, 701, Springer, Berlin, 1979. (Pierre Lesaint) **81f:65041** 65J05 (49G10, 65N30)
- Analysis of mixed methods using mesh dependent spaces. *Computational methods in nonlinear mechanics (Proc. Second Internat. Conf., Univ. Texas, Austin, Tex., 1979)*, pp. 361-377, North-Holland, Amsterdam, 1980. (Juhani Pitkäranta) **81h:65116** 65N30
- (with Babuška, I.; Pitkäranta, Juhani) Analysis of mixed methods using mesh dependent norms. *Math. Comp.* 35 (1980), no. 152, 1039-1062. (Rolf Rannacher) **81m:65166** 65N30 (65N15, 73K10)
- (with Babuška, I.) Analysis of finite element methods for second order boundary value problems using mesh dependent norms. *Numer. Math.* 34 (1980), no. 1, 41-62. (Manfred Dobrowolski) **81g:65143** 65N30 (65N15)
- Osborn, T. A.** (with Bollé, D.) Time delay in N-body scattering. *Few body systems and nuclear forces (Proc. Eighth Internat. Conf., Graz, 1978)*, 1, pp. 367-370, *Lecture Notes in Phys.*, 82, Springer, Berlin, 1978. (From the text) **81b:81026** 81F10
- (with MacMillan, L. W.) Transit time measures in scattering theory. *Ann. Physics* 126 (1980), no. 1, 1-19. (M. Demuth) **81g:81091** 81F99 (35P25, 47A40)
- (with Froese, R. G.; Howes, S. F.) Levinson's theorems in classical scattering. *Phys. Rev. A* (3) 22 (1980), no. 1, 101-110. (Authors' summary) **81j:70003** 70D99 (47A40, 70F05)
- (with Komarov, V. V.; Šablov, V. L.; Popova, A. M.) Failure of the connected-kernel method. *Phys. Rev. C* (3) 22 (1980), no. 3, 976-984. (Authors' summary) **81h:81113** 81F10
- Osborn, Thomas R.** (with Croxton, Clive A.) Monotonic and oscillatory density profiles at the free liquid surface for simple atomic fluids. *Molecular Phys.* 40 (1980), no. 6, 1489-1502. (Authors' summary) **81h:82040** 82A50
- Osborne, M. R.** (with Watson, G. Alistair) Nonlinear approximation problems in vector norms. *Numerical analysis (Proc. 7th Biennial Conf., Univ. Dundee, Dundee, 1977)*, pp. 117-132, *Lecture Notes in Math.*, 630, Springer, Berlin, 1978. (From the introduction) **81e:65027** 65K10
- The stabilized march is stable. *SIAM J. Numer. Anal.* 16 (1979), no. 6, 923-933. (David K. Kahaner) **81e:65047** 65L10
- (with Clark, David I.) On the implementation of a subset selection algorithm for the restricted least squares problem. *J. Austral. Math. Soc. Ser. B* 22 (1980/81), no. 1, 2-11. (W. Börsch-Supan) **81k:65045** 65F20 (65K05)
- (with Jittorntrum, Krišm) Strong uniqueness and second-order convergence in nonlinear discrete approximation. *Numer. Math.* 34 (1980), no. 4, 439-455. (G. C. Barozzi) **81h:65018** 65D15 (90C30)
- Osborne, M. Scott** (with Warner, Garth) Multiplicities of the integrable discrete series: the case of a nonuniform lattice in an R-rank one semisimple group. *J. Funct. Anal.* 30 (1978), no. 3, 287-310. (J. A. C. Kolk) **81g:22011** 22E30 (43A85, 43A90)
- Osborne, Martin** Using two-class classifiers for function estimation. *Inform. Sci.* 18 (1979), no. 3, 235-245. (Authors' summary) **81m:62071** 62G05 (68G10)
- Osgood, Brad G.** (with Gehring, F. W.) Uniform domains and the quasihyperbolic metric. *J. Analyse Math.* 36 (1979), 50-74 (1980). (Jukka Sarvas) **81k:30023** 30C60
- Univalence criteria in multiply-connected domains. *Trans. Amer. Math. Soc.* 260 (1980), no. 2, 459-473. (L. A. Aksent'ev) **81h:30021** 30C55 (30C60)
- Osher, Stanley** One-sided difference schemes and transonic flow. *Computing methods in applied sciences and engineering (Proc. Fourth Internat. Sympos., Versailles, 1979)*, pp. 153-156, North-Holland, Amsterdam, 1980. (V. Girault) **81j:76057** 76H05 (65N05)
- Approximation par éléments finis avec décentrage pour des lois de conservation hyperboliques non linéaires multi-dimensionnelles. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 17, A819-A821. (Authors' summary) **81e:65059** 65N30
- (with Engquist, Björn) Stable and entropy satisfying approximations for transonic flow calculations. *Math. Comp.* 34 (1980), no. 149, 45-75. (Joseph Oliger) **81b:65062** 65M10 (65M05, 76H05)
- Oshiba, Takeshi** (with Nagata, Shuro; Funahashi, Sakae) A method for obtaining proof figures of valid formulas in the first order predicate calculus. *Bull. Nagoya Inst. Tech.* 31 (1979), 117-126. (Authors' summary) **81j:03093** 03F99 (03B10)
- (with Arikawa, Setsuo) On right extension grammars and languages. *Res. Inst. Fund. Inform. Sci. Res. Rep.* No. 61 (1979), i+36 pp. (From the introduction) **81a:68084** 68F05
- Oshikiri, Gen-ichi** The surgery of codimension-one foliations. *Tōhoku Math. J.* (2) 31 (1979), no. 1, 63-70. (D. B. Fuks) **81e:57027** 57R30
- Foliated cobordisms of suspended foliations. *Tōhoku Math. J.* (2) 32 (1980), no. 3, 375-392. (R. E. Stong) **81j:57016** 57R30
- Ōshima, Hideaki** On stable James numbers of stunted complex or quaternionic projective spaces. *Osaka J. Math.* 16 (1979), no. 2, 479-504. (Peter J. Eccles) **81b:55008** 55N15
- On F-projective stable stems. *Osaka J. Math.* 16 (1979), no. 2, 505-528. (Peter J. Eccles) **81b:55009** 55N15 (55Q40)
- On the homotopy group $\pi_{2n+9}(U(n))$ for $n \geq 6$. *Osaka J. Math.* 17 (1980), no. 2, 495-511. (M. Mimura) **81j:55015** 55Q52 (57T20)
- On C-projective 8 and 10 stems. *Osaka J. Math.* 17 (1980), no. 3, 619-623. (Shichirō Oka) **81k:55023** 55Q52 (55Q45)
- Ōshima, Nobuo** Study on the methods of simple cell model for the flow problem. *J. Fac. Engrg. Univ. Tokyo Ser. B* 35 (1979/80), no. 3, 471-491. (Authors' summary) **81d:76094** 76T05
- The effective coefficients of thermal conduction in absorptive disperse media. I. Steady state case. *Bull. JSME* 23 (1980), no. 182, 1359-1365. (Authors' summary) **81l:80006** 80A20
- Ōshima, Toshio** (with Kashiwara, Masaki; Kowata, Atsuta; Minemura, K.; Ōkamoto, Kiyosato; Tanaka, Makoto) Eigenfunctions of invariant differential operators on a symmetric space. *Ann. of Math.* (2) 107 (1978), no. 1, 1-39. (Kenneth Johnson) **81f:43013** 43A80 (22E30)
- Poisson transformations on affine symmetric spaces. *Proc. Japan Acad. Ser. A Math. Sci.* 55 (1979), no. 9, 323-327. (S. G. Gindikin) **81k:43013** 43A85 (22E30, 53C35, 58G30)
- (with Sekiguchi, Jirō) Eigenspaces of invariant differential operators on an affine symmetric space. *Invent. Math.* 57 (1980), no. 1, 1-81. (S. G. Gindikin) **81k:43014** 43A85 (22E30, 53C35, 58G30)
- (with Matsuki, Toshihiko) Orbits on affine symmetric spaces under the action of the isotropy subgroups. *J. Math. Soc. Japan* 32 (1980), no. 2, 399-414. (J. A. Wolf) **81f:53043** 53C35 (32M15)
- Ōshiro, Kiyochi** (with Kutami, Mamoru) Strongly semiprime rings and nonsingular quasi-injective modules. *Osaka J. Math.* 17 (1980), no. 1, 41-50. (W. D. Burgess) **81f:16011** 16A12 (16A52)
- (with Kutami, Mamoru) An example of a ring whose projective modules have the exchange property. *Osaka J. Math.* 17 (1980), no. 2, 415-420. (Manabu Harada) **81f:16026** 16A50 (16A51)
- Ōsialcz, A.** Nonlinear programming applied to the optimum control of a gas compressor station. *Internat. J. Numer. Methods Engrg.* 15 (1980), no. 9, 1287-1301. (Authors' summary) **81f:49035** 49D39 (93A99)
- Ōsikawa, Motoeige** (with Hamachi, Toshihiro) Fundamental homomorphism of normalizer group of ergodic transformation. *Ergodic theory (Proc. Conf., Math. Forschungsinst., Oberwolfach, 1978)*, pp. 43-57, *Lecture Notes in Math.*, 729, Springer, Berlin, 1979. (A. de Korvin) **81b:46076** 46L10 (28D99)
- Ostlenker, B. P.** Linear processes of approximation of functions of several variables. (Russian) *Studies in the theory of functions of several real variables, No. 2 (Russian)*, pp. 176-195, Yaroslavl Gos. Univ., Yaroslavl, 1978. (Hans-Jürgen Albrand) **81b:41008** 41A10 (42B05)
- A weighted polynomial approximation by linear means of functions of several variables. (Russian) *Dokl. Akad. Nauk SSSR* 247 (1980), no. 6, 1320-1324. (G. Sunouchi) **81k:42022** 42B05 (41A10, 42C05)
- Osta, B. G.** (with Egorova, L. Ja.; Levin, L. L.; Pargaev, Ju. I.; Cvetnickaja, S. A.; Rešetnikova, G. N.) ★Практикум по численным методам. (Russian) [Workbook on numerical methods] Tomsk Gos. Univ., Tomsk, 1979. 212 pp. (Editors) **81e:65002** 65-01
- Ostapenko, G. S.** Bifurcation of dynamical systems near invariant manifolds. (Russian) *Asymptotic methods in the theory of nonlinear oscillations (Proc. All-Union Conf. Asymptotic Methods in Nonlinear Mech., Katsiveli, 1977)* (Russian), pp. 147-150, 275, "Naukova Dumka", Kiev, 1979. (L. Reizig) **81j:34077** 34C30 (58F14)
- Perturbation of dynamical systems near invariant manifolds. I. (Russian) *Differentsial'nye Uravneniya* 15 (1979), no. 11, 1967-1979, 2108. (A. Morimoto) **81h:58054a** 58F30 (34D10)
- Perturbation of dynamical systems near invariant manifolds. II. (Russian) *Differentsial'nye Uravneniya* 16 (1980), no. 4, 620-628, 763. (A. Morimoto) **81h:58054b** 58F30 (34D10)
- Ostapenko, K. Ju.** Best methods for approximation and degree of informativeness of systems. (Russian) *Mat. Sb. (N.S.)* 111(153) (1980), no. 4, 532-556, 623. (W. R. Madych) **81m:41025** 41A45 (41A50)
- Ospik, Ju. I.** (with Amosov, A. A.; Bahvalov, N. S.) Iteration processes for a problem of stationary heat exchange in a system of absolutely black bodies. (Russian) *Ž. Vychisl. Mat. i Mat. Fiz.* 20 (1980), no. 1, 104-111, 261. (Authors' summary) **81a:80002** 80A20
- Ospik, L. P.** (with Kutuzov, S. A.) A generalized model for the three-dimensional gravitational potential of stellar systems. *Astronom. Zh.* 57 (1980), no. 1, 28-37 (Russian); translated as *Soviet Astronom.* 24 (1980), no. 1, 17-22. (Authors' summary) **81h:85001** 85A05
- Ospov, Ė. P.** The Yukawa₂ quantum field theory: Lorentz invariance. *Ann. Physics* 125 (1980), no. 1, 53-66. (M. Seetharaman) **81d:81057** 81E10
- Ospov, Ju. S.** (with Krjžimskij, A. V.; Ohezin, S. P.) Control problems in systems with distributed parameters. (Russian) *Dynamics of control systems (Third All-Union Conference, Irkutsk, 1977)* (Russian), pp. 199-208, 341, "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. (Authors' summary) **81h:93041** 93C20 (93E05)
- Ospov, Ju. V.** p-adic Fourier transform. (Russian) *Uspehi Mat. Nauk* 34 (1979), no. 5(209), 227-228. (Neal Koblitz) **81h:12021** 12B40 (12B30, 42B10)
- p-adic zeta functions and Bernoulli numbers. (Russian) *Studies in number theory*, 6, *Zap. Nauch. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 93 (1980), 192-203, 228. (Neal Koblitz) **81f:12012** 12B40 (12B30)
- Ospov, V. F.** Some questions of spectral synthesis on subsets of Euclidean spaces. (Russian. English summary) *Vestnik Leningrad. Univ. Mat. Meh. Astronom.* 1980, vyp. 2, 32-39, 124. (S. Hartman) **81h:43011** 43A45 (46F12)
- Osolkov, A. P.** On the theory of Voigt fluids. (Russian) Boundary value problems of mathematical physics and related questions in the theory of functions, 12, *Zap. Nauch. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 96 (1980), 233-236, 310. (Authors' summary) **81f:76002** 76A05 (35Q10)
- Osolkov, K. I.** Polygonal approximation of functions of two variables. (Russian) *Mat. Sb. (N.S.)* 107(149) (1978), no. 4, 601-612, 639. (L. I. Hedberg) **81j:41020** 41A15 (41A10)
- Quantitative estimates of N. N. Luzin's C-property for classes of integrable functions. *Approximation theory (Papers, Vth Semester, Stefan Banach Internat. Math. Center, Warsaw, 1975)*, pp. 185-196, Banach Center Publ., 4, PWN, Warsaw, 1979. (Ivan Dobrakov) **81a:26003** 26A15 (28A20)
- Optimality of a quadrature formula with equidistant nodes on classes of periodic functions. (Russian) *Dokl. Akad. Nauk SSSR* 249 (1979), no. 1, 49-52. (G. P. Ismatuliev) **81b:41077** 41A55
- Lebesgue's inequality in the mean. (Russian) *Mat. Zametki* 25 (1979), no. 4, 551-555, 636. (J. Németh) **81e:42005** 42A10 (41A17)
- Approximate properties of classes of periodic functions. (Russian) *Mat. Zametki* 27 (1980), no. 4, 651-666, 671. (S. G. Samko) **81j:42011** 42A20

- Osman, A.** Three-body problems with separable two-body interactions. (German summary) *Ann. Physik* (7) 37 (1980), no. 4, 294-300. (Author's summary) **81k:81005** 81F10 (81G35)
- Osman, E. V.** Continuity points of the metric projection in a space of continuous functions. (Russian) *Dokl. Akad. Nauk SSSR* 247 (1979), no. 5, 1050-1053. (G. Godin) **81g:41044** 41A65
- Continuity of the metric projection in the space $C(Q)$. (Russian) *Dokl. Akad. Nauk SSSR* 251 (1980), no. 5, 1063-1066. (L. B. Sofman) **81d:41034** 41A50 (41A65)
- Continuity of a metric projection on Čebyšev spaces of finite codimensions in a space of continuous functions. (Russian) *Mat. Zametki* 27 (1980), no. 4, 597-606, 670. (Vladimir I. Levin) **81m:41029** 41A50 (41A52, 41A65, 46E15)
- Osmanov, G. I.** Uniform Riesz summability of the Fourier integral on the plane. (Russian) *Differentsial'nye Uravneniya* 16 (1980), no. 2, 350-359, 383. (Naza Tanović-Miller) **81d:42027** 42B10
- Osmanov, Ja. K.** Convergence and error estimate for the method of sequential analysis of variants in variation in a space of equations. (Russian) *Studies in some questions of the constructive theory of functions and differential equations* (Russian), pp. 167-171. *Azerbaidžan. Inst. Nefti i Himii, Baku, 1974*. (See **80d:00021**) 34H05
- Osmanov, P. K.** Continuation of projective mappings onto T_1 -bicomparifications. (Russian) *Topological spaces and algebraic systems. Mat. Issled. No. 53* (1979), 103-107, 224. (A. Császár) **81e:54044** 54E05
- Regular and correct T_1 -bicomparification. (Russian) *Uspehi Mat. Nauk* 34 (1979), no. 6(210), 178-182. (W. Kulpa) **81e:54023** 54D35 (54D10, 54E05)
- Osmonovskii, V. G.** Korn's inequality for the geometrically nonlinear elasticity theory. (Russian) *Boundary value problems. Spectral theory* (Russian), pp. 167-178, 244. *Probl. Mat. Anal.*, 7, Leningrad. Univ., Leningrad, 1979. (Szczepon Borkowski) **81g:35023** 35J20 (73C50)
- Osmes, E.** (with Leinaas, J. M.) Application of the Borel method of summation to a quantum mechanical model problem. *Phys. Scripta* 22 (1980), no. 3, 193-196. (Authors' summary) **81e:81040** 81C12
- Ostafsky, Barbara L.** Projective dimension of "nice" directed unions. *J. Pure Appl. Algebra* 13 (1978), no. 2, 179-219. (L. A. Koifman) **81d:16019** 16A60 (13D03, 13D05, 13F05, 18G20)
- Osobko, George** An abstract-symbolic description of circuit structure. *IEEE Trans. Circuits and Systems* 27 (1980), no. 9, 839-841. (Author's summary) **81h:94041** 94C99
- Osonda, Kevin E.** Homomorphisms of semilattices of semigroups. *Semigroup Forum* 19 (1980), no. 2, 133-138. (Eckehart Hotzel) **81d:20053** 20M10 (06A12)
- Osone, Tadashi** (with Fujisawa, Takehisa) On the queueing system $M/G^{(m)}/1$ with the maximum batch size m . *Rep. Univ. Electro-Comm.* 30 (1979/80), no. 2, 225-231. (Carl M. Harris) **81e:60102** 60K25 (90B22)
- Osowski, Stanisław** (with Cichocki, Andrzej) Matrix expansion method and its application in the analysis and synthesis of N -port networks. (Polish. Russian and English summaries) *Arch. Elektrotech. (Warsaw)* 29 (1980), no. 1, 133-138. (Authors' summary) **81j:94036** 94C05 (65F30)
- Ossa, Erich** (with Kosniowski, Czes) Orientation-preserving involutions. *Algebraic topology, Aarhus 1978* (Proc. Sympos., Univ. Aarhus, Aarhus, 1978), pp. 465-475, *Lecture Notes in Math.*, 763, Springer, Berlin, 1979. (R. E. Stong) **81e:57035** 57R85
- Osserman, Robert** Properties of solutions of the minimal surface equation in higher codimension. *Minimal submanifolds and geodesics* (Proc. Japan-United States Sem., Tokyo, 1977), pp. 163-172, *North-Holland, Amsterdam*, 1979. (Themistocles M. Rassias) **81h:53008** 53A10 (49F10)
- Isoperimetric inequalities and eigenvalues of the Laplacian. *Proceedings of the International Congress of Mathematicians (Helsinki, 1978)*, pp. 435-442, *Acad. Sci. Fennica, Helsinki*, 1980. (Catherine Bandle) **81g:52012** 52A40 (26B15, 35P05, 53A05)
- See also *Geometry of the Laplace operator*, **81e:58002**
- Ostacini, Alessandro** (with Rosati, Francesco) The convergence of hyper-Gaussian functionals. (Italian. French summary) *Rend. Mat.* (6) 11 (1978), no. 1, 97-108. (B. Rodríguez-Salinas) **81a:41046** 41A55 (65D32)
- (with Rosati, Francesco) Comparison theorems for the zeros of s -orthogonal polynomials. (Italian. French summary) *Calcolo* 16 (1979), no. 4, 371-381 (1980). (F. M. Ascoli) **81m:33009** 33A65 (41A10, 42C15)
- Ostachowicz, Wiesław** Application of the stiff finite element method to analysis of the vibrations of axially loaded plates. (Polish. English and Russian summaries) *Mechanics and computers*, Vol. 2 (Polish), pp. 121-129, *PWN, Warsaw*, 1980. (See **81m:73008**) 65N30
- Ostapenko, A. G.** The topological method of calculating second-order sensitivities of electronic circuit parameters. (Russian. English summary) *Teoret. Élektrotehn.* No. 28 (1980), 53-59, 168. (Author's summary) **81m:94037** 94C15
- Ostapenko, V. V.** The evasion problem with various constraints on the control. (Russian) *Akad. Nauk Ukrain. SSR Inst. Kibernet. Preprint No. 25 Neobhodim. Uslov. Ékstrim. dlya Differentsial. Vključen. i Zadač. Ubežan.* (1978), 23-40. (A. B. Kuržanskii) **81d:90120** 90D25 (90D26)
- A differential evasion game without discrimination of the opponent. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* No. 10 (1978), 925-927, 957. (A. B. Kuržanskii) **81d:90121** 90D25 (90D26)
- Nonlinear differential games of evasion. *Kibernetika (Kiev)* 1979, no. 6, 146-147 (Russian); translated as *Cybernetics* 15 (1979), no. 6, 941-942 (1980). (Author's summary) **81i:90230** 90D26
- Ostapko, Daniel L.** (with Hong, Se June) Fault analysis and test generation for programmable logic arrays (PLA). *FTCS-8 (Eighth Ann. Internat. Conf. Fault-Tolerant Comput., Toulouse, 1978)*, pp. 83-89, *IEEE, New York*, 1978. (Authors' summary) **81e:94041** 94C10
- Ostapov, Ju. G.** (with Borisenko, V. I.) Probabilistic Janov schemes. (Russian) *Akad. Nauk Ukrain. SSR Inst. Kibernet. Preprint No. 41* (1977), 25 pp. (Karel Čulík) **81e:68010** 68B10
- Ostaszewski, A. J.** (with Davies, Roy O.) Denumerable compact metric spaces admit isometry-invariant finitely additive measures. *Mathematika* 26 (1979), no. 2, 184-186 (1980). (J. Diestel) **81g:28016** 28C15
- hoffmann-Ostenhof, Thomas** See *Hoffmann-Ostenhof, Thomas*
- Oster, G.** The dynamics of nonlinear models with age structure. *Studies in mathematical biology, Part II*, pp. 411-438, *MAA Studies in Math.*, 16, Math. Assoc. America, Washington, D.C., 1978. (See **80m:92006**) 92A15
- Osterberg, James** (with Fisher, Joe W.) Finite group actions on noncommutative rings: a survey since 1970. *Ring theory and algebra, III (Proc. Third Conf., Univ. Oklahoma, Norman, Okla., 1979)*, pp. 357-393, *Lecture Notes in Pure and Appl. Math.*, 55, Dekker, New York, 1980. (Donald S. Passman) **81l:16001** 16-02 (16A74, 20F29)
- (with Goursaud, Jean-Marie; Pascaud, Jean-Louis; Valette, Jacques) Points fixes des anneaux réguliers auto-injectifs. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 21, A985-A987. (Authors' summary) **81g:16016** 16A30 (16A38, 16A52)
- Osterhage, Wolfgang W.** Geometric unification of classical gravitational and electromagnetic interaction in five dimensions: a modified approach. *Z. Naturforsch. A* 35 (1980), no. 3, 302-307. (Elhanan Leibowitz) **81d:83051** 83E15
- Österreicher, Ferdinand** On the construction of least favourable distributions. *Measure theory applications to stochastic analysis (Proc. Conf., Res. Inst. Math., Oberwolfach, 1977)*, pp. 253-261, *Lecture Notes in Math.*, 695, Springer, Berlin, 1978. (Helmut Rieder) **81j:62073** 62F35
- On the dimensioning of tests for composite hypotheses and not necessarily independent observations. (Russian summary) *Problems Control Inform. Theory/Problemy Upravlen. Teor. Inform.* 7 (1978), no. 5, 333-343. (Helmut Rieder) **81h:62045** 62F03
- (with Linhart, J.) Gleichmäßige Verteilung von Punkten in gewissen metrischen Räumen, speziell auf der Kugel. (English summary) *Monatsh. Math.* 89 (1980), no. 2, 111-120. (Herald Niederreiter) **81h:10073** 10K30
- Osterwalder, Konrad** (with Schrader, Robert) Axioms for Euclidean Green's functions. II. (Russian) Translated from the English by L. E. Filippova. *Euclidean quantum field theory* (Russian), pp. 9-45, *Mat.: Novoe Znanie, Nauka*, 12, "Mir", Moscow, 1978. (See **81f:81002**) 81E10
- Auf dem Weg zu einer relativistischen Quantenfeldtheorie. *Einstein Symposium, Berlin* (1979), pp. 220-232, *Lecture Notes in Phys.*, 100, Springer, Berlin, 1979. (J. S. Joel) **81g:81056** 81E10 (47A55)
- See also *Mathematical problems in theoretical physics*, **81f:81003**
- Ostrand, Thomas J.** (with Weyuker, Elaine J.) Theories of program testing and the application of revealing subdomains. *IEEE Trans. Software Engng.* 6 (1980), no. 3, 236-246. (Authors' summary) **81h:68017** 68B10
- Ostrogorski, Tatjana** Global and local saturation theorems in some spaces of temperate functions. *Publ. Inst. Math. (Beograd) (N.S.)* 26(40) (1979), 199-213. (G. Sunouchi) **81e:42022** 42A38 (41A40)
- Ostrom, T. G.** (with Johnson, Norman Lloyd) The geometry of $SL(2, q)$ in translation planes of even order. *Geom. Dedicata* 9 (1979), no. 1, 39-60. (J. Yaquib) **81e:51009** 51A40
- (with Bush, K. A.) Nets and partially balanced designs. *J. Statist. Plann. Inference* 3 (1979), no. 4, 381-385 (1980). (Katherine Heinrich) **81i:05027** 05B05 (51E20)
- (with Kallagher, M. J.) Collineation groups irreducible on the components of a translation plane. *Geom. Dedicata* 9 (1980), no. 2, 153-194. (H. Salzmann) **81e:51008** 51E15 (20H15)
- Ostrovčik, L. A.** Asymptotic equalities in approximating functions of H^w classes by the de la Vallée Poussin sums. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* No. 5 (1979), 341-343, 399. (J. Németh) **81c:41046** 41A30 (42B30)
- Ostrov'skii, I. V.** A class of functions of bounded variation on the line defined by their values on a half line. (Russian. English summary) *Investigations on linear operators and the theory of functions, IX. Zap. Nauch. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 92 (1979), 220-229, 323. (W. H. J. Fuchs) **81h:30034** 30D35 (42A38)
- (with Kamynin, I. P.) Null sets of entire Hermitian-positive functions. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* 1980, no. 7, 20-23, 91. (Authors' summary) **81m:60026** 60E10 (32A15)
- Infinitely divisible factorization. (Russian) *Teor. Funkcii Funkcional. Anal. i Prilozhen.* No. 34 (1980), 89-96, iii-iv. (Lennart Bondesson) **81f:60023** 60E07
- Ostrovskii, V. N.** (with Nikitin, S. I.) The autoionisation of high Rydberg atomic states with large orbital angular momentum. *J. Phys. B* 13 (1980), no. 10, 1961-1984. (Authors' summary) **81h:81153** 81G40
- (with Ustimov, V. I.) The Fermi problem for the rotor. The two-dimensional case. (Russian. English summary) *Vestnik Leningrad. Univ. Fiz. Him.* 1980, vyp. 1, 38-47, 124. (M. Demuth) **81h:81006** 81F10 (47A40)
- Ostrowski, A. M.** Notiz über Maximalwerte von Polynomen auf dem Einheitskreis. *Univ. Beograd. Publ. Elektrotehn. Fak. Ser. Mat. Fiz.* No. 634-677 (1979), 55-56. (Z. Rubinstein) **81h:30027** 30C80
- Ostyovalskii, A. N.** The relation between the weak minimum condition and the minimum condition for subgroups. (Russian) *Algebra i Logika* 17 (1978), no. 2, 201-209, 242. (N. S. Černikov) **81e:20033** 20E07
- O'Sullivan, John J.** (with Eschenburg, Jost-Hinrich) Jacobi tensors and Ricci curvature. *Math. Ann.* 252 (1980), no. 1, 1-26. (Gudlaugur Thorbergsson) **81h:53037** 53C20 (53C22, 58E10)
- Osumi, Noriyoshi** (with Kida, Takuro) New time-domain sensitivity formulas and their applications. *IEEE Trans. Circuits and Systems* 27 (1980), no. 3, 176-184. (From the summary) **81a:94075** 94C99
- Oswald, P.** See *Oswald, P.*
- Oswald, A.** (with Meldrum, J. D. P.) Near-rings of mappings. *Proc. Roy. Soc. Edinburgh Sect. A* 83 (1979), no. 3-4, 213-223. (J. J. Malone) **81h:16042** 16A76 (20F28)
- Near-rings with chain conditions on right annihilators. *Proc. Edinburgh Math. Soc.* (2) 23 (1980), no. 1, 123-127. (Günter Pilz) **81h:16049** 16A76
- Oswald, P.** Approximation by splines in the metric L_p , $0 < p < 1$. (Russian) *Math. Nachr.* 94 (1980), 69-96. (M. Tomić) **81j:41021** 41A15 (41A65)
- Ōta, Shōichi** (with Inoue, Atsushi) Derivations on algebras of unbounded operators. *Trans. Amer. Math. Soc.* 261 (1980), no. 2, 567-577. (G. Lassner) **81h:46073** 46L99 (46K10, 47D40)
- Otake, Masamori** Comparison of time risks based on a multinomial logistic response model in longitudinal studies. *Ann. Inst. Statist. Math.* 32 (1980), no. 1, 125-142. (Author's summary) **81a:92018** 92A15

- Otsu, Yoshihiko (with Fon, Vinc) Classical welfare theorems with nontransitive and noncomplete preferences. *J. Econom. Theory* 20 (1979), no. 3, 409-418. (From the introduction) **81a:90048** 90A14
- Strategic equilibrium of tariffs and general equilibrium. *Econometrica* 48 (1980), no. 3, 643-662. (Author's summary) **81c:90021** 90A14 (90A12)
- Ottaviani, M. The smoothness of solutions of pseudodifferential equations and separability of pseudodifferential operators. (Russian) *Proceedings of an All-Union Conference on Partial Differential Equations (Moscow State Univ., Moscow, 1976)* (Russian), pp. 191-193, *Moskoo. Gos. Univ., Meh.-Mat. Fakul'tet, Moscow, 1978*. (See **90f:35002**) 34B99 (35S05, 47G05)
- (with Apyšev, O. D.) The spectrum of one class of binomial operators. (Russian) *Dokl. Akad. Nauk SSSR* 248 (1979), no. 2, 265-268. (P. A. Mišnaevskii) **81j:35084** 35P05 (47B10)
- Estimates of approximate numbers of operators connected with elliptic equations. (Russian) *Dokl. Akad. Nauk SSSR* 248 (1979), no. 4, 783-787. (P. A. Mišnaevskii) **81j:35087** 35P15 (47F05)
- (with Apyšev, O. D.) The spectrum of a degenerate operator. (Russian) *Izv. Akad. Nauk Kazah. SSR Ser. Fiz.-Mat.* 1979, no. 3, 52-55, 90. (R. C. Gilbert) **81b:34013** 34B25 (47E05)
- Asymptotic behavior of eigenvalues of the Sturm-Liouville operator. I. (Russian) *Kazakh summary* *Izv. Akad. Nauk Kazah. SSR Ser. Fiz.-Mat.* 1979, no. 5, 40-44, 90. (Björn Textorius) **81c:34019a** 34B25
- Estimates of S-numbers and conditions for completeness of the system of root vectors of a nonselfadjoint Sturm-Liouville operator. (Russian) *Mat. Zametki* 25 (1979), no. 3, 409-418, 477. (A. A. Skalikov) **81i:47051** 47E05 (34B25, 47A70)
- Imbedding theorems for spaces with a weight and their application to the study of the spectrum of a Schrödinger operator. (Russian) *Studies in the theory of differentiable functions of several variables and its applications, VII. Trudy Mat. Inst. Steklov.* 150 (1979), 265-305, 323-324. (H. Triebel) **81b:46048** 46E35 (35P20, 81C05)
- Asymptotic behavior of eigenvalues of the Sturm-Liouville operator. II. (Russian) *Kazakh summary* *Izv. Akad. Nauk Kazah. SSR Ser. Fiz.-Mat.* 1980, no. 1, 48-52, 92. (Björn Textorius) **81c:34019b** 34B25
- Ottaviani, H. G. Applications of bifurcation theory in the analysis of spatial and temporal pattern formation. *Bifurcation theory and applications in scientific disciplines (Papers, Conf., New York, 1977)*, pp. 64-71, *Ann. New York Acad. Sci.*, 316, New York Acad. Sci., New York, 1979. (C. V. Pao) **81i:92003** 92A05 (35K55, 58F14)
- Ott, David (with Bowden, David C.) Testing equality of ratios from two finite populations. *J. Statist. Plann. Inference* 3 (1979), no. 2, 135-150. (B. Thomsen) **81c:62023** 62D05
- Otroščenko, I. V. See Otroščenko, I. V.
- Ötting, Shajl Order of Liouvillian elements satisfying an algebraic differential equation of the first order. *Osaka J. Math.* 16 (1979), no. 3, 667-673. (J. L. Johnson) **81g:12026** 12H05
- Minimal length of Liouville chain for solutions of an algebraic differential equation. *J. Math. Soc. Japan* 32 (1980), no. 4, 623-629. (Michael F. Singer) **81j:12023** 12H05 (34A99)
- Otsuki, Takuro Diffraction by a rectangular aperture. *J. Acoust. Soc. Amer.* 68 (1980), no. 1, 329-333. (Author's summary) **81d:78027** 78A45 (76Q05)
- Ott, Edward (with Wersinger, J.-M.; Finn, John M.) Bifurcation and "strange" behavior in instability saturation by nonlinear three-wave mode coupling. *Phys. Fluids* 23 (1980), no. 6, 1142-1154. (Authors' summary) **81d:76053** 76E30 (76B15)
- Ottaviani, Massimiliano Selection of investments and the cost of money. (Italian. English summary) *Riv. Mat. Sci. Econom. Social.* 2 (1979), no. 1, 61-69. (Author's summary) **81c:90014** 90A09 (90A11)
- Otte, George Reduction of complex linear models by the method of moments. *Systems analysis and simulation, 1980 (Proc. Internat. Sympos., Berlin, 1980)*, pp. 151-155, *Math. Research*, 5, Akademie-Verlag, Berlin, 1980. (See **81j:93009**) 93A20
- Ottendörfer, Wilhelm (with Fichler, Franz R.) Decomposition of general dynamical systems. (Russian summary) *Systems Sci.* 5 (1979), no. 1, 5-18. (Authors' summary) **81c:93012** 93A10 (68G20)
- Otterson, Paul (with Svetlichny, George) On derivative-dependent infinitesimal deformations of differentiable maps. *J. Differential Equations* 36 (1980), no. 2, 270-294. (A. M. Vinogradov) **81i:58054** 58G35 (35A30)
- Ottmann, Th. (with Mauer, Hermann A.) Manipulating sets of points—a survey. *Graphs, data structures, algorithms (Proc. Workshop, Graphtheoretic Concepts in Comput. Sci., Erlangen, 1978)*, pp. 9-29, *Applied Comput. Sci.*, 13, Hanser, Munich, 1979. (Authors' summary) **81d:68035** 68B15 (68E99)
- (with Rosenberg, Arnold L.; Six, H.-W.; Wood, Derick) Node-visit optimal 1-2 brother trees. *Theoretical computer science (Fourth GI Conf., Aachen, 1979)*, pp. 213-221, *Lecture Notes in Comput. Sci.*, 67, Springer, Berlin, 1979. (Authors' summary) **81c:68047** 68E10
- (with Wood, Derick) 1-2 brother trees or AVL trees revisited. *Comput. J.* 23 (1980), no. 3, 248-255. (Authors' summary) **81c:68095** 68E10
- Ottuy, J. P. A perturbation method for a set of purely nonlinear differential equations. *Internat. J. Control* 30 (1979), no. 4, 587-595. (S. D. Miluleva) **81c:34037** 34C29 (34C05)
- An extension of the Van der Pol oscillator. *Internat. J. Control* 31 (1980), no. 4, 691-703. (Author's summary) **81c:34021** 34C05 (93C10)
- Study of a nonlinear perturbed oscillator. *Internat. J. Control* 32 (1980), no. 3, 475-487. (P. C. Parks) **81j:34052** 34C05 (70K10)
- Otroščenko, I. V. (with Naděin, D. K.) The spectrum of the electron neutrinos and antineutrinos associated with the process of neutron-star formation. *Astronom. Z.* 57 (1980), no. 1, 78-89 (Russian); translated as *Soviet Astronom.* 24 (1980), no. 1, 47-53. (Authors' summary) **81h:85002** 85A05
- On, Sen Cheng S. (with Liou, Kuo Nan) Numerical experiments on the Helmholtz equation derived from the solar radiation transfer equation in three-dimensional space. *Appl. Math. Comput.* 7 (1980), no. 2, 155-175. (Authors' summary) **81h:86011** 86A35 (65P05)
- Oshiba, José A. (with Martínez Gadea, Pedro) Une connexion caractérisant l'intégrabilité d'une $\varphi(4, \pm 2)$ -structure. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 286 (1978), no. 11, A523-A525. (Authors' summary) **81c:53022** 53C15
- Ouchi, Sumio Asymptotic behaviour of singular solutions of linear partial differential equations in the complex domain. *J. Fac. Sci. Univ. Tokyo Sect. IA Math.* 27 (1980), no. 1, 1-36. (Yūsaku Hamada) **81m:35019** 35B40 (32A30, 35A20)
- Oudineh, Mohammed Structure d'a.b.m.c. de $Q^n(I)$. Applications: théorème de Bochner $Q(I)$, 6 et 5. *Bull. Assoc. Enseign. Math. Sér. B* No. 1 (1978), 15-25. (J. Horváth) **81b:46064** 46H05 (46F05)
- Oudar, J.-L. (with Shen, Y. R.) Nonlinear spectroscopy by multiresonant four-wave mixing. *Phys. Rev. A* (3) 22 (1980), no. 3, 1141-1158. (Authors' summary) **81g:78007** 78A10 (81K05)
- den Ouden, L. W. J. (with Knops, H. J. F.) Momentum space renormalization for the sine-Gordon model. *Phys. A* 103 (1980), no. 3, 597-608. (Authors' summary) **81j:81048** 81E99 (82A25)
- Oumalali, Amar Méthodes numériques pour la détermination de solutions périodiques d'équations différentielles périodiques à argument retardé. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 286 (1978), no. 18, A787-A789. (Author's summary) **81c:65062** 65L10
- Outcall, David L. (with Yaqub, Adil) Structure and commutativity of rings with constraints on nilpotent elements. *Math. J. Okayama Univ.* 21 (1979), no. 1, 15-19. (Hal G. Moore) **81h:16055** 16A70
- Outlaw, Curtis (with Derr, Leroy; Sarafyan, Ditan) Generalization of Euler-Maclaurin sum formula to the six-point Newton-Cotes quadrature formula. (Italian summary) *Rend. Mat.* (6) 12 (1979), no. 3-4, 597-607 (1980). (M. I. Levin) **81f:65017** 65D30
- Outram, Dorinda The language of natural power: the *Éloges* of Georges Cuvier and the public language of nineteenth century science. *Hist. of Sci.* 16 (1978), no. 33, part 3, 153-178. (Joong Fang) **81c:01022** 01A55 (01A80)
- Ovchinnikov, J. V. On the differentiability in dual optimal control problems. (Russian and German summaries) *Math. Operationsforsch. Statist. Ser. Optim.* 10 (1979), no. 4, 529-542. (M. Yamasaki) **81g:90073** 90C25 (90C48)
- Extremal problems with an infinite number of inequality constraints. *Internat. J. Systems Sci.* 11 (1980), no. 6, 743-751. (A. D. Ioffe) **81k:90079** 90C25 (49D30)
- Ovčarenko, I. E. The expansion of Hermitian forms and operators. The problem of obtaining special integral representations of positive definite functions. III. (Russian) *Teor. Funkcii Funkcional. Anal. i Prilozhen.* No. 34 (1980), 81-89, iii. (Heinz Langer) **81m:47041** 47B25 (42A82, 46M99)
- Ovčarenko, V. I. (with Filippov, G. F.) Matrix elements of the potential-energy operator in the anisotropic-oscillator model with projection. *Jadernaja Fiz.* 30 (1979), no. 3, 646-659 (Russian); translated as *Soviet J. Nuclear Phys.* 30 (1979), no. 3, 333-340. (Authors' summary) **81h:81031** 81G35 (22E70)
- Ovchinnikov, S. V. (with Kuz'min, V. B.) Construction of group decisions in a space of fuzzy binary relations. (Russian) *Expert estimates. Voprosy Kibernet.* (Moscow) No. 58 (1979), 91-109. (Roy Gardner) **81i:90021** 90A08 (03E72, 90A06)
- Convexity in subsets of a lattice. (Russian) *Izv. Vys. Učebn. Zaved. Matematika* 1980, no. 2, 70-72. (V. P. Soltan) **81i:52002** 52A01
- Ovchinnikov, V. A. See Ovčinnikov, V. A.
- Ovčinnikov, A. O. Analytic theory of MHD wave propagation in an ionospheric waveguide. (Russian) *Problems in the diffraction and propagation of waves*, No. 17 (Russian), pp. 121-130, 212, *Leningrad. Univ., Leningrad*, 1979. (A. S. Silbergleit) **81m:78027** 78A50 (76W05, 86A35)
- Ovčinnikov, I. S. Theorem on a covering for mappings in a n -dimensional space. (Russian) *Metric questions of the theory of functions and mappings*, No. V7 (Russian), pp. 101-110, "Naukova Dumka", Kiev, 1975. (See **80c:30003**) 54C99
- Order of increase of quasiconformal mappings. (Russian) *Metric questions of the theory of functions and mappings*, No. VII (Proc. Fourth Collq., Quasiconformal Mappings and their Generalizations, Donetsk, 1974) (Russian), pp. 114-118, "Naukova Dumka", Kiev, 1975. (See **80c:30023**) 30C60
- Ovčinnikov, S. V. See Ovchinnikov, S. V.
- Ovčinnikov, V. A. (with Pavlov, V. G.) Hydrodynamic stability of incompressible boundary layers with variable viscosity. *Izv. Vys. Učebn. Zaved. Aviacion. Tehn.* 22 (1979), no. 4, 53-57 (Russian); translated as *Soviet Aeronaut.* 22 (1979), no. 4, 43-46. (Authors' summary) **81g:76062** 76E99 (76A05)
- Ovčinnikov, V. I. (with Dmitriev, V. I.) Interpolation in spaces of the real method. (Russian) *Dokl. Akad. Nauk SSSR* 246 (1979), no. 4, 794-797. (S. D. Riemschneider) **81g:46103** 46M35 (46E35)
- Description of interpolation orbits. (Russian) *Funkcional. Anal. i Prilozhen.* 13 (1979), no. 4, 85-86. (Jöran Bergh) **81g:46104** 46M35 (46E35)
- Ovčinnikov, B. I. P. Montel's uniqueness theorem in the case of n ($n \geq 2$) variables and some of its applications. (Russian) *Izv. Vys. Učebn. Zaved. Matematika* 1979, no. 6, 43-51. (Ju. E. Hohlov) **81k:32014** 32D15
- Overholzer, Knowles A. (with Heinemann, Robert F.; Reddien, George W.) Multiplicity and stability of the hydrogen-oxygen-nitrogen flame: the influence of chemical pathways and kinetics on transitions between steady states. *AIChE J.* 26 (1980), no. 5, 725-734. (Aubrey B. Poore) **81m:80010** 80A25 (35K55)
- Oversteegen, Lex G. An uncountable collection of noncontractible fans. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math.* 27 (1979), no. 5, 385-389. (J. J. Charatonik) **81g:54039a** 54F50 (54F65)
- Internal characterizations of contractibility for fans. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math.* 27 (1979), no. 5, 391-395. (J. J. Charatonik) **81g:54039b** 54F50 (54F65)
- Open retractions and locally confluent mappings of certain continua. *Houston J. Math.* 6 (1980), no. 1, 113-125. (S. A. Peregrudov) **81j:54018** 54C10 (54F15)
- Every contractible fan is locally connected at its vertex. *Trans. Amer. Math. Soc.* 260 (1980), no. 2, 379-402. (Lewis Lum) **81c:54029** 54F20 (54F25)
- Overton, Michael L. (with Prokurovski, Andzej) Canonical incidence matrices of graphs. *BIT* 19 (1979), no. 2, 271-273. (Armin Cremers) **81c:05065** 68E10 (05C50, 68B15)
- Ovsievsk, A. I. (with Evstigneiev, I. V.) Splitting times for random fields. (Russian. English summary) *Teor. Veroyatnost. i Primenen.* 23 (1978), no. 2, 433-438. (Authors' summary) **81h:60009** 60G60 (60J25)
- Ovsievsk, I. A. See Ovsievsk, I. A.
- Orsejjan, R. I. Extraction of lacunary subsystems from general systems with a property of

- absolute convergence. (Russian) *Mat. Sb. (N.S.)* 111(153) (1980), no. 4, 522-531, 623. (Paul Nevai) **81c:42026** 42A55
- Ovsepjan, S. G. A new method in the theory of extensions of topological spaces. (Russian) *Uspehi Mat. Nauk* 34 (1979), no. 6(210), 174-178. (S. A. Peregrudov) **81c:54012** 54C20
- Ovčević, I. A. (with Pinsker, M. S.) Linear transmission of Gaussian messages over a nonstationary Gaussian channel with feedback. *Problemy Peredachi Informacii* 15 (1979), no. 2, 3-22 (Russian); translated as *Problems Inform. Transmission* 15 (1979), no. 2, 85-99. (Shunsuke Ihara) **81b:94031** 94A40 (94A15, 94B05)
- Ovčinnikov, V. D. See Ovčinnikov, V. D.
- Ovčinnikov, Ju. V. (with Dement'ev, V. E.) On the question of the nonlinearity of relationships between parameters of production processes. (Russian) *Ekonom. i Mat. Metody* 16 (1980), no. 2, 245-257. (A. Aganbegian) **81j:90020** 90A11
- Ovčinnikov, S. A. (with Nazarova, L. A.; Roiter, A. V.) Polyquivers of finite type. (Russian) Algebra, number theory and their applications. *Trudy Mat. Inst. Steklov.* 148 (1978), 190-194, 277. (Sheila Brenner) **81d:16023** 16A64
- Ovčinnikov, V. G. (with Bilonov, S. M.; Bogoslavov, I. S.; Karačun, V. Ja.) Application of the theory of thermal potentials to the solution of a boundary value problem of heat conduction in a cylindrical layer. (Russian) *Numerical-analytic methods for the solution of problems of heat conduction and electrodynamics* (Russian), pp. 5-18, 183, *Akad. Nauk Ukrain. SSR, Inst. Mat., Kiev*, 1979. (H. A. Lauwerier) **81m:80002** 80A20 (35C99)
- Ovčinnikov, A. Ja. Lattice isomorphisms of finitely presented nilsemigroups. (Russian) *Ural. Gos. Univ. Mat. Zap.* 11 (1978), no. 1, 137-144, iv. (P. Goralčik) **81f:20072** 20M05
- Lattice isomorphisms of nonperiodic semigroups with cancellation law. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1980, no. 3, 32-44. (G. Pollák) **81j:20102** 20M99
- Lattice isomorphisms of relatively free commutative semigroups. *Semigroup Forum* 20 (1980), no. 3, 189-225. (P. Goralčik) **81k:20096** 20M14
- Ovčinnikov, A. M. Calculation of flows of an incompressible fluid in jets by the source and sink method. (Russian) Numerical methods in continuum mechanics. *Vychisl. Metody i Programirovanie* No. 30 (1979), 109-119. (From the text) **81b:76029** 76D25
- Ovčinnikov, L. V. Justification of the shallow water theory. (Russian) *Proceedings of an All-Union Conference on Partial Differential Equations* (Moscow State Univ., Moscow, 1976) (Russian), pp. 185-188, *Moskoo. Gos. Univ., Meh.-Mat. Fakul'tet, Moscow*, 1978. (See **80f:35002**) 35Q20 (76B15)
- Ovčinnikov, M. P. On calculation of viscous interaction in terms of the pressure on conical bodies. *Izv. Vysš. Učebn. Zaved. Aviacion. Tehn.* 22 (1979), no. 4, 47-52 (Russian); translated as *Societ Aeronaut.* 22 (1979), no. 4, 38-42. (Author's summary) **81g:76072** 76K05
- Ovčinnikov, V. D. (with Manakov, N. L.) Two-photon transitions between atomic levels with different parity. *Phys. B+C* 100 (1980), no. 2, 260-272. (Authors' summary) **81d:81097** 81F99 (81K05)
- Ovčinnikov, A. J. See Ovčinnikov, A. J.
- Ovčinnikov, M. P. See Ovčinnikov, M. P.
- Ow, Wellington H. (with Goldstein, Myron) A converse of the Riesz decomposition theorem for harmonic spaces. *Math. Z.* 173 (1980), no. 2, 105-109. (Ursula Schirmeier) **81k:31021** 31D05
- (with Gauthier, P. M.; Goldstein, Myron) Uniform approximation on unbounded sets by harmonic functions with logarithmic singularities. *Trans. Amer. Math. Soc.* 261 (1980), no. 1, 169-183. (Walter Hengartner) **81m:30033** 30E10 (31C05)
- Owa, Shigeyoshi (with Kubo, Tadao) On some class of analytic functions in an annulus. *Tech. Rep. Osaka Univ.* 29 (1979), no. 1459-1491, 1-8. (S. M. Shah) **81m:30018** 30C55 (30C85)
- On the fractional partial derivative and its application. *Kyungpook Math. J.* 20 (1980), no. 1, 77-82. (J. Marshall Ash) **81k:46046** 46F10 (32A30)
- On applications of the fractional calculus. *Math. Japon.* 25 (1980), no. 2, 195-206. (Thomas J. Osler) **81i:30004** 30A10 (26A33, 30E99)
- el Orwally, H. M. See El Orwally, H. M.
- Owen, D. B. A table of normal integrals. *Comm. Statist. B—Simulation Comput.* 9 (1980), no. 4, 389-419. (Author's summary) **81d:62119** 62Q05 (65A05)
- Owen, David R. (with Coleman, Bernard D.) On the thermodynamics of elastic-plastic materials with temperature-dependent moduli and yield stresses. *Arch. Rational Mech. Anal.* 70 (1979), no. 4, 339-354. (Peter J. Chen) **81i:73002** 73B30 (73E99, 80A99)
- Owen, T. C. (with Davies, M. E.; Abalakin, V. K.; Cross, C. A.; Duncombe, R. L.; Masursky, H.; Morando, B.; Seidelmann, P. K.; Sinclair, A. T.; Wilkins, G. A.; Tjufin, Y. S.) Report of the IAU Working Group on Cartographic Coordinates and Rotational Elements of the Planets and Satellites. *Celestial Mech.* 22 (1980), no. 3, 205-230. (Authors' summary) **81j:70009** 70F15
- Owens, D. H. Spatial kinetics in nuclear reactor systems. *Modelling of dynamical systems, Vol. 1*, pp. 97-116, *IEEE Control Engrg. Ser.*, 12, *Peregrinus, Stevenage*, 1980. (See **81m:93005**) 93C20 (82A70)
- Large-scale systems analysis using approximate inverse models. *IEEE Trans. Automat. Control* 25 (1980), no. 2, 328-330. (Author's introduction) **81a:93061** 93D99 (93A15)
- (with Field, A. D.) Graphical bounds for the root-loci of linear multivariable systems. *Internat. J. Control* 31 (1980), no. 4, 709-722. (Authors' summary) **81d:93036** 93C35
- Owens, P. J. On regular graphs and Hamiltonian circuits, including answers to some questions of Joseph Zaks. *J. Combin. Theory Ser. B* 28 (1980), no. 3, 262-277. (Joseph Zaks) **81j:05075** 05C35
- Owens, Robyn Sur les zéros des fonctions analytiques presque périodiques. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 2, A71-A74. (A. K. Agarwal) **81k:30010** 30C15 (30E05)
- Oxford, E. (with Mines, R.) Model induced triples and completions of abelian groups. *Symposia Mathematica, Vol. XXIII (Conf. Abelian Groups and their Relationship to the Theory of Modules, INDAM, Rome, 1977)*, pp. 189-199, *Academic Press, London*, 1979. (L. Bican) **81f:18030** 18E40
- Ordey, James G. Infinite matroids and duality. (French summary) *Problèmes combinatoires et théorie des graphes (Colloq. Internat. CNRS, Univ. Orsay, Orsay, 1976)*, pp. 325-326, *Colloques Internat. CNRS*, 260, *CNRS, Paris*, 1978. (M. V. Lomonosov) **81b:05030** 05B35
- A generalization of a covering problem of Mullin and Stanton for matroids. *Combinatorial mathematics, VI (Proc. Sixth Austral. Conf., Univ. New England, Armidale, 1978)*, pp. 92-97, *Lecture Notes in Math.* 748, *Springer, Berlin*, 1979. (R. C. Mullin) **81f:05058** 05B35
- (with Welsh, Dominic) The Tutte polynomial and percolation. *Graph theory and related topics (Proc. Conf., Univ. Waterloo, Waterloo, Ont., 1977)*, pp. 329-339, *Academic Press, New York*, 1979. (Ruth Bari) **81a:05031** 05B35 (60K35)
- On a covering problem of Mullin and Stanton for binary matroids. *Aequationes Math.* 20 (1980), no. 1, 104-112. (R. C. Mullin) **81g:05049** 05B35
- On Hartfiel and Maxson's definition of connected sets of a matroid. *J. Combin. Theory Ser. B* 28 (1980), no. 2, 249-250. (András Recski) **81j:05043b** 05B35
- (with Mason, J. H.) A circuit covering result for matroids. *Math. Proc. Cambridge Philos. Soc.* 87 (1980), no. 1, 25-27. (R. Balakrishnan) **81b:05029** 05B35
- Oxtoby, John C. ★Measure and category. A survey of the analogies between topological and measure spaces. Second edition. *Graduate Texts in Mathematics*, 2. *Springer-Verlag, New York-Berlin*, 1980. x+106 pp. *ISBN 0-387-90508-1* (Editors) **81j:28003** 28-02 (54H99)
- Oya, Shinichi "Jinko-ki" and mathematical education. (Japanese) *Sūgakushi Kenkyū* No. 79 (1978), 28-38. (Joong Fang) **81c:01006** 01A27 (00A25)
- (with Shimodaira, Kazuo; Noguchi, Taisuke; Michiaki, Yoshimasa; Matsuzaki, Toshio; Kuwabara, Hideo; Suzuki, Hisao; Takagi, Shigeo; Matsuoka, Motohisa) Perspective of study of history of mathematics. (Japanese) Special issue on the 20th anniversary of Sūgakushi Kenkyū. *Sūgakushi Kenkyū* No. 80 (1979), 3-75. (K. Inoue) **81b:01008** 01A27
- Oyamada, Kimiyuki (with Okoshi, Takanori) High-accuracy WKB analyses of α -power graded-core fibers. *IEEE Trans. Microwave Theory Tech.* 28 (1980), no. 8, 839-845. (I. Kay) **81h:78027** 78A50 (34E20)
- Oyamaguchi, Michio (with Inagaki, Yasuyoshi; Honda, Namio) On the equivalence problem for two DPDA's, one of which is real-time. *Information processing 80 (Proc. IFIP Congr., Tokyo/Melbourne, 1980)*, pp. 53-57, *IFIP Congress Ser.*, 8, *North-Holland, Amsterdam*, 1980. (See **81i:68009**) 68D35 (68C30)
- (with Honda, Namio; Inagaki, Yasuyoshi) The equivalence problem for real-time strict deterministic languages. *Inform. and Control* 45 (1980), no. 1, 90-115. (Authors' summary) **81f:68093** 68F10
- Oyma, Knut Interpolation in H^p -spaces. *Proc. Amer. Math. Soc.* 76 (1979), no. 1, 81-88. (S. V. Hruščëv) **81j:30045** 30D55
- van Oystaeyen, F. On the AR-property. *Bull. Soc. Math. Belg.* 28 (1976), no. 1, 11-16. (Jonathan Golan) **81b:16020** 16A63 (16A08)
- Compatibility of kernel functors and localization functors. *Bull. Soc. Math. Belg.* 28 (1976), no. 2, 131-137. (J. Lambek) **81d:16003** 16A08 (18E15)
- Birational extensions of rings. *Ring theory (Proc. Antwerp Conf. (NATO Adv. Study Inst.), Univ. Antwerp, Antwerp, 1978)*, pp. 287-328, *Lecture Notes in Pure and Appl. Math.*, 51, *Dekker, New York*, 1979. (George Szeto) **81i:16005** 16A08 (16A48)
- (with van Deuren, J.-P.) Arithmetically graded rings. I. *Ring theory, Antwerp 1980 (Proc. Conf., Univ. Antwerp, Antwerp, 1980)*, pp. 130-152, *Lecture Notes in Math.*, 825, *Springer, Berlin*, 1980. (I. Reiner) **81m:13017** 13F05 (16A03)
- Graded prime ideals and the left Ore condition. *Comm. Algebra* 8 (1980), no. 9, 861-868. (Jitendra Manocha) **81k:16006** 16A08 (16A03)
- See also *Ring theory*, **81i:16002**
- Öz, H. (with Meirovitch, L.) Control of large-order discretized systems. *Thirteenth Asilomar Conference on Circuits, Systems and Computers (Pacific Grove, Calif., 1979)*, pp. 193-197, *IEEE, New York*, 1980. (See **81m:93004**) 93C20
- (with Meirovitch, L.) Optimal modal-space control of flexible gyroscopic systems. *J. Guidance Control* 3 (1980), no. 3, 218-226. (Authors' summary) **81d:70023** 70M05 (70E05, 90D26)
- Ozaki, Hiroshi (with Fujiwara, Hideo) On the diagnosability of systems with self-testing units. *FTCS-9 (Ninth Annual Internat. Sympos. Fault-Tolerant Comput., Madison, Wis., 1979)*, pp. 157-160, *IEEE, New York*, 1979. (See **81m:94001**) 68A05
- (with Fujiwara, Hideo; Kinoshita, Kozo) Universal test sets for programmable logic arrays. *FTCS-10 (Tenth Internat. Sympos. Fault-Tolerant Comput., Kyoto, 1980)*, pp. 137-142, *IEEE, New York*, 1980. (See **81m:94002**) 94C99
- Ozaki, Jiro (with Tomishima, Yasuo) Monte Carlo solution of Schrödinger's equation for the hydrogen atom in a magnetic field. *J. Comput. Phys.* 33 (1979), no. 3, 382-396. (A. A. Arsen'ev) **81a:81026** 81C05 (65C05)
- Ozaki, Masa-aki Group theoretical structure of a solution of the unrestricted Hartree-Fock equation in molecular systems with a spatial point symmetry. *Progr. Theoret. Phys.* 62 (1979), no. 5, 1183-1196. (B. Geyer) **81a:81116** 81G50 (20C35)
- Ozaki, T. Nonlinear time series models for nonlinear random vibrations. *J. Appl. Probab.* 17 (1980), no. 1, 84-93. (J. D. Atkinson) **81j:70021** 70L05 (34F05, 62M10)
- Ozawa, Mitsuru A characterization of the cosine function by the value distribution. *Kodai Math. J.* 1 (1978), no. 2, 213-218. (M. K. Jain) **81m:30024** 30D15
- On a characterization of the exponential function and the cosine function by factorization. II. *Kodai Math. J.* 1 (1978), no. 2, 313-315. (M. K. Jain) **81m:30025** 30D15
- On a characterization of the exponential function and the cosine function by factorization. III. *Kodai Math. J.* 2 (1979), no. 2, 200-210. (M. K. Jain) **81m:30025b** 30D15
- On a solution of $w'' + e^{-w} + (az + b)w = 0$. *Kodai Math. J.* 3 (1980), no. 2, 295-309. (J. S. W. Wong) **81k:34006** 34A20 (30D20)
- On the boundedness of the solutions of a differential equation in the complex domain. *Kodai Math. J.* 3 (1980), no. 2, 310-314. (J. S. W. Wong) **81k:34007** 34A20
- Ozawa, Shin Perturbation of domains and Green kernels of heat equations. *Proc. Japan Acad. Ser. A Math. Sci.* 54 (1978), no. 10, 322-325. (Ernest G. Kalnins) **81g:49036a** 49G05 (35J05, 35K05, 58G11)
- Perturbation of domains and Green kernels of heat equations. II. *Proc. Japan Acad. Ser. A Math. Sci.* 55 (1979), no. 5, 172-175. (Ernest G. Kalnins) **81g:49036b** 49G05 (35J05, 35K05, 58G11)

- Perturbation of domains and Green kernels of heat equations. III. *Proc. Japan Acad. Ser. A Math. Sci.* 55 (1979), no. 7, 227-230. (Ernest G. Kalnina) **81g:49036** 49G05 (35J05, 35K05, 58G11)
- Remarks on Hadamard's variation of eigenvalues of the Laplacian. *Proc. Japan Acad. Ser. A Math. Sci.* 55 (1979), no. 9, 328-333. (J. Peetre) **81d:58048** 58G11 (35P05)
- Ozawa, T. Realization of a symmetric terminal capacity matrix by a tree with the minimum diameter. *Networks* 10 (1980), no. 2, 129-142. (Kenji Onaga) **81h:05056** 05C05 (94C15)
- Ozdamar, E. (with Hacısalihoğlu, H. Hilmi) Principal curvatures of a manifold and the shape operators. *J. Fac. Sci. Karadeniz Tech. Univ.* 1 (1977), 81-97. (George Virsik) **81f:53003** 53A07
- (with Hacısalihoğlu, H. Hilmi) Higher order Gaussian curvatures and fundamental forms. (Turkish summary) *J. Fac. Sci. Karadeniz Tech. Univ.* 1 (1977), 99-116. (George Virsik) **81f:53004** 53A07
- Ozdeşer, Abdülkadir On a class of curves on a surface defined by a rectilinear congruence. (Turkish summary) *İstanbul Tek. Üniv. Bil.* 32 (1979), no. 2, 49-64. (Josef Vala) **81h:53006** 53A25
- Ozeki, Kunio On the microlocal structure of the regular prehomogeneous vector space associated with $SL(5) \times GL(4)$. I. *Proc. Japan Acad. Ser. A Math. Sci.* 55 (1979), no. 2, 37-40 (1 fold-out). (A. L. Oniščik) **81k:20057** 20G05 (15A72, 32C40)
- On the microlocal structure of a regular prehomogeneous vector space associated with $GL(8)$. *Proc. Japan Acad. Ser. A Math. Sci.* 56 (1980), no. 1, 18-21. (A. L. Oniščik) **81k:20058** 20G05 (15A72, 32C40)
- Omerol, V. M. Using preference information in multistep methods for solving multiple criteria decision problems. *Multiple criteria decision making theory and application (Proc. Third Conf., Hagen/Königswinter, 1979)*, pp. 314-328. *Lecture Notes in Econom. and Math. Systems*, 177, Springer, Berlin, 1980. (Andrzej Wiecezorek) **81j:90117** 90C31 (49D99)
- Özgüler, Bülent (with Hüseyin, Özyay) On inversion and invertibility of multidimensional polynomial matrices. *Proceedings of the Fourth International Symposium on Network Theory (Ljubljana, 1979)*, pp. 265-271. *Georgi, St.-Saphorin, 1979*. (Authors' summary) **81f:65032** 65F05 (68C05)
- (with Sezer, E.; Hüseyin, Özyay) Relative primeness of multidimensional polynomial matrices. *IEEE Trans. Circuits and Systems* 27 (1980), no. 8, 729-732. (Authors' summary) **81h:15012** 15A30 (93B05)
- Ozavil, T. S. (with Džanajia, G. A.) A criterion for an analytic function given on a circle. (Russian. Georgian and English summaries) *Soobšč. Akad. Nauk Gruz. SSR* 99 (1980), no. 1, 41-43. (D. M. Campbell) **81m:30041** 30E99
- Ożiewicz, Zdzisław The physical regions on the Mandelstam plane as the Lie group space. *Hadronic J.* 3 (1979/80), no. 5, 1393-1417. (Author's summary) **81h:81120** 81F15 (81C40)
- Ottawa, E. P. The origins of symbolic and combinatorial methods at the end of the 18th and at the beginning of the 19th century. (Russian) *Istor.-Mat. Issled.* No. 24 (1979), 121-157, 387. (Eberhard Knobloch) **81g:01010** 01A50 (01A55, 05-03)
- Oudiner, A. S. On the stability theory of unsteady motions. (Russian) *Problems of stability of motion, analytical mechanics and control of motion (Third All-Union Četaev Conf., Irkutsk, 1977)* (Russian), pp. 50-56, 321. "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. (Author's summary) **81h:93074** 93D20 (34D05)
- Ozis, T. (with Crank, J.) Numerical solution of a free boundary problem by interchanging dependent and independent variables. *J. Inst. Math. Appl.* 26 (1980), no. 1, 77-85. (Authors' summary) **81k:76070** 76S05 (65N99)
- Oztop, M. N. (with Shouman, S. M.) Transient heat conduction in an anisotropic medium in cylindrical coordinates. *J. Franklin Inst.* 309 (1980), no. 6, 457-472. (Authors' summary) **81e:80009** 80A20
- Ozura, V. D. (with Barabanenkov, Ju. N.; Selest, A. V.) On the theory of stochastic processes in quantum dynamical systems. (Russian. English summary) *Teoret. Mat. Fiz.* 42 (1980), no. 2, 232-242. (Authors' summary) **81f:82004** 82A15
- Pastukh, V. A. A singular Cauchy integral on a countable set of closed contours. (Russian) Boundary properties of analytic functions, singular integral equations and some questions of harmonic analysis. *Trudy Tbilis. Mat. Inst. Razmadze Akad. Nauk Gruz. SSR* 65 (1980), 122-130. (C. Tanaka) **81k:30053** 30E20
- Pabsek, Ewa (with Przybyło, Wacław; Radwańska, Maria; Waszczyński, Zenon) A program for computing ribbed plates described on a rectangular grid. (Polish. English and Russian summaries) *Mechanics and computers*, Vol. 2 (Polish), pp. 177-186, PWN, Warsaw, 1980. (See **81m:73008**) 73K30
- Pacault, Adolphe See *Synergetics: Far from equilibrium*, **81e:82002**
- Pačev, U. M. (with Malysiev, A. V.) On the arithmetic of second-order matrices. (Russian) Studies in number theory, 6. *Zap. Naučn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 93 (1980), 41-86, 226. (A. I. Vinogradov) **81k:10032** 10C05 (15A30)
- On the distribution of integer points on some two-sheeted hyperboloids. (Russian) Studies in number theory, 6. *Zap. Naučn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 93 (1980), 87-141, 226. (A. I. Vinogradov) **81m:10091** 10J25 (10E25)
- Pačeva, S. L. (with Nisimov, E. R.) Generalized nonlinear sigma models and universality in three dimensions. I. "Soft mass" renormalization of the $1/N$ expansion. (Russian summary) *Bulgar. J. Phys.* 6 (1979), no. 6, 610-622. (Authors' summary) **81a:81064** 81E15
- (with Nisimov, E. R.) Phase transition and particle spectrum in three-dimensional generalized nonlinear sigma models and Higgs models from $1/N$ expansion. *C. R. Acad. Bulgare Sci.* 32 (1979), no. 11, 1475-1478. (Don Weingarten) **81h:81158** 81G25 (82A25)
- (with Nisimov, E. R.) Generalized nonlinear sigma models and universality in three dimensions. II. Scaling limit and critical behaviour. (Russian summary) *Bulgar. J. Phys.* 7 (1980), no. 1, 16-27. (Authors' summary) **81m:81049** 81E99 (81G20)
- Pačević, E. L. (with Aksešev, L. A.) Estimates for functions that are harmonic in circular multiply connected domains. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1978, no. 6(193), 6-26. (L. I. Hedberg) **81h:30070** 30E20 (31A05, 41A29)
- Sufficient conditions for univalence of certain integral representations. (Russian) *Mai. Zametki* 27 (1980), no. 3, 399-410, 493. (L. A. Aksešev) **81h:30016** 30C45 (26A15)
- Pach, A. J. Flat spots and super-reflexivity in normed spaces. *Nederl. Akad. Wetensch. Indag. Math.* 41 (1979), no. 4, 443-454. (Ronald E. Harrell) **81h:46017** 46B10 (46B05)
- Pach, János On superuniversal graphs. *Studia Sci. Math. Hungar.* 12 (1977), no. 1-2, 19-27 (1980). (J. Spencer) **81m:05086** 05C35 (05C40)
- Note on a problem of Erdős and Katona. *Ars Combin.* 9 (1980), 47-49. (G. F. Clements) **81h:05105** 05C65 (05C35)
- (with Erdős, Paul) On a problem of L. Fejes Tóth. *Discrete Math.* 30 (1980), no. 2, 103-109. (L. G. Šaraburova) **81e:51006** 51M05 (52A45)
- Pacheva, S. J. See Pačeva, S. L.
- Pachl, Jan K. A note on the Orlicz-Pettis theorem. *Nederl. Akad. Wetensch. Indag. Math.* 41 (1979), no. 1, 35-37. (J. J. Uhl, Jr.) **81e:28010** 28B05 (22A99, 46G10)
- Pachner, Udo (with Günter, Ewald; Kleinschmidt, Peter; Schulz, Christoph) Neuere Entwicklungen in der kombinatorischen Konvexgeometrie. *Contributions to geometry (Proc. Geom. Sympos., Siegen, 1978)*, pp. 131-163. *Birkhäuser, Basel*, 1979. (E. Hertel) **81j:57009** 57Q05 (52A25)
- Baryzentrische Unterraumschnitte des Simplex. *Resulante Math.* 2 (1979), no. 1, 105-110. (G. T. Sallee) **81j:52010** 52A45 (51H10, 57Q05)
- Pacholaki, Leszek See Mostowski, Andrzej Włodzimierz, **81i:01018a** and Mostowski, Andrzej Włodzimierz, **81i:01018b**
- Pachpatte, B. G. On a class of integral inequalities of Bellman-Bihari type. *Indian J. Pure Appl. Math.* 7 (1976), no. 10, 1166-1177. (Author's summary) **81g:26012** 26D15
- Integral perturbations in the theory of the stability of nonlinear systems of differential equations. *Bul. Univ. Braşov Ser. C* 20 (1978), 9-22. (S. R. Bernfeld) **81k:34040** 34D10
- Finite difference inequalities and discrete time control systems. *Indian J. Pure Appl. Math.* 9 (1978), no. 12, 1282-1290. (Adly T. Fam) **81h:93044** 93C55 (93D25)
- Comparison theorems for Volterra integral equations in a Banach space. *İstanbul Tek. Üniv. Bil.* 31 (1978), no. 1, 85-93. (Author's summary) **81h:45024** 45N05 (45M99)
- On some integro-differential inequalities similar to Wendroff's inequality. *An. Ştiinţ. Univ. "Al. I. Cuza" Iaşi Sect. I a Mat. (N.S.)* 25 (1979), no. 1, 127-136. (V. B. Headley) **81h:26010** 26D10 (45K05)
- (with Bondge, B. K.) On some fundamental integral inequalities in two independent variables. *J. Math. Anal. Appl.* 72 (1979), no. 2, 533-544. (A. E. Danese) **81h:26012** 26D15
- Common fixed point theorems for a new class of mappings in metric spaces. *J. Maulana Azad College Tech.* 12 (1979), 53-58. (Schie Park) **81m:54006** 54H25
- (with Singare, S. M.) Discrete generalized Gronwall inequalities in three independent variables. *Pacific J. Math.* 82 (1979), no. 1, 197-210. (I. Stamate) **81m:39006** 39A12 (26D15)
- On Itô type stochastic integro-differential equation. *Tamkang J. Math.* 10 (1979), no. 1, 1-18. (C. P. Tsokos) **81c:60076** 60H99
- (with Singare, S. M.) On some fundamental discrete inequalities of the Wendroff type. *An. Ştiinţ. Univ. "Al. I. Cuza" Iaşi Sect. I a Mat. (N.S.)* 26 (1980), no. 1, 87-94. (William N. Everitt) **81h:26021** 26D15
- On some new integral inequalities involving functions and their derivatives. *Indian J. Pure Appl. Math.* 11 (1980), no. 8, 1039-1044. (E. R. Love) **81h:26015** 26D10
- On some fundamental partial integral inequalities. *J. Math. Anal. Appl.* 73 (1980), no. 1, 238-251. (Chung Lie Wang) **81a:26012** 26D10
- On some new integro-differential inequalities of the Wendroff type. *J. Math. Anal. Appl.* 73 (1980), no. 2, 491-500. (B. Crstici) **81h:26020** 26D15 (45K05)
- (with Bondge, B. K.; Walter, Wolfgang) On generalized Wendroff-type inequalities and their applications. *Nonlinear Anal.* 4 (1980), no. 3, 491-495. (Paul R. Beesack) **81g:26007** 26D10 (26D15, 39C05)
- Pachter, Meir (with Jacobson, D. H.; Martin, D. H.; Geveci, T.) ★ Extensions of linear-quadratic control theory. *Lecture Notes in Control and Information Sciences*, 27. *Springer-Verlag, Berlin-New York*, 1980. xi + 288 pp. ISBN 3-540-10069-5 (S. P. Bhattacharyya) **81g:93001** 93-02
- (with Getz, Wayne M.) The geometry of the barrier in the "game of two cars". *Optimal Control Appl. Methods* 1 (1980), no. 2, 103-118. (Authors' summary) **81e:90122** 90D26
- Pack, Russell T. (with Hirschfelder, Joseph O.) Virial theorem for inelastic molecular collisions. Atom-rigid rotor scattering. *J. Chem. Phys.* 73 (1980), no. 8, 3823-3830. (Authors' summary) **81i:81091** 81F99
- Packel, E. W. (with Deegan, J.) A new index of power for simple n -person games. *Internat. J. Game Theory* 7 (1978), no. 2, 113-123. (Authors' summary) **81h:90212** 90D12 (90A06)
- Pačkorja, A. M. Normal Schreier extensions of semimodules. (Russian. English summary) Collection of articles on algebra, 2. *Trudy Tbilis. Mat. Inst. Razmadze Akad. Nauk Gruz. SSR* 62 (1979), 76-90. (W. T. van Est) **81i:16033** 18G15 (16A78)
- Paclet, Philippe Formes de Dirichlet non symétriques et contractions normales. (Italian summary) *Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur.* (8) 64 (1978), no. 2, 118-123. (Alano Ancona) **81h:46017** 46E05 (31C25)
- Capacité fonctionnelle sur un espace de Hilbert. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 289 (1979), no. 5, A337-A340. (W. P. Ziemer) **81f:31014** 31C25
- Pacmura, Andrzej Analogue of the Fourier transform in the space $L_1(-\infty, \infty, B)$. (Polish. Russian and French summaries) *Zeszyty Nauk. Politech. Śląsk. Mat.-Fiz. No. 35* (1979), 83-91. (A. Kufner) **81e:42029a** 42B10 (46E30)
- Analogue of the generalized Fourier transform in the space $L_2(-\infty, \infty, H)$. (Polish. Russian and French summaries) *Zeszyty Nauk. Politech. Śląsk. Mat.-Fiz. No. 35* (1979), 93-100. (A. Kufner) **81e:42029b** 42B10 (46E30)
- Paczynski, B. (with Witta, P. J.) Thick accretion disks and supercritical luminosities. *Astronom. and Astrophys.* 88 (1980), no. 1-2, 23-31. (Authors' summary) **81h:85010** 85A40 (85A20)
- Padawitz, Peter Graph grammars and operational semantics. *Graph-grammars and their application to computer science and biology (Internat. Workshop, Bad Honnef, 1978)*, pp. 350-366. *Lecture Notes in Comput. Sci.*, 73, Springer, Berlin, 1979. (Author's summary) **81d:68106** 68F05 (68B10)
- (with Ehrig, Hartmut; Kreowski, Hans-Jörg) Algebraic implementation of abstract

- data types: concept, syntax, semantics and correctness. *Automata, languages and programming* (Proc. Seventh Internat. Colloq. Noordwijkerhout, 1980), pp. 142-156, *Lecture Notes in Comput. Sci.*, 85, Springer, Berlin, 1980. (Authors' summary) **81j:68029** 68B15
- (with Ehrig, Hartmut; Kreowski, Hans-Jörg) A case study of abstract implementations and their correctness. *International Symposium on Programming* (Proc. Fourth Internat. Sympos., Paris, 1980), pp. 108-122, *Lecture Notes in Comput. Sci.*, 83, Springer, Berlin, 1980. (Authors' summary) **81m:68016** 68B10
- (with Ehrig, Hartmut; Kreowski, Hans-Jörg; Mahr, Bernd) Compound algebraic implementations: an approach to stepwise refinement of software systems. *Mathematical foundations of computer science*, 1980 (Proc. Ninth Sympos., Rydzyna, 1980), pp. 231-245, *Lecture Notes in Comput. Sci.*, 88, Springer, Berlin, 1980. (See **81h:68003**) 68B10 (68C20)
- Padberg, Manfred W.** (with Grötschel, Martin) On the symmetric travelling salesman problem. I. Inequalities. *Math. Programming* **16** (1979), no. 3, 265-280. (E. Ja. Gabovici) **81m:90072a** 90C08
- (with Grötschel, Martin) On the symmetric travelling salesman problem. II. Lifting theorems and facets. *Math. Programming* **16** (1979), no. 3, 281-302. (E. Ja. Gabovici) **81m:90072b** 90C08
- (with Balas, Egon) Adjacent vertices of the all 0-1 programming polytope. (French summary) *RAIRO Rech. Opér.* **13** (1979), no. 1, i, 3-12. (Authors' summary) **81a:90115** 90C10
- (with Crowder, Harlan) Solving large-scale symmetric travelling salesman problems to optimality. *Management Sci.* **26** (1980), no. 5, 495-509. (From the summary) **81h:90074** 90B35 (90C10)
- (with Hong, Saman) On the symmetric travelling salesman problem: a computational study. *Combinatorial optimization*. *Math. Programming Stud.* No. 12 (1980), 78-107. (E. Ja. Gabovici) **81j:90082** 90C10 (05C35, 90C35)
- See also *Combinatorial optimization*, **81c:90051**
- Paderna, Bedřich** (with Štafl, Miloš) Losses in an electrically conducting magnetic half-space with an adjacent AC current carrying filament. *Acta Tech. ČSAV* **25** (1980), no. 3, 335-346. (Authors' introduction) **81m:78030** 78A55
- Padgett, W. J.** Some Bayes and empirical Bayes estimators of reliability in the lognormal model. *Decision information*, pp. 259-275, *Academic Press, New York*, 1979. (G. K. Bhattacharyya) **81h:62174** 62N05 (62F10)
- (with Wei, L. J.) Maximum likelihood estimation of a distribution function with increasing failure rate based on censored observations. *Biometrika* **67** (1980), no. 2, 470-474. (Adhir K. Basu) **81h:62052** 62F10 (62N05)
- (with Lee, A. C. H.) Solution of random operator equations by random step-contractions. *Nonlinear Anal.* **4** (1980), no. 1, 145-151. (D. Kannan) **81k:60063** 60H25 (47H15)
- Padley, S. M.** (with Deshpande, M. V.) Local properties of semigroups of selfadjoint operators. *J. Indian Math. Soc. (N.S.)* **42** (1978), no. 1-4, 85-94 (1979). (A. B. Buche) **81i:47041** 47D05
- Paditz, Ludwig** Über eine Fehlerabschätzung im zentralen Grenzwertsatz. *Wiss. Z. Tech. Univ. Dresden* **28** (1979), no. 5, 1197-1200. (Christian Hipp) **81e:60021** 60F05 (60G50)
- Padmanabhan, P. A.** (with Munot, P. C.) A note on integral representations for certain hypergeometric functions of three variables. (Spanish summary) *Acta Mexicana Cienc. Techn.* **13** (1979), no. 35-38, 1, 55-58. (L. J. Slater) **81k:33008** 33A35
- Padmanabhan, A. R.** Hodges-Lehmann estimators in the case of grouped data. III. *Comm. Statist. A—Theory Methods* **9** (1980), no. 4, 415-425. (G. Tuszdy) **81k:62056** 62C05
- Padmanabhan, K. S.** (with Parvatham, Rajagopalan) Radii of starlikeness of certain class of analytic functions. *Rev. Roumaine Math. Pures Appl.* **23** (1978), no. 10, 1545-1551. (S. Ruscheweyh) **81d:30018** 30C45
- (with Parvatham, Rajagopalan) On certain generalized close-to-star functions in the unit disc. *Ann. Polon. Math.* **37** (1980), no. 1, 1-11. (T. H. MacGregor) **81i:30029** 30C45
- Padovan, Joseph** (with Zeid, Ibrahim) On the development of traveling load finite elements. *Comput. & Structures* **12** (1980), no. 1, 77-83. (Authors' summary) **81f:73037** 73K25
- Padučeva, E. V.** Denotational status of a noun group and its expression in the semantic representation of a sentence. (Russian. English and German summaries) *Naučn.-Tehn. Informacija (VINITI) Ser. 2. Informacionnye Procesi i Sistemy* **1979**, no. 9, 25-31, 32, 33. (Authors' summary) **81d:68114** 68F20 (68F30)
- Padula, Mariarosaria** (with Russo, Remigio) A note on the bifurcation of micropolar fluid motions. (Italian summary) *Boll. Un. Mat. Ital. A* (5) **17** (1980), no. 1, 85-90. (R. R. Huilgol) **81e:76003** 76A05 (35B32)
- de Paeppe, P. J.** A maximal subalgebra of $R(X)$. *Math. Scand.* **43** (1978), no. 2, 322-324 (1979). (T. W. Gamelin) **81a:46060** 46J10
- Essential function algebras with large Šilov boundary. *Math. Scand.* **43** (1978), no. 2, 325-328 (1979). (T. W. Gamelin) **81a:46061** 46J10
- Maximality in function algebras. *J. London Math. Soc.* (2) **22** (1980), no. 2, 345-354. (H. S. Bear) **81j:46081** 46J10
- Paes Leme, P. J.** (with Isaacson, David; Isaacson, E. L.; Marchesin, Dan) Spectral properties of systems with many degrees of freedom. *Seminar on Numerical Analysis and its Applications to Continuum Physics (Rio de Janeiro, 1980)*, pp. 45-53, *Soc. Brasil. Mat., Rio de Janeiro*, 1980. (G. Fante) **81m:81014** 81C05 (65N25)
- Pagan, Adrian** Rational and polynomial lags. The finite connection. *J. Econometrics* **8** (1978), no. 2, 247-254. (Andrew Harvey) **81f:62158** 62P20
- Some consequences of viewing LIML as an iterated Aitken estimator. *Econom. Lett.* **3** (1979), no. 4, 369-372. (P. C. B. Phillips) **81f:62159** 62P20
- (with Breusch, Trevor S.) A simple test for heteroscedasticity and random coefficient variation. *Econometrica* **47** (1979), no. 5, 1287-1294. (Authors' summary) **81b:62081** 62J05
- Pagani, Carlo Domenico** On elliptic-parabolic equations of second order and approximating integral equations. (Russian summary) *Complex analysis and its applications* (Russian), pp. 473-493, 670, "Nauka", Moscow, 1978. (A. P. Soldatov) **81d:35035** 35J70 (35K65, 35M05, 45A05)
- Paganoni, Luigi** (with Bacchelli, Barbara) Extension of solutions of some functional equations. (Italian summary) *Boll. Un. Mat. Ital. B* (5) **16** (1979), no. 3, 1000-1012. (J. G. Dhombres) **81d:39003** 39B20 (39B50)
- (with Fenyő, I. S.) On the general solution of a functional equation which occurs in the theory of singular integral equations. *C. R. Math. Rep. Acad. Sci. Canada* **2** (1980), no. 3, 113-117. (József Tabor) **81g:39006** 39B10
- Paganuzzi, A.** (with Colli Franzone, P.; Stefanelli, M.) Iron metabolism: mathematical modelling and digital simulation. *Simulation of systems '79* (Proc. Ninth IMACS Congress, Sorrento, 1979), pp. 717-725, North-Holland, Amsterdam, 1980. (Authors' summary) **81m:92014** 92A09
- Page, Annie** Actions de groupes. *Séminaire d'Algèbre Paul Dubreil 31ème année* (Paris, 1977-1978), pp. 9-24, *Lecture Notes in Math.*, 740, Springer, Berlin, 1979. (Kenneth A. Brown) **81e:16031** 16A72 (16A74)
- Page, D. R.** (with Dickson, N. K.) Groups with dihedral 3-normalizers of order $4k$. III. *J. Algebra* **58** (1979), no. 2, 462-480. (Koichiro Harada) **81e:20023** 20D06
- Page, Don N.** Particle transmutations in quantum gravity. *Phys. Lett. B* **95** (1980), no. 2, 244-246. (Authors' summary) **81i:83021** 83C45
- Page, E. S.** (with Wilson, L. B.) ★An introduction to computational combinatorics. Cambridge Computer Science Texts, 9. Cambridge University Press, Cambridge-New York, 1979. vi+218 pp. ISBN 0-521-22427-6, 0-521-29492-4 (Rudolf Mathon) **81d:68001** 68-01 (05-01, 39A10, 68E10, 90B40, 90C39)
- le Page, Émile** See **Le Page, Émile**
- Page, S. S.** Stable rings. *Canad. Math. Bull.* **23** (1980), no. 2, 173-178. (B. J. Müller) **81j:16024** 16A45
- Pages, J.-P.** (with Cailliez, F.; Escoufier, Yves) Analyse factorielle: un peu d'histoire et de géométrie. *Rev. Statist. Appl.* **27** (1979), no. 1, 5-28. (Jacques Dauxois) **81a:62047** 62H20 (01A60, 62H25)
- Paget, D. F.** (with Elliott, David) Gauss type quadrature rules for Cauchy principal value integrals. *Math. Comp.* **33** (1979), no. 145, 301-309. (Authors' summary) **81h:65023** 65D32 (41A55)
- Pagli, Linda** (with Lipaki, Witold, Jr.; Lodi, Elena; Luccio, Fabrizio; Magnai, Cristina) On two-dimensional data organization. II. *Fund. Inform.* (4) **2** (1978/79), no. 3, 245-260. (Authors' summary) **81j:68034** 68B15 (68H05)
- Pagliari, Carmen** A fourth-order method for the numerical integration of a second-order ordinary differential equation. (Italian) *Rend. Sem. Fac. Sci. Univ. Cagliari* **49** (1979), no. 3-4, 541-563. (F. M. Pascal) **81j:65081** 65L05 (65L20)
- Paglietti, A.** On the thermodynamic behaviour of nonhyperelastic elastic materials. (Polish and Russian summaries) *Arch. Mech. (Arch. Mech. Stas.)* **32** (1980), no. 1, 3-20. (Authors' summary) **81j:73002** 73B30 (80A10)
- de Pagter, B.** (with Huijsmans, C. B.) On z -ideals and d -ideals in Riesz spaces. I. *Nederl. Akad. Wetensch. Indag. Math.* **42** (1980), no. 2, 183-195. (Lawrence C. Moore, Jr.) **81g:46010** 46A40
- Paguet, Luc** Semi-groupes généralisés, semi-groupes et opérateurs paraboliques. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **286** (1978), no. 11, A507-A510. (Authors' summary) **81c:35061** 35K22 (47D05)
- Pagurek, B.** (with Woodside, C. M.) The sum of serial correlations of waiting and system times in GI/G/1 queues. *Oper. Res.* **27** (1979), no. 4, 755-766. (Anthony G. Pakes) **81a:60111** 60K25
- (with Woodside, C. M.; Newell, G. F.) A diffusion approximation for correlation in queues. *J. Appl. Probab.* **17** (1980), no. 4, 1033-1047. (John P. Lehoczy) **81i:60100** 60K25 (60J60, 90B20)
- Pahareva, N. O.** (with Oleksandrovic, I. M.) On p -wave functions with wave-logarithmic characteristic p . (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* **1980**, no. 4, 23-26, 98. (A. Borzymowski) **81i:30074** 30E25 (35L99)
- (with Oleksandrovic, I. M.) p -wave functions and their application to a problem of plasticity theory. (Russian. English summary) *Vysisl. Prikl. Mat. (Kiev) No. 40* (1980), 86-93, 159-160. (T. Kubo) **81h:73024** 73E99 (30E25)
- Pahlings, Herbert** On the chromatic number of skew graphs. *J. Combin. Theory Ser. B* **25** (1978), no. 3, 303-306. (Jean-Claude Fournier) **81e:05070** 05C15
- Pakhomov, S. V.** Machine-independent description of some machine complexity classes. (Russian. English summary) *Studies in constructive mathematics and mathematical logic*, VIII. *Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* **88** (1979), 176-185, 244. (Authors' summary) **81a:68057** 68C30 (03D15, 68C25)
- Pal, D. V.** (with Govindarajulu, P.) On f -proximal points of pairs of sets. *Optimizing methods in statistics* (Proc. Internat. Conf., Indian Inst. Tech., Bombay, 1977), pp. 367-384, Academic Press, New York, 1979. (F. Deutsch) **81a:41060** 41A65
- (with Govindarajulu, P.) On properties of sets related to f -projections. *J. Math. Anal. Appl.* **73** (1980), no. 2, 457-465. (Lee L. Keener) **81d:41039** 41A65 (41A50, 46A99)
- Pal, M. A.** (with Gomathi, K.; Prabhu, S. S.) A suboptimal controller for minimum sensitivity of closed loop eigenvalues to parameter variations. *IEEE Trans. Automat. Control* **25** (1980), no. 3, 587-588. (Authors' summary) **81k:93072** 93C45 (93C35)
- Paidak, I. N.** Method for solving some multicriterial combinatorial problems. (Russian) *Ekon. i Mat. Metody* **16** (1980), no. 1, 182-185. (E. Ja. Gabovici) **81i:90184** 90C31 (90C10)
- Paidy, Sudhakar R.** See **Hwang, Ching Lai**; et al., **81d:90001**
- Paige, C. C.** Error analysis of some techniques for updating orthogonal decompositions. *Math. Comp.* **34** (1980), no. 150, 465-471. (Authors' summary) **81h:65040** 65F30
- Paikow, V. I.** (with Kruglikov, V. I.) Continuous mappings with a finite Dirichlet integral. (Russian) *Dokl. Akad. Nauk SSSR* **249** (1979), no. 5, 1049-1052. (Olli Martio) **81h:30023** 30C60 (30G99)
- Paimein, V. N.** Calculation of plates and shells with a complex contour. *Prikl. Meh.* **16** (1980), no. 4, 63-70, 141 (Russian); translated as *Soviet Appl. Mech.* **16** (1980), no. 4, 316-322. (From the introduction) **81h:73044** 73K15 (73L10)
- Pain, Astouh A.** A new bilateral generating relation for generalized Bessel polynomials. *Math. Balkanica* **6** (1976), 149-151 (1978). (From the text) **81k:33069** 33A40
- Paine, John** (with de Hoog, Frank R.) Uniform estimation of the eigenvalues of Sturm-Liouville problems. *J. Austral. Math. Soc. Ser. B* **21** (1979/80), no. 3, 365-383. (Alan L. Andrew) **81e:65085** 65L15 (34B25)
- trias Paidr, Joan** See **Trias Paidr, Joan**

- Pálviri, László** On the spaces $L_p^s(I_0)$: maximal inequalities and complex interpolation. Dissertation, University of Helsinki, Helsinki, 1980. *Ann. Acad. Sci. Fenn. Ser. A I Math. Dissertationes* No. 25 (1980), 38 pp. (Colin Bennett) **81j:46056** 46E35 (46M35)
- Pajunen, Petri** Extensions of a method for evaluating higher-order semiclassical phase integrals. *J. Chem. Phys.* 73 (1980), no. 12, 6232–6237. (Author's summary) **81k:81038** 81C99 (65D30)
- Pak, L. N.** Asymptotic formulas for derivatives of sums of special trigonometric series. (Russian) *Asymptotic methods in systems theory*, No. 9 (Russian), pp. 98–117, 239, *Irkutsk. Gos. Univ.*, Irkutsk, 1976. (Author's summary) **81i:46015** 42A99 (41A60)
- Weakly oscillating functions. (Russian) *Asymptotic methods in systems theory*, No. 9 (Russian), pp. 227–236, 246, *Irkutsk. Gos. Univ.*, Irkutsk, 1976. (Author's summary) **81j:46011** 40E05 (26A12)
- On sums of trigonometric series. (Russian) *Uspehi Mat. Nauk* 35 (1980), no. 2(212), 91–144, 279–280. (Edwin Hewitt) **81m:42004** 42A16 (42A32)
- Pak, Jingyao** On the recent development of the Nielsen fixed point theorems of fiber-preserving maps. The Proceedings of the 1979 Topology Conference (Ohio Univ., Athens, Ohio, 1979). *Topology Proc.* 4 (1979), no. 1, 139–148 (1980). (Benjamin Halpern) **81i:55003** 55M20
- Pakes, Anthony G.** The age of a Markov process. *Stochastic Process. Appl.* 8 (1978/79), no. 3, 277–303. (Esa Nummelin) **81b:60071** 60J27 (60J80)
- Some remarks on a one-dimensional skip-free process with repulsion. *J. Austral. Math. Soc. Ser. A* 30 (1980/81), no. 1, 107–128. (H. Kesten) **81m:60132** 60J15 (60F05)
- Pakula, P. V.** Approximate design of discrete-time stochastic systems with constrained control. (Russian. English summary) With loose English translation. *Problems Control Inform. Theory/Problemy Upravlen. Teor. Inform.* 8 (1979), no. 4, 327–339. (N. C. Mohanty) **81b:93084** 93E20
- Exponential stability of a class of nonlinear stochastic systems. *Avtomat. i Telemekh.* 1980, no. 2, 65–71. (Russian. English summary); translated as *Automat. Remote Control* 41 (1980), no. 2, part 1, 189–194. (Author's summary) **81i:93116** 93E15
- Pakula, Lewis** Convergence rates of $k(n)$ -nearest neighbor density estimates. *An. Ştiinţ. Univ. "Al. I. Cuza" Iaşi Sect. I a Mat. (N.S.)* 24 (1978), no. 2, 375–378. (M. Bertrand-Retali) **81i:62031** 62G05
- Pai, A.** (with Srimani, P. K.; Sinha, B. P.) Fail-safe realization of sequential machines with a new two-level MOS module. *Comput. Electr. Engng.* 7 (1980), no. 3, 163–173. (Authors' summary) **81m:68042** 68D15 (68A05, 94C30)
- Pai, Janó** On almost everywhere differentiability of dyadic integral functions on \mathbb{R}_+ . *Fourier analysis and approximation theory (Proc. Colloq., Budapest, 1976)*, Vol. II, pp. 591–601, *Colloq. Math. Soc. János Bolyai*, 19, North-Holland, Amsterdam, 1978. (F. Schipp) **81i:42023** 42C10 (26A24)
- Pai, Jayanta** System reduction by a mixed method. *IEEE Trans. Automat. Control* 25 (1980), no. 5, 973–976. (Author's summary) **81i:93021** 93D25
- Suboptimal control using Padé approximation techniques. *IEEE Trans. Automat. Control* 25 (1980), no. 5, 1007–1008. (Author's summary) **81i:93022** 93D40 (49E25)
- Pai, Ram Babu** (with Mishra, R. S.) (F, T, g) -connection in a Sasakian manifold. *Acta Sci. Indica* 5 (1979), no. 4, 155–158. (A. Gray) **81m:53056** 53C25
- Pai, S. L.** (with Das, M. M.; Li, Huon) Compactness effects on drift of Arctic pack ice. *J. Math. Phys. Sci.* 14 (1980), no. 2, 141–151. (Authors' summary) **81k:76057** 76T05 (86A05)
- Pai, Satyabrata** (with Datta, Barun Kumar) Some new methods of construction of efficiency balanced designs. *Calcutta Statist. Assoc. Bull.* 28 (1979), no. 109–112, 157–161. (Bhagwandas) **81i:62106** 62K10
- Pai, T. K.** (with Maiti, M.) Some results on orbital contractions. *Mat. Vesnik* 3(16)(31) (1979), no. 1, 31–32. (S. L. Singh) **81m:54077** 54H25
- (with Maiti, M.; Achari, J.) Mappings having compact fixed points. II. *Pure Appl. Math. Sci.* 10 (1979), no. 1–2, 9–12. (T. C. Lim) **81i:54067** 54H25
- Pala, M. M.** (with Spano, P.) A cubic spline technique for a fourth-order hyperbolic-parabolic mixed problem. (Italian) *Rend. Sem. Fac. Sci. Univ. Cagliari* 48 (1978), no. 1–2, 49–58. (Georges A. Lebaud) **81i:65088** 65M05
- Palacio, F.** (with Altmann, S. L.) Double groups and projective representations. II. Clebsch-Gordan coefficients. *Molecular Phys.* 38 (1979), no. 2, 513–526. (Authors' summary) **81i:20009b** 20C25 (82A60)
- Palacios, Ángel** See Rodríguez Palacios, Ángel
- Palacios, Rafael** See Cid Palacios, Rafael
- Palacios-Gómez, F. E.** (with Armstrong, Ronald D.; Cook, W. D.) An algorithm for a nonlinear discontinuous knapsack problem. *Management Sci.* 25 (1979), no. 9, 884–894 (1980). (E. Ja. Gabovitch) **81i:90073** 90C10 (90C30)
- Palacios Lataza, Manuel** Systems of canonical variables in the case of hyperbolic motions. (Spanish) *Proceedings of the First Spanish-Portuguese Mathematical Conference (Madrid, 1973)* (Spanish), pp. 489–501, *Consejo Sup. Inc. Cient., Madrid*, 1977. (See **81j:50009**) 70H99
- Palais, Richard S.** The principle of symmetric criticality. *Comm. Math. Phys.* 69 (1979), no. 1, 19–30. (A. J. Tromba) **81i:58026** 58E05
- Palayra, R. M.** (with Srivastava, K. N.; Choudhary, Arati) Some integrals occurring in fracture mechanics. *Defence Sci. J.* 29 (1979), no. 1, 27–34. (Maria Coninoux) **81i:73019** 73M05
- (with Srivastava, K. N.; Choudhary, Arati) On a Griffith crack at the interface of two bonded dissimilar elastic wedges. *Z. Angew. Math. Mech.* 59 (1979), no. 11, 643–646. (K. S. Parihar) **81m:73072** 73M05 (73C35)
- (with Srivastava, K. N.; Karaulia, D. S.) Interaction of torsional wave by penny-shaped crack at the interface of two bonded dissimilar elastic solids. (German and Russian summaries) *Z. Angew. Math. Mech.* 59 (1979), no. 12, 731–735. (J. Miklowitz) **81h:73049** 73M05 (73D99)
- Palani, G.** (with Russo, G. V.) Minimization of incompletely specified sequential machines. (French and German summaries) *Digital Process.* 6 (1980), no. 2–3, 199–206. (Authors' summary) **81k:68043** 68D15
- Palamarchuk, V. G.** Free vibrations of a ribbed cylindrical shell attached to a beam. *Prikl. Meh.* 16 (1980), no. 3, 45–49, 140 (Russian); translated as *Soviet Appl. Mech.* 16 (1980), no. 3, 208–211. (From the text) **81i:73063** 73L20
- Palanides, P. K.** Kneser's type problems for Carathéodory differential equations. *Funkcial. Ekvac.* 23 (1980), no. 1, 25–37. (Juri Bogdanov) **81j:34011** 34A10
- (with Sficas, Y. G.; Stalkos, Vasilios Anast.) Asymptotic behavior of Carathéodory systems. Anti-Lyapunov method. *J. Differential Equations* 36 (1980), no. 3, 442–457. (N. Onuchic) **81g:34062** 34D05 (34A10, 34C11)
- Palanski, Marek** (with Woźniakowska, Barbara) On congruence lattices of commutative BCK-algebras. *Polish Acad. Sci. Inst. Philos. Sociol. Bull. Sect. Logic* 8 (1979), no. 4, 188–190. (G. Georgescu) **81g:06010** 06D99 (03G25)
- Some remarks on BCK-algebras. *Math. Sem. Notes Kobe Univ.* 8 (1980), no. 1, 137–144. (From the text) **81j:06015** 06D99 (03G25)
- Some remarks on BCK-algebras. *Polish Acad. Sci. Inst. Philos. Sociol. Bull. Sect. Logic* 9 (1980), no. 2, 85–87. (Editors) **81k:06011** 06D99 (03G25)
- The identity and conjugacy problem for finitely presented groups. (Russian) *Z. Math. Logik Grundleit. Math.* 26 (1980), no. 4, 311–326. (V. N. Remeslennikov) **81m:20053** 20F10
- Palamopoulos, G. V.** A probabilistic approach to the buckling on thin cylindrical shells with general random imperfections: solution of the corresponding deterministic problem. *Theory of shells (Proc. Third IUTAM Symp., Thessaloniki, 1978)*, pp. 417–443, North-Holland, Amsterdam, 1980. (From the summary) **81m:73043** 73B05
- Palásti, Ilona** On a two-dimensional random space filling problem. *Studia Sci. Math. Hungar.* 11 (1976), no. 1–2, 247–252 (1978). (M. Stoksa) **81d:52011** 52A45 (52A22, 60D05)
- Palazzo, Anthony N.** (with Deschler, William H.) The use of trigonometric finite differences in virtual work expressions for plate instability. *Proceedings of the First International Conference on Mathematical Modeling (St. Louis, Mo., 1977)*, Vol. III, pp. 1409–1419, Univ. Missouri-Rolla, Rolla, Mo., 1977. (See **81i:90005**) 73H99
- (with Heise, Herbert) Elastic-plastic anisotropic materials. *Proceedings of the First International Conference on Mathematical Modeling (St. Louis, Mo., 1977)*, Vol. III, pp. 1697–1704, Univ. Missouri-Rolla, Rolla, Mo., 1977. (Authors' summary) **81m:73036** 73E99 (73C30, 73G99)
- Pal'cev, B. V.** A class of convolution equations on a finite interval. (Russian) *Dokl. Akad. Nauk SSSR* 247 (1979), no. 1, 41–44. (I. M. Spitkovskii) **81c:45085** 45E10 (30D30, 46F12)
- Pal'cik, M. Ja.** (with Fradkin, E. S.; Zaikin, V. N.) Calculation of anomalous dimensions in conformally invariant field theory. *J. Phys. A* 13 (1980), no. 11, 3429–3446. (Authors' summary) **81i:81070** 81E99 (82A25)
- Palcz, Marian** A remark on the analysis of some properties of a pencil of circles. (Polish. Russian and English summaries) *Zeszyty Nauk. Politech. Śląsk. Mat.-Fiz.* No. 35 (1979), 173–178. (Krzysztof Witczyński) **81i:51017** 51M35 (14N05)
- (with Sulwiński, Stanisław) Properties of a transformation of a sphere. (Polish. Russian and English summaries) *Zeszyty Nauk. Politech. Śląsk. Mat.-Fiz.* No. 35 (1979), 179–183. (E. Otto) **81i:51019** 51M15
- (with Pogonowska, Anna) On a property of a band of conics resulting from a plane transformation. (Polish. Russian and English summaries) *Zeszyty Nauk. Politech. Śląsk. Mat.-Fiz.* No. 35 (1979), 185–190. (E. Otto) **81i:51026** 51N20
- Palenčák, M. A.** (with Jaremkó, T. M.) The Dirichlet problem for a second-order nonlinear elliptic equation. (Russian) *Vestnik L'vov. Politehn. Inst.* No. 141 *Differencial'nye Uravneniya i ik Prilozhenia* (1980), 71–73, 122. (Authors' summary) **81i:35053** 35J25
- Palenčák, R. M.** (with Černjanskaja, L. V.) A method for finding the roots of a characteristic polynomial. (Russian) *Vestnik L'vov. Politehn. Inst.* No. 141 *Differencial'nye Uravneniya i ik Prilozhenia* (1980), 99–100, 127. (Authors' summary) **81i:55026** 15A99
- Palens, Lidia** (with Maiellaro, Michele) On the steady MHD flow of a binary mixture into a porous slant layer in the presence of the Hall effect and on their stability. (Italian. English summary) *Rend. Accad. Sci. Fis. Mat. Napoli* (4) 46 (1979), 471–481 (1980). (J. Lawrynowicz) **81i:76037** 76E25 (76S05, 76T05)
- Palev, Čavdar** (with Gančev, A. Č.) A Lie superalgebraic interpretation of the para-Bose statistics. *J. Math. Phys.* 21 (1980), no. 4, 797–799. (Authors' summary) **81d:81036** 81D05 (17A70)
- Fock space representations of the Lie superalgebra $A(0, n)$. *J. Math. Phys.* 21 (1980), no. 6, 1293–1298. (J. Löhmus) **81i:17005** 17A70 (17B70, 81C99)
- S-matrix for interacting A-fields. *J. Math. Phys.* 21 (1980), no. 10, 2560–2561. (A. V. Buhvalov) **81i:81044** 81D05 (17A70, 17B65, 81F20)
- Palffy, Thomas R.** Multiple-object, discriminatory auctions with bidding constraints: a game-theoretic analysis. *Management Sci.* 26 (1980), no. 9, 935–945. (Author's summary) **81i:90234** 90D35 (90A10)
- Palffy, P. P.** On regular pronominal subgroups of symmetric groups. *Acta Math. Acad. Sci. Hungar.* 34 (1979), no. 3–4, 287–292 (1980). (P. Rudra) **81j:20012** 20B35
- Palla, J.** Conjugation invariants and stability moduli of dynamical systems. (Portuguese) *Proceedings of the Eleventh Brazilian Mathematical Colloquium (Poços de Caldas, 1977)*, Vol. II (Portuguese), pp. 621–627, *Inst. Mat. Pura Apl., Rio de Janeiro*, 1978. (See **80c:00018b**) 58F10
- Moduli of stability and bifurcation theory. *Proceedings of the International Congress of Mathematicians (Helsinki, 1978)*, pp. 835–839, *Acad. Sci. Fennica, Helsinki*, 1980. (Clark Robinson) **81c:58046** 58F10 (58F09)
- Palserant, A. F.** A complete scheme of crystallographic groups of (p^h) and $(p^h, 2)$ -symmetry with a singular plane. (Russian) *Contemporary questions of applied mathematics and programming (Russian)*, pp. 109–114, 170, "Štitska", Kishinev, 1979. (Vojtech Kopáček) **81j:20067** 20H15
- (with Zamorzaev, A. M.) Antisymmetry, its generalization and geometrical applications. *Z. Krist.* 151 (1980), no. 3–4, 231–248. (J. J. Burckhardt) **81m:51021** 51F15 (20H15, 82A60)
- Paljutin, E. A.** (with Eršov, Ju. L.) ★Математическая логика. (Russian) [Mathematical logic] "Nauka", Moscow, 1979. 320 pp. (Wiesław Dziobiak) **81i:03002** 03–01
- Categorical positive Horn theories. (Russian) *Algebra i Logika* 18 (1979), no. 1, 47–72, 122. (B. I. Zil'ber) **81i:03042** 03C35
- Paljutin, V. G.** Distribution of eigenvalues of a boundary value problem with a spectral parameter in the boundary condition. (Russian) *Boundary value problems of mathematical physics (Russian)*, pp. 135–141, 181, *Akad. Nauk Ukrain. SSR, Inst. Mat., Kiev*, 1978. (Russell C. Thompson) **81h:34032** 34B25

- The distribution of zeros of entire functions. (Russian) *Methods of functional analysis in problems of mathematical physics* (Russian), pp. 63–80, 181. *Akad. Nauk Ukrain. SSR, Inst. Mat., Kiev*, 1978. (A. E. Eremenko) **81c:30049** 30D15 (30D20)
- A fixed-point theorem for a semigroup of linear transformations. (Russian) *Analytical methods of probability theory* (Russian), pp. 85–88, 152. "Naukova Dumka", Kiev, 1979. (L. Janos) **81b:47051** 47D05 (47H10)
- Distribution of eigenvalues of a boundary value problem for a third-order equation with spectral parameters in the boundary conditions. (Russian) *Akad. Nauk Ukrain. SSR Inst. Mat. Preprint No. 18* (1979), 39 pp. (K. Moszyński) **81k:34018** 34B25 (34E05)
- Classes of uniqueness of the solution to the Cauchy problem for equations with variable coefficients. (Russian) *Mat. Zametki* 26 (1979), no. 6, 835–844, 972. (Piero Bassanini) **81i:35029** 35G10
- Asymptotics of the number of zeros of entire functions. (Russian) *Ukrain. Mat. Ž.* 31 (1979), no. 2, 205–207, 223. (Pet'r Rusev) **81c:30052** 30D20
- Palka, Zdzisław (with Karoński, Michał) On the size of a maximal induced tree in a random graph. (Russian summary) *Math. Slovaca* 30 (1980), no. 2, 151–155. (Michael Capobianco) **81k:05093** 05C99
- Palia, László (with Forgács, Péter; Horváth, Zsolt) Generating the Bogomolny-Prasad-Sommerfield one-monopole solution by a Bäcklund transformation. *Phys. Rev. Lett.* 45 (1980), no. 7, 505–508. (Authors' summary) **81c:81094** 81E99 (58A15)
- Ionescu-Pallus, Nicholas See Ionescu-Pallus, Nicholas
- Pallauchke, Diethard See Special topics of applied mathematics, **81j:46003**
- Pallisch, Marino Divisors of the first kind of a nonsingular algebraic variety. I. (Italian. English summary) *Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur.* (8) 64 (1978), no. 4, 367–373. (Ezio Stagnaro) **81d:14009a** 14C20 (14F05)
- Divisors of the first kind of a nonsingular algebraic variety. II. (Italian. English summary) *Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur.* (8) 64 (1978), no. 5, 452–457. (Ezio Stagnaro) **81d:14009b** 14C20 (14F05)
- (with Lanteri, Antonio) Observations in the elliptic scroll in \mathbb{P}^4 . (Italian. English summary) *Istit. Lombardo Accad. Sci. Lett. Rend. A* 112 (1978), no. 2, 223–233 (1979). (Knud Lønsted) **81k:14030** 14J25 (14M20)
- Pallo, J. (with Bonnin, André) Changements de parenthèses n -aires. I. *Bull. Math. Soc. Sci. Math. R. S. Roumanie (N.S.)* 23(71) (1979), no. 2, 125–133. (Laurent Kott) **81c:6805a** 68F05
- (with Bonnin, André) Changement de parenthèses n -aires. II. *Bull. Math. Soc. Sci. Math. R. S. Roumanie (N.S.)* 23(71) (1979), no. 3, 231–236. (Laurent Kott) **81c:6805b** 68F05
- Palma, S. (with Meijana, S.) Quark masses and Cabibbo angles in an $SU(2)_c \times SU(2)_L \times U(1)$ gauge model with permutation symmetry. *Phys. Lett. B* 90 (1980), no. 1–2, 138–142. (E. Wiczorek) **81c:81070** 81G25 (20C35, 81D20)
- Palma, Enok (with Tveitereid, Morten) On coupled van der Pol equations. *Quart. J. Mech. Appl. Math.* 33 (1980), no. 3, 267–276. (W. O. Criminale, Jr.) **81k:70016** 70K10 (34C05, 58F13)
- Palma, Franz (with Zellner, Arnold) Large sample estimation and testing procedures for dynamic equation systems. *J. Econometrics* 12 (1980), no. 3, 251–283. (Denise R. Osborn) **81g:62156** 62M10 (62F10, 62P20)
- Palma, G. On representation and approximation of nonlinear systems. II. Discrete time. *Biol. Cybernet.* 34 (1979), no. 1, 49–52. (Andrzej W. Olbrot) **81k:93027** 93C10 (92A09, 93C55)
- Palma, Ursula Anwendung von Itô-Gleichungen bei Geburts- und Todesprozessen. *Wiss. Z. Tech. Hochsch. Leuna-Merseburg* 20 (1978), no. 2, 149–154. (H. Hering) **81d:60088** 60J80
- Palma, A. (with Berrondo, M.) The algebraic approach to the Morse oscillator. *J. Phys. A* 13 (1980), no. 3, 773–780. (Wayne J. Holman, III) **81k:81033** 81C40
- Palmeira, Carlos Frederico Borges Differentiable stability of submersions from R^n into R . (Portuguese) *Proceedings of the Eleventh Brazilian Mathematical Colloquium (Poços de Caldas, 1977)*, Vol. II (Portuguese), pp. 789–791. *Inst. Mat. Pura Apl., Rio de Janeiro*, 1978. (See **80c:00010b**) 57R42
- Feuilletages par cylindres fermés de R^3 . (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 9, A419–A421. (Authors' summary) **81a:57028a** 57R30
- Erratum: "Feuilletages par cylindres fermés de R^3 ". *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 19, A929. (Editors) **81a:57028b** 57R30
- Palmer, Edgar M. The enumeration of graphs. *Selected topics in graph theory*, pp. 385–415. Academic Press, London, 1978. (See **81c:05059**) 05C30
- (with Schwenk, Allen J.) On the number of trees in a random forest. *J. Combin. Theory Ser. B* 27 (1979), no. 2, 109–121. (R. W. Robinson) **81j:05071** 05C30 (05C05)
- Palmer, Kenneth J. Two linear systems criteria for exponential dichotomy. *Ann. Mat. Pura Appl.* (4) 124 (1980), 199–216. (V. Sree-Hari-Rao) **81m:34070** 34D20 (93D25)
- On the reducibility of almost periodic systems of linear differential equations. *J. Differential Equations* 36 (1980), no. 3, 374–390. (Robert Vinograd) **81g:34043** 34C20 (34A30)
- Palmer, T. N. Gravitational energy-momentum: the Einstein pseudotensor reexamined. *Gen. Relativity Gravitation* 12 (1980), no. 2, 149–154. (Authors' summary) **81d:83043** 83C99 (53B20)
- Palmer, T. W. Classes of nonabelian, noncompact, locally compact groups. *Rocky Mountain J. Math.* 8 (1978), no. 4, 683–741. (Jonathan M. Rosenberg) **81j:22003** 22D05 (22D10, 43–02)
- Palmore, Julian I. Central configurations and relative equilibria in the n -body problem in E^4 . *Proceedings of the Sixth Conference on Mathematical Methods in Celestial Mechanics (Math. Forschungsinst., Oberwolfach, 1978)*, Part I. *Celestial Mech.* 21 (1980), no. 1, 21–24. (Authors' introduction) **81a:70014** 70F10 (58F05)
- Paltiel, Z. (with Levit, S.; Negele, J. W.) Time-dependent mean-field theory and quantized bound states. *Phys. Rev. C* (3) 21 (1980), no. 4, 1603–1625. (Authors' summary) **81a:81106** 81G35
- Păltineanu, Gavril Density theorems in spaces of continuous functions. I. (Romanian. English summary) *Stud. Cerc. Mat.* 30 (1978), no. 5, 521–554. (G. Godini) **81k:46021a** 46E15 (41A65)
- Density theorems in spaces of continuous functions. II. (Romanian) *Stud. Cerc. Mat.* 30 (1978), no. 6, 629–653. (G. Godini) **81k:46021b** 46E15 (41A65)
- (with Mazilu, P.) Semidiscretization method for the numerical solving of Volterra integral equations. *Proceedings of the International Symposium on Applications of Mathematics in System Theory (Univ. Braşov, Braşov, 1978)*, II, pp. 245–253. *Univ. Braşov, Braşov*, 1979. (G. T. Symm) **81m:45004** 45D05 (45L05, 65R20)
- Weighted approximation for a subspace of vector-valued continuous functions. *Rev. Roumaine Math. Pures Appl.* 25 (1980), no. 4, 635–640. (J. B. Prolla) **81i:46042** 46E40 (46A05)
- Palumbo, Annunziata (with Giambò, Sebastiano) Sur l'équation de transport pour une onde simple en relativité restreinte. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 14, A665–A668. (Authors' summary) **81d:83007** 83A05 (35L75)
- Pamfilos, Paris Kennzeichnung der geodätischen Abstandssphären in H^{n+1} durch ihr Schattengrenzen-Verhalten bei paralleler und punktförmiger Beleuchtung. *Math. Ann.* 251 (1980), no. 2, 151–170. (Werner Ballmann) **81k:53053** 53C40
- Pammer, Z. A mesh refinement method for transient heat conduction problems solved by finite elements. *Internat. J. Numer. Methods Engrg.* 15 (1980), no. 4, 495–505. (Authors' summary) **81b:80004** 80A20
- Pan, C. S. See Pan, Chiao Sung
- Pan, Cheng Dong (with Ding, Xia Xi) A new mean value theorem. *Sci. Sinica* 1979, *Special Issue II on Math.*, 149–161. (H. Halberstam) **81j:10063** 10H15
- Pan, Ch'iao Sung (with Hwang, Jun Shung; Wu, L. S.) An extension of Bernstein-Müntz-Szász theorem. *Soochow J. Math.* 4 (1978), 121–126. (M. Dixon) **81e:41007** 41A10 (30B60, 62E10)
- Pan, Ching Tsai (with Chao, Kwong Shu) Multiple solutions of nonlinear equations: roots of polynomials. *IEEE Trans. Circuits and Systems* 27 (1980), no. 9, 825–832. (W. Niethammer) **81m:65077** 65H10
- Pan, Liang Ru Frozen-in and resistive force-free fields in moving fluids. *Chinese Astron.* 4 (1980), no. 2, 185–193. (Authors' summary) **81d:76105** 76W05
- Pan, S. H. (with Lou, S. P.) Fuzzy structure. *J. Math. Anal. Appl.* 76 (1980), no. 2, 631–642. (E. W. Chapin, Jr.) **81j:54012** 54A40 (03E72, 06A10)
- Pan, V. Ya. Computational complexity of computing polynomials over the fields of real and complex numbers. *Conference Record of the Tenth Annual ACM Symposium on Theory of Computing (San Diego, Calif., 1978)*, pp. 162–172. *ACM, New York*, 1978. (Authors' summary) **81i:68064** 68C25
- New fast algorithms for matrix operations. *SIAM J. Comput.* 9 (1980), no. 2, 321–342. (Francesco Romani) **81i:65037** 65F30 (68C25)
- Panagiotopoulos, P. D. A variational inequality approach to the stochastic holonomic elastoplastic torsion of cylindrical or prismatic bars. *Applications of statistics and probability in soil and structural engineering (Proc. Third Internat. Conf., Sydney, 1979)*, Vol. I, II, pp. 171–180. *Unisearch, Kensington*, 1979. (Authors' summary) **81g:73092** 73K40 (49A29, 65N30, 73E99)
- Panagides, P. (with Bunch, T. S.; Parker, Leonard) On renormalisation of $\lambda\phi^4$ field theory in curved space-time. I. *J. Phys. A* 13 (1980), no. 3, 901–918. (Beverly K. Berger) **81d:81071a** 81E99 (53B50)
- (with Bunch, T. S.) On renormalisation of $\lambda\phi^4$ field theory in curved space-time. II. *J. Phys. A* 13 (1980), no. 3, 919–932. (Beverly K. Berger) **81d:81071b** 81E99
- Panaretos, J. (with Xekalaki, E.) A characteristic property of certain discrete distributions. *Analytic function methods in probability theory (Proc. Colloq. Methods of Complex Anal. in the Theory of Probab. and Statist., Kossuth L. Univ. Debrecen, Debrecen, 1977)*, pp. 253–267. *Colloq. Math. Soc. János Bolyai*, 21, North-Holland, Amsterdam, 1979. (V. Seshadri) **81g:62027** 62E10
- (with Shanbhag, D. N.) Some results related to the Rao-Rubin characterization of the Poisson distribution. *Austral. J. Statist.* 21 (1979), no. 1, 78–83. (V. Seshadri) **81g:62028** 62E10 (60E05)
- Panasenko, G. P. Higher-order asymptotics of the solutions of problems on the contact of periodic structures. (Russian) *Mat. Sb. (N.S.)* 110(152) (1979), no. 4, 505–538. (V. T. Golovchan) **81f:35018** 35C20 (49D50, 73K20, 73T05)
- Panasjuk, A. I. (with Panasjuk, V. I.) An equation generated by a differential inclusion. (Russian) *Mat. Zametki* 27 (1980), no. 3, 429–437, 494. (Pavel Krčec) **81i:34008** 34A60
- Panasjuk, G. Ju. (with Storokin, B. A.) Dynamics of systems with a tensorial ordering parameter near the critical point. (Russian. English summary) *Teoret. Mat. Fiz.* 45 (1980), no. 1, 107–113. (Authors' summary) **81k:82019** 82A25
- Panasjuk, V. I. (with Panasjuk, A. I.) An equation generated by a differential inclusion. (Russian) *Mat. Zametki* 27 (1980), no. 3, 429–437, 494. (Pavel Krčec) **81i:34008** 34A60
- Panasjuk, V. V. (with Savruk, M. P.; Nazarchuk, Z. T.) The plane problem of diffraction of an electromagnetic field by a system of curvilinear screens. (Russian) *Dokl. Akad. Nauk SSSR* 252 (1980), no. 5, 1101–1104. (V. M. Babič) **81h:78022** 78A45
- Panasovič, V. O. Improvement of an estimate. (Ukrainian. English and Russian summaries) *Visnik Kirov. Univ. Ser. Mat. Meh.* No. 20 (1978), 94–96, 166. (Authors' summary) **81d:65011** 65D32
- Panayiotopoulos, J.-C. Catastrophe transportation programming. *Indust. Math.* 29 (1979), no. 2, 77–87. (Authors' summary) **81h:90094** 90C08 (58C28, 90B05)
- The multidimensional assignment model with provision for an uncertain future. *J. Inform. Optim. Sci.* 1 (1980), no. 1, 94–101. (Authors' summary) **81i:90158** 90C15 (90B05)
- Pančenko, V. A. (with Smirnov, E. P.) Generalized orthogonality relation for waveguides with anisotropic filling. *Radiotekhn. i Elektron.* 24 (1979), no. 5, 1066–1070. (Russian); translated as *Radio Engrg. Electron. Phys.* 24 (1979), no. 5, 128–131 (1980). (From the text) **81h:78028** 78A50
- Pančenko, A. M. Singular problems of the calculus of variations and asymptotic programming. (Russian) *Asymptotic methods in systems theory*, No. 9 (Russian), pp. 5–31, 237. *Irkutsk. Gos. Univ., Irkutsk*, 1976. (Authors' summary) **81k:49028** 49D99
- Extremal problems in the control of motion with local functionals. (Russian) *Problems of stability of motion, analytical mechanics and control of motion (Third All-Union Četaev Conf., Irkutsk, 1977)* (Russian), pp. 190–202, 325. "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. (Authors' summary) **81g:93058** 93C20
- See also Problems of stability of motion, analytical mechanics and control of motion

- 81c:93002** and Asymptotic methods in systems theory. **81f:93001**
- Panchevko, V. A.** See **Panchevko, V. A.**
- Panda, Radhanath** Static inventory model with uncertainty in supply. *Calcutta Statist. Assoc. Bull.* 27 (1978), no. 105-108, 141-148 (1979). (Steven Nahmias) **81b:90065** 90B05
- Pande, A. K.** The integral equation approach for the scattering problem. *Proceedings of the Conference on Mathematical Methods in Physics (Mysore, 1978), Part A*, pp. 141-151, *Matscience Rep.*, 96, *Inst. Math. Sci., Madras*, 1979. (From the text) **81g:81000** 81F05
- Pande, D.** (with Lal, Mange) Study of second-order elastic effects in an elliptic hole stressed at infinity. *J. Math. Phys. Sci.* 13 (1979), no. 5, 411-423. (Authors' summary) **81d:73011** 73C45
- Pande, H. D.** (with Gupta, K. K.) Bianchi's identities in a Finsler space with nonsymmetric connection. *Bull. Acad. Serbe Sci. Arts Cl. Sci. Math. Natur. (N.S.)* No. 10 (1979), 41-46. (S. C. Rastogi) **81k:53025** 53B40 (53B15)
(with Singh, Baldu) Berwald's recurrent Finsler spaces of the first order. *Bull. Calcutta Math. Soc.* 71 (1979), no. 2, 94-102. (S. C. Rastogi) **81k:53026** 53B40
(with Gupta, K. K.) Some special properties of R^a_b and Q^a_b in recurrent Finsler spaces. *Indian J. Pure Appl. Math.* 10 (1979), no. 8, 1020-1030. (R. B. Misra) **81c:53022** 53B10 (53B40)
(with Dwivedi, B. D.) On conformal transformation in areal space. *Indian J. Pure Appl. Math.* 10 (1979), no. 8, 1031-1038. (Siegfried Steiner) **81c:53032** 53B40 (49F99)
(with Gupta, K. K.) Projective entities. *J. Math. Phys. Sci.* 13 (1979), no. 5, 425-435. (R. B. Misra) **81c:53026** 53B40
- Pande, L. K.** (with Bhat, Nalini) Three-species ecosystems in a solvable model. *J. Theoret. Biol.* 83 (1980), no. 2, 321-344. (T. G. Hallam) **81f:92028** 92A17 (58F12)
- Pandey, Akhlesh** (with French, J. B.; Mello, P. A.) Statistical properties of many-particle spectra. II. Two-point correlations and fluctuations. *Ann. Physics* 113 (1978), no. 2, 277-293. (Authors' summary) **81h:82004a** 82A05 (81F20)
Statistical properties of many-particle spectra. III. Ergodic behavior in random-matrix ensembles. *Ann. Physics* 119 (1979), no. 1, 170-191. (Author's summary) **81h:82004b** 82A05 (81F20)
- Pandey, R. D.** (with Sharma, Rishi Ram) On the growth and decay of acceleration waves in transient gas flows with vibrational relaxation. (German summary) *Acta Mech.* 33 (1979), no. 3, 171-178. (Authors' summary) **81f:76027** 76N15 (76L05)
- Pandey, B. N.** On the utilization of a known coefficient of kurtosis in the estimation procedure of variance by mean square successive differences. *J. Indian Statist. Assoc.* 16 (1978), 135-140. (Author's summary) **81j:62064** 62F10
(with Singh, J. A) Note on the use of known coefficients of variation in the estimation of common mean of two populations. *J. Indian Statist. Assoc.* 16 (1978), 141-144. (Authors' summary) **81j:62065** 62F10
(with Singh, B. P.) On estimation of r th power of scale in exponential distribution from complete and censored samples. *Progr. Math. (Allahabad)* 12 (1978), no. 1-2, 51-57. (Authors' summary) **81e:62028** 62F10 (62N05)
Double stage estimation of population variance. *Ann. Inst. Statist. Math.* 31 (1979), no. 2, 225-233. (S. K. Katti) **81g:62053** 62F10
(with Singh, Padmakar) Shrinkage estimation of scale in exponential distribution from censored samples. *Comm. Statist. A—Theory Methods* 9 (1980), no. 8, 875-882. (V. K. Srivastava) **81g:62056** 62F11
- Pandey, H. B.** (with Mishra, R. S.) On (F, G) -structure manifolds. *Indian J. Pure Appl. Math.* 7 (1976), no. 12, 1371-1380. (Mihai Dediu) **81a:53038** 53C15
- Pandey, Jagdish N.** On the positive definiteness of a functional. *Canad. Math. Bull.* 22 (1979), no. 2, 203-206. (Author's summary) **81i:46043** 46F10 (46E40, 60G20)
(with Tiwari, U. N.) The Stieltjes transform of distributions. *Internat. J. Math. Math. Sci.* 2 (1979), no. 3, 441-458. (E. R. Love) **81f:44012** 44A15 (46F12)
(with Pathak, Ram S.) A distributional Hardy transformation. *Internat. J. Math. Math. Sci.* 2 (1979), no. 4, 693-701. (Hans-Jürgen Glaeske) **81c:44009** 44A15 (46F12)
(with Pathak, Ram S.) The Kontorovich-Lebedev transformation of distributions. *Math. Z.* 165 (1979), no. 1, 29-51. (Hans-Jürgen Glaeske) **81b:46058** 46F12 (44A15)
(with Tiwari, U. N.) The Mehler-Fock transform of distributions. *Rocky Mountain J. Math.* 10 (1980), no. 2, 401-408. (R. S. Pathak) **81m:46050** 46F12 (44A15)
- Pandey, P. N.** Decomposition of curvature tensor in a recurrent Finsler manifold. *Tamkang J. Math.* 10 (1979), no. 1, 31-34. (B. B. Sinha) **81b:53027** 53B40
A recurrent Finsler manifold with a concircular vector field. *Acta Math. Acad. Sci. Hungar.* 35 (1980), no. 3-4, 465-466. (S. Watanabe) **81j:53033** 53B40
- Pandey, R. J.** Single sampling three-decision plan by attributes providing average quality protection. *Sankhyā Ser. B* 39 (1978), no. 4, 329-343. (W. Uhlmann) **81k:62142** 62N10
- Pandey, R. N.** (with Singh, Ramji) Integral representation for the generalized polynomial $R_n(x, y)$. *Acta Cienc. Indica* 4 (1978), no. 3, 304-308. (D. P. Gupta) **81a:33021** 33A70 (44A20)
(with Singh, Ramji) Recurrence relations for the polynomial set $S_n(x, y)$. (Hindi. English summary) *Vijnana Parishad Anusandhan Patrika* 23 (1980), no. 1, 17-24. (C. L. Koul) **81c:33014** 33A65
- Pandey, S. B.** (with Mishra, R. S.) On H -conharmonic curvature tensor in Kähler manifolds. *Indian J. Pure Appl. Math.* 7 (1976), no. 11, 1277-1287. (Y. Tashiro) **81c:53022** 53B25
- Pandey, S. N.** On plane wave-like solutions of Finzi's nonsymmetric unified field theory. *Tensor (N.S.)* 33 (1979), no. 3, 259-264. (P. C. Veidya) **81f:83038** 83E10 (53B05)
(with Micković, N. V.) On the motion of test particles in the field of a plane gravitational wave. *Gen. Relativity Gravitation* 12 (1980), no. 7, 581-583. (Authors' summary) **81g:83023** 83C35 (83C10)
(with Mishra, R. S.) On quarter symmetric metric F -connections. *Tensor (N.S.)* 34 (1980), no. 1, 1-7. (A. Sharfuddin) **81j:53038** 53C05
- Pandharipande, V. M.** (with Das, B. N.) Equivalent circuit of a narrow-wall waveguide slot coupler. *IEEE Trans. Microwave Theory Tech.* 27 (1979), no. 9, 800-804. (A. Ishimaru) **81c:78011** 78A50
- Pandit, Sudhakar M.** Data dependent systems and exponential smoothing. *Analysing time series* (Proc. Internat. Conf., Guernsey, 1979), pp. 217-238, North-Holland, Amsterdam, 1980. (Robert V. Foutz) **81g:93008** 93E03 (62M99)
- Pandolfi, Luciano** Exponential stability and Liapunov equation for a class of functional-differential equations. (Italian summary) *Boll. Un. Mat. Ital.* 8 (5) 16 (1979), no. 3, 897-909. (R. F. Datko) **81c:34009** 34K20
Nonautonomous regulator problem in Hilbert spaces. *J. Optim. Theory Appl.* 30 (1980), no. 3, 471-484. (Author's summary) **81a:49004** 49A27 (49A50, 93C25)
- Pandolfi, Joseph P.** (with Brown, Philip S., Jr.) A gravity-wave problem with the upstream difference method. *J. Comput. Phys.* 37 (1980), no. 2, 141-150. (Authors' summary) **81g:76009** 76B15 (65M10, 86A10)
- Panella Martinelli, Luigia** On a notable metrical model of Veronese surfaces. (Italian) *Publ. Istit. Mat. Appl. Fac. Ingeg. Univ. Stud. Roma Quaderno No. 15* (1980), 17-21. (Ciro Ciliberto) **81m:51028** 51M35 (14N05)
- Pang, Jong Shi** On discovering hidden Z-matrices. *Constructive approaches to mathematical models* (Proc. Conf. in honor of R. J. Duffin, Pittsburgh, Pa., 1978), pp. 231-241, Academic Press, New York, 1979. (G. N. de Oliveira) **81c:15024** 15A48 (65F30)
- Panfil, O. I.** Conjugate boundary value problems and their connection with conjugate pseudodifferential equations on the boundary of the domain for elliptic systems of second-order equations. (Russian) *Mat. Fiz. No. 26* (1979), 114-121, 130. (L. Cattabriga) **81c:35043** 35J55
- Panin, V. M.** Quadratic convergence of a second-order method for a discrete minimax problem. (Russian) *Theory of optimal decisions* (Russian), pp. 43-49, 109, *Akad. Nauk Ukrain. SSR, Inst. Kibernet.*, Kiev, 1979. (Ja. I. Al'ber) **81k:49015** 49B40 (49D25, 65K10)
- Panja, Chumki** (with Samanta, S. K.) On determination of a common fixed point. *Indian J. Pure Appl. Math.* 11 (1980), no. 1, 120-127. (Heinrich Steinlein) **81c:47055** 47H09 (47H10)
- Pankov, A. A.** Almost periodic solutions of variational evolution inequalities. (Russian) *Dokl. Akad. Nauk SSSR* 241 (1978), no. 2, 286-289. (R. Schumann) **81h:47064** 47H05 (49A29)
Discrete approximations of convex sets, and convergence of solutions of variational inequalities. (Russian) *Math. Nachr.* 91 (1979), 7-22. (Ja. I. Al'ber) **81d:49007** 49A29 (47H15, 49D10, 65K10)
On the Favara theory of impulse evolution equations. (Russian) *Rev. Roumaine Math. Pures Appl.* 25 (1980), no. 3, 385-401. (M. M. Konstantinov) **81j:34109** 34G10 (34C27)
Regularity of solutions of abstract variational inequalities. (Russian) *Ukrain. Mat. Ž.* 32 (1980), no. 5, 683-686. (Erich Miersemann) **81k:49007** 49A29 (47H20)
- Pankov, A. R.** (with Skuridin, A. M.) Recursive estimation of linear model parameters from several groups of measurements. *Avtomat. i Telemekh.* 1979, no. 9, 80-89. (Russian. English summary); translated as *Automat. Remote Control* 40 (1979), no. 9, part 1, 1323-1331 (1980). (Authors' summary) **81a:93091** 93E10 (62J05)
- Pankov, P. S.** (with Imanaliev, M. I.) Generalized solution of an integral equation of the first kind. (Russian) *Differentsial'nye Uravneniya* 16 (1980), no. 5, 937-940, 959. (William L. Perry) **81f:45002** 45A05 (45H05)
(with Imanaliev, M. I.; Alekseenko, S. N.) On the theory of approximation of generalized functions by continuous ones on a closed interval. (Russian) *Izv. Akad. Nauk Kirgiz. SSR* 1980, no. 3, 3-8, 96. (R. Smarzewski) **81k:46041** 46F05 (44A40, 45L05)
- Pankova, L. A.** (with Burkov, V. N.; Šneiderman, M. V.) The problem of formation of expert groups. (Russian) Expert estimates. *Voprosy Kibernet. (Moscow)* No. 58 (1979), 86-91. (Authors' summary) **81g:05001** 05A05
- Pankowski, Tadeusz** (with Albricht, Jerzy) On numerical solution of quasilinear differential equations. *Funct. Approx. Comment. Math.* 7 (1979), 47-54. (Authors' summary) **81a:65071** 65L10
- Pankratova, V. G.** ★Вопросы теории делимости в кольцах и полях алгебраических чисел. (Russian) (Questions of the theory of divisibility in rings and algebraic number fields) *Kalnin. Gos. Univ., Kalnin*, 1979. 83 pp. (W. Narkiewicz) **81k:12001** 12-01 (12A25)
- Pannikov, B. V.** Convergence of series with respect to the system $f_n(x)$ with monotone coefficients. (Russian) *Mat. Zametki* 27 (1980), no. 3, 373-380, 493. (D. P. Gupta) **81c:40002** 40A05
- Panor, A. N.** On the Dixmier mapping. (Russian) *Funkcional. Anal. i Priložen.* 14 (1980), no. 1, 79-80. (Dragomir Ž. Đoković) **81f:17008** 17B35
- Panov, V. F.** Impact of plane electromagnetic-gravitational waves. (Russian) *Izv. Vysl. Učebn. Zaved. Fizika* 1979, no. 5, 91-96. (Ja. A. Smorodinskii) **81a:83020** 83C50 (35Q20)
Interaction of plane gravitational waves with variable polarization. (Russian) *Izv. Vysl. Učebn. Zaved. Fizika* 1979, no. 9, 79-84. (N. V. Micevič) **81a:83012** 83C35 (53C50, 83C15)
- Stationary Einstein-Maxwell fields. (Russian) *Izv. Vysl. Učebn. Zaved. Fizika* 1980, no. 3, 3-7. (N. V. Micevič) **81g:83015** 83C15 (53C80, 83C50)
- Panov, V. I.** (with Rudenko, V. N.) Self-pumped parametric sensor of small forces. *Radiotekh. i Elektron.* 24 (1979), no. 5, 1036-1043. (Russian); translated as *Radio Engng. Electron. Phys.* 24 (1979), no. 5, 105-112 (1980). (Authors' summary) **81e:78042** 78A55 (78A25)
- Panovko, Ja. G.** (with Gubanov, I. I.) ★Устойчивость в колебаниях упругих систем. (Russian) [Stability and oscillations of elastic systems] Современные концепции, парадоксы и ошибки. [New concepts, paradoxes and fallacies] Third edition, revised. "Nauka", Moscow, 1979. 384 pp. (Vadim Komkov) **81h:73001** 73-02 (73D99, 73H99)
- Pantelev, A. D.** (with Medvedev, N. G.) Coercivity of the operator of the theory of three-layered plates. (Russian) *Mat. Fiz. No. 26* (1979), 121-124, 130. (Z. Kąckowski) **81d:73054** 73K10
- Pantelev, V. P.** The construction of the Daniell integral in the case of weakened requirements for the class of fundamental functions. (Russian) *Mat. Zametki* 23 (1978), no. 4, 573-580. (Author's summary) **81k:28018** 28C05
- Pantis, M. A.** (with Avraam, T. P.; Kounadis, A. N.) Snap-through buckling of a simple frame with a tangential load. *Acta Mech.* 36 (1980), no. 1-2, 119-127. (Yi-Yuan Yu)

- 81c:73033 73H05
- Panitska, V. A new form of the extended Kalman filter for parameter estimation in linear systems with correlated noise. *IEEE Trans. Automat. Control* 25 (1980), no. 2, 229-235. (Author's summary) 81a:93692 93E10
- Panwalkar, S. S. (with Woolam, C. R.) Ordered flow shop problems with no in-process waiting: further results. *J. Oper. Res. Soc.* 31 (1980), no. 11, 1039-1043. (Authors' summary) 81j:90071 90B35
- Panzer, John C. (with Ordover, Janusz A.) On the nonexistence of Pareto superior outlay schedules. *Bell J. Econom.* 11 (1980), no. 1, 351-354. (Authors' summary) 81h:90033 90A14
- Pannone, Rafael (with Benedek, Agnes) On the mathematical model of a vibrating mechanical device. *Null series: two applications*, pp. 1-31, *Notas Algebra Anal.*, 8, Univ. Nac. del Sur, Bahía Blanca, 1979. (A. D. Wood) 81d:73057 73K12 (70J10)
- Pan, C. V. On the blowing-up behavior of solutions for a parabolic boundary value problem. *Applicable Anal.* 10 (1980), no. 1, 5-13. (Jagdish Chandra) 81i:35004 35K55 (76N15)
- Mathematical analysis of enzyme-substrate reaction diffusion in some biochemical systems. *Nonlinear Anal.* 4 (1980), no. 2, 369-392. (K. Smítalová) 81i:92006 92A09 (35K55, 80A30, 92A40)
- Asymptotic behavior of solutions for a parabolic equation with nonlinear boundary conditions. *Proc. Amer. Math. Soc.* 80 (1980), no. 4, 587-593. (Howard A. Levine) 81m:35074 35K60 (35B40)
- Nonexistence of global solutions for an integro-differential system in reactor dynamics. *SIAM J. Math. Anal.* 11 (1980), no. 3, 559-564. (J. A. Nohel) 81h:45024 45K05 (82A70)
- Pao, Peter S. Nonlinear circle actions on the 4-sphere and twisting spun knots. *Topology* 17 (1978), no. 3, 291-296. (Author's summary) 81h:57028 57S25 (57R60)
- (with Fintushel, Ronald) A surgery construction on $M^3 \times S^1$. *Houston J. Math.* 5 (1979), no. 1, 69-73. (From the text) 81i:57031 57R65 (57M25)
- (with Hsiang, Wu Chung) The homology 3-spheres with involutions. *Proc. Amer. Math. Soc.* 75 (1979), no. 2, 308-310. (From the text) 81i:57038 57S25 (57R99)
- Pao, Y. C. (with Pardiya, R.; Ritman, E. L.) Regional stresses and strains in a urethane plastic cast of left ventricular myocardium calculated from computer-tomographically recorded displacements of affixed surface markers. *Proceedings of the 16th Midwestern Mechanics Conference (Kansas State Univ., Manhattan, Kan., 1979)*, pp. 219-223, *Develop. in Mech.*, 10, Kansas St. Univ., Manhattan, Kan., 1979. (See 81m:73010) 92A07
- Pao, Yih Hsing Theory of acoustic emission. *Transactions of the Twenty-Sixth Conference of Army Mathematicians (Hanover, N.H., 1980)*, pp. 389-396, *ARO Rep.* 81, 1, U. S. Army Res. Office, Research Triangle Park, N.C., 1981. (See 81m:60006) 73D99
- Pao, Young Ping (with Wen, Shih Liang) Rotation of a classical toroidal plasma. *Phys. Fluids* 23 (1980), no. 3, 636-643. (R. R. Gold) 81b:76073 76W05 (76X05)
- di Paola, J. W. See Di Paola, J. W.
- di Paola, Robert A. See Di Paola, Robert A.
- Paolucci, S. (with Leibovich, S.) Energy stability of the Eulerian-mean motion in the upper ocean to three-dimensional perturbations. *Phys. Fluids* 23 (1980), no. 7, 1286-1290. (Authors' summary) 81d:86004 86A05 (76V05)
- Pap, Emile Some contributions to the theory of n -convex functions. (Serbo-Croatian. English summary) *Univ. u Novom Sadu Zb. Rad. Prirod.-Mat. Fak.* 8 (1978), 29-32. (Author's summary) 81d:20066 20N15 (39C05)
- Pap, Gy. On the asymptotic behaviour of the generalized binomial distributions. *Analytic function methods in probability theory (Proc. Colloq. Methods of Complex Anal. in the Theory of Probab. and Statist., Keszthely L. Univ. Debrecen, Debrecen, 1977)*, pp. 269-276, *Colloq. Math. Soc. János Bolyai*, 21, North-Holland, Amsterdam, 1979. (G. S. Lingappaiah) 81c:60028 60F05 (62E15)
- Pap, M. (with Lemire, F.) H -finite irreducible representations of simple Lie algebras. *Canad. J. Math.* 31 (1979), no. 5, 1084-1106. (C. J. Henrich) 81c:17014 17B10 (17B20)
- Papacostas, Georges C. Le spectre de $(L_1 \oplus L_2)(\mathbb{R}_+)$. *Acad. Roy. Belg. Bull. Cl. Sci.* (5) 65 (1979), no. 10, 545-554. (D. J. Patil) 81m:46073 46J10 (43A20)
- Papadakis, John S. See Nonlinear partial differential equations in engineering and applied science. 81d:35002
- Papadatos, John Sp. See Archimedes. 81d:91027
- Papadimitriou, Christon H. (with Steiglitz, K.) Some examples of difficult traveling salesman problems. *Oper. Res.* 26 (1978), no. 3, 434-443. (James G. Morris) 81b:90092 90B35
- (with Karp, Richard M.) On linear characterizations of combinatorial optimization problems. *21st Annual Symposium on Foundations of Computer Science (Syracuse, N.Y., 1980)*, pp. 1-9, *IEEE, New York*, 1980. (Authors' summary) 81k:90064 90C10 (68C25)
- (with Lewis, Harry R.) Symmetric space-bounded computation (extended abstract). *Automata, languages and programming (Proc. Seventh Internat. Colloq., Noordwijkerhout, 1980)*, pp. 374-384, *Lecture Notes in Comput. Sci.*, 85, Springer, Berlin, 1980. (Authors' summary) 81k:68032 68C25 (68C40)
- (with Bentley, Jon Louis) A worst-case analysis of nearest neighbor searching by projection. *Automata, languages and programming (Proc. Seventh Internat. Colloq., Noordwijkerhout, 1980)*, pp. 470-482, *Lecture Notes in Comput. Sci.*, 85, Springer, Berlin, 1980. (Authors' summary) 81i:68110 68G10 (68C25)
- (with Kanellakis, Paris C.) Local search for the asymmetric traveling salesman problem. *Oper. Res.* 28 (1980), no. 5, 1086-1099. (From the introduction) 81k:90049 90B35
- (with Garey, M. R.; Johnson, David S.; Miller, Gary L.) The complexity of coloring circular arcs and chords. *SIAM J. Algebraic Discrete Methods* 1 (1980), no. 2, 216-227. (Authors' summary) 81g:06065 68C25 (03D15, 05C5, 20F10)
- Papadopoulos, Z. (with Herbut, F.; Vujčić, M.) A new look at unitary-antunitary representations of groups and their construction. *J. Phys. A* 13 (1980), no. 8, 2577-2589. (Authors' summary) 81i:81038 81C40 (22E70)
- Papadopoulos, K. (with Scott, John S.; Holman, Gordon D.; Ionson, James A.) The heating of gas in clusters of galaxies by relativistic electrons: collective effects. *Astrophys. J.* 239 (1980), no. 3, part 1, 769-773. (Authors' summary) 81h:85003 85A05
- (with Freund, H. P.) Radiation from a localized Langmuir oscillation in a uniformly magnetized plasma. *Phys. Fluids* 23 (1980), no. 8, 1546-1552. (Authors' summary) 81g:76121 76X05
- Papadopoulos, Nicholas M. Teams with variable precision information structures: a model for organizational form. *IEEE Trans. Automat. Control* 24 (1979), no. 6, 988-990. (Author's summary) 81a:93119 93E99
- The garbling decision maker: a model of bounded rationality. *IEEE Trans. Automat. Control* 25 (1980), no. 3, 577-579. (Y. C. Ho) 81i:90007 90A05 (90D30)
- Papadourakis, M. A method for the automatic evaluation of the dynamic relaxation parameters. *Comput. Methods Appl. Mech. Engrg.* 25 (1981), no. 1, 35-48. (Author's summary) 81k:65038 65F10 (70K99, 73K99)
- Papageorgiou, Markos A new approach to time-of-day control based on a dynamic freeway traffic model. *Transportation Res. Part B* 14 (1980), no. 4, 349-360. (Author's summary) 81i:90039 90B20
- Papaghic, Neculai Sur le calcul différentiel de Marinescu dans les espaces localement convexes. *An. Ştiinţ. Univ. "Al. I. Cuza" Iaşi Sect. I a Mat. (N.S.)* 25 (1979), no. 1, 75-80. (Sadayuki Yamamoto) 81a:58008 58C20
- Sur le théorème d'inversion locale pour des applications entre des espaces localement convexes. (Romanian summary) *Bul. Inst. Politehn. Iaşi Sect. I* 25(29) (1979), no. 3-4, 63-67. (Sadayuki Yamamoto) 81k:58005 58C15 (26E15, 58C20)
- Applications du calcul différentiel dans les espaces localement convexes à l'analyse globale. *Bull. Math. Soc. Sci. Math. R. S. Roumanie (N.S.)* 23(71) (1979), no. 2, 195-199. (Peter Michor) 81d:58020 58D15 (46A05, 58C20)
- Papathanassiou, A. I. (with Nanousis, N. D.; Georgantopoulos, G. A.) Hydromagnetic free convection flow in the Stokes problem for a porous vertical limiting surface with constant suction. *Astrophys. and Space Sci.* 70 (1980), no. 2, 377-383. (Authors' summary) 81d:76104 76W05
- Papathanassiou, T. (with Ferentinos, K. K.) Loss of information due to groupings. *Transactions of the Eighth Prague Conference on Information Theory, Statistical Decision Functions, Random Processes (Prague, 1978)*, Vol. C, pp. 87-94, *Reidel, Dordrecht*, 1979. (I. Guttman) 81d:62006 62B10
- Papaykiri, Panagiotis A. Optimal experimental design in econometrics. A time series problem. *J. Econometrics* 7 (1978), no. 3, 351-372. (Hilmar Drygas) 81g:62130 62K05 (62P20)
- Papoulous, L. C. (with Jannussis, A. D.; Patargias, N.) Generalized coherent states and the $U(n)$ Lie group. *J. Phys. Soc. Japan* 47 (1979), no. 3, 1003-1009. (José F. Carrión) 81k:81032 81C40 (22E70, 81D99)
- (with Jannussis, A. D.; Brodimas, G. N.) New creation and annihilation operators in the Gauss plane and quantum friction. *Phys. Lett. A* 71 (1979), no. 4, 301-303. (Authors' summary) 81i:81043 81D05
- Papamichael, N. (with Behforooz, G. H.) End conditions for interpolatory cubic splines with unequally spaced knots. *J. Comput. Appl. Math.* 6 (1980), no. 1, 59-65. (E. L. Albasing) 81i:65009 65D07
- (with Behforooz, G. H.; Worsey, A. J.) A class of piecewise-cubic interpolatory polynomials. *J. Inst. Math. Appl.* 25 (1980), no. 1, 53-65. (Authors' summary) 81a:65019 65D07 (41A15)
- Papantolaeou, George C. (with Bensoussan, A.; Lions, Jacques-Louis) Homogenization and ergodic theory. *Probability theory (Papers, VIIth Semester, Stefan Banach Internat. Math. Center, Warsaw, 1976)*, pp. 15-25, *Banach Center Publ.*, 5, PWN, Warsaw, 1979. (A. N. Al-Hussaini) 81h:60101 60J60 (28D99, 35B40, 49D50)
- Stochastically perturbed bifurcation. *Computing methods in applied sciences and engineering (Proc. Fourth Internat. Sympos., Versailles, 1979)*, pp. 659-673, *North-Holland, Amsterdam*, 1980. (Pierre-Louis Lions) 81m:60118 60H15 (35P30, 58E07)
- Electromagnetic problems in composite materials in linear and nonlinear regimes. *Nonlinear electromagnetics*, pp. 253-261, *Academic Press, New York*, 1980. (D. L. Colon) 81m:78009 78A25 (82A42)
- Effective parameters and fluctuations for boundary value problems. *Transactions of the Twenty-Fifth Conference of Army Mathematicians (Johns Hopkins Univ., Baltimore, Md., 1979)*, pp. 733-744, *ARO Rep.* 80, 1, U. S. Army Res. Office, Research Triangle Park, N.C., 1980. (Z. Schuss) 81g:35119 35R60 (49D50, 73B35)
- Papantolaeou, N. Gravitational duality and Bäcklund transformations. *J. Math. Phys.* 20 (1979), no. 10, 2069-2077. (Mineo Ikeda) 81c:83024 83C40 (35A30, 58A15)
- (with Modinow, L. D.) $SO(2, 1)$ algebra and the large N expansion in quantum mechanics. *Ann. Physics* 128 (1980), no. 2, 314-334. (Authors' summary) 81m:81022 81C12
- (with Jevicki, A.) Classical dynamics in the large N limit. *Nuclear Phys. B* 171 (1980), no. 3, 362-376. (Authors' summary) 81h:81044 81C99 (81E99)
- Papantoni-Kazakos, P. (with Gray, Robert M.) Robustness of estimators on stationary observations. *Ann. Probab.* 7 (1979), no. 6, 989-1002. (P. J. Huber) 81g:62068 62F35 (60G10)
- Papas, Charles H. (with Engheta, Nader; Mickelson, Alan R.) On the near-zone inverse Doppler effect. *IEEE Trans. Antennas and Propagation* 28 (1980), no. 4, 519-522. (Authors' summary) 81i:78012 78A25
- Papastavridis, J. G. (with Lianis, G.) Rotating frames and continuum mechanics: a relativistic appraisal. *Found. Phys.* 9 (1979), no. 9-10, 673-694. (Jean Chevalier) 81c:83021 83C40 (53B50)
- Papastavridis, Stavros A necessary condition for embedding a complex in S^{2n+2} . *Fund. Math.* 103 (1979), no. 3, 217-222. (Donald M. Davis) 81d:57022 57R40
- On realising mod-2 homology classes of manifolds by submanifolds. *Proc. Edinburgh Math. Soc.* (2) 22 (1979), no. 2, 109-111. (K. Aoki) 81c:70038 57R95
- Relations among characteristic classes of n -manifolds imbedded in \mathbb{R}^{n+2} . *Proc. Amer. Math. Soc.* 79 (1980), no. 4, 639-643. (A. J. Berrick) 81i:57028 57R40 (57R20)
- Papathodorou, Theodore S. Approximation of solutions to nonlinear variational time dependent problems. *Serdica* 5 (1979), no. 1, 73-82. (Philip W. Schaefer) 81h:35024 35J35 (35A15)
- (with Jesanis, M. E.) Collocation methods for Volterra integro-differential equations with singular kernels. *J. Comput. Appl. Math.* 6 (1980), no. 1, 3-8. (H. Brunst) 81j:65137 65R20
- Papavasiliopoulos, George P. (with Cruz, Jose B., Jr.) Nonclassical control problems and

- Stackelberg games. *IEEE Trans. Automat. Control* 24 (1979), no. 2, 155-166. (Authors' summary) **81i:90223** 90D25 (49A45)
- Papayannopoulos, Th. Orbits near the particle resonance of a galaxy. I. Numerical study. *Astronom. and Astrophys.* 77 (1979), no. 1-2, 75-85. (George Contopoulos) **81i:8502a** 85A05
- Orbits near the particle resonance of a galaxy. II. Theoretical study. *Astronom. and Astrophys.* 79 (1979), no. 1-2, 197-203. (George Contopoulos) **81i:8502b** 85A05
- (with Contopoulos, G.) Orbits in weak and strong bars. *Astronom. and Astrophys.* 92 (1980), no. 1-2, 33-46. (Authors' summary) **81i:85001** 85A05
- Pape, Uwe. See *Discrete structures and algorithms*, **81m:68002**
- Papick, Ira J. Coherent overrings. *Canad. Math. Bull.* 22 (1979), no. 3, 331-337. (David E. Dobbs) **81m:13016** 13E99 (13B20, 13F05)
- When coherent pairs are Noetherian pairs. *Houston J. Math.* 5 (1979), no. 4, 559-564. (Stephen McAdam) **81i:13006** 13B20 (13E05)
- A note on proper overrings. *Comment. Math. Univ. St. Paul.* 28 (1980), no. 2, 137-140. (J. L. Mott) **81j:13016** 13E15 (13F05)
- (with Huckaba, James A.) Quotient rings of polynomial rings. *Manuscripta Math.* 31 (1980), no. 1-3, 167-196. (Jean-Luc Chabert) **81i:13012** 13F20 (13F05)
- Papil, Gloria. On the stability of the Dirichlet problem for the vibrating string equation. *Ann. Scuola Norm. Sup. Pisa Cl. Sci.* (4) 6 (1979), no. 4, 719-728. (E. C. Zachmanoglou) **81i:35157** 35R25 (35L05, 73C99)
- Papineau, Robert L. (with Lakshminarayan, Sankaran; Lakshmanan, Ram; Rochette, René) Order preserving allocation of jobs to two nonidentical parallel machines: a solvable case of the maximum cut problem. (French summary) *INFOR—Canad. J. Oper. Res. Inform. Process.* 17 (1979), no. 3, 230-241. (N. N. Mirenkov) **81i:90078** 90B35 (68C15)
- Papil, Pier Luigi (with Singer, Ivan) Best coapproximation in normed linear spaces. *Monatsh. Math.* 88 (1979), no. 1, 27-44. (Hans-Peter Helfrich) **81i:41080** 41A65 (46B20)
- Papo, Haim B. (with Grafarend, Erik W.; Mueller, Ivan I.; Richter, Burghard) Concepts for reference frames in geodesy and geodynamics: the reference directions. *Bull. Géodésique* 53 (1979), no. 3, 195-213. (Z. Nádénik) **81i:86005** 86A30 (53A05, 53A99)
- Papoulis, Athanasios (with Chamzas, Christodoulos) Detection of hidden periodicities by adaptive extrapolation. *IEEE Trans. Acoust. Speech Signal Process.* 27 (1979), no. 5, 492-500. (Authors' summary) **81i:94017** 94A12
- Papoukakis, Eleftherios (with Ramkrishna, Doraiswami; Lim, Henry C.) The extended Graetz problem with Dirichlet wall boundary conditions. *Appl. Sci. Res.* 36 (1980), no. 1, 13-34. (From the summary) **81i:76053** 76R05
- Papp, E. Space-dispersion approach to the explanation of the Higgs mechanism. (German summary) *Ann. Physik* (7) 37 (1980), no. 3, 161-170. (Author's summary) **81i:81061** 81D25
- Papp, Zoltán (with Györfi, Kálmán) On discriminant form and index form equations. *Studia Sci. Math. Hungar.* 12 (1977), no. 1-2, 47-60 (1980). (A. J. van der Poorten) **81g:10034** 10B16 (10F45)
- Spectrum, topologies and sheaves for left Noetherian rings. *Module theory (Proc. Special Session, Amer. Math. Soc., Univ. Washington, Seattle, Wash., 1977)*, pp. 204-214. *Lecture Notes in Math.*, 700, Springer, Berlin, 1979. (Jonathan Golan) **81i:16004** 16A08 (16A63)
- On the spectra of left stable rings. *Ring theory (Proc. Antwerp Conf. (NATO Adv. Study Inst.), Univ. Antwerp, Antwerp, 1978)*, pp. 741-756. *Lecture Notes in Pure and Appl. Math.*, 51, Dekker, New York, 1979. (Beth Barnwell) **81i:16002** 16A08 (16A63)
- (with Golan, Jonathan S.) Cocircular nice rings and Boyle's conjecture. *Comm. Algebra* 8 (1980), no. 18, 1775-1798. (K. A. Byrd) **81i:16027** 16A52 (16A64)
- Pappas, P. T. On velocity and the transverse Doppler effect in the six-dimensional space. A hidden-variable model? *Lett. Nuovo Cimento* (2) 28 (1980), no. 6, 209-215. (From the text) **81i:83010** 83A05 (81B05)
- Pappas, Thrasosoulas (with Laub, Alan J.; Sandell, Nils R., Jr.) On the numerical solution of the discrete-time algebraic Riccati equation. *IEEE Trans. Automat. Control* 25 (1980), no. 4, 631-641. (Authors' summary) **81i:93065a** 93C55 (65F05)
- See also Emami-Naeini, A.; et al., **81i:93065b**
- Papazova, F. P. (with Reas, P. G.; Michelucci, M. L.) A differential model concerning morphogenetic processes. (Italian) *Atti Acad. Sci. Lett. Arti Palermo Parte I* (4) 36 (1976/77), 235-248 (1978). (T. Poggio) **81i:92007** 92A09 (58C99, 82A35)
- (with Michelucci, M. L.; Reas, P. G.) The growth of a microbial/population as approximate solution of a first-order partial differential equation. (Italian) *Atti Acad. Sci. Lett. Arti Palermo Parte I* (4) 36 (1976/77), 457-472 (1978). (Authors' summary) **81i:92015** 92A17 (35L67)
- (with Michelucci, M. L.; Reas, P. G.) Approximate solution of a first-order differential system that represents a "predator-prey" model with account taken of age. (Italian) *Atti Acad. Sci. Lett. Arti Palermo Parte I* (4) 36 (1976/77), 473-490 (1978). (Authors' summary) **81i:92016** 92A17 (35L67)
- (with Michelucci, M. L.; Reas, P. G.) A mathematical model concerning the behavior of two biological associations: numerical approximation. (Italian) *Atti Acad. Sci. Lett. Arti Palermo Parte I* (4) 36 (1976/77), 557-579 (1978). (Authors' summary) **81i:92017** 92A17 (35L67)
- Papues, Antonio (with Micali, Artibano) Sur le groupe des extensions cycliques. (English summary) *J. Algebra* 63 (1980), no. 1, 268-278. (James Hein) **81i:13001** 13B02
- Papues, Otilia T. Wiermann The approximation property for certain spaces of holomorphic mappings. *Approximation theory and functional analysis (Proc. Internat. Sympos. Approximation Theory, Univ. Estadual de Campinas, Campinas, 1977)*, pp. 351-370. *North-Holland Math. Studies*, 35, North-Holland, Amsterdam, 1979. (G. Coeuré) **81d:46055** 46G20
- (with Bianchini, M.; Zaine, M. C.) On the strong compact-ported topology for spaces of holomorphic mappings. *Pacific J. Math.* 77 (1978), no. 1, 33-49. (Klaus-Dieter Bierstedt) **81i:46059** 46G20 (32A30, 46E10)
- Para, A. Foglio (with Garriba, S.) Reliability analysis of a repairable single unit under general age-dependence. *Synthesis and analysis methods for safety and reliability studies (Proc. NATO Adv. Study Inst., Urbino, 1978)*, pp. 251-268. Plenum, New York, 1980. (See **81j:93008**) 93E03
- Paradis, André D. (with Thierrin, Gabriel) Strong endomorphisms of automata. *Fundamentals of computation theory (Proc. Conf. Algebraic, Arith. and Categorical Methods in Comput. Theory, Berlin/Wendisch-Rietz, 1979)*, pp. 318-324. *Math. Research*, 2, Akademie-Verlag, Berlin, 1979. (Authors' introduction) **81i:68068** 68D30
- (with Thierrin, Gabriel) Strong endomorphisms of α -connected automata. *Semigroup Forum* 20 (1980), no. 1, 91-93. (P. Dömös) **81i:68045** 68D30
- Paralio, Michele (with di Pasquale, Salvatore; Reale, Enrico) Matrix formulation of large deformation analysis. (German and Russian summaries) Special issue on large elastic deformation of discrete systems (Lectures, Euromech 69 Internat. Colloq., Balatonsezes, 1977). *Acta Tech. Acad. Sci. Hungar.* 87 (1978), no. 1-2, 87-101 (1979). (Hwa-Shan Ho) **81i:73043** 73K30 (73G05, 73K20)
- Paras, Ju. I. (with Egorova, L. Ja.; Levin, L. L.; Osin, B. G.; Cvetnickaja, S. A.; Reletnikova, G. N.) ★Практикум по численным методам. (Russian) [Workbook on numerical methods] Tomsk. Gos. Univ., Tomsk, 1979. 212 pp. (Editors) **81i:65002** 65-01
- Paraschewar, Mangalam R. On the connectedness of certain sets in summability theory. *Canad. Math. Bull.* 23 (1980), no. 2, 137-142. (B. E. Rhoades) **81i:40008** 40G05
- Parashams, S. A. Some variants of quasi-injectivity. *Progr. Math. (Allahabad)* 12 (1978), no. 1-2, 59-66. (J. Jirások) **81i:16039** 16A52
- Parasomov, P. V. (with Ščerbin, N. V.) Examples of nonanalytic uniform algebras. (Russian. English summary) *Vestnik Moskov. Univ. Ser. I Mat. Meh.* 1980, no. 4, 26-28, 99. (C. C. White) **81j:46083** 46J15 (46J20)
- Parasjape, S. R. Simpler proofs for the infinite divisibility of multivariate gamma distributions. *Sankhyā Ser. A* 40 (1978), no. 4, 393-398. (Charles M. Goldie) **81i:60022** 60E07
- Parasjuk, E. M. (with Parasjuk, L. S.) The fundamental boundary value problems in the half-plane for certain elliptic equations with a parameter, degenerate on the boundary. (Ukrainian. Russian summary) *Visnik L'viv. Derž. Univ. Ser. Meh.-Mat.* No. 12 (1977), 11-14, 93. (Authors' summary) **81i:35014** 35J25
- A transformation of a matricant. (Russian) *Vestnik L'viv. Politehn. Inst. No. 141 Differentsial'nye Uravnenija i ih Prilozhen.* (1980), 73-75, 122. (Author's summary) **81i:65061** 65L05 (34G10)
- Parasjuk, L. S. (with Parasjuk, E. M.) The fundamental boundary value problems in the half-plane for certain elliptic equations with a parameter, degenerate on the boundary. (Ukrainian. Russian summary) *Visnik L'viv. Derž. Univ. Ser. Meh.-Mat.* No. 12 (1977), 11-14, 93. (Authors' summary) **81i:35014** 35J25
- Parasjuk, O. S. (with Vladimirov, V. S.; Mitropol'skij, Ju. O.; Guz', O. M.) Nikolai Nikolaevič Bogoljubov (on the occasion of his seventieth birthday). (Russian) *Prikl. Meh.* 15 (1979), no. 8, 124-127. (Editors) **81g:01020a** 01A70
- (with Davydov, A. S.; Petrina, D. Ja.) Nikolai Nikolaevič Bogoljubov (on the occasion of his seventieth birthday). (Russian) *Ukrain. Fiz. Ž.* 24 (1979), no. 8, 1073-1075. (Editors) **81g:01020e** 01A70
- (with Vladimirov, V. S.; Mitropol'skij, Ju. O.) Nikolai Nikolaevič Bogoljubov (on the occasion of his seventieth birthday). (Russian) *Ukrain. Mat. Ž.* 31 (1979), no. 4, 339-340 (1 plate). (Editors) **81g:01020b** 01A70
- Paraskevopoulos, P. N. (with King, R. E.) Parameter identification using discrete Laguerre polynomials. *Identification and system parameter estimation (Proc. Fourth IFAC Sympos., Tbilisi, 1976)*, Part 2, pp. 1343-1350. *North-Holland, Amsterdam*, 1978. (See **80d:93010b**) 93B30
- Exact model-matching of 2-D systems via state feedback. *J. Franklin Inst.* 308 (1979), no. 5, 475-486. (S. G. Tzafestas) **81i:93056** 93C99
- (with Vachtsevanos, G. J.) On the transfer function matrix identification of two-dimensional systems. *Simulation of distributed-parameter and large-scale systems (Proc. IMACS European Simulation Meeting, Univ. Patras, Patras, 1979)*, pp. 67-72. *North-Holland, Amsterdam*, 1980. (Authors' summary) **81i:93029** 93B30
- (with Kosmidou, O. I.) Dynamic compensation for exact model-matching of two-dimensional systems. *Internat. J. Systems Sci.* 11 (1980), no. 10, 1163-1175. (Authors' summary) **81j:93027** 93B55 (93C45)
- Parashams, R. (with Duske, J.; Specht, J.) On deterministic indexed languages. *Inform. and Control* 45 (1980), no. 1, 48-67. (Authors' summary) **81i:68086** 68F05
- Pardya, R. (with Pao, Y. C.; Rittman, E. L.) Regional stresses and strains in a urethane plastic cast of left ventricular myocardium calculated from computer-tomographically recorded displacements of affixed surface markers. *Proceedings of the 16th Midwest Mechanics Conference (Kansas State Univ., Manhattan, Kan., 1979)*, pp. 219-223. *Develop. in Mech.*, 10, Kansas St. Univ., Manhattan, Kan., 1979. (See **81m:73010**) 92A07
- trab Pardo, Luis See *Trab Pardo, Luis*
- Pardon, William Mod 2 semicharacteristics and the converse to a theorem of Milnor. *Math. Z.* 171 (1980), no. 3, 247-268. (Ian Hambleton) **81i:57042** 57S17
- Pardoux, E. Filtering of a diffusion process with Poisson-type observation. *Stochastic control theory and stochastic differential systems (Proc. Workshop, Deutsch. Forschungsgemeinschaft, Univ. Bonn, Bad Honnef, 1979)*, pp. 510-518. *Lecture Notes in Control and Information Sci.*, 16, Springer, Berlin, 1979. (P. Brémaud) **81i:60054** 60G35 (60G55, 60J60)
- Stochastic partial differential equations and filtering of diffusion processes. *Stochastics* 3, no. 2, 127-167 (1979). (B. L. Rozovskii) **81i:60059** 60H15 (60G25, 62M20)
- Paré, Robert (with Bunge, Marta) Stacks and equivalence of indexed categories. *Cahiers Topologie Géom. Différentielle* 20 (1979), no. 4, 373-399. (A. Preller) **81i:18017** 18B25
- (with Barr, Michael) Molecular toposes. *J. Pure Appl. Algebra* 17 (1980), no. 2, 127-152. (Ioan Tofan) **81i:18010** 18B25 (03G30)
- Paraschams, J. The interaction of integrity constraints in an information system. *J. Comput. System Sci.* 20 (1980), no. 3, 310-329. (Author's summary) **81i:68030** 68B15
- Transitive dependencies in a database scheme. (French summary) *RAIRO Inform.* 14 (1980), no. 2, 149-163. (Author's summary) **81i:68031** 68B15
- Pareek, C. M. (with Mulla, F. S.) On 3-regular graphs. (French summary) *Problèmes combinatoires et théorie des graphes (Colloq. Internat. CNRS, Univ. Orsay, Orsay, 1976)*, pp. 301-303. *Colloques Internat. CNRS*, 260, CNRS, Paris, 1978. (V. Krishnamoorthy)

- 81c:05005** 05C99
Biological spaces and quasimetric spaces. *J. Univ. Kuwait Sci.* 6 (1979), 1-8. (Worthen Hunsaker) **81m:54062** 54E55
- Parenti, Cesare** (with Rodino, Luigi) Examples of hypoelliptic operators which are not microhypoelliptic. (Italian summary) *Boll. Un. Mat. Ital. B* (5) 17 (1980), no. 1, 390-409. (Makhlof Derridj) **81f:35028** 35H05 (35S05)
- mailet-Paret, John** See **Mailet-Paret, John**
- Parfenov, O. G.** Estimates of singular values of integral operators with analytic kernels. (Russian) *Boundary value problems. Spectral theory (Russian)*, pp. 178-188, 244-245, *Probl. Mat. Anal.*, 7, Leningrad. Univ., Leningrad, 1979. (V. G. Kravchenko) **81g:47059** 47G05
- Parfenov, V. A.** An example of a locally nilpotent Lie algebra. (Russian) *Mat. Zametki* 26 (1979), no. 5, 667-672, 813. (K. Strambach) **81m:17016** 17B40 (17B30)
- Parhi, H.** (with Satapathy, P. K.) A transversely isotropic composite with a penny-shaped crack. (German summary) *Acta Mech.* 32 (1979), no. 4, 275-285. (Authors' summary) **81e:73000** 73M05
- Parhi, N.** (with Nayak, S. K.) On nonoscillatory behaviour of solutions of nonlinear differential equations. (Italian summary) *Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur.* (8) 65 (1978), no. 1-2, 58-62 (1979). (John R. Graef) **81g:34037** 34C10
- Parhomchenko, P. P.** (with Pravil'skiĭ, P. A.) Software diagnosis (review). *Avtomat. i Telemekh.* 1980, no. 1, 103-121 (Russian. English summary; translated as *Automat. Remote Control* 41 (1980), no. 1, part 2, 82-96. (Authors' summary) **81g:68024** 68B10
- Parhomovskii, Ja. M.** Approximate formulas for elliptic integrals and examples of their application to two problems of nonlinear statics of elastic beams. (Russian) *Učen. Zap. CAGI* 9 (1978), no. 4, 75-86. (R. G. Langebartel) **81h:33002** 33A25 (73K05)
Approximate formulas for elliptic integrals of the third kind. (Russian) *Učen. Zap. CAGI* 10 (1979), no. 3, 78-86. (R. G. Langebartel) **81h:33003** 33A25 (65D20)
Torsion-bending vibrations of an airfoil. (Russian) *Učen. Zap. CAGI* 10 (1979), no. 5, 60-74. (Author's summary) **81j:73033** 73D99
- Paria, Gunaadhar** Plane strain in Cosserat elasticity with hypothesis of displacement dependent rotation. *J. Indian Math. Soc. (N.S.)* 42 (1978), no. 1-4, 257-261 (1979). (D. Iesau) **81h:73003** 73B25
- Parikh, J.** (with Sahoo, B.) On the complementarity problem over polyhedral cone. *Indian J. Pure Appl. Math.* 11 (1980), no. 7, 838-844. (Edward J. Haug, Jr.) **81i:90190** 90C33 (52A40)
- Parikh, C. L.** (with Patel, V. C.) On modified Jacobi polynomials. *J. Indian Acad. Math.* 1 (1979), no. 1, 41-46. (B. D. Agrawal) **81h:33018** 33A65
- Parikh, R. S.** (with Shukla, J. B.; Rao, B. R. P.; Gupta, S. P.) Effects of peripheral-layer viscosity on peristaltic transport of a bio-fluid. *J. Fluid Mech.* 97 (1980), no. 2, 225-237. (Authors' summary) **81a:76053** 76Z05 (92A09)
- Parish, B. S.** Some methods for saving computer storage and computation time for various double sweep methods. (Russian) *Ž. Vyisl. Mat. i Mat. Fiz.* 20 (1980), no. 1, 69-76, 260. (Author's summary) **81h:65074** 65L10
- Parikh, Rohit** The completeness of propositional dynamic logic. *Mathematical foundations of computer science, 1978 (Proc. Seventh Symp., Zakopane, 1978)*, pp. 403-415, *Lecture Notes in Comput. Sci.*, 64, Springer, Berlin, 1978. (Robert P. McArthur) **81h:03029** 03B60 (03C80, 68C01)
(with Meyer, Albert R.) Definability in dynamic logic. *Conference Proceedings of the Twelfth Annual ACM Symposium on Theory of Computing (Los Angeles, Calif., 1980)*, pp. 1-7, *ACM, New York*, 1980. (See **81j:68006**) **03B60** (68B10)
- Parikh, E. E.** (with Markus, A. S.) Change of the Jordan structure of a matrix under small perturbations. (Russian) *Linear operators. Mat. Issled.* No. 54 (1980), 98-109, 167. (Jaroslav Zemánek) **81j:47013** 47A55 (15A21)
- Paria, F.** (with Alarcón, E.; Martín, A.) Some minor problems with B.E.M. *Applied numerical modelling (Proc. Second Internat. Conf., Madrid Polytech. Univ., Madrid, 1978)*, pp. 591-600, *Pentech, London*, 1979. (From the summary) **81d:65062** 65N30
- de Paris, Gennaro** (with Volzone, Gaetano) Block systems of a class of incidence structures. (Italian. English summary) *Rend. Mat.* (6) 11 (1978), no. 2, 217-230. (Authors' introduction) **81i:05044** 05B25 (51F99)
- Paris, J. B.** (with Kirby, L. A. S.) Σ_n -collection schemas in arithmetic. *Logic Colloquium '77 (Proc. Conf., Wrocław, 1977)*, pp. 199-209, *Studies in Logic and Foundations of Math.*, 96, North-Holland, Amsterdam, 1978. (R. Parikh) **81e:03056** 03F30
Note on an induction axiom. *J. Symbolic Logic* 43 (1978), no. 1, 113-117. (S.-C. Liu) **81e:03057** 03F30 (03H15, 10N15)
(with Mills, George) Closure properties of countable nonstandard integers. *Fund. Math.* 103 (1979), no. 3, 205-215. (Authors' summary) **81j:03099** 03H15 (10N15)
- Paris, Quirino** Consistent aggregation of linear complementarity problems. *Math. Programming* 18 (1980), no. 1, 41-48. (S. R. Mohan) **81d:90102** 90C33
- Paris, R. B.** On the asymptotic expansions of solutions of an n th order linear differential equation. *Proc. Roy. Soc. Edinburgh Sect. A* 85 (1980), no. 1-2, 15-57. (A. D. Wood) **81d:34044** 34E05 (33A35, 76D10)
- Parisi, G.** (with Balian, R.; Voros, A.) Quartic oscillator. *Feynman path integrals (Proc. Internat. Colloq., Marseille, 1978)*, pp. 337-360, *Lecture Notes in Phys.*, 106, Springer, Berlin, 1979. (J. S. Joel) **81h:41083** 41A60 (34E20, 58G25, 81C12)
The physical basis of the asymptotic estimates in perturbation theory. *Hadron structure and lepton-hadron interactions (Proc. Cargèse Summer Inst., Cargèse, 1977)*, pp. 665-685, *NATO Adv. Study Inst. Ser., Ser. B: Physics*, 39, Plenum, New York, 1979. (Author's introduction) **81e:81012** 81C12
Toward a mean field theory for spin glasses. *Phys. Lett. A* 73 (1979), no. 3, 203-205. (B. Derrida) **81h:82035** 82A42
- Park, Bae-Hun** On Wallman-type extensions. *Kyungpook Math. J.* 19 (1979), no. 2, 183-199. (Melvin Henriksen) **81g:54031** 54F05
- Park, C.** (with Schuurmann, F. J.) Evaluations of absorption probabilities for the Wiener process on large intervals. *J. Appl. Probab.* 17 (1980), no. 2, 363-372. (N. M. Zinchenko) **81f:60111** 60J65 (60G15)
- Park, C. J.** (with Chung, Han Young) A representation of sum of dependent Bernoulli random variables as sum of independent random variables. *J. Korean Math. Soc.* 16 (1979/80), no. 2, 107-111. (S. Kotz) **81k:60019** 60E05 (62E15)
- Park, David** (with Kanda, Akira) When are two effectively given domains identical? (extended abstract). *Theoretical computer science (Fourth GI Conf., Aachen, 1979)*, pp. 170-181, *Lecture Notes in Comput. Sci.*, 67, Springer, Berlin, 1979. (Authors' summary) **81j:68058** 68C30
- Park, Jae Keol** (with Fisher, Joe W.; Lanski, Charles) Gabriel dimension of finite normalizing extensions. *Comm. Algebra* 8 (1980), no. 16, 1493-1503. (T. Albu) **81k:16029** 16A55
- Park, James L.** (with Gilmore, Todd, Jr.) Superselection rules in quantum theory. II. Subensemble selection. *Found. Phys.* 9 (1979), no. 9-10, 739-749. (Authors' summary) **81j:81037** 81D99
(with Band, William; Yourgrau, Wolfgang) Simultaneous measurement, phase-space distributions, and quantum state determination. (German summary) *Am. Physik* (7) 37 (1980), no. 3, 189-199. (Authors' summary) **81h:81028** 81C20
See also **Newton, Roger G.** **81h:81029**
- Park, K. C.** (with Felippa, C. A.; Yee, H. C.) Synthesis of staggered solution procedures for coupled field analysis. *Applied numerical modelling (Proc. Second Internat. Conf., Madrid Polytech. Univ., Madrid, 1978)*, pp. 551-561, *Pentech, London*, 1979. (From the text) **81a:93010** 93A99 (90C30)
(with Underwood, P. G.) A variable-step central difference method for structural dynamics analysis. I. Theoretical aspects. *Comput. Methods Appl. Mech. Engrg.* 22 (1980), no. 2, 241-258. (Authors' summary) **81d:73065** 73K30 (65D30)
Partitioned transient analysis procedures for coupled-field problems: stability analysis. *Trans. ASME Ser. E J. Appl. Mech.* 47 (1980), no. 2, 370-376. (Author's summary) **81g:93093** 93D99
- Park, Robert E.** A four-element algebra whose identities are not finitely based. *Algebra Universalis* 11 (1980), no. 2, 255-260. (Stanley N. Burris) **81k:08005** 08B05 (03C05)
- Park, S. W.** (with Himmelblau, D. M.) Error in the propagation of error formula. *AICA J.* 26 (1980), no. 1, 168-170. (Seppo Linnainmaa) **81i:65036** 65G05
- Park, Sehe** A unified approach to fixed points of contractive maps. *J. Korean Math. Soc.* 16 (1979/80), no. 2, 95-105. (M. Edelstein) **81g:54066** 54H25
An extension of a fixed point theorem of Kasahara. *Math. Sem. Notes Kobe Univ.* 7 (1979), no. 1, 85-89. (Haskell Cohen) **81g:54065** 54H25
- Park, Seung Ahn** (with Kwon, T.; Lee, K.; Cho, I.) On generalized Heisenberg groups. *Bull. Korean Math. Soc.* 16 (1979/80), no. 1, 1-9. (Rainer Dirl) **81m:20010** 20C05 (20C25)
- Park, Soo Bin** (with Zellner, Arnold) Minimum expected loss (MELO) estimators for functions of parameters and structural coefficients of econometric models. *J. Amer. Statist. Assoc.* 74 (1979), no. 365, 185-193. (A. L. Nagar) **81k:62078** 62J05 (62P20)
- Park, W. J.** (with Hsu, Yu Sheng) On stationary Gaussian second order Markov processes. *Kyungpook Math. J.* 19 (1979), no. 2, 249-255. (M. I. Jadrénko) **81m:60064** 60G15
(with Hsu, Yu Sheng) Some statistical inferences on O-U processes. *Comm. Statist. A—Theory Methods* 9 (1980), no. 5, 529-540. (Paul I. Nelson) **81k:62096** 62M02 (62M05)
- Park, Young L.** A note on n -semisimple ring. *Kyungpook Math. J.* 19 (1979), no. 2, 201-203. (Afzal Beg) **81f:16012** 16A12 (16A40)
- Park, Young Soo** Wallman's type order compactifications. II. *Kyungpook Math. J.* 19 (1979), no. 2, 151-158. (R. F. Dickman, Jr.) **81k:54030** / 54D35 (54F05)
- Parkash, Om** (with Saxena, P. C.; Patkar, Vivek) A note on an algorithm for integer solution to linear and piecewise linear programs. *Pure Appl. Math. Sci.* 9 (1979), no. 1-2, 31-36. (Thomas L. Magnanti) **81j:90083** 90C10
(with Saxena, P. C.; Patkar, Vivek) Linear fractional functional programming in complex space. *Z. Angew. Math. Mech.* 59 (1979), no. 6, 276-278. (I. M. Stancu-Minasian) **81i:90145** 90C32
- Parker, Barry R.** (with Huerta, Robert) Nonsingular particle solutions in variations on Einstein's nonsymmetric unified field theory. *Phys. Rev. D* (3) 21 (1980), no. 6, 1489-1493. (Authors' summary) **81a:83031** 83E10
- Parker, D. F.** An asymptotic analysis of large deflections and rotations of elastic rods. *Internat. J. Solids and Structures* 15 (1979), no. 5, 361-377. (Author's summary) **81g:73071** 73K05 (35B40, 73C50)
The decay of sawtooth solutions to the Burgers equation. *Proc. Roy. Soc. London Ser. A* 369 (1980), no. 1738, 409-424. (Tommaso Ruggeri) **81d:35056** 35L67 (35C20, 76L05)
- Parker, E. N.** ★Cosmic magnetic fields. Their origin and their activity. The International Series of Monographs on Physics. The Clarendon Press, Oxford University Press, New York, 1979. xvii+841 pp. ISBN 0-19-851290-2 (N. V. Micevič) **81e:85001** 85-02 (35K05, 76W05, 78A25, 85A30)
- Parker, E. T.** (with Killgrove, Raymond B.; Kiel, Donald I.) Some combinatorial problems in the foundations of geometry. *Proceedings of the Ninth Southeastern Conference on Combinatorics, Graph Theory, and Computing (Florida Atlantic Univ., Boca Raton, Fla., 1978)*, pp. 401-409, *Congress. Numer., XXI, Utilitas Math., Winnipeg, Man.* 1978. (G. L. Alexanderson) **81e:05015** 05B15 (51A99)
(with Killgrove, Raymond B.) A planar Latin square lacking automorphism. *J. Combin. Theory Ser. A* 27 (1979), no. 3, 404-406. (Stanley E. Payne) **81e:05046** 05B15
(with Killgrove, Raymond B.) Nonexistence of new order-9 projective plane with order-13 collineation. *J. Geom.* 14 (1980), no. 2, 151-153. (Authors' summary) **81k:05029** 05B25
- Parker, G. A.** (with Moore, E. L.) A modified Volterra series representation for a class of single-valued, continuous nonlinear systems. *Trans. ASME Ser. G J. Dynamic Systems Measurement Control* 102 (1980), no. 3, 163-167. (Authors' summary) **81i:93014** 93C10
- Parker, G. N.** See **Okubo, Akira** **81i:92025**
- Parker, George D.** (with Millman, Richard S.) The Pin(n) group as a covering group of O(n). *Tensor (N.S.)* 34 (1980), no. 2, 138-140. (V. Cruceanu) **81j:22013** 22E15
(with Millman, Richard S.) Denseness of bounded and unbounded Riemannian metrics. *Tensor (N.S.)* 34 (1980), no. 2, 223-224. (H. D. Fegan) **81f:53033** 53C21 (58D17)
- Parker, Leonard** Applied quantum gravity: applications of the semiclassical theory. *On the path of Albert Einstein*, pp. 145-166, *Stud. in Nat. Sciences*, 15, Plenum, New York, 1979. (See **81k:83003**) **83C45** (81M05)
(with Bunch, T. S.; Panangaden, P.) On renormalisation of $\lambda\phi^4$ field theory in

- curved space-time. I. *J. Phys. A* 13 (1980), no. 3, 901-918. (Beverly K. Berger) **81d:81071a** 81E99 (53B50)
- One-electron atom in curved space-time. *Phys. Rev. Lett.* 44 (1980), no. 23, 1559-1562. (Author's summary) **81g:81120** 81M05 (58F05, 83C25)
- Parker, Montague Classification of real simple Lie superalgebras of classical type. *J. Math. Phys.* 21 (1980), no. 4, 689-697. (Joseph C. Ferrar) **81g:17007** 17B70 (17A70)
- (with Cahen, M.) Pseudo-Riemannian symmetric spaces. *Mem. Amer. Math. Soc.* 24 (1980), no. 229, iv + 108 pp. (K. Nomizu) **81h:53036** 53C35 (17B10)
- Parker, Philip E. Distributional geometry. *J. Math. Phys.* 20 (1979), no. 7, 1423-1426. (Judith M. Arms) **81f:83030** 83C99 (53C21)
- New directions in relativity and quantization of manifolds. *Quantum theory and gravitation (Proc. Sympos., Loyola Univ., New Orleans, La., 1979)*, pp. 137-146, Academic Press, New York, 1980. (J. Fugère) **81h:83022** 83C45 (58F06)
- Parker, R. G. (with Bullin, R. L.) Scheduling jobs on two facilities to minimize makespan. *Management Sci.* 26 (1980), no. 2, 202-214. (Authors' summary) **81i:90107** 90B35 (68C15)
- Parker, T. J. (with Chambers, W. G.; Mok, C. L.) Theory of the scattering of electromagnetic waves by a regular grid of parallel cylindrical wires with circular cross section. *J. Phys. A* 13 (1980), no. 4, 1433-1441. (From the summary) **81a:78013** 78A45
- Parhomenko, P. P. See Parhomenko, P. P.
- Parkinson, G. H. R. Leibniz's Paris writings in relation to Spinoza. *Leibniz in Paris (1672-1676) (Sympos. G. W. Leibniz Soc./CNRS, Chantilly, 1976)*, Vol. II (French), pp. 73-89, Studia Leibnitiana Suppl., XVIII, Steiner, Wiesbaden, 1978. (See **81m:01022b**) 01A45 (03-03)
- Parks, D. C. See Analysis and optimisation of stochastic systems, **81j:93069**
- Parkus, H. Magneto- and electrothermoelasticity. *Thermomechanics in solids (Proc. Sympos., Internat. Centre Mech. Sci., Udine, 1974)*, pp. 55-71, CISM Courses and Lectures, 223, Springer, Vienna, 1977. (See **80e:73072**) 73R05
- Parlett, Beresford N. ★The symmetric eigenvalue problem. Prentice-Hall Series in Computational Mathematics. Prentice-Hall, Inc., Englewood Cliffs, N.J., 1980. xix + 348 pp. ISBN 0-13-880047-2 (Robert Todd Gregory) **81j:65063** 65F15 (15A18)
- Parmenter, M. M. (with Grünfelder, L.) Isomorphic group rings with nonisomorphic coefficient rings. *Canad. Math. Bull.* 23 (1980), no. 2, 245-246. (Authors' introduction) **81e:20007** 20C07 (16A27)
- Parmigliani, F. (with Stein, R. B.; Ögüzörel, Mehmet Namık) Linear and nonlinear analysis of mammalian motor control. *Mathematical modelling in biology and ecology (Proc. Sympos., Pretoria, 1979)*, pp. 4-22, Lecture Notes in Biomath., 33, Springer, Berlin, 1980. (See **81i:92001**) 92A09
- Parmigliani, Daniela On the \mathcal{K} -category of the abelian groups in \mathcal{K} . (Italian) *Riv. Mat. Univ. Parma* (4) 4 (1978), 247-258 (1979). (Author's introduction) **81j:18013** 18D35 (20K40)
- Paronik, S. L. (with Halatnikov, I. M.) On the motion of particles in the field of a naked Kasner-type singularity. *Phys. Lett. A* 66 (1978), no. 6, 466-468. (Authors' summary) **81m:83010** 83C10
- Quantum particle production in the formation of naked Kasner-type singularities. *Phys. Lett. A* 73 (1979), no. 3, 153-156. (Derek Raine) **81j:83022** 83C45
- Parovikeno, I. I. Some questions connected with set-theoretic operations. (Russian) Topological spaces and algebraic systems. *Mat. Issled.* No. 53 (1979), 108-121, 224. (B. Węglarz) **81j:04002** 04A15 (54H10)
- Some constructions of set-theoretic operations. (Russian) *Uspehi Mat. Nauk* 34 (1979), no. 6(210), 80-89. (S. V. Ovčinnikov) **81e:04002** 04A05
- Parr, William C. (with Schucany, William R.) The jackknife: a bibliography. (French summary) *Internat. Statist. Rev.* 48 (1980), no. 1, 73-78. (From the text) **81i:62036** 62F10
- (with Schucany, William R.) Minimum distance and robust estimation. *J. Amer. Statist. Assoc.* 75 (1980), no. 371, 616-624. (Rudolph J. Beran) **81e:62062** 62F35 (62G05)
- Parvati, Guido (with Gorini, Vittorio; Sudarshan, E. C. G.) Resonances, scattering theory, and rigged Hilbert spaces. *J. Math. Phys.* 21 (1980), no. 8, 2208-2226. (W. O. Amrein) **81m:81057** 81F05 (47A40)
- (with Ghirardi, G. C.; Gorini, Vittorio) Spatial localization of quantum states and physical meaning of the matrix elements of the resolvent operator. (Italian and Russian summaries) *Nuovo Cimento A* (11) 57 (1980), no. 1, 1-20. (From the summary) **81e:81064** 81D99
- Parren, F. (with Host, B.) Sur les mesures quasi-idempotentes et la fermeture de $\mu \cdot L^1$. *Séminaire sur la Géométrie des Espaces de Banach (1977-1978)*, Exp. No. 21-22, 19 pp., École Polytech., Palaiseau, 1978. (I. Glicksberg) **81f:43002** 43A10
- See also Méta, Jean-François, **81k:43007**
- Parrott, A. K. (with Morton, K. W.) Generalised Galerkin methods for first-order hyperbolic equations. *J. Comput. Phys.* 36 (1980), no. 2, 249-270. (A. V. Džirkariani) **81i:65123** 65N30
- Parrott, David (with Harada, Koichiro) On finite groups having 2-local subgroups $E_2 \times O^*(2n, 2)$. *J. Algebra* 63 (1980), no. 2, 331-345. (Gary L. Walls) **81g:20030** 20D05 (20D08)
- Parrott, J. E. A problem in the calculation of diffusion capacitance. *Internat. J. Electron.* 47 (1979), no. 6, 561-564. (Author's summary) **81d:78032** 78A55
- Parvi, Stephen On a quotient norm and the Sz-Nagy-Foias lifting theorem. *J. Funct. Anal.* 30 (1978), no. 3, 311-328. (Author's summary) **81h:47006** 47A20 (47A30, 47A35)
- Parr, Charles J. A genus theory for quartic fields. *J. Reine Angew. Math.* 314 (1980), 40-71. (G. Whaples) **81j:12002** 12A50 (12A30)
- Perry, G. W. Regeneration diagrams. *Synthesis and analysis methods for safety and reliability studies (Proc. NATO Adv. Study Inst., Urbino, 1978)*, pp. 85-94, Plenum, New York, 1980. (See **81j:93008**) 94C99
- Perry, Gareth P. On the finite plane strain of anisotropic compressible hyperelastic materials. *Mech. Res. Comm.* 7 (1980), no. 1, 27-32. (R. L. Fosdick) **81a:73008** 73C30
- On the relative strengths of stability criteria in anisotropic materials. *Mech. Res. Comm.* 7 (1980), no. 2, 93-98. (From the introduction) **81e:73050** 73H99 (73C30)
- Parry, Walter R. A negative result on the representation of modular forms by theta series. *J. Reine Angew. Math.* 310 (1979), 151-170. (A. N. Andrianov) **81a:10034** 10D12 (10C15)
- (with Cox, David A.) Torsion in elliptic curves over $k(t)$. *Compositio Math.* 41 (1980), no. 3, 337-354. (Kenneth Kramer) **81k:14035** 14K07 (10D12, 14K10)
- Parry, William The Lorenz attractor and a related population model. *Ergodic theory (Proc. Conf., Math. Forschungsinst., Oberwolfach, 1978)*, pp. 169-187, Lecture Notes in Math., 729, Springer, Berlin, 1979. (Carl P. Simon) **81f:58027** 58F15 (28D05, 82A15)
- Finitary isomorphisms with finite expected code lengths. *Bull. London Math. Soc.* 11 (1979), no. 2, 170-176. (Douglas Lind) **81a:28018** 28D05
- Parter, V. A. (with Astaf'eva, N. M.) On the question of the numerical solution of Navier-Stokes equations in problems with spherical geometry. (Russian) *Čisl. Metody Meh. Splaín. Sredy* 9 (1978), no. 7 Vjazkaja Židkosti, 12-18. (From the text) **81g:65167** 65P05 (76D05)
- Parshall, Brian (with Cline, Edward; Scott, Leonard) Induced modules and extensions of representations. II. *J. London Math. Soc.* (2) 20 (1979), no. 3, 403-414. (James E. Humphreys) **81f:20051** 20G05 (14F05)
- (with Cline, Edward; Scott, Leonard) Cohomology, hyperalgebras, and representations. *J. Algebra* 63 (1980), no. 1, 98-123. (H. H. Andersen) **81k:20060** 20G10 (14L17)
- (with Cline, Edward; Scott, Leonard) On the tensor product theorem for algebraic groups. *J. Algebra* 63 (1980), no. 1, 264-267. (James E. Humphreys) **81e:20046** 20G05
- (with Scott, Leonard) An imprimitivity theorem for algebraic groups. *Nederl. Akad. Wetensch. Indag. Math.* 42 (1980), no. 1, 39-47. (R. H. Dye) **81k:20059** 20G05
- Paršina, G. V. (with Melniko, V. P.; Šneorov, B. E.; Švec, Marko; Dmitrieva-Arrago, L. R.; Julina, E. P.; Magazenzov, L. N.; Bogachenko, S. V.; Šeinin, D. A.) A hydrodynamic model of the general circulation of the atmosphere. (Russian) *Trudy Glavn. Geofiz. Observator. No. 410 Dinamika Global. Atmosf. Processov i Prognoz Pogody* (1980), 3-33, 142. (Authors' summary) **81j:86006** 86A10 (76R05)
- Parson, L. Alynne Dedekind sums and Hecke operators. *Math. Proc. Cambridge Philos. Soc.* 88 (1980), no. 1, 11-14. (Kenneth H. Rosen) **81f:10033** 10D05
- Parsons, L. (with Kunen, Kenneth) Projective covers of ordinal subspaces. *Proceedings of the 1978 Topology Conference (Univ. Oklahoma, Norman, Okla., 1978)*, II. *Topology Proc.* 3 (1978), no. 2, 407-428 (1979). (From the introduction) **81m:54044** 54D99 (54G05)
- Parsons, T. D. The search number of a connected graph. *Proceedings of the Ninth Southeastern Conference on Combinatorics, Graph Theory, and Computing (Florida Atlantic Univ., Boca Raton, Fla., 1978)*, pp. 549-554, Congress. Numer., XXI, Utilitas Math., Winnipeg, Man., 1978. (A. C. Shershin) **81e:05034** 05C10
- Ramsey graph theory. *Selected topics in graph theory*, pp. 361-384, Academic Press, London, 1978. (See **81e:05059**) 05C55
- Permutation action graphs. *Proceedings of the Tenth Southeastern Conference on Combinatorics, Graph Theory and Computing (Florida Atlantic Univ., Boca Raton, Fla., 1979)*, pp. 775-785, Congress. Numer., XXIII-XXIV, Utilitas Math., Winnipeg, Man., 1979. (Jonathan L. Gross) **81f:05140** 05C99
- (with Pisanski, Tomaz; Jackson, Brad) Dual imbeddings and wrapped quasicoerings of graphs. *Discrete Math.* 31 (1980), no. 1, 43-52. (Jonathan L. Gross) **81e:05069** 05C10 (94C15)
- Parsons, Terence Referring to nonexistent objects. *Language theory. Theory and Decision* 11 (1979), no. 1, 95-110. (From the introduction) **81a:03007** 03A05 (03B10, 03B45)
- Partee, Barbara Hall ★Fundamentals of mathematics for linguistics. Gryphon Publishers, Stamford, Conn., 1978. xxiv + 242 pp. ISBN 0-89223-012-6 (D. Simovici) **81h:68001** 68-01 (00A06)
- Parter, Seymour V. On the roles of "stability" and "convergence" in semidiscrete projection methods for initial-value problems. *Math. Comp.* 34 (1980), no. 149, 127-154. (P. C. Jain) **81a:65110** 65N35 (34G99)
- (with Kedem, Gershon; Steuerwalt, Michael) The solutions of a model nonlinear singular perturbation problem having a continuous locus of singular points. *Stud. Appl. Math.* 63 (1980), no. 2, 119-146. (Johannes Eichner) **81m:34074** 34E20 (34B15)
- See also Singular perturbations and asymptotics, **81m:34001**
- Parthasarathy, K. R. Graphs and groups. *Proceedings of the Symposium on Graph Theory (Indian Statist. Inst., Calcutta, 1976)*, pp. 36-64, ISI Lecture Notes, 4, Macmillan of India, New Delhi, 1979. (F. Harary) **81a:05066** 05C25 (20F32)
- (with Krishnamoorthy, V.) Reconstruction of critical blocks. *J. Math. Phys. Sci.* 13 (1979), no. 3, 219-239. (F. Harary) **81a:05095** 05C60
- Parthasarathy, Kalyanaswami Rangachari (with Plymen, R. J.) On the outer and inner invariants of Connes. *J. Funct. Anal.* 38 (1980), no. 1, 1-15. (Christopher Lance) **81h:46084** 46L40 (22D40)
- Parthasarathy, P. R. (with Ramanarayanan, R.) Number of repairs and total repair time for a 2-unit warm standby system. (German and Russian summaries) *Math. Operationsforsch. Statist. Ser. Optim.* 10 (1979), no. 4, 591-595. (Z. Khalil) **81f:90051** 90B25 (60K10)
- Partington, J. R. Equivalent norms on spaces of bounded functions. *Israel J. Math.* 35 (1980), no. 3, 205-209. (M. M. Day) **81j:46013** 46B20
- Parrot, C. Sur la théorie de l'utilité linéaire lexicographique. (English summary) *Publ. Inst. Statist. Univ. Paris* 24 (1979), no. 1-2, 75-105. (Lionel Weisa) **81h:90021** 90A10
- Paruch, H. (with Broy, M.; Dosch, W.; Pepper, P.; Wirsing, M.) Existential quantifiers in abstract data types. *Automata, languages and programming (Sixth Colloq., Graz, 1979)*, pp. 73-87, Lecture Notes in Comput. Sci., 71, Springer, Berlin, 1979. (Authors' summary) **81d:68028** 68B15
- (with Broy, M.; Pepper, P.; Wirsing, M.) Semantic relations in programming languages. *Information processing 80 (Proc. IFIP Congr., Tokyo/Melbourne, 1980)*, pp. 101-106, IFIP Congress Ser., 8, North-Holland, Amsterdam, 1980. (See **81i:68069**) 68B10
- Parvatham, Rajagopalan (with Padmanabhan, K. S.) Radii of starlikeness of certain class of analytic functions. *Rev. Roumaine Math. Pures Appl.* 23 (1978), no. 10, 1545-1551. (S. Ruscheweyh) **81d:30018** 30C45
- (with Blambert, Maurice) Ultraconvergence et singularités pour une classe de séries d'exponentielles. (English summary) *Ann. Inst. Fourier (Grenoble)* 29 (1979), no. 1, xvi,

- 239-262. (Authors' summary) **81c:30006** 30B50
(with Padmanabhan, K. S.) On certain generalized close-to-star functions in the unit disc. *Ann. Polon. Math.* 37 (1980), no. 1, 1-11. (T. H. MacGregor) **81c:30029** 30C45
(with Blambert, Maurice) Compléments à des théorèmes de S. Mandelbrojt et de Pólya-Bernstein. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 10, A457-A460. (Authors' summary) **81c:30048** 30D10
- Parzen, Emmanuel** A density-quantile function perspective on robust estimation. *Robustness in statistics (Proc. Workshop, Army Res. Office, Research Triangle Park, N.C., 1978)*, pp. xvi, 237-258, Academic Press, New York, 1979. (See **81c:62032**) 62F35
Density quantile estimation approach to statistical data modelling. *Smoothing techniques for curve estimation (Proc. Workshop, Heidelberg, 1979)*, pp. 155-180, *Lecture Notes in Math.*, 757, Springer, Berlin, 1979. (Eve Bofinger) **81f:62068** 62G05 (62F35)
Nonparametric statistical data modeling. With comments by John W. Tukey, Roy E. Welch, William F. Eddy, D. V. Lindley, Michael E. Tarter and Edwin L. Crow, and a rejoinder by the author. *J. Amer. Statist. Assoc.* 74 (1979), no. 365, 105-131. (Walter Schlee) **81c:62053** 62G05 (62E20, 62F10, 62G10)
(with Newton, H. J.) Multiple time series modeling. II. *Multivariate analysis, V (Proc. Fifth Internat. Sympos., Univ. Pittsburgh, Pittsburgh, Pa., 1978)*, pp. 181-197, North-Holland, Amsterdam, 1980. (Tata Subba Rao) **81c:62171** 62M10 (93E10)
See also Good, I. J., at **81c:62073**
- Palmer, R. T.** Uniqueness theorems for the inverse problem of spectral theory for a class of systems of differential equations with discontinuous coefficients. (Russian. Azerbaijani and English summaries) *Akad. Nauk Azerbaidžan. SSR Dokl.* 35 (1979), no. 10, 3-6. (Alexander Alenicyan) **81c:34019** 34B25
- Palmeiro, E. E.** (with Maksudov, F. G.) A multiple expansion in eigenfunctions. (Russian) *Dokl. Akad. Nauk SSSR* 249 (1979), no. 3, 544-547. (Boris Pavlov) **81g:47052** 47E05 (34B25, 47A70)
- Pascal, Blaise** See Streifova, G. Ja., **81d:01024**
- Pascual, Dan** Equations with an A-proper sum of operators. (Romanian. English summary) *Stud. Cerc. Mat.* 32 (1980), no. 3, 333-343. (Author's summary) **81m:47088** 47H15 (35J65, 47H09)
See also Variational inequalities and optimization problems, **81c:49001**
- Pascard, Jean-Louis** (with Goursaud, Jean-Marie; Osterburg, James; Valette, Jacques) Points fixes des anneaux réguliers auto-injectifs. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 21, A985-A987. (Authors' summary) **81g:16016** 16A30 (16A38, 16A52)
- Pasch, Moritz** Schriftenverzeichnis. *Mitt. Math. Sem. Giessen* No. 146 (1980), 40-45. (Editors) **81j:01041** 01A70
See also Pickert, G., **81k:01019** and Pickert, G., **81k:01020**
- Paschke, William L.** (with Bunce, John W.) Quasi-expectations and injective operator algebras. *C*-algebras and applications to physics (Proc. Second Japan-USA Sem., Los Angeles, Calif., 1977)*, pp. 123-125, *Lecture Notes in Math.*, 650, Springer, Berlin, 1978. (E. J. Woods (Zbl 399:46050)) **81m:46083** 46L10
(with Salinas, Norberto) Matrix algebras over O_n . *Michigan Math. J.* 26 (1979), no. 1, 3-12. (Man-Duen Choi) **81c:46075** 46L05 (46M20)
(with Bunce, John W.) Derivations on a C^* -algebra and its double dual. *J. Funct. Anal.* 37 (1980), no. 2, 235-247. (B. E. Johnson) **81c:46064** 46L05
The crossed product of a C^* -algebra by an endomorphism. *Proc. Amer. Math. Soc.* 90 (1980), no. 1, 113-118. (Dorte Olesen) **81m:46081** 46L05 (46L55)
- Pasciak, Joseph E.** Spectral and pseudospectral methods for advection equations. *Math. Comp.* 35 (1980), no. 152, 1081-1092. (E. H. Twizell) **81c:65073** 65M10 (65M15)
- Pascoletti, A.** (with Marzollo, Angelo; Serafini, P.) Genericity and singularities in vector optimization. *Recent developments in variable structure systems, economics and biology (Proc. US-Italy Sem., Taormina, 1977)*, pp. 201-213, *Lecture Notes in Econ. and Math. Systems*, 162, Springer, Berlin, 1978. (Carl P. Simon) **81j:58034** 58E17 (58C27, 90C31)
- Pascoli, A.** (with Minelli, T. A.) Soliton dynamics and nonlinear quantum mechanics. *Lett. Nuovo Cimento* (2) 27 (1980), no. 13, 413-423. (V. Z. Enol'skii) **81k:81016** 81C05
- Pasca, Anca** (with Baciu-Țugulea, Aurora) Languages of Leontief type. (Romanian) *An. Univ. Timișoara Ser. Științ. Mat.* 16 (1978), no. 2, 111-118 (1979). (Gheorghe Păun) **81c:08090** 68F05 (90A14)
Some properties of TOL systems as models for alive organisms. *Proceedings of the International Symposium on Applications of Mathematics in System Theory (Univ. Brașov, Brașov, 1978)*, II, pp. 135-141, Univ. Brașov, Brașov, 1979. (See **81j:93006b**) 68F15 (68D25)
(with Baciu-Țugulea, Aurora) Leontief type grammars and languages. *Found. Control Engrg.* 4 (1979), no. 3, 97-106. (Authors' summary) **81a:68079** 68F05
- Pasca, N.** (with Lupu, M.; Podaru, V.) Calculation of the order of starlikeness for α -starlike functions. (Romanian. English summary) *Bul. Univ. Brașov Ser. C* 20 (1978), 73-77. (Sanford S. Miller) **81c:30027** 30C45
(with Lupu, M.; Podaru, V.) On some classes of hypergeometrical functions which lead to conformal mapping. *Proceedings of the International Symposium on Applications of Mathematics in System Theory (Univ. Brașov, Brașov, 1978)*, II, pp. 343-344, Univ. Brașov, Brașov, 1979. (See **81j:93006b**) 33A30 (30C20)
- Pascual, J.-F.** In theory of hadrons and leptons. *Lett. Nuovo Cimento* (2) 28 (1980), no. 9, 321-324. (From the text) **81k:81090** 81G05
- Paschuk, G. M.** Geometric characterization of a set of exponents of a representing system of exponentials for the space $H(G)$. (Russian) *Dokl. Akad. Nauk SSSR* 252 (1980), no. 3, 553-555. (V. A. Tkachenko) **81j:30010** 30B50
- Paschuk, L. P.** (with Milant'ev, V. P.) Kinetics of Coulomb-particle systems in the weak-relativistic approximation. (Russian) *Izv. Vysš. Učebn. Zaved. Fizika* 1980, no. 5, 99-101. (Authors' summary) **81g:82050** 82A45
- Pasenčenko, Ju. A.** (with Pavljuk, I. A.; Burim, V. M.) ★ Приближенно-аналитические решения неавтономных дифференциальных уравнений. (Russian) [Approximate analytic solutions of nonautonomous differential equations] "Viša Škola", Kiev, 1980. 232 pp. (A. Halanay) **81m:34073** 34E05
- Pashkov, A. G.** See Paikovsky, G. S.
- Paikovsky, G. S.** See Paikovsky, G. S.
- Pasicki, Lech** Retracts in metric spaces. *Proc. Amer. Math. Soc.* 78 (1980), no. 4, 595-600.
- (B. T. Sims) **81a:54016** 54C15
- Paolani, Antonio** On the incidence algebras. (Italian summary) *Matematiche (Catania)* 32 (1977), no. 1, 138-147 (1979). (E. J. F. Primrose) **81g:51004** 51A15
On transitive incidence algebras. (Italian. English summary) *Atti Sem. Mat. Fis. Univ. Modena* 28 (1979), no. 2, 279-288 (1980). (Author's summary) **81m:08003** 08A05 (51A40)
On the finite transitive incidence algebras. (Italian summary) *Boll. Un. Mat. Ital. B* (5) 17 (1980), no. 1, 373-389. (V. Havel) **81c:51005** 51A45
- Paolani, Ju. I.** (with Šreder, E. G.) Variational principle in the thermodynamics of irreversible processes. (Russian) *Izv. Vysš. Učebn. Zaved. Fizika* 1980, no. 5, 47-51. (Authors' summary) **81g:62031** 82A35 (49H05)
- Paolani, A. G.** One approach to the solution of certain nonlinear positional differential games. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* 1979, no. 1, 17-22, 218 (Russian); translated as *Engrg. Cybernetics* 17 (1979), no. 1, 11-16 (1980). (Emmanuel Nicholas Barron) **81f:90135** 90D25 (49B10, 93E05)
- Paikovsky, G. S.** Minimax programs of diagnosis of the state of complex systems. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* 1979, no. 5, 95-102, 221 (Russian); translated as *Engrg. Cybernetics* 17 (1979), no. 5, 73-79 (1980). (Author's summary) **81c:90092** 90B25 (90B40)
- Paikovsky, V. I.** Calculation of electromagnetic fields in a fine-grained medium. (Russian) *Differentsial'nye Uravnenija* 16 (1980), no. 2, 317-321, 381-382. (Andrzej Zardecki) **81m:78012** 78A30
- Paikuleva, D. Z.** Univalent functions that are convex in one direction. (Russian) *C. R. Acad. Bulgare Sci.* 31 (1978), no. 7, 795-798. (V. Linis) **81f:30011** 30C45
- Paivner, A. I.** (with Volkov, D. V.) Supersymmetric Lagrangian for particles in proper time. (Russian. English summary) *Teoret. Mat. Fiz.* 44 (1980), no. 3, 321-326. (Authors' summary) **81k:81100** 81G20
- Paisius, C.** (with Foias, Ciprian; Voiculescu, Dan) Weak limits of almost invariant projections. *J. Operator Theory* 2 (1979), no. 1, 79-93. (P. A. Fillmore) **81m:47012** 47A15 (46L05)
- de Pasquale, F.** (with Tombesi, P.) The decay of an unstable equilibrium state near a "critical point". *Phys. Lett. A* 72 (1979), no. 1, 7-9. (Authors' summary) **81c:62028** 82A35 (58E15)
- di Pasquale, Salvatore** (with Paradiso, Michele; Reale, Enrico) Matrix formulation of large deformation analysis. (German and Russian summaries) Special issue on large elastic deformation of discrete systems (Lectures, Euromech 69' Internat. Colloq., Balatonszemes, 1977). *Acta Tech. Acad. Sci. Hungar.* 87 (1978), no. 1-2, 87-101 (1979). (Hwa-Shan Ho) **81c:73043** 73K30 (73G05, 73K20)
- Pasqualetti, F.** (with Bertero, M.; Viano, G. A.; Ronchi, L.; Toraldo di Francia, G.) The inverse scattering problem in the Born approximation and the number of degrees of freedom. *Optica Acta* 27 (1980), no. 8, 1011-1024. (Authors' summary) **81g:78021** 78A45 (35P25, 68G10)
- Pasquali Coluzzi, Dario** Equivalence between polygons, and symmetries on the hyperbolic plane. (Italian. English summary) *Pubbl. Istit. Mat. Appl. Fac. Ingeg. Univ. Stud. Roma Quaderno No. 14* (1979), 3-11. (H. Levi) **81b:51017** 51M10
- Pasquier, G.** The binary GOLAY code obtained from an extended cyclic code over F_2 . *European J. Combin.* 1 (1980), no. 4, 369-370. (Author's summary) **81m:94020** 94B15
- Pasquinelli, G.** (with Cella, A.; Lucchesi, M.) Space-time elements for the shock wave propagation problem. *Internat. J. Numer. Methods Engrg.* 15 (1980), no. 10, 1475-1488. (Authors' summary) **81m:65168** 65N30 (73D99, 76L05)
- Pasquini, Lionello** Systems of linear and homogeneous partial differential equations that have a prescribed linear manifold of solutions. (Italian. English summary) *Rend. Mat.* (6) 12 (1979), no. 2, 313-333. (V.-V. Olariu) **81c:35010** 35C05
- Pasquarelli, R. E.** (with Srivastava, Ramesh) Analytical solutions to simple models of condensation and coalescence. *J. Atmospheric Sci.* 37 (1980), no. 3, 612-621. (Authors' summary) **81b:86009** 86A35
- Passarello, Chris E.** (with Huston, Ronald L.) Multibody structural dynamics including translation between the bodies. *Comput. & Structures* 12 (1980), no. 5, 713-720. (Authors' summary) **81m:70007** 70B99 (49H05, 92A05)
- Passi, I. B. S.** (with Hales, Alfred W.) The second augmentation quotient of an integral group ring. *Arch. Math. (Basel)* 31 (1978/79), no. 3, 259-265. (Authors' review) **81a:20010** 20C05
- Passi, Rajni M.** Linear model estimation with extraneous estimates of a parameter subset, with an application to aircraft tracking. *Technometrics* 21 (1979), no. 4, 511-514. (R. Kala) **81j:62127** 62J05
- Pasman, Donald S.** ★ The algebraic structure of group rings. Pure and Applied Mathematics. Wiley-Interscience [John Wiley & Sons], New York-London-Sydney, 1977. xiv + 720 pp. ISBN 0-471-02272-1 (Uno Kaljulaid) **81c:16001** 16-02 (16A27, 20C07)
(with Lorenz, Martin) Integrality and normalizing extensions of rings. *J. Algebra* 61 (1979), no. 2, 289-297. (L. C. A. van Leeuwen) **81c:16022** 16A56 (16A66)
The Jacobson radical of a group ring of a locally solvable group. *Proc. London Math. Soc.* (3) 38 (1979), no. 1, 169-192. (From the introduction) **81j:16017a** 16A27 (16A21, 20C07)
Corrigendum: "The Jacobson radical of a group ring of a locally solvable group". *Proc. London Math. Soc.* (3) 39 (1979), no. 2, 208-210. (From the text) **81j:16017b** 16A27 (16A21, 20C07)
(with Lorenz, Martin) Observations on crossed products and fixed rings. *Comm. Algebra* 8 (1980), no. 8, 743-779. (M. E. Keating) **81c:16013** 16A26 (16A12)
(with Lorenz, Martin) Two applications of Maschke's theorem. *Comm. Algebra* 8 (1980), no. 19, 1853-1866. (B. Hartley) **81c:16009** 16A12 (16A72, 20C20)
- de Passos, E. J. V.** (with de Toledo Piza, A. F. R.) Properties of Griffin-Hill-Wheeler spaces. II. One-parameter and two-conjugate-parameter families of generator states. *Phys. Rev. C* (3) 21 (1980), no. 1, 425-438. (Authors' summary) **81h:81178** 81Hxx
- Passow, Eli** (with Hill, D.; Raymon, L.) Correction to our paper: "Approximation with interpolatory constraints" [Illinois J. Math. 20 (1976), no. 1, 65-71; MR 52 # 8727]. *Illinois J. Math.* 24 (1980), no. 1, 48. (Editors) **81c:41013** 41A10
Conditionally poised Birkhoff interpolation problems. *J. Approx. Theory* 28 (1980), no. 1, 36-44. (C. A. Micchelli) **81h:41003** 41A05
- Passty, Gregory B.** Ergodic convergence to a zero of the sum of monotone operators in

- Hilbert space. *J. Math. Anal. Appl.* 72 (1979), no. 2, 383-390. (R. A. Plastock)
81c:47054 47H05 (49A29)
- Pasy, Solomon Structured programs for Turing machines. *Inform. Process. Lett.* 10 (1980), no. 2, 63-67. (From the text) 81c:68080 68F10 (03D10)
- Pasy, U. (with Levanon, Y.) Manpower allocation with multiple objectives—the min max approach. *Multiple criteria decision making theory and application* (Proc. Third Conf., Hagen/Königswinter, 1979), pp. 329-343, *Lecture Notes in Econom. and Math. Systems*, 177, Springer, Berlin, 1980. (Authors' summary) 81d:90036 90A30 (90B05)
- Patensk, V. E. (with Senkevich, A. A.; Julkanov, A. A.; Jalamov, Ju. I.) Thermal slip of a moderately dense gas along a flat surface. *Int.-Fiz. Ž.* 37 (1979), no. 2, 273-277 (Russian); translated as *J. Engng. Phys.* 37 (1979), no. 2, 933-936 (1980). (Authors' summary) 81h:76042 76P05 (82A40)
- Paté, P. (with Bonora, L.) Phase factor operators and soliton fields. (Italian and Russian summaries) *Nuovo Cimento A* (11) 56 (1980), no. 3, 361-368. (Authors' summary) 81f:81055 81E99
- Patijn, Francis (with Bylen, Karl; Meakin, John) Building bisimple idempotent-generated semigroups. *Proceedings of the Conference on Semigroups in Honor of Alfred H. Clifford* (Tulane Univ., New Orleans, La., 1978), pp. 143-147, Tulane Univ., New Orleans, La., 1979. (John M. Howie) 81f:20079 20M10
- *Idempotent elements in reguliere semigroupen. (Dutch) [Idempotent elements in regular semigroups] Thesis, Rijksuniversiteit te Gent, Ghent, 1980. With an English summary. *Communication and Cognition*, Ghent, 1980. vi+162 pp. (Editors) 81d:20054 20M10
- Semilattices with a transitive automorphism group. *J. Austral. Math. Soc. Ser. A* 29 (1980), no. 1, 29-34. (Helen Skala) 81e:06005 06A12 (20M10)
- (with Namboripad, K. S. S.) Subgroups of free idempotent generated regular semigroups. *Semigroup Forum* 21 (1980), no. 1, 1-7. (R. McFadden) 81k:20089 20M10
- (with Bylen, Karl; Meakin, John) The double four-spiral semigroup. *Simon Stevin* 54 (1980), no. 2, 75-105. (John M. Howie) 81f:20080 20M10
- Pastore, Anna Maria (with Falcitelli, Maria) On the pseudoconnections that preserve an almost complex structure. (Italian. English summary) *Rend. Mat.* (6) 12 (1979), no. 2, 231-247. (J. J. Etayo) 81d:53022 53C05
- (with Falcitelli, Maria) On the projectively equivalent pseudoconnections. (Italian. English summary) *Rend. Mat.* (6) 13 (1980), no. 1, 115-133. (J. J. Etayo) 81m:53039 53C05
- Pastore, G. L. A branching diffusion process on a compact space. (Russian. English summary) *Vestnik Moskov. Univ. Ser. I Mat. Meh.* 1978, no. 5, 9-15. (Author's summary) 81j:60095 60J80
- Pastre, D. Automatic theorem proving in set theory. *Artificial Intelligence* 10 (1978), no. 1, 1-27. (Author's summary) 81e:68114 68G15 (03B35, 04-04)
- Patukova, S. E. Averaging of boundary value problems in perforated domains. (Russian) *Uspehi Mat. Nauk* 34 (1979), no. 4(208), 205-206. (Jif Nedoma) 81c:35017 35B30
- Pavlyukov, B. A. On a theorem of E. Čech. (Russian. English summary) *Vestnik Moskov. Univ. Ser. I Mat. Meh.* 1979, no. 6, 54-57, 107. (Douglas L. Grant) 81c:54031 54D35 (54B05)
- Pavlykova, I. A. Periodic motions of a system with three degrees of freedom with two internal resonances. (Russian. English summary) *Vestnik Leningrad. Univ. Mat. Meh. Astron.* 1980, vyp. 2, 92-96, 125-126. (J. Daneš) 81k:70018 70K30 (34C25)
- Pavson, Ann A category-theoretical characterization of surjective homomorphisms of partial algebras. *Studia Sci. Math. Hungar.* 12 (1977), no. 1-2, 251-256 (1980). (H. Andrka) 81m:08009 08A55 (18A20)
- Pavson-Varga, Katalin Recursive procedure generator of irredundant disjunctive normal forms of systems of Boolean functions, an optimal algorithm from the viewpoint of time and memory demands. (Hungarian) *Tanulmányok—MTA Számítástech. Automat. Kutató Int. Budapest* No. 102 (1980), 102 pp. (not consecutively paged) (2 foldouts). (Author's foreword) 81c:94054 94C10 (05C05)
- Patel, J. R. On lacunary Fourier series. *J. Indian Math. Soc. (N.S.)* 42 (1978), no. 1-4, 245-251 (1979). (Wo-Sang Young) 81b:42048 42A55
- On the absolute convergence of a lacunary Fourier series. *J. Math. Anal. Appl.* 65 (1978), no. 2, 391-398. (Masako Izumi) 81d:42019 42A55
- Patelkar, S. V. (with Ramadhyani, S.) Solution of the Poisson equation: comparison of the Galerkin and control-volume methods. *Internat. J. Numer. Methods Engrg.* 15 (1980), no. 9, 1395-1407. (A. B. Stephens) 81m:65177 65N30
- Patelra, A. D. (with Melikidze, G. I.) Modulational instability of nonlinear waves in a relativistic plasma, with account taken of nonlinear Landau damping. (Russian) *Astrophys. and Space Sci.* 68 (1980), no. 1, 49-59. (Authors' summary) 81d:76121 76X05 (78A20, 82A45)
- (with Kobaladze, Z. L.; Hantadze, A. G.) Steady planetary waves of finite amplitude. (Russian. Georgian and English summaries) *Sobolev Akad. Nauk Gruzin. SSR* 98 (1980), no. 2, 321-324. (Authors' summary) 81m:86005 86A35 (76B25)
- Patelra, N. (with Jannussis, A. D.; Papaloucas, L. C.) Generalized coherent states and the U(n) Lie group. *J. Phys. Soc. Japan* 47 (1979), no. 3, 1003-1009. (José F. Cariñena) 81k:81032 81C40 (22E70, 81D99)
- Patelraki, Simeon P. (with Konstantinov, Mihail M.; Petkov, Petko Hr.; Hristov, Nikola D.) Synthesis of linear control systems with prescribed dynamics. *Proceedings of the First International Conference on Mathematical Modeling* (St. Louis, Mo., 1977), Vol. III, pp. 1639-1648, Univ. Missouri-Rolla, Rolla, Mo., 1977. (See 81c:90005) 93C05
- (with Konstantinov, Mihail M.; Petkov, Petko Hr.; Hristov, Nikola D.) Absolute stability and stabilization of differential delays systems. (Polish and Russian summaries) *Arch. Autom. Telemekh.* 24 (1979), no. 3, 339-350. (József Kalinowski) 81a:34069 34K20 (93D20)
- Pate, Thomas H. Some improvements in Neuberger's iteration procedure for solving partial differential equations. *J. Differential Equations* 34 (1979), no. 2, 261-272. (J. W. Neuberger) 81c:35030 35G20 (65N99)
- An application of the Neuberger iteration procedure to the constant coefficient linear partial differential equation. *J. Math. Anal. Appl.* 72 (1979), no. 2, 771-782. (M. Wachman) 81c:35026 35E20 (35A35, 65N99)
- Patel, A. M. (with Pradhan, Dhira K.; Hsiao, M. Y.; Su, Stephen Y. H.) Shift registers designed for on-line fault detection. *FTCS-8 (Eighth Ann. Internat. Conf. Fault-Tolerant Comput., Toulouse, 1978)*, pp. 173-178, IEEE, New York, 1978. (Authors' summary) 81c:94052 94C30
- Patel, C. M. (with Agrawal, S. R.) On the convergence of Fourier-Bessel series. *Aligarh Bull. Math.* 3/4 (1973/74), 47-58. (A. de Castro Drzezicki) 81f:42022 42C10
- (with Patel, R. K.) Summability of orthogonal series by Euler method. *Aligarh Bull. Math.* 3/4 (1973/74), 59-63. (Editors) 81d:42037 42C15 (40G05)
- (with Agrawal, S. R.) On the mean convergence of Dini series. (Italian summary) *Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur. (8)* 62 (1977), no. 3, 305-315. (Authors' summary) 81h:33008 33A40
- Patel, L. D. (with Gajjar, A. V.) Life test based on progressively group-censored samples from exponential distribution with periodic change in failure rate. *Defence Sci. J.* 29 (1979), no. 4, 167-172. (Authors' summary) 81k:62175 62N05
- (with Lingappaiah, G. S.) On modified and inflated discrete distribution of general type. *Gujarat Statist. Rev.* 6 (1979), no. 2, 50-60. (Authors' summary) 81f:62034 62E15
- Patel, J. M. Operators having finite spectrum. *Indian J. Pure Appl. Math.* 11 (1980), no. 7, 897-903. (Glenn R. Luecke) 81k:47005 47A12 (47B15)
- Patel, Jagdish K. (with Kingston, Joseph V.) Selecting the best one of several Weibull populations. *Comm. Statist. A—Theory Methods* 9 (1980), no. 4, 383-398. (Authors' summary) 81c:62023 62F07
- (with Kingston, Joseph V.) A restricted subset selection procedure for Weibull populations. *Comm. Statist. A—Theory Methods* 9 (1980), no. 13, 1371-1383. (Yung L. Tong) 81d:62048 62F07
- Patel, L. A. (with Sodha, M. S.) Self-focusing of a laser beam in a magnetoplasma. (French summary) *Optica Acta* 27 (1980), no. 6, 783-797. (Authors' summary) 81h:78003 78A10 (76X05)
- Patel, L. K. (with Akabari, R. P.; Dave, Upendra) Some pure radiation fields in general relativity. *J. Austral. Math. Soc. Ser. B* 21 (1979/80), no. 4, 464-473. (B. K. Datta) 81m:83021 83C35 (53B50, 83C20)
- Patel, Nitin R. (with Mehta, Cyrus R.) A network algorithm for the exact treatment of the 2 x k contingency table. *Comm. Statist. B—Simulation Comput.* 9 (1980), no. 6, 649-664. (Authors' summary) 81m:62098 62H17 (93C35)
- On wait-and-see stochastic linear programmes: an application and an algorithm. *J. Oper. Res. Soc.* 31 (1980), no. 8, 733-741. (Author's summary) 81d:90085 90C15
- Patel, R. K. (with Patel, C. M.) Summability of orthogonal series by Euler method. *Aligarh Bull. Math.* 3/4 (1973/74), 59-63. (Editors) 81d:42037 42C15 (40G05)
- Patel, R. V. (with Toda, Mitsuhiro) Bounds on estimation errors of discrete-time filters under modeling uncertainty. *Proceedings of the 1978 IEEE Conference on Decision and Control including the 17th Symposium on Adaptive Processes* (San Diego, Calif., 1979), pp. 612-617, IEEE, New York, 1979. (Seihaku Higuchi) 81c:93004 93E11
- Matrix fraction descriptions of linear time-invariant systems. *Proceedings of the 18th IEEE Conference on Decision and Control* (Fort Lauderdale, Fla., 1979), Vol. 1, 2, pp. 11-16, IEEE, New York, 1979. (Author's summary) 81m:93051 93C45 (93C05)
- (with Toda, Mitsuhiro) Algorithms for adaptive stochastic control for a class of linear systems. *J. Math. Anal. Appl.* 72 (1979), no. 1, 122-149. (S. E. Dreyfus) 81h:93006 93E20
- (with Toda, Mitsuhiro) Bounds on estimation errors of discrete-time filters under modeling uncertainty. *IEEE Trans. Automat. Control* 25 (1980), no. 6, 1115-1121. (Authors' summary) 81m:93077 93E11
- Patel, S. R. Optimum test for the equality of two parameters in multinomial distribution. *Pure Appl. Math. Sci.* 10 (1979), no. 1-2, 101-103. (Vijaya Prakash Gupta) 81c:62020 62F03
- Patel, Ujjagar (with Nanda, Sribatsa) A nonlinear complementarity problem for monotone functions. *Bull. Austral. Math. Soc.* 20 (1979), no. 2, 227-231. (Hisakazu Nishino) 81c:9109a 90C33 (47H05)
- Patel, V. C. (with Parihar, C. L.) On modified Jacobi polynomials. *J. Indian Acad. Math.* 1 (1979), no. 1, 41-46. (B. D. Agrawal) 81b:33018 33A65
- Patel, J. (with Sharp, R. T.) Generating function techniques pertinent to spectroscopy and crystal physics. *Recent advances in group theory and their application to spectroscopy* (Proc. NATO Adv. Study Inst., St. Francis Xavier Univ., Antigonish, N.S., 1978), pp. 219-248, NATO Adv. Study Inst. Ser. B: Physics, 43, Plenum, New York, 1979. (T. Janssen) 81f:20017 20C35 (22E70, 81C40, 82A60)
- (with Winternitz, P.; Zassenhaus, Hans) On the maximal abelian subgroups of the quadratic classical algebraic groups. *C. R. Math. Rep. Acad. Sci. Canada* 2 (1980), no. 5, 237-242. (Editors) 81c:20052 20G20
- (with Saint-Aubin, Y.; Zassenhaus, Hans) Finite subgroups of the generalized Lorentz groups $O(p, q)$. *J. Math. Phys.* 21 (1980), no. 2, 234-239. (Nigel B. Backhouse) 81c:22023 22E43 (20C35, 81C40)
- (with Sharp, R. T.; Slansky, R.) On a new relation between semisimple Lie algebras. *J. Math. Phys.* 21 (1980), no. 9, 2335-2341. (J. F. Cornwell) 81h:17004 17B20 (81C40)
- (with Sharp, R. T.) Generating functions for plethysms of finite and continuous groups. *J. Phys. A* 13 (1980), no. 2, 397-416. (M. K. F. Wong) 81c:22031 22E70 (20C35, 81C40)
- Paterson, Alan L. T. Amenability and locally compact semigroups. *Math. Scand.* 42 (1978), no. 2, 271-288. (James C. S. Wong) 81b:43001 43A07 (22A20)
- Weak containment and Clifford semigroups. *Proc. Roy. Soc. Edinburgh Sect. A* 81 (1978), no. 1-2, 23-30. (L. N. Arghabrig) 81c:43001 43A07
- Amenable groups for which every topological left invariant mean is invariant. *Pacific J. Math.* 84 (1979), no. 2, 391-397. (James C. S. Wong) 81d:43003 43A07
- Paterson, Michael S. (with Klein, Peter) Asymptotically optimal circuit for a storage access function. *IEEE Trans. Comput.* 29 (1980), no. 8, 737-738. (Authors' summary) 81f:94039 94C10
- (with Masek, William J.) A faster algorithm computing string edit distances. *J. Comput. System Sci.* 20 (1980), no. 1, 18-31. (Authors' summary) 81c:68050 68C25
- Patetta, Nicolas Restrictions to the motion of three bodies along a planar solution. *Rev. Roumaine Math. Pures Appl.* 25 (1980), no. 5, 777-782. (V. E. Kuzmichev) 81m:70018 70F07
- Pathak, A. On convolution structure for conjugate Fourier series in a Banach space. (Hindi. English summary) *Vijnana Parishad Anusandhan Patrika* 22 (1979), no. 4,

- 351-356. (Tikam Singh) **81c:42018** 42A50 (42A85)
- Pathak, P. K.** Note on Basu's lemma. *Snadia Sci. Math. Hungar.* **11** (1976), no. 3-4, 297-299 (1978). (M. E. Thompson) **81c:62004** 62B05
(with Męczyński, M. J.) Integration of surveys. *Scand. J. Statist.* **7** (1980), no. 3, 130-138. (V. P. Godambe) **81j:62028** 62D05
- Pathak, Ram S.** (with Pandey, Jagdish N.) A distributional Hardy transformation. *Internat. J. Math. Math. Sci.* **2** (1979), no. 4, 693-701. (Hans-Jürgen Glaeske) **81c:44009** 44A15 (46F12)
(with Pandey, Jagdish N.) The Kontorovich-Lebedev transformation of distributions. *Math. Z.* **165** (1979), no. 1, 29-51. (Hans-Jürgen Glaeske) **81b:46058** 46F12 (44A15)
- Pathak, Sunil K.** Fluid flows with flexible boundaries—a study of interaction of an oscillatory flow with a porous flexible boundary. *Proceedings of the First International Conference on Mathematical Modeling (St. Louis, Mo., 1977), Vol. III, pp. 1229-1238, Univ. Missouri-Rolla, Rolla, Mo., 1977.* (See **81i:90005**) 76D99
- Pathan, G. M.** (with Hoskins, W. D.; Walton, D. J.) Solution of bilinear systems arising from high order discretizations of Poisson-type equations. *BIT* **20** (1980), no. 2, 212-214. (Luciano Biasini) **81j:65108** 65N05
- Pathan, M. A.** On a general triple hypergeometric series. *Proc. Nat. Acad. Sci. India Sect. A* **47** (1977), no. 1, 58-60. (V. L. Deshpande) **81a:33004** 33A35
Certain formulas involving $F^p(x, y, z)$. *Acta Cienc. Indica* **4** (1978), no. 3, 316-318. (From the text) **81b:33004** 33A30
On operational calculus. (Arabic summary) *Libyan J. Sci.* **8** (1978), part B, 57-62. (Author's summary) **81g:44011** 44A45 (44A10)
On a generalized hypergeometric function of $(n+1)$ variables. *J. Nat. Chiao Tung Univ.* **6** (1979), 51-59. (C. M. Joshi) **81c:33009** 33A35
On infinite series of Horn's function H_4 . *Bull. Inst. Math. Acad. Sinica* **8** (1980), no. 1, 39-44. (Rakha Srivastava) **81c:33062** 33A30
(with Srivastava, Hari M.) Some bilateral generating functions for the extended Jacobi polynomials. *Comment. Math. Univ. St. Paul.* **28** (1980), no. 1, 23-30. (Ram Kishore Saxena) **81k:33014** 33A65
- Pathanis, Martine** Résultats de Boyd sur les nombres de Pisot-Salem. *Séminaire, Delange-Pisot-Poitou, 20e année: (1978/1979), Théorie des nombres, Fasc. 1 (French), Exp. No. 2, 10 pp., Secrétariat Math., Paris, 1980.* (Marthe Grandet) **81i:12003** 12A15
- Pathria, R. K.** (with Karmeshu) Stochastic evolution of competing social groups. *J. Math. Sociol.* **7** (1980), no. 1, 47-58. (Andrew D. Barbour) **81g:92024** 92A20
(with Karmeshu) Stochastic evolution of a nonlinear model of diffusion of information. *J. Math. Sociol.* **7** (1980), no. 1, 59-71. (Authors' summary) **81i:92034** 92A20 (60J99, 92A15)
- Patil, K. B.** Equivalent conditions for cancellation of graded Azumaya algebras. *Comm. Algebra* **8** (1980), no. 11, 1071-1082. (F. DeMeyer) **81g:16007** 16A16 (14A99)
- Patil, N. P.** (with Date, T. H.) Lie invariance of the stress-energy tensor for the perfect magnetofluid. (Italian summary) *Nuovo Cimento B* (11) **44** (1978), no. 1, 196-204. (Authors' summary) **81c:76083** 76W05 (76Y05)
- Patil, S. H.** T-matrix analysis of one-dimensional weakly coupled bound states. *Phys. Rev. A* **3** (1978), no. 4, 1655-1663. (P. A. Mithanevskii) **81k:81084** 81F05 (35P25, 81G45)
Ground-state energy of two-dimensional weakly coupled Hamiltonians. *Phys. Rev. A* (3) **22** (1980), no. 6, 2400-2402. (Author's summary) **81j:81011** 81C05 (47A55)
- Patilkar, Guy** Déformations différentielles à coefficients constants et produits de Moyal généralisés. *Ann. Inst. H. Poincaré Sect. A (N.S.)* **30** (1979), no. 4, 275-293. (A. Crumeyrolle) **81c:59029** 58F06 (17B65)
- Patilkar, A. J.** Scattering from a helical coil of circular cross section in the Rayleigh-Debye theory. (French summary) *Canad. J. Phys.* **58** (1980), no. 9, 1375-1382. (Author's summary) **81g:78031** 78A45 (92A10)
- Patkar, Vivek** (with Saxena, P. C.; Parkash, Om) A note on an algorithm for integer solution to linear and piecewise linear programs. *Pure Appl. Math. Sci.* **9** (1979), no. 1-2, 31-36. (Thomas L. Magnanti) **81j:90083** 90C10
(with Saxena, P. C.; Parkash, Om) Linear fractional functional programming in complex space. *Z. Angew. Math. Mech.* **59** (1979), no. 6, 276-278. (I. M. Stancu-Minasian) **81b:90145** 90C32
- Pathias, A.** (with Rujin, P.) Disorder parameter approach to abelian Higgs models. *Phys. Lett. B* **88** (1979), no. 3-4, 363-366. (Authors' summary) **81a:81100** 81G25 (82A25)
- Patodi, Vijay Kumar** See *Geometry and analysis*, **81i:58005** and *Obituary: Patodi, Vijay Kumar*, **81i:01102**
- Patra, B.** On the absolute logarithmic summability of successively derived Fourier series. *J. Indian Math. Soc. (N.S.)* **42** (1978), no. 1-4, 295-312 (1979). (N. Kishore) **81f:42007** 42A28
- Patra, Badyanath** On the torsion of a finite elastic cone as a mixed boundary value problem. *Bull. Math. Soc. Sci. Math. R. S. Roumanie (N.S.)* **24** (72) (1980), no. 1, 77-86. (Roger D. Low) **81m:73021** 73C35
- On the completeness of generalized eigenfunction expansion associated with Bessel functions with respect to order. *Indian J. Pure Appl. Math.* **11** (1980), no. 7, 885-890. (H. Hochstadt) **81a:34020** 34B25 (33A40)
- Patra, Nishith K.** (with Basu, Sujit K.; Maizima, Makoto) A nonuniform rate of convergence in a local limit theorem concerning variables in the domain of normal attraction of a stable law. *Yokohama Math. J.* **27** (1979), no. 1, 63-72. (J. L. Mijneer) **81f:60030** 60F05 (60E07)
- Patronis, A.** Topology induced by a topological group acting on a set. *Topology (Proc. Fourth Colloq., Budapest, 1978), Vol. II, pp. 939-944, Colloq. Math. Soc. János Bolyai, 23, North-Holland, Amsterdam, 1980.* (W. A. Feldman) **81m:54009** 54A10 (54H99)
- Patten, Thomas W.** (with Chang, Ping Wu; Finlayson, Bruce A.) Collocation and Galerkin finite element methods for viscoelastic fluid flow. I. Description of method and problems with fixed geometry. *Comput. & Fluids* **7** (1979), no. 4, 267-283. (Nima Geffen) **81c:76006** 76A10 (65N30)
(with Chang, Ping Wu; Adams, Fred T.; Finlayson, Bruce A.) Galerkin and collocation finite element methods for Newtonian and viscoelastic fluids. *Recent advances in numerical methods in fluids*, Vol. 1, pp. 119-138, Pineridge, Swansea, 1980. (See **81j:76002**) 76A10 (65N30)
- Patterson, E. M.** Critical metrics and harmonic metrics. *Southeast Asian Bull. Math.* **3** (1979), no. 2, 216-229. (J. Peetre) **81a:53024** 53B20 (58E20)
- Patterson, J. C.** Natural convection in a closed cavity—a numerical experiment. *Numerical simulation of fluid motion (Proc. Internat. Conf. Numerical Simulation of Fluid Dynamic Systems, Monash Univ., Melbourne, 1976), pp. 483-492, North-Holland, Amsterdam, 1978.* (See **81a:76005**) 76R10 (65P05)
- Patterson, S. J.** (with Heath-Brown, D. R.) The distribution of Kummer sums at prime arguments. *J. Reine Angew. Math.* **310** (1979), 111-130. (Matti Jutila) **81c:10033** 10G05
See also *Deligne, Pierre*, **81k:10047**
- Patton, C. M.** Zero rest mass fields and the Bargmann complex structure. *Complex manifold techniques in theoretical physics (Proc. Workshop, Lawrence, Kan., 1978), pp. 126-134, Res. Notes in Math., 32, Pitman, San Francisco, Calif., 1979.* (From the text) **81a:81143** 81M05 (32L99, 81E99)
- Pätzelt, B.** (with Stingl, M.; Weiguny, A.) Scattering solutions to nonlocal Hamiltonians in terms of generalized Bessel-Neumann series. *Nuclear Phys. A* **339** (1980), no. 1, 175-188. (R. G. Newton) **81c:81048** 81F05 (41A58)
- Paul, L. F.** Finite learning sample size problems in pattern recognition. *Pattern recognition and signal processing (Proc. NATO Adv. Study Inst., Paris, 1978), pp. 83-115, NATO Adv. Study Inst. Ser., Ser. E: Appl. Sci., 29, Sijthoff & Noordhoff, Alphen aan den Rijn, 1978.* (See **80j:68076**) 68G05 (68G10)
- Pauer, Franz** Invariante Zwischenkörper endlicher Körpererweiterungen. (English summary) *Manuscripta Math.* **29** (1979), no. 2-4, 147-157. (James K. Deveney) **81a:12022** 12F15 (14L17)
- Paukowitz, Hans Peter** Über Hyperflächen aus Quadriken und quadratischen Kegeln im reellen m -dimensionalen projektiven Raum. *Arch. Math. (Basel)* **33** (1979/80), no. 1, 105-112. (P. Scherk) **81f:51016** 51M35
Zum Satz von H. Maschke in reellen projektiven Räumen. *Arch. Math. (Basel)* **33** (1979/80), no. 3, 283-293. (O. Giering) **81c:53013** 53A20
- Paul, B. B.** Electrospherically charged fluid spheres in general relativity. *Indian J. Pure Appl. Math.* **11** (1980), no. 8, 1055-1059. (A. F. da F. Teixeira) **81b:83009** 83C15 (83C30)
Tangentially stressed charged cylinders in general relativity. *Indian J. Pure Appl. Math.* **11** (1980), no. 8, 1060-1063. (Author's summary) **81i:83009** 83C15
- Paul, H.** (with Law, S. S.; Leong, H. K.) A method for single facility multiple products scheduling. *J. Oper. Res. Soc.* **31** (1980), no. 9, 825-832. (Authors' summary) **81i:90089** 90B25 (90C09)
- Paul, Manfred** (with Güntzer, U.) On a uniform formal description of data structures. *Mathematical studies of information processing (Proc. Internat. Conf., Kyoto, 1978), pp. 360-383, Lecture Notes in Comput. Sci., 75, Springer, Berlin, 1979.* (Authors' summary) **81g:68032** 68B15
(with Bauer, Friedrich L.; Eršov, A. P.; Perlis, A. J.) Klaus Samelson. *Acta Inform.* **15** (1981), no. 1, 1-2. (Editors) **81k:01025** 01A70
See also *Mathematical studies of information processing*, **81f:68006**
- Paul, Michael E.** (with Markley, Nelson G.) Almost automorphic symbolic minimal sets without unique ergodicity. *Israel J. Math.* **34** (1979), no. 3, 259-272 (1980). (Pierre Michel) **81f:28024** 28D20 (54H20)
- Paul, R. P. C.** (with Luh, J. Y. S.; Walker, M. W.) On-line computational scheme for mechanical manipulators. *Trans. ASME Ser. G J. Dynamic Systems Measurement Control* **102** (1980), no. 2, 69-76. (From the summary) **81g:70001** 70B15
- Paul, S. R.** (with Plackett, R. L.) Dirichlet models for square contingency tables. Special issue on theory and practice for categorical data analysis. *Comm. Statist. A—Theory Methods* **7** (1978), no. 10, 939-952. (See **80d:62042**) 62H17
- Paul, Surinder** An extremal problem for starlike functions. *Indian J. Pure Appl. Math.* **7** (1976), no. 10, 1199-1202. (P. T. Mocanu) **81f:30012** 30C45
- Paul, Wolfgang J.** (with Tarjan, Robert Endre; Celoni, James R.) Space bounds for a game on graphs. *Math. Systems Theory* **10** (1976/77), no. 3, 239-251. (Authors' summary) **81b:68030a** 68C25 (68B20)
(with Tarjan, Robert Endre; Celoni, James R.) Correction to: "Space bounds for a game on graphs". *Math. Systems Theory* **11** (1977/78), no. 1, 85. (Editors) **81b:68030b** 68C25 (68B20)
Kolmogorov complexity and lower bounds. *Fundamentals of computation theory (Proc. Conf. Algebraic, Aritih. and Categorical Methods in Comput. Theory, Berlin/Wendisch-Rietz, 1979), pp. 325-334, Math. Research, 2, Akademie-Verlag, Berlin, 1979.* (From the introduction) **81d:68079** 68E05 (68C05)
On time hierarchies. *J. Comput. System Sci.* **19** (1979), no. 2, 197-202. (Cristian Calude) **81b:03043** 03D15 (68C40)
- Paulauskas, Celestinas** A recurrent algorithm of general form for random input signal reconstruction in dynamic systems. (Russian. Lithuanian and English summaries) *Statist. Problemy Upravljenija—Trudy Sem. Processy Optimal. Upravljenija V Sekcija* **No. 41** (1979), 9-35, 97. (Author's summary) **81m:93071** 93E10
- Paulauskas, V. I.** (with Bernotas, V.) A nonuniform estimate in the central limit theorem in some Banach spaces. (Russian. Lithuanian and English summaries) *Lietuv. Mat. Šb.* **19** (1979), no. 2, 23-43, 209-210. (A. Weron) **81g:60009** 60B12 (60F05)
On the central limit theorem in the Banach space C_0 (Russian) *Dokl. Akad. Nauk SSSR* **254** (1980), no. 2, 286-288. (S. A. Čobanjan) **81k:60011** 60B12
- Schröck-Pauli, Claudia** See *Schröck-Pauli, Claudia*
- Pauli, Hans-Christian** (with Balazs, N. L.; Dabbousi, O. B.) Tables of Weyl fractional integrals for the Airy function. *Math. Comp.* **33** (1979), no. 145, 353-358. (Y. L. Luke) **81a:33010** 33A40 (65A05)
On classical hydrodynamics and collective motion as approximation to the nuclear many-body problem. *Z. Phys. A* **295** (1980), no. 4, 315-326. (From the summary) **81c:81148** 81G35 (82A50)
(with Grangé, P.; Weidenmüller, Hans A.) Suzuki's scaling limit and the theory of statistical fluctuations in nuclear fission. *Z. Phys. A* **296** (1980), no. 2, 107-110. (Authors' summary) **81f:81086** 81G35
- Pauli, Wolfgang** ★Wissenschaftlicher Briefwechsel mit Bohr, Einstein, Heisenberg u.a. Band I: 1919-1929. (German) [Scientific correspondence with Bohr, Einstein, Heisenberg and others. Vol. I: 1919-1929] Edited by Armin Hermann, K. von Meyenn and Victor F. Weisskopf. With a foreword by Victor F. Weisskopf. With an introduction by Armin Hermann. Sources in the History of Mathematics and Physical Sciences, 2.

- Springer-Verlag, New York-Heidelberg, 1979. li + 577 pp. ISBN 0-387-08962-4 (H. Treder) **81c:01034** 01A75 (01A70, 81-03, 81B05)
- Paulin, Jeannine Saint Jean (with Cioranescu, Doina; Lanchon, H.) Elastic-plastic torsion of heterogeneous cylindrical bars. *J. Inst. Math. Appl.* 24 (1979), no. 4, 353-378. (J. A. König) **81b:73015** 73E99
- (with Cioranescu, Doina) Homogenization in open sets with holes. *J. Math. Anal. Appl.* 71 (1979), no. 2, 590-607. (Hélène Lanchon) **81j:35017** 35B40 (35J65, 49D50)
- Paulos, John A. A model-theoretic explication of the theses of Kuhn and Whorf. *Notre Dame J. Formal Logic* 21 (1980), no. 1, 155-165. (Brent Mundy) **81a:03006** 03A05 (03B99)
- Pausen, Vern (with Salinas, Norberto) Two examples of nontrivial essentially n -normal operators. *Indiana Univ. Math. J.* 28 (1979), no. 5, 711-724. (P. A. Fillmore) **81c:47024** 47B15 (47A55, 47C15)
- Pausner, J.-C. Stable solutions to a shell problem. *Comput. Methods Appl. Mech. Engrg.* 20 (1979), no. 1, 91-103. (Hwa-Shan Ho) **81c:73041** 73K15 (65N30, 73Lxx)
- Plan, Gheorghe A note on time-varying grammars. *An. Ştiinţ. Univ. "Al. I. Cuza" Iaşi Sect. I a Mat. (N.S.)* 25 (1979), no. 1, 183-185. (A. Salomaa) **81j:68097** 68F10 (68F05)
- On a prolongation operation of languages. *Bull. Math. Soc. Sci. Math. R. S. Roumanie (N.S.)* 23(71) (1979), no. 3, 293-296. (B. Brainerd) **81c:68085** 68F05
- On the generative capacity of conditional grammars. *Inform. and Control* 43 (1979), no. 2, 178-186. (Rani Siromoney) **81c:68061** 68F05
- Marcus' contextual grammars and languages, a survey. *Rev. Roumaine Math. Pures Appl.* 24 (1979), no. 10, 1467-1486. (M. Novotný) **81i:68106** 68F05
- A note on the intersection of context-free languages. *Fund. Inform.* (4) 3 (1980), no. 2, 135-139. (Author's summary) **81m:68061** 68F05
- Some consequences of a result of Ehrenfeucht and Rozenberg. (French summary) *RAIRO Inform. Théor.* 14 (1980), no. 1, 119-122. (Author's summary) **81i:68109** 68F05
- (with Nguyen Xuan My) On the inner-contextual grammars. *Rev. Roumaine Math. Pures Appl.* 25 (1980), no. 4, 641-651. (Sorin Istrail) **81i:68110** 68F05
- Pański, D. (with Hadzić, Olga) An existence theorem for the system $x = H(x, y)$, $y = K(x, y)$ in probabilistically locally convex spaces. (Serbo-Croatian summary) *Univ. u Novom Sadu Zb. Rad. Prirod.-Mat. Fak. B* 8 (1978), 21-27. (I. A. Rus) **81d:47037** 47H10
- Parvets, Wilfried On some results in comparative statics analysis. *J. Econom. Theory* 21 (1979), no. 3, 483-490. (Author's summary) **81a:90057** 90A14 (90A15, 90C05)
- Pavarnicko, I. A. (with Rabinović, S. I.) On an algorithm for distinguishing the contour of a simply connected domain or a binary discrete picture. (Russian) *Automation, analysis and pattern recognition*, 1 (Russian), pp. 69-102, 262, "Zinatne", Riga, 1979. (Authors' summary) **81i:68109** 68G10
- Pavel, Monique Pattern recognition: the categorical setting. *Proceedings of the Fourth International Joint Conference on Pattern Recognition (Kyoto, 1978)*, pp. 472-474, IEEE, New York, 1979. (Author's summary) **81d:68126** 68G10
- Pavel, Nicolas H. (with Vrabie, Ioan I.) Differential equations associated with continuous and dissipative time-dependent domain operators. *Volterra equations (Proc. Helsinki Sympos. Integral Equations, Otaniemi, 1978)*, pp. 236-250, *Lecture Notes in Math.*, 737, Springer, Berlin, 1979. (Robert H. Martin, Jr.) **81h:34074** 34G20
- (with Vrabie, Ioan I.) Semilinear evolution equations with multivalued right-hand side in Banach spaces. *An. Ştiinţ. Univ. "Al. I. Cuza" Iaşi Sect. I a Mat. (N.S.)* 25 (1979), no. 1, 137-157. (J. A. Nohel) **81a:47060** 47H15 (34G20, 35K55, 49A27)
- Ribbens-Pavella, M. See Ribbens-Pavella, M.
- Pavella, Richard Erratum: "The Plank integral cannot be evaluated in terms of a finite series of elementary functions" [*J. Math. Phys.* 21 (1980), no. 1, 14; MR 80k:26001]. *J. Math. Phys.* 21 (1980), no. 8, 2313. (Editors) **81k:26004** 26A06
- Pavet-Fontana, Stefano L. (with Capasso, Vincenzo) Contributions to stochastic compartmental analysis. (Italian summary) *Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur.* (6) 64 (1978), no. 6, 578-583. (Robert J. Mulholland) **81f:92008** 92A09 (60K99, 93E03)
- (with Rigacci, Rossella) A singularly perturbed weakly-singular integro-differential problem from analytical chemistry. *Numerical analysis of singular perturbation problems (Proc. Conf., Math. Inst., Catholic Univ., Nijmegen, 1978)*, pp. 475-484, Academic Press, London, 1979. (Authors' summary) **81a:65128** 65R20
- Pavlov, B. An interpretation of the relative curvatures for surfaces in the isotropic space. (Serbo-Croatian summary) *Glas. Mat. Ser. III* 15(35) (1980), no. 1, 149-152. (K. Strubecker) **81m:53017** 53A40 (51N25)
- Pavlenko, M. I. (with Berzilović, E. Ju.; Tin'kov, L. A.) Optimal servicing of systems with dependent elements. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* 1979, no. 3, 80-85, 220 (Russian); translated as *Engrg. Cybernetics* 17 (1979), no. 3, 56-61 (1980). (Authors' summary) **81h:90064** 90B25 (90B22)
- Pavlenko, V. N. (with Lazzaro, E.; Musalevskii, V. V.) Echo in a semibounded plasma with boundary defined by electrostatic-potential profiles. (Italian summary) *Nuovo Cimento B* (11) 56 (1980), no. 1, 137-147. (F. C. Auluck) **81f:76053** 76X05 (82A45)
- Pavlenko, V. P. (with Weiland, J.) Nonlinear excitation of convective cells by interchange modes and spectrum cascade processes. *Phys. Fluids* 23 (1980), no. 4, 719-724. (T. Kahan) **81e:76090** 76X05
- Pavlidis, Theodoros (with Chang, Robin Lok Ping) Applications of fuzzy sets in curve fitting. *Fuzzy Sets and Systems* 2 (1979), no. 1, 67-74. (Authors' summary) **81j:68027** 68D07 (03E72)
- Pavlov, V. Ju. On the question of stabilization of linear systems under uncertainty conditions. (Russian) *Some questions of differential and integral equations and their applications*, No. 2 (Russian), pp. 177-184, 191, *Yakutsk. Gos. Univ., Yakutsk*, 1977. (Author's summary) **81c:93032** 93C05 (93E00)
- Parjick, I. A. (with Burin, V. M.; Paschenko, Ju. A.) ★Приближенно-аналитические решения неавтономных дифференциальных уравнений. (Russian) [Approximate analytic solutions of nonautonomous differential equations] "Viśta Škola", Kiev, 1980. 232 pp. (A. Halanay) **81m:34073** 34E05
- Parvicki, I. P. Weakly relativistic kinetic equations for neutral particles. (Russian. English summary) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 165* (1979), 23 pp. (Author's summary) **81a:82031** 82A40
- Pavlov, A. A. Reduction of the problem of time-optimal control of linear nonstationary dynamical objects to the mixed linear integer programming problem. (Russian. English summary) *Elektronnoe Modelirovanie* 1980, no. 5, 91-93, 111. (Author's summary) **81i:49026** 49D35
- The possibility of computerizing the design of nonlinear dynamical control systems. (Russian) *Prikl. Geom. i Inžener. Grafika No. 30* (1980), 21-22, 132. (From the text) **81h:93030** 93C10
- Pavlov, A. L. Uniqueness of the solution of the Cauchy problem for equations that are not solved for the highest derivative with respect to time. (Russian) *Boundary value problems for partial differential equations (Russian)*, pp. 76-79, 165, "Naukova Dumka", Kiev, 1978. (L. A. Ivanov) **81a:35005** 35A20
- Pavlov, B. M. (with Gerasimenko, L. V.) Application of the Navier-Stokes equations to the study of flows of a viscous gas in a Laval nozzle. (Russian) Numerical methods in continuum mechanics. *Vysisl. Metody i Programirovanie No. 30* (1979), 120-130. (Editors) **81a:76035** 76N10 (65P05)
- Pavlov, E. A. Some properties of the Hardy-Littlewood operator. (Russian) *Mat. Zametki* 26 (1979), no. 6, 909-912, 973. (J. Musielak) **81d:46028** 46E30
- Pavlov, E. G. Optimal control of a perfectly conducting compressible fluid column. *Izv. Vysl. Učebn. Zaved. Aviacion. Tehn.* 1979, no. 2, 50-55 (Russian); translated as *Soviet Aeronaut.* 22 (1979), no. 2, 38-42. (Author's summary) **81d:93028** 93C20 (76N10)
- Pavlov, E. V. Real realization of the conformal correspondence of Riemann spaces over a Clifford algebra. (Russian) *Izv. Vysl. Učebn. Zaved. Matematika* 1978, no. 7(194), 64-67. (V. G. Kopp) **81k:53018** 53B30
- Pavlov, G. G. Differential equations for perturbed motion relative to the osculating variables of the KS transformation. *Astronom. ž.* 57 (1980), no. 1, 178-181 (Russian); translated as *Soviet Astronom.* 24 (1980), no. 1, 105-107. (M. Hussain) **81m:70022** 70F15 (34A10, 58F05)
- Pavlov, Hristo V. An inverse problem in queueing theory. (Russian) *Serdica* 5 (1979), no. 3, 287-291. (M. A. Faingberg) **81i:60094** 60K25
- Pavlov, I. V. (with Uliakov, I. A.) The asymptotic distribution of the time until a semi-Markov process gets out of a kernel. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* 1978, no. 5, 97-101, 221 (Russian); translated as *Engrg. Cybernetics* 16 (1978), no. 5, 68-72. (O. A. Voina) **81g:60089** 60K15
- Interval estimation of quasiconvex functions in reliability problems. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* 1979, no. 3, 69-79, 220 (Russian); translated as *Engrg. Cybernetics* 17 (1979), no. 3, 46-56 (1980). (William E. Thompson) **81k:62140** 62N05 (62F25)
- A counterexample to the conjecture that H^∞ is dense in the space BMO. (Russian. English summary) *Teor. Veroyatnost. i Primenen.* 25 (1980), no. 1, 154-157. (Author's summary) **81j:60058** 60G42 (46J15)
- Confidence bounds for convex functions of several unknown parameters. (Russian. English summary) *Teor. Veroyatnost. i Primenen.* 25 (1980), no. 2, 394-399. (I. N. Volodin) **81j:62071** 62F25 (62N05)
- Pavlov, Ju. L. A case of limit distribution of the maximum size of a tree in a random forest. (Russian) *Mat. Zametki* 25 (1979), no. 5, 751-760, 800. (I. Z. Chorneyko) **81a:60048** 60F99 (05C05, 60C05)
- Pavlov, K. B. (with Fedotov, N. A.; Širšov, A. A.) On the theory of flow of an incompressible viscous fluid in a channel of arbitrary section. *Izv. Akad. Nauk SSSR Meh. Židk. Gaza* 1980, no. 2, 124-128 (Russian); translated as *Fluid Dynamics* 15 (1980), no. 2, 274-278. (Authors' summary) **81i:76018** 76D05
- Pavlov, P. K. The stressed state of an elastic circular ring with a press-fitted washer under the action of concentrated power factors. (Bulgarian. Russian and English summaries) *Godišnik Visl. Učebn. Zaved. Prirodna Mat.* 14 (1978), no. 1, 195-202. (Author's summary) **81j:73007** 73C05
- A problem of two-dimensional elasticity theory with mixed boundary conditions specified on cut along an arc of a circle. (Bulgarian. Russian and English summaries) *Godišnik Visl. Učebn. Zaved. Prirodna Mat.* 14 (1978), no. 1, 203-212. (Author's summary) **81j:73011** 73C35 (45E05)
- Pavlov, Radoslav D. A generalization of the concept of a passing letter. (Russian) *Serdica* 5 (1979), no. 2, 149-172. (N. G. Šahova) **81f:20055** 20E06 (20F10)
- Pavlov, V. A. (with Danilov, V. Ja.) On the reducibility of linear systems of difference equations to the diagonal form. (Russian. English summary) *Vysisl. Prikl. Mat. (Kiev)* No. 40 (1980), 17-26, 157. (Miomir S. Stanković) **81k:39001** 39A10
- Pavlov, V. G. (with Garaev, K. G.) Continuous groups of transformations in a problem of sensitivity of systems with distributed parameters. (Russian) *Theory of invariance and its application (Proc. Fifth All-Union Conf., Kiev, 1976)*, Part 1 (Russian), pp. 330-334, "Naukova Dumka", Kiev, 1979. (A. Göpfert) **81m:90025** 93B35 (22E05, 35A30)
- Three-dimensional self-similar laminar boundary layer with longitudinal and transverse pressure gradient. *Izv. Vysl. Učebn. Zaved. Aviacion. Tehn.* 1979, no. 2, 56-62 (Russian); translated as *Soviet Aeronaut.* 22 (1979), no. 2, 43-48. (Author's summary) **81d:76039** 76D10
- (with Ovcinnikov, V. A.) Hydrodynamic stability of incompressible boundary layers with variable viscosity. *Izv. Vysl. Učebn. Zaved. Aviacion. Tehn.* 22 (1979), no. 4, 53-57 (Russian); translated as *Soviet Aeronaut.* 22 (1979), no. 4, 43-46. (Authors' summary) **81g:76062** 76E99 (76A05)
- (with Boreckii, I. F.) Group-theoretic interpretation of the sensitivity of smooth dynamic systems. *Avtomat. i Telemekh.* 1980, no. 2, 5-10 (Russian. English summary); translated as *Automat. Remote Control* 41 (1980), no. 2, part 1, 141-146. (Authors' summary) **81h:93017** 93B35
- Pavlov, V. N. Criteria for λ -continuity of point-set mappings. (Russian) *Models and methods of investigating economic systems (Russian)*, pp. 91-98, "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. (J. J. Charatonik) **81c:54017** 54C60 (54C65)
- Effectiveness of approximate optimization of complex systems. (Russian) *Models and methods of investigating economic systems (Russian)*, pp. 98-108, "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. (Author's introduction) **81h:90153** 90C48 (65K10)
- Pavlov, V. V. (with Voronin, A. N.) A generalized quality criterion for ergatic control systems. *Avtomatika* 1979, no. 4, 66-71, 96 (Russian); translated as *Soviet Automat. Control* 12 (1979), no. 4, 53-56. (Authors' summary) **81f:93063** 93A10
- Pavlova, M. F. (with Ljalko, A. D.) Investigation of an implicit difference scheme for a variational inequality of nonlinear filtration theory. (Russian) *Differentsial'nye Uravnenija* 16 (1980), no. 7, 1255-1264, 1350. (E. Ungureanu-David) **81k:78074**

- 76S05 (49A29)
- Parlovce, G. A.** Potential flow around a profile with a trailing edge of finite thickness. (Russian) *Učen. Zap. CAGI* 10 (1979), no. 4, 10-19. (Author's summary) **81j:76005** 76B05
- Parlovce, Milica** (with Hendeković, Josip) Complex configuration mixing method. *Chem. Phys. Lett.* 77 (1981), no. 2, 377-381. (Authors' summary) **81k:81113** 81G50
- Pavlovskii, Ju. N.** (with Elkin, V. I.; Smirnov, T. G.) The method of complete systems in aggregation problems. (Russian) *Upravljajemye Sistemy* No. 18 (1979), 26-38, 76. (Authors' summary) **81g:93002** 93A10
- (with Evlulenko, Ju. G.) Integrated optimization-simulation systems for industry and regional planning. *Information processing 80 (Proc. IFIP Congr., Tokyo/Melbourne, 1980)*, pp. 651-658, *IFIP Congress Ser.* 8, North-Holland, Amsterdam, 1980. (See **81i:68009**) 90A30
- Pavlu, Luis Carlos** (with Onuchic, Nelson) Invariance, asymptotic behavior and stability properties for ordinary differential equations. *Tōhoku Math. J. (2)* 32 (1980), no. 2, 217-224. (M. Rama Mohana Rao) **81m:34066** 34D10 (34C10)
- Pavon, Michèle** (with Badawi, Faris A.; Lindquist, Anders) A stochastic realization approach to the smoothing problem. *IEEE Trans. Automat. Control* 24 (1979), no. 6, 878-888. (Authors' summary) **81a:93102** 93E14
- Stochastic realization and invariant directions of the matrix Riccati equation. *SIAM J. Control Optim.* 18 (1980), no. 2, 155-180. (R. S. Bucy) **81a:93099** 93E11 (93E20)
- Pavšič, M.** Introducing the dilatational degree of freedom: special relativity in V_4 . *J. Phys. A* 13 (1980), no. 4, 1367-1387. (Author's summary) **81d:83008** 83A05 (51B20, 83E99)
- Pawlik, P. S.** (with Reismann, H.; Malone, D. P.) Laser induced thermoelastic response of circular plates. *Solid Mech. Arch.* 5 (1980), no. 3, 253-323. (From the introduction) **81m:73062** 73U05
- Pawłowski, Zbigniew** Horizon of econometric prediction. (Polish. Russian and English summaries) *Przegląd Statyst.* 25 (1978), no. 3, 279-294 (1979). (Author's summary) **81c:62113** 62P20
- On the concept of horizon of prediction. (Russian summary) *Systems Sci.* 5 (1979), no. 1, 81-90. (Author's summary) **81i:62196** 62P20 (90A20)
- Pawlik, Krystyn** Finite elements in diagonal coordinates. (Polish. Russian and English summaries) *Arch. Elektrotech. (Warsaw)* 28 (1979), no. 3, 659-670 (1980). (Author's summary) **81f:78020** 78A55 (65N30)
- Payan, Charles** Couplages maximaux disjoints. (English summary) *Problèmes combinatoires et théorie des graphes (Colloq. Internat. CNRS, Univ. Orsay, Orsay, 1976)*, pp. 327-329, *Colloques Internat. CNRS*, 260, CNRS, Paris, 1978. (H. Kramer) **81e:05119** 05C99 (05C70)
- Remarks on cliques and dominating sets in graphs. *Ars Combin.* 7 (1979), 181-189. (Stephane Foldes) **81e:05108** 05C65
- (with Nguyen Huy Xuong) Graphes de nombre facial 3 ou 4. (English summary) *Combinatorics 79 (Proc. Colloq., Univ. Montréal, Montréal, Que., 1979)*, Part I. *Ann. Discrete Math.* 8 (1980), 129-135. (A. T. White) **81m:05066** 05C10
- (with Nguyen Huy Xuong) Graphes d'intervalle d'immersion 1. (English summary) *Combinatorics 79 (Proc. Colloq., Univ. Montréal, Montréal, Que., 1979)*, Part I. *Ann. Discrete Math.* 8 (1980), 137-141. (A. T. White) **81m:05067** 05C10
- A class of threshold and domishold graphs: equitable and equidominating graphs. *Discrete Math.* 29 (1980), no. 1, 47-52. (M. C. Golumbic) **81i:05118** 05C99
- Payzandeh, B.** A block cluster approach to percolation. *Riv. Nuovo Cimento* (3) 3 (1980), no. 3, 33 pp. (From the introduction) **81e:82040** 82A42 (81E15)
- Payne, Deane A.** Backlund transformations in several variables. *J. Math. Phys.* 21 (1980), no. 7, 1593-1602. (F. A. E. Pirani) **81j:58010** 58A20 (35A30)
- Payne, Fred R.** (with Wadia, Aspi Rustom) A mixed method for unsteady flow problems. *Proceedings of the 16th Midwestern Mechanics Conference (Kansas State Univ., Manhattan, Kan., 1979)*, pp. 161-165, *Develop. in Mech.*, 10, Kansas St. Univ., Manhattan, Kan., 1979. (See **81m:73010**) 65N99
- Payne, G. L.** (with Friar, J. L.; Gibson, B. F.) Exact solution of the Faddeev equations for the harmonic oscillator ground state. *Phys. Rev. C* (3) 22 (1980), no. 1, 284-286. (N. D. Sengupta) **81e:81144** 81G35
- Payne, L. E.** On explicit norm inequalities and their applications in partial differential equations. *Constructive approaches to mathematical models (Proc. Conf. in honor of R. J. Duffin, Pittsburgh, Pa., 1978)*, pp. 279-292, *Academic Press*, New York, 1979. (W. Allegretto) **81e:35021** 35B50 (49G05, 73K15, 81C10)
- (with Philippin, Gérard A.) On some maximum principles involving harmonic functions and their derivatives. *SIAM J. Math. Anal.* 10 (1979), no. 1, 96-104. (N. I. Skiba) **81f:31011a** 31B15
- See also **Bundlie, Catherine**, **81f:31011b**
- Payne, M. T. J.** (with Carter, Roger William) On homomorphisms between Weyl modules and Specht modules. *Math. Proc. Cambridge Philos. Soc.* 87 (1980), no. 3, 419-425. (James E. Humphreys) **81k:20048** 20G05
- Payne, R. L.** (with Zarrow, Martin B.; Goodwin, Graham C.) Experiment design for time series analysis: the multivariate case. *SIAM J. Appl. Math.* 37 (1979), no. 2, 370-381. (Andrej Pázmán) **81a:62079** 62K05 (62M99)
- Payne, Stanley E.** (with Killgrove, Raymond B.; Kiel, Donald I.) Generalized quadrangles as amalgamations of Desarguesian planes: the multiplicative case. *Proceedings of the Tenth Southeastern Conference on Combinatorics, Graph Theory and Computing (Florida Atlantic Univ., Boca Raton, Fla., 1979)*, pp. 787-794, *Congress. Numer., XXIII-XXIV, Utilitas Math., Winnipeg, Man., 1979*. (J. André) **81e:51015** 51E15 (05B25)
- Payne, Thomas H.** General computability. *Notre Dame J. Formal Logic* 21 (1980), no. 2, 277-292. (Viggo Stoltenberg-Hansen) **81k:03047** 03D75
- Paz, Azaria** Fibonacci encoding—to combat time dither in digital transmission. (Italian summary) *Rend. Sem. Mat. Fis. Milano* 48 (1978), 125-133 (1980). (Author's summary) **81d:94019** 94A29
- (with Raz, Y.) Complexity of pattern generation by MAP-L systems. Abridged version. *Graph-grammars and their application to computer science and biology (Internat. Workshop, Bad Honnef, 1978)*, pp. 367-378, *Lecture Notes in Comput. Sci.*, 73, Springer, Berlin, 1979. (William R. Edwards) **81m:68043** 68D20 (68E10, 68F05)
- Pazderski, Gerhard** The orders of which only belong metabelian groups. *Math. Nachr.* 95 (1980), 7-16. (W. E. Deakins) **81k:20037** 20D60
- Pazdur, Anna** (with Pazdur, Mieczysław) Application of the nonlinear least squares method to the estimation of the parameters of a function for approximation of the results of measurements. (Polish. Russian and English summaries) *Zeszyty Nauk. Politech. Śląsk. Mat.-Fiz.* No. 32 (1980), 101-109. (Authors' summary) **81g:65020** 65D10 (90C15)
- Pazdur, Mieczysław** (with Pazdur, Anna) Application of the nonlinear least squares method to the estimation of the parameters of a function for approximation of the results of measurements. (Polish. Russian and English summaries) *Zeszyty Nauk. Politech. Śląsk. Mat.-Fiz.* No. 32 (1980), 101-109. (Authors' summary) **81g:65020** 65D10 (90C15)
- Pazin, G. N.** (with Tupčiev, V. A.) Conditions on a discontinuity for generalized self-similar solutions of quasilinear systems. (Russian) *Mat. Zametki* 26 (1979), no. 1, 35-38, 156. (V. Duriković) **81e:35082** 35L65 (35L60)
- Palma, Villam** The new path integrals representation of a potential scattering amplitude. (Russian summary) *Acta Phys. Slovaca* 29 (1979), no. 4, 249-253. (K. J. Le Couteur) **81k:81031** 81C35 (81F20)
- Pázmán, Andrej** Optimal experiments. (Czech) *Pokroky Mat. Fyz. Astronom.* 23 (1978), no. 6, 310-317. (M. Hulko) **81a:62077** 62K05
- gonzález Pazos, Lucila** See **González Pazos, Lucila**
- Pazy, A.** (with Crandall, Michael G.; Tartar, Luc) Remarks on generators of analytic semigroups. *Israel J. Math.* 32 (1979), no. 4, 363-374. (Olusola Akinyele) **81g:47043** 47D05 (47F05, 47H20)
- Remarks on nonlinear ergodic theory in Hilbert space. *Nonlinear Anal.* 3 (1979), no. 6, 863-871. (Simeon Reich) **81e:47056** 47H09 (47H20)
- (with Crandall, Michael G.) An approximation of integrable functions by step functions with an application. *Proc. Amer. Math. Soc.* 76 (1979), no. 1, 74-80. (B. Rodríguez-Salinas) **81a:41041** 41A30
- Pčelina, B. K.** A basic formula for the representation of a subharmonic function in the classical case of an arbitrary integral order. (Russian) *Dokl. Akad. Nauk SSSR* 240 (1979), no. 1, 55-57. (A. I. Heifich) **81a:31004** 31B30
- Basic formula of a subharmonic function representation in the general case of arbitrary integral order inside a domain. (Russian) *Dokl. Akad. Nauk SSSR* 250 (1980), no. 3, 560-562. (Ü. Kuran) **81a:31005** 31B30 (31B05)
- Pčelina, L. V.** (with Nikulin, G. Z.; Pirumov, U. G.; Rosljakov, G. S.) Three-dimensional flows of a gas in jets. (Russian) Numerical methods in continuum mechanics. *Vychisl. Metody i Programirovanie* No. 30 (1979), 30-74. (From the text) **81f:76032** 76J99 (65N05, 76B10)
- Pearce, Lynn Haumer** Random walks on trees. *Discrete Math.* 30 (1980), no. 3, 269-276. (J. W. Moon) **81f:60096** 60J15 (05C05, 60C05)
- Pearce, Paul A.** (with Griffiths, Robert B.) Mathematical properties of position-space renormalization-group transformations. *J. Statist. Phys.* 20 (1979), no. 5, 499-545. (Michel Romero) **81m:82005** 82A05 (81E15, 82A67)
- (with Monroe, James L.) Correlation inequalities for vector spin models. *J. Statist. Phys.* 21 (1979), no. 6, 615-633. (Masuo Suzuki) **81g:82014** 82A15 (82A67)
- Pearcy, Carl** (with Shields, Allen L.) Almost commuting matrices. *J. Funct. Anal.* 33 (1979), no. 3, 332-338. (M. P. Drazin) **81e:15018** 15A27 (47A30)
- (with Kim, H. W.; Moore, Robert L.) A variation of Lomonosov's theorem. *J. Operator Theory* 2 (1979), no. 1, 131-140. (P. Rosenthal) **81h:47007** 47A15
- (with Foias, Ciprian; Sz. Nagy, Béla) The functional model of a contraction and the space L^1 . *Acta Sci. Math. (Szeged)* 42 (1980), no. 1-2, 201-204. (E. Durst) **81k:47016** 47A45
- (with Kim, H. W.) Extensions of normal operators and hyperinvariant subspaces. *J. Operator Theory* 3 (1980), no. 2, 203-211. (Lawrence Williams) **81h:47025** 47B20 (47A15)
- Pearl, Judea** Asymptotic complexity of game-searching procedures. *Mathematical foundations of computer science, 1980 (Proc. Ninth Sympos., Rydzyna, 1980)*, pp. 474-487, *Lecture Notes in Comput. Sci.*, 88, Springer, Berlin, 1980. (See **81k:68003**) 90D99 (68C25)
- Asymptotic properties of minimax trees and game-searching procedures. *Artificial Intelligence* 14 (1980), no. 2, 113-138. (Author's summary) **81i:90208** 90D05 (68C25, 90D40)
- Pearlman, J. G.** An algorithm for the exact likelihood of a high-order autoregressive-moving average process. *Biometrika* 67 (1980), no. 1, 232-233. (Robert V. Foutz) **81j:62150** 62M09
- Realizability of multilinear input/output maps. *Internat. J. Control* 32 (1980), no. 2, 271-283. (Author's summary) **81h:93013** 93B15 (93B07, 93D99)
- See also **Frazho, Arthur**, **81h:93015**
- Pearlman, William A.** (with Finamore, Weiler A.) Optimal encoding of discrete-time continuous-amplitude memoryless sources with finite output alphabets. *IEEE Trans. Inform. Theory* 26 (1980), no. 2, 144-155. (From the summary) **81c:94024** 94A34
- Pearson, A. E.** Equation error identification with modal disturbances suppressed. *Numerical techniques for stochastic systems (Conf., Gargano, 1979)*, pp. 19-41, North-Holland, Amsterdam, 1980. (See **81f:93067**) 93E12
- Pearson, D. B.** Scattering theory for a class of oscillating potentials. *Helv. Phys. Acta* 52 (1979), no. 4, 541-554 (1980). (Woodford W. Zachary) **81f:34030** 34B25 (81F05)
- (with Amrein, W. O.) The S-matrix for abstract scattering systems. *Lett. Math. Phys.* 3 (1979), no. 2, 83-86. (Authors' summary) **81i:47013** 47A40 (81F99)
- (with Amrein, W. O.; Sinha, Kalyan B.) Bounds on the total scattering cross section for N-body systems. (Italian and Russian summaries) *Nuovo Cimento A* (11) 52 (1979), no. 1, 115-131. (A. Corciovei) **81h:81110** 81F10 (47A40)
- Pearson, K. R.** (with Mainwaring, Diane) Decomposability of finite rings. *J. Austral. Math. Soc. Ser. A* 28 (1979), no. 2, 136-138. (Thomas Laffey) **81f:16029** 16A44
- (with Rimmer, M.) Nilpotents and units in skew polynomial rings over commutative rings. *J. Austral. Math. Soc. Ser. A* 28 (1979), no. 4, 423-426. (Jean-Marie Goursaud) **81m:16007** 16A05 (13B20)
- See also **MacKenzie, D.**, **81m:01066**
- Pearson, R. A.** Comparison between methods—a review. *Numerical simulation of fluid motion (Proc. Internat. Conf. Numerical Simulation of Fluid Dynamic Systems, Monash Univ., Melbourne, 1976)*, pp. 261-284, North-Holland, Amsterdam, 1978. (See **81k:76005**) 76-04 (65F05)

- (with Williams, P. G.) Dependence of numerical results on truncation errors. *Numerical simulation of fluid motion (Proc. Internat. Conf. Numerical Simulation of Fluid Dynamic Systems, Monash Univ., Melbourne, 1976)*, pp. 493–502, North-Holland, Amsterdam, 1978. (See 81h:76005) 76–04 (65P05)
- Pearson, R. P. (with Kogut, John B.; Shigemitsu, J.) The string tension, confinement and roughening in SU(3) Hamiltonian lattice gauge theory. *Phys. Lett. B* 98 (1981), no. 1–2, 63–68. (From the summary) 81h:81078 81E99 (81–04)
- Pearse, M. (with Shostak, R.; Lampion, Leslie) Reaching agreement in the presence of faults. *J. Assoc. Comput. Mach.* 27 (1980), no. 2, 228–234. (Authors' summary) 81h:68057 68C40 (68B20)
- Pečarić, Josip E. (with Vasić, Petar M.) On the Jensen inequality for monotone functions. *An. Univ. Timișoara Ser. Științ. Mat.* 17 (1979), no. 1, 95–104. (Paul R. Beesack) 81g:26014 26D15 (26A48, 26A51)
- (with Vasić, Petar M.) On the Jensen inequality. *Univ. Beograd. Publ. Elektrotehn. Fak. Ser. Mat. Fiz. No. 634-677 (1979)*, 50–54. (Paul R. Beesack) 81h:26016 26D15 (26A51)
- (with Đorđević, Radosav Ž.; Milovanović, Gradimir V.) Some estimates of L^p norm on the set of continuously-differentiable functions. *Univ. Beograd. Publ. Elektrotehn. Fak. Ser. Mat. Fiz. No. 634-677 (1979)*, 57–61. (J. Horváth) 81h:26013 26D10 (46E30)
- (with Milovanović, Gradimir V.) The Steffensen inequality for convex function of order n . *Univ. Beograd. Publ. Elektrotehn. Fak. Ser. Mat. Fiz. No. 634-677 (1979)*, 97–100. (E. F. Beckenbach) 81h:26018 26D15
- On the Jensen-Steffensen inequality. *Univ. Beograd. Publ. Elektrotehn. Fak. Ser. Mat. Fiz. No. 634-677 (1979)*, 101–107. (E. F. Beckenbach) 81h:26019 26D15
- (with Janić, Radovan R.) Some functional equations with several unknown functions. *Univ. Beograd. Publ. Elektrotehn. Fak. Ser. Mat. Fiz. No. 634-677 (1979)*, 228–233. (Pl. Kannappan) 81h:39010 39B30
- (with Janić, Radovan R.) On a functional inequality. *Univ. Beograd. Publ. Elektrotehn. Fak. Ser. Mat. Fiz. No. 634-677 (1979)*, 234–235. (Pl. Kannappan) 81h:39014 39C05
- Peccati, Lorenzo On the internal rate of return of random financial operations. (Italian. English summary) *Riv. Mat. Sci. Econom. Social.* 2 (1979), no. 1, 9–26. (Author's summary) 81d:90015 90A09 (62P05)
- Pedersen, Ju. N. See *Mathematical modelling of planning and control processes*, 81g:90003 and *Design of interpreters*, 81m:68001
- Pedersli, Sergei On a bargaining solution. (Russian. Lithuanian and English summaries) *Mat. Metody v Social. Nauk.—Trudy Sem. Processy Optimal. Upravleniya II Sekcija* No. 12 (1979), 88–107, 130. (M. Maňas) 81f:90123 90D10
- Pečesec-Dražić, Jaroslav Presheaves over the sets which need not be well ordered, functional separation of their inductive limits and their representation by sections. (Russian and Czech summaries) *Acta Univ. Carolin.—Math. Phys.* 20 (1979), no. 2, 57–62. (Jacob Kofner) 81a:54012a 54B30 (18F20)
- Under an inductivity condition the stalks of the covering space of a presheaf are isomorphic (inductive and projective modifications of closures of presheaves). (Russian and Czech summaries) *Acta Univ. Carolin.—Math. Phys.* 20 (1979), no. 2, 63–73. (Jacob Kofner) 81a:54012b 54B30 (18F20)
- Functional separation of inductive limits and representation of presheaves by sections. II. Embedding of presheaves into presheaves of compact spaces. (Russian summary) *Czechoslovak Math. J.* 29(104) (1979), no. 4, 514–529. (Pavel Pták) 81a:54012 54B25 (18F20)
- Functional separation of inductive limits and representation of presheaves by sections. III. Some special cases of separation of inductive limits of presheaves. With a loose Russian summary. *Czechoslovak Math. J.* 30(105) (1980), no. 3, 357–368. (From the introduction) 81g:54007 54B25 (18F20)
- Pecher, Hartmut Ein nichtlinearer Interpolationssatz und seine Anwendung auf nichtlineare Wellengleichungen. *Math. Z.* 161 (1978), no. 1, 9–40. (H. Triebel) 81h:46039 46E35 (35L60)
- (with von Wahl, Wolf) Time dependent nonlinear Schrödinger equations. *Manuscripta Math.* 27 (1979), no. 2, 125–157. (R. Glassey) 81h:35106 35L75 (35B65, 35J10)
- Existenzsätze für reguläre Lösungen semilinearer Wellengleichungen. *Nachr. Akad. Wiss. Göttingen Math.-Phys. Kl. II* 1979, no. 7, 129–151. (R. Glassey) 81g:35076 35L60 (35L30)
- On global regular solutions of third order partial differential equations. *J. Math. Anal. Appl.* 73 (1980), no. 1, 278–299. (Jagdish Chandra) 81e:35062 35K35 (35G30)
- Peck, G. W. Maximum antichains of rectangular arrays. *J. Combin. Theory Ser. A* 27 (1979), no. 3, 397–400. (D. J. Kleitman) 81e:05057 05B35
- Optimal spreading in an n -dimensional rectilinear grid. *Stud. Appl. Math.* 62 (1980), no. 1, 69–74. (Author's summary) 81a:05058 05C20 (94C99)
- Peck, N. T. (with Lotz, Heinrich P.; Porta, Horacio) Semi-embeddings of Banach spaces. *Proc. Edinburgh Math. Soc. (2)* 22 (1979), no. 3, 233–240. (E. Beckenstein) 81h:46029 46B99 (46E25)
- Peck, S. N. (with Hudson, R. L.) Canonical Fourier transforms. *J. Math. Phys.* 20 (1979), no. 1, 114–119. (Gerald A. Goldin) 81j:46107 46L60 (81C20, 81D05)
- Peckover, R. S. (with Gimblett, C. G.) On the mutual interaction between rotation and magnetic fields for axisymmetric bodies. *Proc. Roy. Soc. London Ser. A* 368 (1979), no. 1732, 75–97. (T. Erber) 81h:78005 78A25 (58C25, 86A25)
- Pécseli, H. L. (with Karpman, V. I.; Lynov, J. P.; Michelsen, P.; Rasmussen, J.; Juul, Turikov, V. A.) Modification of plasma solitons by resonant particles. *Phys. Fluids* 23 (1980), no. 9, 1782–1794. (D. ter Haar) 81j:76107 76K05 (35Q20)
- Pečoniowski, J. L. (with Leake, R. Jeffrey; Sain, M. K.) Step trackable linear multivariable plants. *Internat. J. Control* 30 (1979), no. 6, 1013–1022. (N. Harris McClamroch) 81c:93049 93C35
- Pedersen, Erik Kjaer (with Ranicki, Andrew) Projective surgery theory. *Topology* 19 (1980), no. 3, 239–254. (V. P. Snaith) 81h:57032 57R67 (18F25, 57P10)
- (with Munkholm, Hans J.) On the Wall finiteness obstruction for the total space of certain fibrations. *Trans. Amer. Math. Soc.* 261 (1980), no. 2, 529–545. (Guido Mislin) 81j:55016 55R05
- Pedersen, Flemming Danhus On the curvatures of midcurve and gable curve. *J. Geom.* 13 (1979), no. 2, 133–143. (P. Scherk) 81c:53007 53A04
- Pedersen, Gert Kjaergård (with Olesen, Dorte) Applications of the Connes spectrum to C^* -dynamical systems. *J. Funct. Anal.* 30 (1978), no. 2, 179–197. (Ola Bratteli) 81h:46074 46L05
- (with Landstad, Magnus B.; Olesen, Dorte) Towards a Galois theory for crossed products of C^* -algebras. *Math. Scand.* 43 (1978), no. 2, 311–321 (1979). (Authors' introduction) 81h:46074 46L05
- ★ C^* -algebras and their automorphism groups. London Mathematical Society Monographs, 14. Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], London-New York, 1979. ix + 416 pp. ISBN 0-12-549450-5 (J. W. Bunce) 81h:46037 46Lxx
- Čebyšev subspaces of C^* -algebras. *Math. Scand.* 45 (1979), no. 1, 147–156. (Robert S. Doran) 81h:46077 46L05
- (with Takai, Hiroshi) Crossed products of C^* -algebras by approximately uniformly continuous actions. *Math. Scand.* 45 (1979), no. 2, 282–288. (Claude Schochet) 81g:46098 46L55 (46L05)
- (with Olesen, Dorte) Applications of the Connes spectrum to C^* -dynamical systems. II. *J. Funct. Anal.* 36 (1980), no. 1, 18–32. (Ola Bratteli) 81h:46076 46L05
- (with Olesen, Dorte) On a certain C^* -crossed product inside a W^* -crossed product. *Proc. Amer. Math. Soc.* 79 (1980), no. 4, 587–590. (Richard I. Loeb) 81h:46075 46L05 (46L55)
- Pedersen, J. Bolden The reactivity dependence of the recombination probability. *J. Chem. Phys.* 72 (1980), no. 7, 3904–3908. (Author's summary) 81a:80010 80A30
- Pedersen, Jean J. (with Foster, James H.) On the reflective property of ellipses. *Amer. Math. Monthly* 87 (1980), no. 4, 294–297. (O. Bottena) 81h:51023 51N20
- Pedersen, Kurt Møller Roger Joseph Bosovich and John Robison on terrestrial aberration. Special issue dedicated to Olaf Pedersen on his sixtieth birthday. *Centaurea* 24 (1980), 335–345. (William R. Shea) 81j:01017 01A50
- Pedersen, Niels Vigand Semicharacters and solvable Lie groups. *Math. Ann.* 247 (1980), no. 3, 191–244. (Rainer Felix) 81j:22015 22E25 (43A05)
- Pedersen, Olaf See Special issue: Pedersen, Olaf, 81h:01003
- Pedersen, Paul Wolff Some approximations for trigonometrical functions. (German summary) *Numerical methods of approximation theory*, Vol. 5 (Conf., Math. Res. Inst., Oberwolfach, 1979), pp. 223–244. *Internat. Ser. Numer. Math.*, 52, Birkhäuser, Basel, 1980. (Y. L. Luke) 81g:65016 65D05 (33A10)
- Pederson, R. N. Newton's method for polynomials with real roots and their divided differences. *Constructive approaches to mathematical models (Proc. Conf. in honor of R. J. Duffin, Pittsburgh, Pa., 1978)*, pp. 447–458. Academic Press, New York, 1979. (A. de Castro Brzezicki) 81g:65061 65H05
- An equivalent norm for the Sobolev space \tilde{H}_m . *J. Analyse Math.* 36 (1979), 213–216 (1980). (J.-P. Gossez) 81h:46035 46E35
- Pedernoll, G. (with Rathie, Pushpa N.) Distribution of product and quotient of Pareto variates. *Metrika* 27 (1980), no. 3, 165–169. (Authors' summary) 81j:62045 62E15
- Pedersen, L. I. (with Ljalko, I. I.; Skorobogat'ko, A. A.) Difference schemes for a class of parabolic equations with nonstationary nonlinear boundary conditions. (Russian. English summary) *Vysisl. Prikl. Mat. (Kiev) No. 40* (1980), 38–45, 158. (E. G. D'jakonov) 81g:65133 65N10
- Pedrosa, A. C. (with Vianna, J. D. M.) On the Jordan algebra and the symmetric formulation of classical mechanics. *J. Phys. A* 13 (1980), no. 3, 825–831. (C. Martin Edwards) 81h:70009 70G35 (17C65, 58D30)
- Pedrycz, Witold (with Czogala, Ernest) On an approach to the identification of fuzzy systems. (Polish and Russian summaries) *Arch. Automat. Telemekh.* 25 (1980), no. 1, 43–50. (Authors' summary) 81g:93021 93B30
- Stabilization of bilinear systems by a linear feedback control. *Kybernetika (Prague)* 16 (1980), no. 1, 48–53. (Author's summary) 81d:93052 93D15
- Peetles, P. J. E. (with Dicke, R. H.) The big bang cosmology—enigmas and nostrums. *General relativity*, pp. 504–517. Cambridge Univ. Press, Cambridge, 1979. (See 81h:93002) 83F05
- Peole, Lawrence C. See Smith, Gary; et al., 81m:62131
- Peers, H. W. Second-order sufficiency and statistical invariants. *Biometrika* 65 (1978), no. 3, 489–496. (L. B. Klebanov) 81e:62035 62F12 (62B05, 62E20)
- Peetre, Jank A counterexample connected with Gagliardo's trace theorem. Special issue dedicated to Władysław Orlicz on the occasion of his seventy-fifth birthday. *Comment. Math. Special Issue* 2 (1979), 277–282. (Richard Bagby) 81h:46047 46E35
- Peev, G. Oscillating flow in a tube with formation of a boundary layer of solvent. *Ind.-Eng. Chem. Anal. Ed.* 52 (1980), no. 2, 238–243. (Russian); translated as *J. Engrg. Phys.* 38 (1980), no. 2, 143–147. (Author's summary) 81h:76004 76A10
- Peets, Ketty G. (with Topenčarov, Vladimir V.; Arnaudov, Ja. N.) Representation of stochastic automata. (Bulgarian. Russian and English summaries) *Godišnik Vis. Učebn. Zaved. Prilozna Mat.* 14 (1978), no. 1, 43–56. (Authors' summary) 81h:68041 68D25 (18B20)
- (with Topenčarov, Vladimir V.) Algebraic theory of stochastic automata—a categorical approach. *Serdica* 4 (1978), no. 4, 277–288. (E. M. Kublanova) 81e:68047 68D30 (18B20, 68D25)
- Peets, M. C. Existence and uniqueness of the solution of a class of integral equations with retarded vector argument. (Bulgarian. Russian and English summaries) *Godišnik Vis. Učebn. Zaved. Prilozna Mat.* 14 (1978), no. 3, 201–208 (1979). (Z. Schusa) 81h:45013 45G10 (26D15, 34K05)
- (with Konstantinov, Mihail M.) A functional inequality and its application in the theory of integral equations. (Bulgarian. Russian and English summaries) *Godišnik Vis. Učebn. Zaved. Prilozna Mat.* 14 (1978), no. 3, 209–216 (1979). (Z. Schusa) 81h:45010 45G10 (45D05)
- Pegg, D. T. Photoelectron antibunching and absorber theory. *J. Phys. A* 13 (1980), no. 4, 1389–1394. (Author's summary) 81a:81136 81L05 (81K05)
- Pegoraro, F. (with Radicati di Brozolo, Luigi) Dielectric tensor and magnetic permeability in the weak field approximation of general relativity. *J. Phys. A* 13 (1980), no. 7, 2411–2421. (Authors' summary) 81e:83034 83C50
- Pegram, G. G. S. An autoregressive model for multilog Markov chains. *J. Appl. Probab.* 17 (1980), no. 2, 350–362. (Peter Purdue) 81d:60105 60K25 (60J10)
- Peherstorfer, Franz On the representation of extremal functions in the L^1 -norm. *J.*

- Approx. Theory* 27 (1979), no. 1, 61–75. (Allan Pinkus) **81b:42012** 42A10 (41A10)
Trigonometric polynomial approximation in the L^1 -norm. *Math. Z.* **169** (1979), no. 3, 261–269. (J. Horváth) **81d:41035** 41A50 (42A10)
- Peteris, Rudolf** ★Surprises in theoretical physics. Princeton Series in Physics. Princeton University Press, Princeton, N.J., 1979. viii+167 pp. ISBN 0-691-08241-3, 0-691-08242-1 (P. Roman) **81g:81002** 81–02 (81D99, 82A99)
- Pfeiffer, Karl** An example of nonisolated equilibrium with maximum potential, stabilized by dissipative forces. (French summary) *Z. Angew. Math. Phys.* **30** (1979), no. 5, 835–837. (Robert Reiss) **81b:70014** 70K20 (70J20, 73H99)
- Pelkova, M. D.** (with B'čvarov, S. N.) Dynamics of a two-dimensional anthropomorphic model of a robot with two-legged locomotion. (Bulgarian. Russian and English summaries) *Godišnik Visš. Učebn. Zased. Priložna Mat.* **14** (1978), no. 1, 135–161. (Authors' summary) **81m:70002** 70B15
- Pelzer, Charles S.** See Morgan, Charles G., **81h:03013** and Elsele, Carolyn, **81j:01047**
- Pelzer, James Mills** See Kennedy, Hubert, **81b:01017**
- Pekalski, Andrzej** See Modern trends in the theory of condensed matter, **81h:82002**
- Pekárek, L.** (with Kráča, J.; Beránek, J.) A cusp catastrophe model for a discontinuous wave pattern observed with ionization waves. *Phys. Lett. A* **70** (1979), no. 4, 311–312. (Authors' summary) **81h:78015** 78A40 (58C28)
- Pekarev, E. L.** Regular and completely nonregular systems of colligations and their characteristic functions. (Russian) *Izv. Vysš. Učebn. Zased. Matematika* **1980**, no. 2, 73–75. (E. R. Cekanovskii) **81h:47019** 47A45
- Pekarskii, A. A.** Rational approximation of absolutely continuous functions. (Russian. English summary) *Vesci Akad. Nauk BSSR Ser. Fiz.-Mat. Nauk* **1978**, no. 6, 22–26, 139. (L. I. Hedberg) **81i:41011** 41A20 (41A25)
- Rational approximations of absolutely continuous functions with derivative in an Orlicz space. (Russian. English summary) *Dokl. Akad. Nauk BSSR* **24** (1980), no. 4, 301–304, 380. (V. N. Malozemov) **81h:41014** 41A20
- Rational approximation of singular functions. (Russian. English summary) *Vesci Akad. Nauk BSSR Ser. Fiz.-Mat. Nauk* **1980**, no. 3, 32–40, 140. (J. Szabados) **81h:41015** 41A20
- Pekelman, Dov** (with Cohen, Morris A.) LIFO inventory systems. *Management Sci.* **24** (1977/78), no. 11, 1150–1162. (R. Jagannathan) **81d:90037** 90B05
- Pekris, C. L.** Stationary spiral flow in polystyptic stellar models. *Proc. Nat. Acad. Sci. U.S.A.* **77** (1980), no. 6, part 1, 3075–3079. (Ian P. Grant) **81h:85006** 85A15 (85A30)
- Pekšić, V. A.** (with Grigorov, H.) Stratifiable cubic Cremona transformations, realized by hypercubics with a double line. (Bulgarian. Russian and English summaries) *Godišnik Visš. Učebn. Zased. Priložna Mat.* **13** (1977), no. 4, 201–208 (1978). (K. Burian) **81k:14043** 14N05
- Pelant, Jan** (with van Douwen, Eric K.; Lutzer, David J.; Reed, G. M.) On unions of metrizable subspaces. *Canad. J. Math.* **32** (1980), no. 1, 76–85. (Brian M. Scott) **81b:54006** 54B05 (54E35)
- Pelant, Jaroslav** A modification and comparison of Filippov and Viktorovskij generalized solutions. *Czechoslovak Math. J.* **29** (194) (1979), no. 2, 219–231. (G. J. Butler) **81c:34003** 34A10 (34A60)
- Pelczewski, Władysław** (with Walczak, Stanisław) Method for determining the nonexistence of common points of the optimal trajectory and state constraints set boundary. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Tech.* **27** (1979), no. 5–6, 537–544. (V. N. Igolkin) **81d:69002** 49A21
- Pelczyński, Aleksander** (with Bożejko, Marek) An analogue in commutative harmonic analysis of the uniform bounded approximation property of Banach space. *Séminaire d'Analyse Fonctionnelle* (1978–1979), Exp. No. 9, 9 pp., École Polytech., Palaiseau, 1979. (Françoise Lust) **81a:43006** 43A20 (46B99)
- (with Kwapiński, Stanisław) Absolutely summing operators and translation-invariant spaces of functions on compact abelian groups. *Math. Nachr.* **94** (1980), 303–340. (Gilles Pisier) **81j:47015** 47B10 (43A46)
- See also Banach, Stefan, **81b:46001**
- Peled, Uri N.** (with Hammer, Peter L.; Pollatschek, M. A.) An algorithm to dualize a regular switching function. *IEEE Trans. Comput.* **28** (1979), no. 3, 238–243. (Authors' summary) **81d:94034** 94C10
- (with Hammer, Peter L.; Ibaraki, Toshihide) Threshold numbers and threshold completions. *Combinatorics 79* (Proc. Colloq., Univ. Montréal, Montréal, Que., 1979), Part II. *Ann. Discrete Math.* **9** (1980), 103–106. (Authors' summary) **81k:05092** 05C99
- Peleg, Bezalel** (with Kannai, Yakar) An approach to the problem of efficient distribution of the labor force. *Applied game theory* (Proc. Conf., Inst. Adv. Stud., Vienna, 1978), pp. 214–235, IHS—Studies, 1, Physica, Würzburg, 1979. (Authors' summary) **81d:90126** 90D40 (90A11)
- (with Maschler, M.; Shapley, Lloyd S.) Geometric properties of the kernel, nucleolus, and related solution concepts. *Math. Oper. Res.* **4** (1979), no. 4, 303–338. (G. Owen) **81b:90169** 90D12
- A theory of coalition formation in committees. *J. Math. Econom.* **7** (1980), no. 2, 115–134. (G. Duru) **81h:90217** 90D12 (90A08)
- Pelch, B. L.** (with Vasil'čenko, I. P.) ★Основы электромагнитного метода исследования напряжений в анизотропных средах. (Russian) [Foundations of the electromagnetic method of studying stresses in anisotropic media] "Naukova Dumka", Kiev, 1980. 114 pp. (Publisher's description) **81a:73009** 73C30 (73R05, 78A25)
- (with Suhorol'skii, M. A.) ★Контактные задачи теории упругих анизотропных оболочек. (Russian) [Contact problems of the theory of elastic anisotropic shells] "Naukova Dumka", Kiev, 1980. 215 pp. (Vadim Komkov) **81d:73097** 73T05
- (with Suhorol'skii, M. A.) A method for the approximation of a function and its first derivative by Legendre polynomials and its applications. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A No. 3* (1980), 26–29, 90. (T. Hermann) **81d:42033** 42C10 (41A10)
- (with Gavriliv, O. S.) An approach to the solution of problems of bending of orthotropic plates. (Russian) *Mat. Metody i Fiz.-Meh. Polja No. 11* (1980), 107–111, 123. (Authors' summary) **81g:73075** 73K10
- Pelletier, L. A.** (with Clément, Philippe) On positive, concave solutions of two-point nonlinear eigenvalue problems. *J. Math. Anal. Appl.* **69** (1979), no. 2, 329–340. (G. A. Klaassen) **81i:34012** 34B15
- Pellagrad, C.** On operators with reductive commutants and commutants of reductive operator algebras. *Rev. Roumaine Math. Pures Appl.* **24** (1979), no. 1, 153–159. (Eric Nordgren) **81c:47043** 47C05 (47A15)
- Pellagrad, Magda** Local convergence for sums of dependent random variables and the law of large numbers. *Rev. Roumaine Math. Pures Appl.* **25** (1980), no. 1, 89–98. (R. I. Tomkins) **81f:60047** 60F15 (60G42)
- Pellis, V. I.** Modulus of continuity of the solutions of Plateau's problem. (Russian) *Mat. Zametki* **26** (1979), no. 4, 561–573, 654. (S. B. Klimentov) **81h:53014** 53A10 (30C99)
- Pellhor, N. V.** (with Marochnik, L. S.; Naselskii, P. D.) Turbulence in cosmology. IV. Asymptotic influence of long-wave disturbances on the expansion of a homogeneous and, on average, isotropic universe close to the cosmological singularity. *Astrophys. and Space Sci.* **67** (1980), no. 2, 261–272. (A. Raychaudhuri) **81f:85005** 85A40
- Pelinsonski, E. N.** (with Petuhov, Ju. V.; Fridman, V. E.) Approximate equations for the propagation of strong acoustic signals in the ocean. *Izv. Akad. Nauk SSSR Ser. Fiz. Atmosf. i Okeana* **15** (1979), no. 4 (Russian); translated as *Izv. Acad. Sci. USSR Atmosf. Ocean. Phys.* **15** (1979), no. 4, 299–304 (1980). (Authors' summary) **81e:86004** 86A05 (76Q05)
- (with Šavrackii, S. H.) Breaking of stationary waves in nonlinear dispersive media. *Phys. D* **1** (1980), no. 3, 317–328. (Authors' summary) **81m:78018** 78A40 (81K05)
- Pellissier, M.** (with Barthelot, J. C.; Durand, Ph.) Analytical relativistic self-consistent-field calculations for atoms. *Phys. Rev. A* (3) **21** (1980), no. 6, 1773–1785. (Authors' summary) **81g:81008** 81C05 (81G45)
- Pelliti, L.** Renormalization group calculations for critical and tricritical dynamics applied to helium. *Dynamical critical phenomena and related topics* (Proc. Internat. Conf., Univ. Geneva, Geneva, 1979), pp. 189–209, *Lecture Notes in Phys.*, **104**, Springer, Berlin, 1979. (See **81i:82002**) 82A25
- Pellizius, Rainer** Konvexitätsaussagen beim stochastischen linearen Programmieren mit Wahrscheinlichkeitsrestriktionen. *Operations Research Verfahren*, **30**, pp. 130–153, Hain, Meisenheim, 1979. (Wolf-Rüdiger Heilmann) **81g:90069** 90C15 (90C25)
- Peljub, G. P.** The general solution of a class of systems of nonlinear functional equations. (Russian) *Approximate and qualitative methods in the theory of differential and functional-differential equations* (Russian), pp. 49–53, *110, Akad. Nauk Ukrain. SSR, Inst. Mat., Kiev*, 1979. (J. Albrecht) **81c:39009** 39B30
- Pellat, R.** (with David, F.) Resonant absorption by a magnetic plasma at a rippled critical surface. *Phys. Fluids* **23** (1980), no. 8, 1682–1690. (Authors' summary) **81g:76120** 76X05
- Pellissier, Jean** (with Weron, Aleksander) Integrals related to stationary processes and cylindrical martingales. (French summary) *Ann. Inst. H. Poincaré Sect. B (N.S.)* **15** (1979), no. 2, 127–146. (S. A. Čobanjan) **81b:28010** 28B05 (60G10)
- Formule du produit et décomposition de réseaux de files d'attente. *Ann. Inst. H. Poincaré Sect. B (N.S.)* **15** (1979), no. 3, 261–286. (Brian Conolly) **81i:60095** 60K25 (90B22)
- (with Métivier, M.) On a stopped Doob's inequality and general stochastic equations. *Ann. Probab.* **8** (1980), no. 1, 96–114. (Philip Protter) **81b:60087** 60H20 (60G44)
- Solutions faibles pour des processus discontinus. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **290** (1980), no. 9, A431–A433. (Author's summary) **81b:60056** 60H10
- Disponibilité d'un ensemble complexe. (English summary) *RAIRO Rech. Opér.* **14** (1980), no. 2, 137–145. (Author's summary) **81h:90053** 90B05
- Pellegrinotti, A.** (with Marchioro, C.; Pulvirenti, M.; Triolo, L.) Erratum: "Velocity of a perturbation in infinite lattice systems" [*J. Statist. Phys.* **19** (1978), no. 5, 499–510; MR **80b:82053**]. *J. Statist. Phys.* **22** (1980), no. 6, 743. (From the text) **81f:82042** 82A67
- Peller, V. V.** Applications of ultraproducts in operator theory. A simple proof of E. Bishop's theorem. (Russian. English summary) Investigations on linear operators and the theory of functions, IX. *Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* **92** (1979), 230–240, 323–324. (P. R. Halmos) **81k:47026** 47A99 (47B20)
- Pelletier, Joan Wick** (with Rosebrugh, Robert D.) The category of Banach spaces in sheaves. *Cahiers Topologie Géom. Différentielle* **20** (1979), no. 4, 353–372. (J. B. Cooper) **81c:46055** 46M20 (18B99, 18F20)
- KAN extensions of the HOM functor in the category of Banach spaces. (French summary) *Ann. Sci. Math. Québec* **4** (1980), no. 1, 59–71. (Guy Noel) **81b:46094** 46M15 (46M40)
- Pelliscoro, M.** (with Nitti, L.; Villani, M.) Lower bounds for quantum energy levels through statistical mechanics methods. *J. Math. Phys.* **21** (1980), no. 4, 834–839. (Authors' summary) **81d:81025** 81C12 (41A21, 49G10, 81C30)
- Pelling, M. J.** (with Rogers, Douglas G.) Stein quasigroups. II. Algebraic aspects. *Bull. Austral. Math. Soc.* **20** (1979), no. 3, 321–344. (Tomáš Kepka) **81c:20054** 20N05
- Two derivations of the Fibonacci numbers. *Nanta Math.* **12** (1979), no. 2, 153–157. (Lawrence Somer) **81f:10019** 10A35
- Acknowledgement: "Regular simplices with rational vertices" [*Bull. London Math. Soc.* **9** (1977), no. 2, 199–200; MR **56** #3736]. *Bull. London Math. Soc.* **12** (1980), no. 2, 138. (Editors) **81c:52007** 52A30 (10C04)
- Pelosi, G.** (with Borchi, B.) A quantum mechanical derivation of the general uncertainty relation for real signals in communication theory. *Signal Process.* **2** (1980), no. 3, 289–292. (Authors' summary) **81k:81005** 81B05 (94A05)
- Pelosi, Virginia** Survey of the phenomenological approach to the inverse problem in elementary particles scattering. *Applied inverse problems*, pp. 330–350, *Lecture Notes in Phys.*, **85**, Springer, Berlin, 1978. (P. Roehus) **81c:81059** 81G05 (81G35)
- Pelzner, Eugeniusz** (with Majewski, Adam) Anisotropic dielectric rod with partially metallized surfaces. (Polish. Russian and English summaries) *Arch. Elektrotech. (Warsaw)* **29** (1980), no. 1, 63–73. (Authors' summary) **81j:73077** 73R05 (35J25)
- Pemberton, J.** (with Tong, H.) On stability and limit cycles of nonlinear autoregression in discrete time. *Cahiers Centre Études Rech. Opér.* **22** (1980), no. 2, 137–147. (Authors' summary) **81j:58059** 58F13 (93E15)
- Pemphill, F.** (with Boiti, M.) Similarity solutions and Bäcklund transformations of the Boussinesq equation. (Italian summary) *Nuovo Cimento B* (11) **56** (1980), no. 1, 148–156. (Hélène Airault) **81i:35138** 35Q20 (35A30, 58A15, 76B15)
- See also Nonlinear evolution equations and dynamical systems, **81i:35004**
- Penaud, Jean-Guy** (with Cori, Robert) The complexity of a planar hypermap and that of

- its dual. *Combinatorics* 79 (Proc. Colloq., Univ. Montréal, Montréal, Que., 1979), Part II. *Ann. Discrete Math.* 9 (1980), 53-62. (T. R. S. Walsh) **81m:05102** 05C65 (05C10)
- Pensko, V. V. (with Marčuk, G. I.; Protasov, A. V.) The variational principle in a small parameter method of atmospheric dynamics. (Russian) *Variational-difference methods in mathematical physics* (Proc. All-Union Conf., Novosibirsk, 1977) (Russian), pp. 213-229. *Akad. Nauk SSSR Sibirsk. Otdel., Vychisl. Centr., Novosibirsk*, 1978. (A. K. Guc) **81g:80006** 86A35 (49H05)
- Penzer, G. D. (with Neekesarskii, V. N.) Adaptive control algorithms and optimization of the movement of a robot manipulator. (Russian) *Mechanics of controllable motion* (Russian), pp. 143-159, 201. *Voprosy Meh. Process. Upravl.*, 3, Leningrad. Univ., Leningrad, 1979. (Authors' summary) **81e:93058** 93C40
- Some problems of adaptive stabilization of linear discrete systems. (Russian) *Mechanics of controllable motion* (Russian), pp. 159-174, 202. *Voprosy Meh. Process. Upravl.*, 3, Leningrad. Univ., Leningrad, 1979. (Author's summary) **81g:93123** 93E15 (93E20)
- Algorithms for the adaptive stabilization of a completely achievable linear discrete system. (Russian. English summary) *Vestnik Leningrad. Univ. Mat. Meh. Astronom.* 1980, vyp. 1, 111-113, 122. (Author's summary) **81g:93094** 93D99 (93C55)
- Penzer, I. K. (with Andreev, A. S.) On the numerical solution of boundary value problems of second-order ordinary differential equations by a cubic spline. (Bulgarian. Russian and English summaries) *Godishnik Visi. Uchebn. Zaved. Plovdiv. Mat.* 13 (1977), no. 1, 65-75 (1978). (Authors' summary) **81j:65008** 65L10 (34B05)
- On the approximate solution of boundary value problems for ordinary differential equations by a parabolic spline. (Bulgarian. Russian and English summaries) *Godishnik Visi. Uchebn. Zaved. Plovdiv. Mat.* 13 (1977), no. 2, 87-94 (1978). (Author's summary) **81j:65009** 65L10
- Peneva, I. H. (with Kondratenko, A. N.; Azarenkov, N. A.; Kuklin, V. M.) Parametric excitation of surface waves by obliquely incident electromagnetic waves. (Russian. English summary) *Bulgar. J. Phys.* 7 (1980), no. 2, 214-223. (Authors' summary) **81m:78019** 78A40
- Peng, C. K. (with Dai, Zong Duo; Lam, Tsit Yuen) Levels in algebra and topology. *Bull. Amer. Math. Soc. (N.S.)* 3 (1980), no. 2, 845-848. (J. Bochnak) **81j:10072** 10J05 (12D15, 55M20)
- Peng, Jia Gu (with Wang, Qi Ming) Critical points of finite Blaschke products and the equation $\Delta u = e^u$. (Chinese. English summary) *Kexue Tongbao* 24 (1979), no. 13, 583-586. (Wu Yung Ch'en) **81d:30055** 30D50
- Peng, Tsai Ann On finite metanilpotent groups. *Southeast Asian Bull. Math.* 3 (1979), no. 2, 230-234. (J. A. Gallian) **81j:20036** 20D15 (20D20)
- The Fitting subgroup and the hypercentre. *Proceedings of the First Franco-Southeast Asian Mathematical Conference* (Nanyang Univ., Singapore, 1979). *Southeast Asian Bull. Math.* 1979, Special Issue a, 152-156. (H. Lausch) **81h:20027** 20D25
- Pensko, A. J. (with Stanojević, Č. V.) An integral analogue to parallelogram law. *Proc. Amer. Math. Soc.* 79 (1980), no. 3, 427-430. (Yehoram Gordon) **81j:46027** 46C99
- Pensk, M. A. (with Crandall, R. E.) A search for large twin prime pairs. *Math. Comp.* 33 (1979), no. 145, 383-388. (H. J. Godwin) **81a:10010** 10A25 (10J10)
- Pensker, Horst The study of the motions of a compressible fluid determined from the point source by a perturbation. (Romanian. German summary) *Stud. Cerc. Mat.* 31 (1979), no. 3, 331-336. (Simona Popp) **81e:76031** 76N10 (35L67)
- Penskov, B. See Summer School: Probability Theory and Mathematical Statistics, **81j:60004**
- Pennacchioni, M. (with Torelli, M.) Some structural properties of Petri nets. (Italian. English summary) *Riv. Mat. Sci. Econ. Social.* 3 (1980), no. 2, 83-100. (Authors' summary) **81m:68047** 68D90
- Pennery, Richard C. Central idempotent measures on a nilmanifold. *J. Funct. Anal.* 36 (1980), no. 2, 255-271. (Leonard F. Richardson) **81d:43010** 43A85 (22E40)
- Harmonically induced representations on nilpotent Lie groups and automorphic forms on nilmanifolds. *Trans. Amer. Math. Soc.* 260 (1980), no. 1, 123-145. (L. Corwin) **81j:22008** 22E27 (14K25, 43A85)
- Lie cohomology of representations of nilpotent Lie groups and holomorphically induced representations. *Trans. Amer. Math. Soc.* 261 (1980), no. 1, 33-51. (A. Kleppner) **81j:22005** 22E25 (17B56)
- Pennig, Frans (with Sauer, Niko) On a class of weighted Sobolev spaces and the minimization of quadratic forms. *Proc. Roy. Soc. Edinburgh Sect. A* 81 (1978), no. 1-2, 119-130. (M. B. Suryanarayana) **81j:46048** 46E35 (49G15)
- Pemet, Jean-Paul (with Malivert, Christian; Théra, Michel) Minimisation d'une fonction régulière sur un fermé non régulier et non convexe d'un espace de Hilbert. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 286 (1978), no. 24, A1191-A1193. (Authors' summary) **81e:58019** 58E05 (47H05, 90C30)
- Fixed point theorems without convexity. *Analyse non convexe* (Proc. Colloq., Pau, 1977). *Bull. Soc. Math. France Mém. No. 60* (1979), 129-152. (Simeon Reich) **81c:47061** 47H10 (54H25)
- Inversion à droite d'applications non linéaires. Applications. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 21, A997-A1000. (P. Ver Eecke) **81m:58017** 58C15 (46G99, 47H99)
- Pemrose, Roger The geometry of the universe. *Mathematics today*, pp. 83-125, Springer, New York, 1978. (See **80b:00007**) **83Cxx**
- Black holes. *Albert Einstein: his influence on physics, philosophy and politics*, pp. 33-50. Vieweg, Braunschweig, 1979. (See **81f:01039**) **83F05** (01A70)
- On the twistor descriptions of massless fields. *Complex manifold techniques in theoretical physics* (Proc. Workshop, Lawrence, Kan., 1978), pp. 55-91. *Res. Notes in Math.*, 32, Pitman, San Francisco, Calif., 1979. (Nicholas M. J. Woodhouse) **81h:83005** 83C05 (32C35)
- Recent advances in global general relativity: a brief survey. *Einstein Symposium, Berlin* (1979), pp. 36-45. *Lecture Notes in Phys.*, 100, Springer, Berlin, 1979. (Andrew King) **81g:83044** 83C99
- Singularities and time-asymmetry. *General relativity*, pp. 581-638, Cambridge Univ. Press, Cambridge, 1979. (See **81j:83002**) **83C99**
- Pentaplexity: a class of nonperiodic tilings of the plane. *Math. Intelligencer* 2 (1979/80), no. 1, 32-37. (Joshua Zak) **81d:52012** 52A45 (05B45)
- The complex geometry of the natural world. *Proceedings of the International Congress of Mathematicians (Helsinki, 1978)*, pp. 189-194. *Acad. Sci. Fennica, Helsinki*, 1980. (M. A. H. MacCallum) **81e:83029** 83C45
- Null hypersurface initial data for classical fields of arbitrary spin and for general relativity. *Gen. Relativity Gravitation* 12 (1980), no. 3, 225-264. (Author's summary) **81d:83044** 83C99 (58D30, 78A25)
- Penson, K. A. (with Jullien, R.; Pleuty, P.; Uzelac, K.) Renormalization-group study of a two-dimensional frustrated-like quantum spin system. *Phys. Rev. Lett.* 44 (1980), no. 23, 1551-1558. (Authors' summary) **81e:82008** 82A15 (82A25)
- Penttinen, Martti (with Linna, Matti) New proofs for jump dpa's. *Mathematical foundations of computer science*, 1979 (Proc. Eighth Sympos., Olomouc, 1979), pp. 354-362. *Lecture Notes in Comput. Sci.*, 74, Springer, Berlin, 1979. (From the introduction) **81e:68102** 68F10 (68D35)
- Pepe, Luigi (with Borgato, Maria Teresa) Approximability of open sets in \mathbb{R}^n of finite perimeter. (Italian. English summary) *Ann. Univ. Ferrara Sez. VII (N.S.)* 24 (1979), 125-135. (Thomas I. Vogel) **81b:28007** 28A75
- The Sobolev-Poincaré inequality. (Italian. English summary) *Ann. Univ. Ferrara Sez. VII (N.S.)* 24 (1979), 191-199. (J. S. Martins) **81e:46026** 46E35 (26D10)
- Peplowski, P. (with Dembiński, S. T.; Kossakowski, A.; Lugiato, L. A.; Mandel, P.) Laser instability below threshold. *Phys. Lett. A* 68 (1978), no. 1, 20-22. (Authors' summary) **81m:81087** 81K05
- (with Mrugała, F.) Stability investigations of laser with saturable absorber. *Z. Phys. B* 38 (1980), no. 4, 359-364. (Authors' summary) **81d:81132** 81K05 (82A25)
- Pepper, D. W. (with Cooper, R. E.) Numerical solution of recirculating flow by a simple finite element recursion relation. Special issue: computational methods in nonlinear fluid mechanics. *Comput. & Fluids* 8 (1980), no. 2, 213-223. (Authors' summary) **81d:76034** 76D05 (65N30)
- (with Baker, A. J.) A high-order accurate numerical algorithm for three-dimensional transport prediction. *Comput. & Fluids* 8 (1980), no. 4, 371-390. (Authors' summary) **81g:82083** 82A70
- Pepper, P. (with Broy, M.; Dosch, W.; Patsch, H.; Wirsing, M.) Existential quantifiers in abstract data types. *Automata, languages and programming* (Sixth Colloq., Graz, 1979), pp. 73-87. *Lecture Notes in Comput. Sci.*, 71, Springer, Berlin, 1979. (Authors' summary) **81d:68028** 68B15
- (with Broy, M.; Patsch, H.; Wirsing, M.) Semantic relations in programming languages. *Information processing 80* (Proc. IFIP Congr., Tokyo/Melbourne, 1980), pp. 101-106. *IFIP Congress Ser.*, 8, North-Holland, Amsterdam, 1980. (See **81i:68009**) **68B10**
- Perrade, D. G. Error distribution in the solution of linear equations. *Numer. Funct. Anal. Optim.* 1 (1979), no. 3, 281-287. (Peter Lancaster) **81e:65017** 65F10 (65G99)
- Persad, Zdzisław Asymptotic decay of solutions of hyperbolic systems into simple waves. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Tech.* 26 (1978), no. 12, 1019-1025. (Alan Jeffrey) **81j:35013** 35B40 (35L45)
- (with Slomczynska, Jerzy) Finite-difference scheme for stationary Navier-Stokes equations with variable coefficients. *Nonlinear partial differential equations in engineering and applied science* (Proc. Conf., Univ. Rhode Island, Kingston, R.I., 1979), pp. 343-371. *Lecture Notes in Pure and Appl. Math.*, 54, Dekker, New York, 1980. (Christopher Caldwell) **81m:65164** 65N20 (35Q10, 76R99)
- Peral, Irene See Peral Alonso, Irene
- Peral Alonso, Irene See Fourier analysis, **81f:42001**
- Peral Alonso, Juan (with Matilla Marin, Miguel) Estimations L^p pour l'équation de Klein-Gordon. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 10, A449-A451. (M. H. Protter) **81j:35087** 35L05 (81D25)
- L^p estimates for the wave equation. *J. Funct. Anal.* 36 (1980), no. 1, 114-145. (R. Glassey) **81k:35089** 35L05 (35B30)
- Peralha, Jean-Claude Caractérisation du sous-différentiel associé à un problème de minimisation convexe à contrainte vectorielle. Application au calcul des variations. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 286 (1978), no. 15, A675-A678. (Author's summary) **81h:90120** 90C25 (46G05, 49A50, 58C20)
- Perrit, Anthony L. (with Green, James; Nielsen, Dale) Evolution of colliding plasmas. *Phys. Rev. Lett.* 44 (1980), no. 26, 1767-1770. (Authors' summary) **81d:76122** 76X05 (82A45, 85A05)
- Perrazo, R. P. J. (with Bés, D. R.; Dussel, G. G.) Perturbative treatment of nuclear rotations: two-dimensional case. *Nuclear Phys. A* 340 (1980), no. 1, 157-182. (Authors' summary) **81g:81014** 81C12 (81G35)
- Percacci, R. (with Omero, C.) Generalized nonlinear σ -models in curved space and spontaneous compactification. *Nuclear Phys. B* 165 (1980), no. 2, 351-364. (J. H. Rawnsley) **81e:81071** 81E10 (58E20)
- Perecl, Peter B. Note on a global homotopy. *Numer. Funct. Anal. Optim.* 2 (1980), no. 1, 99-106. (Kurt Georg) **81m:65075** 65H10 (55M20, 58C30, 90C20)
- On homotopies of transient vector fields. *Topology* 19 (1980), no. 4, 387-393. (Michael Handel) **81k:58041** 58F10 (57R25)
- Perece, A. V. (with Špak, V. F.) Parallelization of the process of syntactical analysis for multiprocessor computing systems on the basis of adjusting logical structures. (Russian) *Gibridnye Vychisl. Mašiny i Kompleksy No. 2* (1979), 35-39, 106. (Authors' summary) **81j:68104** 68F25
- Perchak, D. (with Weiner, J. H.) Local-mode approximations in the Frenkel-Kontorova or sine-Gordon chain. *Phys. Rev. B* 3 (1980), no. 6, 2683-2694. (Authors' summary) **81h:82051** 82A67 (35Q20)
- Perdos, Anna-Maria (with Conte, Giuseppe) Sur les représentations fractionnaires et les réalisations observables de dimension finie des relations linéaires entrée-sortie. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 11, A515-A517. (Authors' summary) **81d:93016** 93B15
- Peregrine, D. H. (with Stassnie, M.) Shoaling of finite-amplitude surface waves on water of slowly varying depth. *J. Fluid Mech.* 97 (1980), no. 4, 783-805. (Authors' summary) **81d:76016** 76B15
- Peregudov, A. N. The second boundary value problem for a class of quasilinear parabolic systems of differential equations. (Russian) *Uspehi Mat. Nauk* 35 (1980), no. 1(211), 209-210. (B. P. Panjajit) **81e:35068** 35K60 (80A30)
- Simões-Pereira, J. M. S. See Simões-Pereira, J. M. S.
- Pereira da Silva, Clóvis (with Katsune Miyazaki, Florinda) Relations among some classes

- of quasigroups. *Rev. Colombiana Mat.* **13** (1979), no. 4, 311–321. (Ján Duplák)
81m:20092 20N05
- Perelli, A. (with Zannier, U.) An arithmetic property of polynomials. (Italian. English summary) *Boll. Un. Mat. Ital. A* (5) **17** (1980), no. 1, 199–202. (L. Caritz) 81i:10073 10M05
- Perelli, Carlos Intertwining invariant manifolds and Lorenz attractor. *Global theory of dynamical systems* (Proc. Internat. Conf., Northwestern Univ., Evanston, Ill., 1979), pp. 375–378, *Lecture Notes in Math.*, 819, Springer, Berlin, 1980. (Richard C. Churchill) 81m:58053 58F13
- Perelman, M. A. Well-posed boundary value problems with a distributed boundary condition. (Russian) *Teor. Funktsii Funktsional. Anal. i Prilozhen.* No. 30 (1977), 112–120, v. (From the text) 81h:35006 35G05
- Perelman, M. A. (with Semenov, Ju. A.) Selfadjointness of elliptic operators with a finite and with an infinite number of variables. (Russian) *Funktsional. Anal. i Prilozhen.* **14** (1980), no. 1, 81–82. (Woodford W. Zachary) 81h:35046 35J10 (35R10, 47F05, 81C10)
- Perturbation of operators with an integral resolvent. (Russian) *Funktsional. Anal. i Prilozhen.* **14** (1980), no. 2, 75–76. (A. G. Ramm) 81e:47041 47G05 (47A55)
- Perelman, A. M. Equilibrium configurations and small oscillations of some dynamical systems. *Ann. Inst. H. Poincaré Sect. A (N.S.)* **28** (1978), no. 4, 407–415. (Author's summary) 81i:34044 34C35 (58F07)
- The simple relation between certain dynamical systems. *Comm. Math. Phys.* **63** (1978), no. 1, 9–11. (J. S. Joel) 81m:34059 34C35 (58F05, 58F07, 70H05)
- (with Ol'faneckii, M. A.) Quantum systems that are connected with root systems, and radial parts of Laplace operators. (Russian) *Funktsional. Anal. i Prilozhen.* **12** (1978), no. 2, 57–65, 96. (Yasuhiro Asao) 81a:43014 43A85 (58G99)
- Description of generalized coherent states closest to classical states. *Jadernaja Fiz.* **29** (1979), no. 6, 1688–1696. (Russian); translated as *Soviet J. Nuclear Phys.* **29** (1979), no. 6, 867–871. (R. Delbourgo) 81a:22011 22E70 (81C99)
- (with Berezin, F. A.) Group-theoretic interpretation of equations of the Korteweg-de Vries type. (Russian) *Funktsional. Anal. i Prilozhen.* **14** (1980), no. 2, 50–51. (P. A. Kul'ment) 81h:58036 58F07 (35Q20)
- Perelson, Alan S. Applications of optimal control theory to immunology. *Recent developments in variable structure systems, economics and biology* (Proc. US-Italy Sem., Taormina, 1977), pp. 272–287, *Lecture Notes in Econom. and Math. Systems*, 162, Springer, Berlin, 1978. (Author's summary) 81i:92010 92A09 (49A36)
- Stochastic models for the evolution of multigene families. Conference on Deterministic Differential Equations and Stochastic Processes Models for Biological Systems (San Cristóbal, N.M., 1977). *Rocky Mountain J. Math.* **9** (1979), no. 1, 115–130. (Ivar Heuch) 81j:92024 92A10
- Receptor clustering on a cell surface. II. Theory of receptor cross-linking by ligands bearing two chemically distinct functional groups. *Math. Biosci.* **49** (1980), no. 1–2, 87–110. (Author's summary) 81e:92010 92A09
- (with Albert, Arthur; Freedman, Marvin) Tumors and the immune system: the effects of a tumor growth modulator. *Math. Biosci.* **50** (1980), no. 1–2, 25–58. (M. E. Wise) 81h:92005 92A07 (34C25)
- Perennes, Guy Algorithme pour l'optimisation d'un discriminateur. *Recognition of shapes and artificial intelligence* (Second AFCET-IRIA Cong., Toulouse, 1979), Vol. 1 (French), pp. 300–309, IRIA, Rocquencourt, 1979. (See 81j:58007) 68G10
- Peres, Asher Measurement of time by quantum clocks. *Amer. J. Phys.* **48** (1980), no. 7, 552–557. (Author's summary) 81e:81016 81B05
- Nonexponential decay law. *Ann. Physics* **129** (1980), no. 1, 33–46. (Author's summary) 81m:81030 81C99
- (with Feingold, Susan J.) How often are Bell's inequality premises violated? *J. Phys. A* **13** (1980), no. 10, 3187–3194. (Authors' summary) 81h:81005 81B05
- Peresskii, A. A. Qualitative theory of open cosmological models with motion of matter. (Russian) *Trudy Sem. Petrovsk.* No. 5 (1979), 137–162. (N. V. Micevici) 81a:83044 83F05 (53C50, 53C80)
- Perestjuk, M. O. (with Karkinbaev, I.) Application of the Krylov-Bogoljubov asymptotic method to the study of systems with impulse action. (Ukrainian. English and Russian summaries) *Visnik Kirov. Univ. Ser. Mat. Meh.* No. 20 (1978), 51–59, 164. (Snezana Hristova) 81h:34043 34E05 (34C29)
- (with Karkinbaev, I.) On the question of the justification of the application of asymptotic methods to the study of impulse systems. (Russian) *Asymptotic methods in the theory of nonlinear oscillations* (Proc. All-Union Conf. Asymptotic Methods in Nonlinear Mech., Katsiveli, 1977) (Russian), pp. 43–50, 273, "Naukova Dumka", Kiev, 1979. (T. Canturia) 81h:34040 34C15
- Peret'jakin, M. G. A criterion of strong constructivizability of a homogeneous model. (Russian) *Algebra i Logika* **17** (1978), no. 4, 436–454, 491. (Author's summary) 81j:03051 03C50
- Peretti, Aldo New insights for old problems. I. Asymptotic exact formulas for the number of twin, Mersenne & Fermat primes, solutions of Fermat's equation, etc. *Bull. Number Theory Related Topics* **3** (1978), no. 1, 1–7. (Bruce C. Berndt) 81a:10057a 10H15 (10A20, 10H25)
- Some new formulae in the theory of the ζ -function. I. *Bull. Number Theory Related Topics* **3** (1978), no. 1, 8–14. (Don Redmond) 81b:10024a 10H05
- Some new formulae in the theory of the ζ -function. II. *Bull. Number Theory Related Topics* **3** (1978), no. 2, 1–20. (Don Redmond) 81b:10024c 10H05
- Errata: "New insights for old problems. I". *Bull. Number Theory Related Topics* **3** (1978), no. 2, 20. (Bruce C. Berndt) 81a:10057b 10H15 (10A20, 10H25)
- Errata: "Some new formulae in the theory of the ζ -function". *Bull. Number Theory Related Topics* **3** (1978), no. 2, 20. (Don Redmond) 81b:10024b 10H05
- New insights for old problems. II. Asymptotic exact formulas for Goldbach partitions, prime numbers of the form $n^2 + a$. *Bull. Number Theory Related Topics* **3** (1978), no. 3, 18–22. (Bruce C. Berndt) 81a:10057c 10H15 (10A20, 10H25)
- Peresverzev, S. V. Exact values of the approximation by Hermite splines on a class of differentiable functions of two variables. (Russian) *Akad. Nauk Ukrain. SSR Inst. Mat. Preprint No. 26 Spilnyy v Zadačah Approximac. i Sglazhoan.* (1978), 32–41. (Yury Girshovich) 81h:41005 41A63 (41A15)
- (with Šabozov, M.) On the question of quadrature and cubature formulas that are connected with Hermite splines. (Russian) *Akad. Nauk Ukrain. SSR Inst. Mat. Preprint No. 26 Spilnyy v Zadačah Approximac. i Sglazhoan.* (1978), 42–47. (Yury Girshovich) 81h:41078 41A55 (65D07, 65D32)
- Best quadrature formula for a class of functions with an r th derivative having bounded variation. (Russian) *The theory of functions and its applications* (Russian), pp. 194–199, 212, "Naukova Dumka", Kiev, 1979. (Yury Girshovich) 81h:41079 41A55
- Exact values of approximation by Hermite splines on a class of functions of two variables. (Russian) *Ukrain. Mat. Ž.* **31** (1979), no. 5, 510–516, 619. (E. Neuman) 81c:41023 41A15 (41A63, 65D07)
- (with Nazarenko, N. A.) Exact values of an approximation by Hermite splines of even degree on classes of differentiable functions. (Russian) *Mat. Zametki* **28** (1980), no. 1, 33–44, 167. (A. A. Ligon) 81m:41009 41A15
- Methods that are optimal with respect to order for the approximate solution of Fredholm integral equations. (Russian) *Ukrain. Mat. Ž.* **32** (1980), no. 2, 181–188, 284. (V. D. Didenko) 81h:65149 65R20
- Peresverzev-Orlov, V. S. (with Alekseevskaja, M. A.; Sablin, V. M.) Prediction of medical tactics. (Russian) Mathematical models of mechanisms of pathological processes. *Voprosy Kibernet.* (Moscow) No. 49 (1979), 111–119. (See 81f:92007) 92A07
- Pereyra, P. (with Jauregui, A.) Explicit basis for the irreducible representation of the group $O(2, 1)$ in the terms of eigenfunctions of the two-dimensional pseudo-Coulomb problem. *Rev. Mexicana Fis.* **26** (1979/80), no. 3, 363–369. (Authors' summary) 81h:81006 81C40 (22E70, 81C05)
- Perez, Albert Simplifications ϵ -admissibles de la structure de dépendance d'un ensemble de variables aléatoires. (English summary) *Information theory* (Proc. Internat. CNRS Colloq., Cachan, 1977) (French), pp. 35–46, *Colloques Internat. CNRS*, 276, CNRS, Paris, 1978. (Andrea Sgarro) 81c:62006 62B05 (94A17)
- On Shannon-McMillan's limit theorem for pairs of stationary random processes. *Kybernetika* (Prague) **16** (1980), no. 4, 301–314. (John C. Kieffer) 81m:60038 60F05
- barja Pérez, J. M. See Barja Pérez, J. M.
- Pérez, José de Jesús (with Logan, J. David) Similarity solutions for reactive shock hydrodynamics. *SIAM J. Appl. Math.* **39** (1980), no. 3, 512–527. (H. M. Cekirge) 81m:76030 76L05 (35A99, 35L67)
- Pérez Boada, Susana Solutions of n -person games. (Spanish) *Gaceta Mat.* (1) (Madrid) **30** (1978), no. 5–6, 142–150. (G. Owen) 81i:90218 90D12
- Pérez de Vargas, Alberto (with Martínez Calvo, María Cristina) Note on the notion of adherence. (Spanish. French summary) *Proceedings of the First Spanish-Portuguese Mathematical Conference* (Madrid, 1973) (Spanish), pp. 333–337, *Consejo Sup. Im. Cient.*, Madrid, 1977. (B. J. Pearson) 81m:54006 54A05
- Pérez-García, C. (with Jou, D.) On a Ginzburg-Landau constitutive equation for the evolution and fluctuations of the heat flux. *Phys. A* **104** (1980), no. 1–2, 320–331. (Authors' summary) 81m:62021 82A35
- Perfect, Hazel (with Bryant, V. W.; Dawson, Jeremy E.) Hereditary circuit spaces. *Compositio Math.* **37** (1978), no. 3, 339–351. (Authors' summary) 81g:05037 05B25
- Remarks on Dilworth's theorem in relation to transversal theory. *Glasgow Math. J.* **21** (1980), no. 1, 19–22. (Werner Poguntke) 81e:06002 06A10 (05A05)
- Pergament, A. H. (with Tel'kovskaja, O. V.) The regularization method and the maximum likelihood method in solution of integral equations of the first kind. (Russian) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 111* (1979), 21 pp. (V. V. Vasin) 81h:65150 65R20 (45L10)
- (with Marčenko, N. A.) Some questions of the theory of approximations and problems of filtration. (Russian) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 178* (1979), 20 pp. (Authors' summary) 81a:76045 76S05
- Periaux, J. (with Bristeau, M. O.; Glowinski, Roland; Mantel, B.; Perrier, Pierre; Pironneau, Olivier) A finite element approximation of Navier-Stokes equations for incompressible viscous fluids. Iterative methods of solution. *Approximation methods for Navier-Stokes problems* (Proc. Sympos., Univ. Paderborn, Paderborn, 1979), pp. 78–128, *Lecture Notes in Math.*, 771, Springer, Berlin, 1980. (Authors' summary) 81h:65080 65N30 (76D05)
- (with Glowinski, Roland; Mantel, B.; Pironneau, Olivier; Poirier, G.) An efficient preconditioned conjugate gradient method applied to nonlinear problems in fluid dynamics via least square formulations. *Computing methods in applied sciences and engineering* (Proc. Fourth Internat. Sympos., Versailles, 1979), pp. 445–487, North-Holland, Amsterdam, 1980. (Nima Geffen) 81h:76035 76H05 (49D07, 65N30)
- (with Glowinski, Roland; Pironneau, Olivier) An efficient preconditioning scheme for iterative numerical solutions of partial differential equations. *Appl. Math. Modelling* **4** (1980), no. 3, 187–192. (L. Fox) 81j:65107 65Nxx (65F10)
- Perić, Veselina (with Maravić, Manojlo; Vajzović, Fikret) Life and work of Academician Mahmut Bajraktarević (Serbo-Croatian) *Akad. Nauka Unjet. Bosne Hercegov. Rad. Odjelj. Prirod. Mat. Nauka* No. 19 (1980), 5–17. (Editors) 81i:01013 01A70
- Perina, Jan (with Peřinová, Vlasta) Quantum statistics and coherence of light. (Czech and Russian summaries) *Sb. Práci Přírodověd. Fak. Unio. Palackého v Olomouci Fyz.* **18** (1979), 27–54. (F. Rocca) 81h:81195 81K05
- Peřinová, Vlasta (with Perina, Jan) Quantum statistics and coherence of light. (Czech and Russian summaries) *Sb. Práci Přírodověd. Fak. Unio. Palackého v Olomouci Fyz.* **18** (1979), 27–54. (F. Rocca) 81h:81195 81K05
- Perjes, Zoltan Unitary space of partial internal states. *Phys. Rev. D* (3) **20** (1979), no. 8, 1857–1876. (A. O. Barut) 81a:81144 81M05 (22E70)
- Perkel, Manley Bounding the valency of polygonal graphs with odd girth. *Canad. J. Math.* **31** (1979), no. 6, 1307–1321. (Donald E. Taylor) 81m:05078 05C25 (20B25)
- A characterization of $PSL(2, 31)$ and its geometry. *Canad. J. Math.* **32** (1980), no. 1, 155–164. (Gareth A. Jones) 81b:20003 20B10 (05C25)
- A characterization of J_1 in terms of its geometry. *Geom. Dedicata* **9** (1980), no. 1, 291–298. (Hugo S. Sun) 81j:05066 05C25 (20B25, 20D06)
- Perko, Richard Zur Theorie der partiellen Differentialgleichungen vom Briot-Bouquet'schen Typ. *Arch. Math. (Brno)* **15** (1979), no. 4, 233–244. (Wolfgang Tuschke) 81g:35012 35C10 (32A05, 34A25, 58A17)
- Peri, Yoshinobu (with Golumbic, Martin Charles) Generalized Fibonacci maximum path graphs. *Discrete Math.* **28** (1979), no. 3, 237–245. (Shmuel Zaks) 81g:05073 05C51 (05C45, 10A35)

- Partis, A. J. (with Bauer, Friedrich L.; Erkov, A. P.; Paul, Manfred) Klaus Sameison. *Acta Inform.* 15 (1981), no. 1, 1-2. (Editors) **81b:01025** 01A70
- Partis, Robert (with Meyer, Werner) On the genus of norm forms. *Math. Ann.* 246 (1979/80), no. 2, 117-119. (Ezra Brown) **81f:10031** 10C99 (12A50, 12A55)
- Perlman, Michael D. Unbiasedness of multivariate tests: recent results. *Multivariate analysis, V (Proc. Fifth Internat. Sympos., Univ. Pittsburgh, Pittsburgh, Pa., 1978)*, pp. 413-432. North-Holland, Amsterdam, 1980. (Nariaki Sugiyama) **81c:62061** 62H15 (62F04)
- (with Hall, Richard L.; Kanter, Marek) Inequalities for the probability content of a rotated square and related convolutions. *Ann. Probab.* 8 (1980), no. 4, 802-813. (Yosef Rinott) **81k:60026** 60E15 (62H05)
- (with Marden, John) Invariant tests for means with covariates. *Ann. Statist.* 8 (1980), no. 1, 25-63. (R. H. Farrell) **81b:62071** 62H15 (62C07)
- Unbiasedness of the likelihood ratio tests for equality of several covariance matrices and equality of several multivariate normal populations. *Ann. Statist.* 8 (1980), no. 2, 247-263. (Hisao Nagao) **81c:62092** 62H10 (62H15)
- Perlman, S. Functions of generalized variation. *Fund. Math.* 105 (1979/80), no. 3, 199-211. (B. Bongiorno) **81h:26007** 26A45
- Perlmutter, Arnold See High-energy physics in the Einstein centennial year, **81a:81003** and On the path of Albert Einstein, **81k:83003**
- Perlmutter, E. A. (with Vazhenin, Ju. M.) Rigid lattices and graphs. (Russian) *Ural. Gos. Univ. Mat. Zap.* 11 (1979), no. 3. Issled. po Sovrem. Algebra, 3-21, 209. (Larry Basenpiller) **81g:05061** 05C15 (06B99)
- Perljakov, V. A. (with Kuvaev, V. M.) A new approach to the calculation of electromagnetic wave scattering characteristics for a two-dimensionally inhomogeneous cylinder of arbitrary cross section. (Russian) *Trudy Moskov. Orden. Lenin. Energet. Inst.* 40.433 (1979), 56-60, 95. (Authors' summary) **81e:78032** 78A45
- Peng, S.-S. Exponentially bounded stopping times of invariant SPRTs in general linear models: finite mgf case. *Ann. Statist.* 6 (1978), no. 1, 85-91. (J. Sethuraman) **81b:62096** 62L10
- Perold, André F. (with Dantzig, George B.) A basis factorization method for block triangular linear programs. *Sparse Matrix Proceedings 1978 (Sympos. Sparse Matrix Comput., Knoxville, Tenn., 1978)*, pp. 283-312. SIAM, Philadelphia, Pa., 1979. (N. N. Abdelmalek) **81j:90091** 90C06 (15A23)
- (with Chvátal, V.; Graham, Ronald L.; Whitesides, S. H.) Combinatorial designs related to the strong perfect graph conjecture. *Discrete Math.* 26 (1979), no. 2, 83-92. (László Lovász) **81b:05044** 05C15 (05B10, 05C50)
- A generalization of the Frank-Wolfe theorem. *Math. Programming* 18 (1980), no. 2, 215-227. (Nobuo Sannomiya) **81j:90096** 90C20
- A degeneracy exploiting LU factorization for the simplex method. *Math. Programming* 19 (1980), no. 3, 239-254. (Author's summary) **81i:90130** 90C06 (65F10, 65K05)
- Perov, A. I. Adaptive filtering of discrete processes. (Russian) *Trudy Moskov. Orden. Lenin. Energet. Inst.* No. 431 (1979), 3-6, 99. (Author's summary) **81h:93112** 93E11 (93E12)
- Perov, V. L. (with Marčuk, G. I.; Dymnikov, V. P.; Lykosov, V. N.; Galin, V. Ja.; Bobyleva, I. M.) A global model of the general atmospheric circulation. *Izv. Akad. Nauk SSSR Ser. Fiz. Atmosf. i Okeana* 15 (1979), no. 5. (Russian); translated as *Izv. Acad. Sci. USSR Atmosf. Ocean. Phys.* 15 (1979), no. 5, 321-331 (1980). (Authors' summary) **81e:86010** 86A10
- Perov, V. P. Synthesis of self-adaptive informational systems in an orthogonal basis. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* 1979, no. 5, 172-181, 223. (Russian); translated as *Engng. Cybernetics* 17 (1979), no. 5, 124-133 (1980). (Author's summary) **81i:94005** 94A11
- Perović, Miroslav Isolated singularity of the mean quasiconformal mappings. *Romanian-Finnish Seminar on Complex Analysis (Proc., Bucharest, 1976)*, pp. 212-214. *Lecture Notes in Math.*, 743, Springer, Berlin, 1979. (H. M. Reimann) **81i:30040** 30C60
- Perron, J. W. (with Smith, E. R.) The role of poles of the structure factor in determining properties of the hard sphere fluid. *J. Phys. A* 13 (1980), no. 6, 2219-2227. (Authors' summary) **81d:82008** 82A05 (82A50)
- Solutions of the ion transport equations with applications to the resting state of active cell membranes. *Match No. 8* (1980), 37-119. (J. P. Kernevez) **81j:92016** 92A09 (76Z05, 92A40)
- Perrin, Andrew L. A note on rational L_p approximation. *J. Approx. Theory* 23 (1978), no. 3, 199-200. (H. L. Loeb) **81a:41025** 41A20
- Perrin, Pierre (with Pironneau, Olivier) Couplage des grosses et petites structures turbulentes par l'homogénéisation. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 286 (1978), no. 14, A635-A638. (Authors' summary) **81b:65064** 65N99 (76D05)
- (with Bristeau, M. O.; Glowinski, Roland; Mantel, B.; Periaux, J.; Pironneau, Olivier) A finite element approximation of Navier-Stokes equations for incompressible viscous fluids. Iterative methods of solution. *Approximation methods for Navier-Stokes problems (Proc. Sympos., Univ. Paderborn, Paderborn, 1979)*, pp. 78-128. *Lecture Notes in Math.*, 771, Springer, Berlin, 1980. (Authors' summary) **81b:65098** 65N30 (76D05)
- Perrin, D. (with Schützenberger, Marcel-Paul) Un problème élémentaire de la théorie de l'information. (English summary) *Information theory (Proc. Internat. CNRS Colloq., Cachan, 1977) (French)*, pp. 249-260. *Colloques Internat. CNRS*, 276, CNRS, Paris, 1978. (L. L. Campbell) **81k:94038** 94B45 (94A29)
- (with Berstel, Jean; Perrot, J.-F.; Restivo, Antonio) Sur le théorème du défaut. *J. Algebra* 60 (1979), no. 1, 169-180. (André Lentin) **81b:20038** 20M05 (68F05)
- Perrin, Yvette Fonctions analytiques sur certains corps valués au sens de Krull. *Séminaire de Théorie des Nombres, 1978-1979*, Exp. No. 6, 18 pp., CNRS, Talence, 1979. (W. Bartenwerfer) **81i:30082** 30C05
- Percyrol-Perrin, Yvette See Fenechrol-Perrin, Yvette
- Perrine, Serge A new aspect of some Post algebras. *Proceedings of the Eighth International Symposium on Multiple-Valued Logic (Rosemont, Ill., 1978)*, p. 259. IEEE, Long Beach, Calif., 1978. (L. L. Maksimova) **81i:03100** 03G20 (06D25)
- Perrin-Riou, Bernadette ★ Plongement d'une extension diédrale dans une extension diédrale ou quaternionienne. (French) [Embedding of a dihedral extension in a dihedral or quaternionic extension] *Publications Mathématiques d'Orsay* 79, 4. Université de Paris-Sud, Département de Mathématique, Orsay, 1979. x+110 pp. (not consecutively pagged). (Jack Sonn) **81b:12010** 12A55
- Plongement d'extensions diédrales. *Séminaire de Théorie des Nombres, 1978-1979*, Exp. No. 14, 10 pp., CNRS, Talence, 1979. (Pierre Damey) **81b:12010** 12A55 (12B10)
- Perrin, W. T. (with McKenzie, D. R.; McPhedran, R. C.) Transport properties of regular arrays of cylinders. *Proc. Roy. Soc. London Ser. A* 369 (1979), no. 1737, 207-225. (Authors' summary) **81c:82033** 82A70 (78A25)
- Perrin, William A linearization process for flows. *The structure of attractors in dynamical systems (Proc. Conf., North Dakota State Univ., Fargo, N.D., 1977)*, pp. 211-224. *Lecture Notes in Math.*, 668, Springer, Berlin, 1978. (Russell A. Johnson) **81d:58044** 58F15 (58F25)
- Perronnet, A. (with Koutchmy, Olga; Joly, Pascal; Legendre, Michel) Description générale du programme MEFISTO. *Journées "Éléments Finit" (Rennes, 1975)*, 21 pp., Univ. Rennes, Rennes, 1975. (From the text) **81c:65093** 65-04 (73K15)
- Perrot, B. (with Colombeau, J. F.; Meise, Reinhold) A density result in spaces of Silva holomorphic mappings. *Pacific J. Math.* 84 (1979), no. 1, 35-42. (Richard M. Aron) **81i:46050** 46G20 (32E30, 46A12)
- (with Colombeau, J. F.) Convolution equations in spaces of infinite-dimensional entire functions of exponential and related types. *Trans. Amer. Math. Soc.* 258 (1980), no. 1, 191-198. (M. Dostal) **81h:46047** 46G20 (32A15, 35R15)
- Perrot, J.-F. (with Pin, J.-E.) Finite syntactic monoids. *Fundamentals of computation theory (Proc. Conf. Algebraic, Aritih. and Categorical Methods in Comput. Theory, Berlin/Wendisch-Rietz, 1979)*, pp. 544-558. *Math. Research*, 2, Akademie-Verlag, Berlin, 1979. (Heinrich Seidel) **81i:68111** 68F05 (20M35)
- (with Berstel, Jean; Perrin, D.; Restivo, Antonio) Sur le théorème du défaut. *J. Algebra* 60 (1979), no. 1, 169-180. (André Lentin) **81b:20038** 20M05 (68F05)
- Perry, J. N. (with Taylor, Laurence; Woitoid, I. P.) The negative binomial as a dynamic ecological model for aggregation, and the density dependence of k . *J. Animal Ecology* 48 (1979), no. 1, 289-304. (Authors' summary) **81m:92056** 92A17 (62P10)
- Perry, Malcolm J. (with Gibbons, G. W.) Quantizing gravitational instantons. *Nuclear Phys. B* 146 (1978), no. 1, 90-108. (Edwin Ihrig) **81g:83031** 83C45
- (with Gibbons, G. W.) New gravitation instantons and their interactions. *Phys. Rev. D* (3) 22 (1980), no. 2, 313-321. (Authors' summary) **81b:83027** 83C45 (53C05)
- Perry, Peter A. Mellin transforms and scattering theory. I. Short range potentials. *Duke Math. J.* 47 (1980), no. 1, 187-193. (P. Achuthan) **81c:35101** 35P25 (47A40, 81F05)
- Perrymann, M. Ray Estimation of recursive nonlinear causal path models: an extended approach. *Proceedings of the Second International Conference on Mathematical Modelling (St. Louis, Mo., 1979)*, Vol. I, II, pp. 625-634. Univ. Missouri-Rolla, Rolla, Mo., 1980. (See **81j:90027**) 90A19 (62P20)
- Pertin, O. Ju. Optimal projection of dendritic communication networks. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* 1978, no. 2, 18-28, 219. (Russian); translated as *Engng. Cybernetics* 16 (1978), no. 2, 12-22 (1979). (Author's summary) **81h:90073** 90B10 (05C05)
- Pervan, Jan The Cauchy problem at simply characteristic points and P -convexity. *Ann. Mat. Pura Appl.* (4) 122 (1979), 117-140. (E. C. Zachmanoglou) **81g:35002** 35A07 (35E05, 47F05)
- Pervon, Lars-Erik On a weak-type theorem with applications. *Proc. London Math. Soc.* (3) 38 (1979), no. 2, 295-308. (R. A. Hunt) **81d:42062** 42B10 (42B25, 46E30)
- Pervon, Tore A new way to obtain Watson's U^2 . *Scand. J. Statist.* 6 (1979), no. 3, 119-122. (Henry R. Neave) **81j:62085** 62G10
- Pervon, Ulf A family of genus two fibrations. *Algebraic geometry (Proc. Summer Meeting, Univ. Copenhagen, Copenhagen, 1978)*, pp. 496-502. *Lecture Notes in Math.*, 732, Springer, Berlin, 1979. (Fabrizio Catanese) **81a:14010** 14J10 (14J25)
- Pert, G. J. Self-similar flows with uniform velocity gradient and their use in modelling the free expansion of polytropic gases. *J. Fluid Mech.* 100 (1980), no. 2, 257-277. (Author's summary) **81j:76070** 76N15
- Perutković, Brana (with Jovanović-Doleček, Gordana) New method for directed trees generation. *Proceedings of the Fourth International Symposium on Network Theory (Ljubljana, 1979)*, pp. 139-142. Georgi, St.-Saphorin, 1979. (Authors' summary) **81c:94059** 94C15 (68E10)
- Pervak, V. D. (with Val'ëv, K. G.) Foundation and application of Hill's method to parabolic equations. (Russian) *Physics and mechanics of nonlinear phenomena (Russian)*, pp. 5-15, 204, "Naukova Dumka", Kiev, 1979. (T. Stys) **81d:35010** 35C10 (35K20)
- Pervozvankii, A. A. (with Gal'gori, V. G.) ★ Дekomпозиция, агрегирование и приближенные оптимизации. (Russian) [Decomposition, aggregation and approximate optimization] Теория и Методы Системного Анализа. (Theory and Methods of Systems Analysis) "Nauka", Moscow, 1979. 343 pp. (Bruce D. Craven) **81i:90104** 90C31 (49D27, 90C50, 93C55)
- (with Gal'gori, V. G.) Sensitivity of solutions of problems of mathematical programming and approximate optimization. (Russian) *Theory of invariance and its application (Proc. Fifth All-Union Conf., Kiev, 1976)*, Part 2. (Russian), pp. 49-57, "Naukova Dumka", Kiev, 1979. (B. I. Anan'ev) **81m:90077** 90C30 (93B35)
- Perz, Franchšek General Sobolev weight spaces with mixed norm. *Funct. Approx. Comment. Math.* 6 (1978), 137-143. (A. Kufner) **81d:46035** 46E35
- On density of $C^\infty(\Omega)$ in the weighted Sobolev spaces $W_p^{(r)}(\Omega)$ with mixed norm. *Funct. Approx. Comment. Math.* 8 (1980), 65-72. (J. S. Martins) **81m:46053** 46E35
- Peršan, A. V. Behavior of the solution of the first mixed problem for a hyperbolic equation as $t \rightarrow \infty$. (Russian) Boundary value problems for nonstationary equations. *Mat. Issled.* No. 58 (1980), 63-75, 142. (H. Marcinkowska) **81k:35094** 35L20
- Perzyna, P. (with Wołoszyńska, K.) Application of methods of characteristics and perturbation in solving the wave problems of viscoplasticity. (Polish and Russian summaries) *Arch. Mech. (Arch. Mech. Stas.)* 31 (1979), no. 2, 281-294. (R. D. Bhargava) **81b:73020** 73F99 (73E99)
- Pesaran, M. H. (with Slater, L. J.) ★ Dynamic regression: theory and algorithms. Computers and their Applications, 5. Ellis Horwood Ltd., Chichester; Halsted Press [John Wiley & Sons], New York-Chichester-Brisbane, 1980. 363 pp. ISBN 0-85312-156-7. (Kenneth N. Berk) **81j:62184** 62M10 (62J05, 62P20, 90A20)
- Pesch, W. (with Kroemer, J.) The surface critical exponent ν_s in the two-dimensional Ising model. *Phys. Lett. A* 70 (1979), no. 3, 223-224. (Authors' summary) **81c:82022** 82A25

- Peschel, K. Möglichkeiten einer formallogischen Darstellung kommunikativer Situationen. *Wiss. Z. Karl-Marx-Universität Leipzig. Ges. Sprachwiss. Reihe* 28 (1979), no. 3, 325-331. (Peter Köhler) **81k:03030** 03B60
- Peikóv, Ju. A. The multidimensional gradient and quasiconformal mappings. (Russian) *Questions in the metric theory of mappings and its application (Proc. Fifth Colloq. Quasiconformal Mappings, Generalizations Appl., Donetsk, 1976)* (Russian), pp. 99-109, 184. "Naukova Dumka", Kiev, 1978. (E. Zlotkiewicz) **81d:30033** 30C60
- Peikins, Charles S. Fluid dynamics of the heart and the ear. *Computing methods in applied sciences and engineering (Proc. Fourth Internat. Symp., Versailles, 1979)*, pp. 587-613, North-Holland, Amsterdam, 1980. (J. P. Kernevez) **81i:92007** 92A09 (76Z05)
- (with McQueen, David M.) Modeling prosthetic heart valves for numerical analysis of blood flow in the heart. *J. Comput. Phys.* 37 (1980), no. 1, 113-132. (Authors' summary) **81j:92011** 92A09 (76Z05, 92A07)
- (with Caffiuchi, Russel E.; Majda, George; Strumolo, Gary) Distortion of the arterial pulse. *Math. Biosci.* 51 (1980), no. 3-4, 229-260. (Authors' summary) **81i:92005** 92A09 (76Z05)
- Peikine, Christian (with Gruson, Laurent) Genre des courbes de l'espace projectif. *Algebraic geometry (Proc. Sympos., Univ. Tromsø, Tromsø, 1977)*, pp. 31-59, *Lecture Notes in Math.*, 687, Springer, Berlin, 1978. (Paolo Maroscia) **81e:14019** 14H45
- Peikins, F. Schwingungen punktebeistelelastischer Systeme unter Berücksichtigung der Kopplung verschiedener Wellenarten. I. (French and English summaries) *Acustica* 45 (1980), no. 4, 209-217. (Piotr Borejko) **81k:73036** 73K05 (73D30)
- Peisner, L. (with Claverie, P.; Soto, F.) Existence of a constant stationary solution for the hydrogen atom problem in stochastic electrodynamics. *Phys. Lett. A* 80 (1980), no. 2-3, 113-116. (G. S. Agarwal) **81m:81095** 81L05 (78A99, 81C20)
- Pemosa, D. (with James, B. R.; James, K. L.) A "super-efficient" procedure for confidence intervals with preassigned length. (Portuguese) *Proceedings of the 3rd National Symposium on Probability and Statistics (Inst. Mat. Estatíst., Univ. São Paulo, São Paulo, 1978)* (Portuguese), pp. 86-89, Univ. São Paulo, São Paulo, 1979. (Authors' introduction) **81m:62059** 62F25 (62L12)
- Pecher, D. (with Weingarten, Don) Monte Carlo calculations and a model of the phase structure for gauge theories on discrete subgroups of SU(2). *Phys. Rev. D* (3) 22 (1980), no. 10, 2465-2477. (Authors' summary) **81j:81052** 81E99 (81-04)
- Petekuk, M. M. The sum of values of a function of divisors in arithmetic progressions with a difference equal to a power of an odd prime number. (Russian) *Izv. Akad. Nauk SSSR Ser. Mat.* 43 (1979), no. 4, 892-908, 967. (W. Schwarz) **81e:10053** 10H25
- Petekuk, V. M. Automorphisms of the groups SL_n over certain local rings. (Russian) *Mat. Zametki* 28 (1980), no. 2, 187-204, 318. (V. A. Roman'kov) **81k:20061** 20G35 (10C30, 20F28)
- Peterka, V. O. On certain local properties of distributions on the plane that are stable in the wide sense. (Russian) *Ukrain. Mat. Ž.* 31 (1979), no. 4, 447-454, 479. (V. M. Kruglov) **81b:60016** 60E07 (60F05)
- Peter, Rózsa See Császár, Akos, **81k:01031** and Ruzsa, Imre; et al., **81k:01045**
- Petríkova, V. (with Halousová, A.) Effective algorithms for real-time multivariate regression. *Identification and system parameter estimation (Proc. Fourth IFAC Symp., Tbilisi, 1976)*, Part 3, pp. 1457-1468, North-Holland, Amsterdam, 1978. (Authors' summary) **81j:93060** 93E11
- Peters, B. Charles, Jr. (with Redner, Richard; Decell, Henry P., Jr.) Characterizations of linear sufficient statistics. *Sankhyā Ser. A* 40 (1978), no. 3, 303-309. (R. H. Farrell) **81i:62007** 62B05 (62H30, 68G10)
- Peters, F. ★Sparse matrices and substructures. With a novel implementation of finite element algorithms. *Mathematical Centre Tracts*, 119, Mathematisch Centrum, Amsterdam, 1980. ii + 98 pp. ISBN 90-6196-192-0 (Ralph A. Willoughby) **81k:65026** 65F05 (15A06, 73K25)
- Peters, Hubert Comportement chaotique d'une équation différentielle retardée. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 24, A1119-A1122. (Waldyr M. Oliva) **81k:58055** 58F20 (34K15)
- Peters, Jeanne M. (with Noor, Ahmed K.) Nonlinear analysis via global-local mixed finite element approach. *Internat. J. Numer. Methods Engrg.* 15 (1980), no. 9, 1363-1380. (Authors' summary) **81i:65158** 65N30
- Peters, L. K. (with Carmichael, G. R.; Kitada, T.) Application of a Galerkin finite element method to atmospheric transport problems. Special issue: computational methods in nonlinear fluid mechanics. *Comput. & Fluids* 8 (1980), no. 2, 155-176. (Authors' summary) **81d:86011** 86A35 (65N30, 80A20, 86A10)
- Peters, Melvin D. Definite binary quadratic forms with class number one. *Acta Arith.* 36 (1980), no. 3, 271-272. (Horst Pfeuffer) **81k:10035** 10C07
- Peters, W. (with Bandt, Christoph) Extension of semimeasures and topologization of vector structures. (Russian) *International Topology Conference (Moscow State Univ., Moscow, 1979)*, *Uspehi Mat. Nauk* 35 (1980), no. 3(213), 140-144. (Z. Lipiecki) **81k:28007** 28A25 (46A40)
- Petersen, Bent E. (with Lancaster, Kirk E.) Systems of partial differential operators with fundamental solutions supported by a cone. *Proc. Amer. Math. Soc.* 78 (1980), no. 2, 247-252. (J. Vaillant) **81d:35054** 35L55 (35E15, 58G16)
- Petersen, Edward R. (with Neave, Edwin H.) A comparison of optimal and adaptive decision mechanisms in an organizational setting. *Management Sci.* 26 (1980), no. 8, 810-822. (Authors' summary) **81j:90004** 90A05 (90C40)
- Petersen, G. M. A Tauberian theorem for Cesàro and Abel summability. *Nederl. Akad. Wetensch. Indag. Math.* 41 (1979), no. 4, 465-468. (W. Beekmann) **81a:40006** 40E05 (40G10)
- Petersen, Karl A construction of ergodic BMO functions. *Proc. Amer. Math. Soc.* 79 (1980), no. 4, 549-555. (M. Cotlar) **81k:42020** 42B30 (28D05)
- thorlund-Petersen, Lars See Thorlund-Petersen, Lars
- Peterson, Allan C. Green's functions for focal type boundary value problems. *Rocky Mountain J. Math.* 9 (1979), no. 4, 721-732. (Richard Brown) **81k:34022** 34B27
- Focal Green's functions for fourth-order differential equations. *J. Math. Anal. Appl.* 75 (1980), no. 2, 602-610. (Jerry Ridenhour) **81k:34023** 34B27 (34C10)
- Peterson, Arthur V., Jr. (with Kronmal, Richard A.) On the alias method for generating random variables from a discrete distribution. *Amer. Statist.* 33 (1979), no. 4, 214-218. (Authors' summary) **81c:65010** 65C10 (68T05)
- (with Kronmal, Richard A.) A representation for discrete distributions by equiprobable mixtures. *J. Appl. Probab.* 17 (1980), no. 1, 102-111. (Ulrich Dieter) **81m:62025** 62E10 (65C10)
- Peterson, Benjamin B. (with Narendra, Kumpati S.) Recent developments in adaptive control. *Methods and applications in adaptive control (Proc. Internat. Symp., Ruhr-Universität Bochum, Bochum, 1980)*, pp. 84-101, *Lecture Notes in Control and Information Sci.*, 24, Springer, Berlin, 1980. (See **81k:93038**) 93C40
- Peterson, Bo Å. (with Varadan, V. V.; Varadan, V. K.) Scattering of acoustic waves by layered elastic and viscoelastic obstacles in water. *J. Acoust. Soc. Amer.* 68 (1980), no. 2, 673-685. (Authors' summary) **81k:76061** 76Q05
- Peterson, Brian (with Taft, Earl J.) The Hopf algebra of linearly recursive sequences. *Aequationes Math.* 20 (1980), no. 1, 1-17. (A. Kuikuleja) **81j:16012** 16A24 (10A35)
- (with Edgar, Hugh M.) Some contributions to the theory of cyclic quartic extensions of the rationals. *J. Number Theory* 12 (1980), no. 1, 77-83. (Ezra Brown) **81m:12007** 12A30
- Peterson, Bruce E. A cut-flow procedure for transportation network optimization. *Networks* 10 (1980), no. 1, 33-43. (Authors' summary) **81a:90006** 90B10 (90C08)
- Peterson, Eric L. A limit cycle interpretation of a mosquito circadian oscillator. *J. Theoret. Biol.* 84 (1980), no. 2, 281-310. (Authors' summary) **81d:92002** 92A05 (34C05, 58F21, 92A09)
- Peterson, F. P. (with Brown, E. H., Jr.) The stable homotopy type of $\Omega^2 S^{n+r}$. *Quart. J. Math. Oxford Ser. (2)* 30 (1979), no. 120, 417-422. (J. F. Adams) **81b:55020** 55P35 (55P42)
- Peterson, Gary L. Time-space trade-offs for asynchronous parallel models. Reducibilities and equivalences. *Conference Record of the Eleventh Annual ACM Symposium on Theory of Computing (Atlanta, Ga., 1979)*, pp. 224-230, ACM, New York, 1979. (Authors' summary) **81e:68066** 68D25 (68C25)
- Succinct representation, random strings, and complexity classes. *21st Annual Symposium on Foundations of Computer Science (Syracuse, N.Y., 1980)*, pp. 86-95, IEEE, New York, 1980. (See **81i:68008**) 68C25
- Peterson, Magnus M. (with Ahmad, Rashid) Restricted permutation symmetry and hypotheses-generating groups in statistics. *Transactions of the Eighth Prague Conference on Information Theory, Statistical Decision Functions, Random Processes (Prague, 1978)*, Vol. A, pp. 71-82, Reidel, Dordrecht, 1978. (Ludger Rüschendorf) **81a:62005** 62A05 (62G10)
- Peterson, Holger P. Conjugacy of idempotents in Jordan pairs. *Comm. Algebra* 6 (1978), no. 7, 673-715. (Kevin McCrimmon) **81m:17022** 17C30
- Classification of locally compact Jordan division rings. *J. Algebra* 58 (1979), no. 2, 350-360. (I. P. Šestakov) **81k:17012** 17C65 (17C50)
- Petke, Karol The domain of the first coefficients of p -valent functions in the unit disc. (Polish. Russian and English summaries) *Zeszyty Nauk. Politech. Śląsk. Mat.-Fiz.* No. 35 (1979), 39-47. (Z. Lewandowski) **81d:30023** 30C50
- Maximum of the functional $|c_1| - |c_2|$ in the classes of functions S_M and S_M' . (Polish. Russian and English summaries) *Zeszyty Nauk. Politech. Śląsk. Mat.-Fiz.* No. 35 (1979), 49-58. (Z. Lewandowski) **81d:30024** 30C45
- Estimation of the functionals $|c_{p+2} - ac_p^2|$, $|c_{p+2}| - |c_p|$ of p -valent functions in the unit disc. (Polish. Russian and English summaries) *Zeszyty Nauk. Politech. Śląsk. Mat.-Fiz.* No. 35 (1979), 59-70. (Z. Lewandowski) **81d:30025** 30C45
- Maximum and minimum of the functional $\operatorname{Re}(c_{p+2} + ac_p^2)$ in the class of p -valent functions. (Polish. Russian and English summaries) *Zeszyty Nauk. Politech. Śląsk. Mat.-Fiz.* No. 35 (1979), 71-78. (Z. Lewandowski) **81d:30026** 30C45
- Petke, Prakash (with Thakare, Nimbakrishna) Property (I) does not imply smoothness. *Indian J. Pure Appl. Math.* 11 (1980), no. 5, 562-564. (S. Swaminathan) **81f:46030** 46B99
- Pethő, Attila Über die nichtlineare Diophantische Approximation von quadratischen, algebraischen Zahlen. (English summary) *J. Number Theory* 12 (1980), no. 3, 334-338. (F. Beukers) **81k:10052** 10F25
- Diophantische Approximationen mit natürlichen Zahlen. *Publ. Math. Debrecen* 27 (1980), no. 1-2, 131-137. (Mary E. Gbur) **81m:10065** 10F10 (10F25)
- Petit, B. Théorie ergodique: classification de certaines transformations réelles. (English summary) *Ann. Inst. H. Poincaré Sect. B (N.S.)* 15 (1979), no. 1, 25-32. (Alan Salek) **81a:28019** 28D05
- Petitjean, Alexis (with Ferrière, Edouard S.) Algèbres de Lie régulières. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 22, A1065-A1068. (Authors' summary) **81f:58047** 58H10 (57R32, 58A20)
- Petkau, A. John An application of dynamic programming in statistics. *Dynamic programming and its applications (Proc. Conf., Univ. British Columbia, Vancouver, B.C., 1977)*, pp. 221-232, Academic Press, New York, 1978. (Joseph A. Yahav) **81b:62094** 62L05
- Sequential medical trials for comparing an experimental with a standard treatment. *J. Amer. Statist. Assoc.* 73 (1978), no. 362, 328-338. (Authors' summary) **81g:62136** 62L05
- Exact slopes for a life testing problem involving the two-parameter exponential distribution. *Comm. Statist. A—Theory Methods* 8 (1979), no. 15, 1511-1521. (A. P. Basu) **81e:62111** 62N05
- On a life testing problem involving the two-parameter exponential distribution. *Comm. Statist. A—Theory Methods* 8 (1979), no. 15, 1523-1534. (Richard A. Johnson) **81d:62106** 62N05
- Petkov, Petko H. (with Konstantinov, Mihail M.; Patarinski, Simeon P.; Hristov, Nikolai D.) Synthesis of linear control systems with prescribed dynamics. *Proceedings of the First International Conference on Mathematical Modeling (St. Louis, Mo., 1977)*, Vol. III, pp. 1639-1648, Univ. Missouri-Rolla, Rolla, Mo., 1977. (See **81i:90005**) 93C05
- (with Konstantinov, Mihail M.; Patarinski, Simeon P.; Hristov, Nikolai D.) Absolute stability and stabilization of differential delays systems. (Polish and Russian summaries) *Arch. Automat. Telemekh.* 24 (1979), no. 3, 339-350. (József Kalinowski) **81a:34069** 34K20 (93D20)
- (with Konstantinov, Mihail M.; Hristov, Nikolai D.) Synthesis of linear multivariable systems with prescribed equivalent form. *Systems Sci.* 5 (1979), no. 4, 381-394 (1980). (Authors' summary) **81d:93033** 93C35
- (with Konstantinov, Mihail M.; Hristov, Nikolai D.) Synthesis of linear systems with desired equivalent form. *J. Comput. Appl. Math.* 6 (1980), no. 1, 27-35. (Authors'

- summary) **81c:93041** 93C05 (93B05, 93B17)
- Petrok, Veselina M. Application of Fourier integral operators concerning hyperbolic operators with multiple characteristics. *Contributions to the School on Global Analysis (Ludwigsfelde, 1976)*, Part 2, pp. 33–46, Akad. Wiss. DDR, Berlin, 1977. (Jorge Hounie) **81a:35058** 35L45 (35S10)
- Microlocal forms for hyperbolic systems. *Math. Nachr.* **93** (1979), 117–131. (Jorge Hounie) **81k:35168** 35S05 (35H05)
- Petkova, Stanislava V. Additive cohomology theories on certain categories of topological spaces. (Russian) *Serdica* **4** (1978), no. 4, 311–315. (Csaba Hatvany) **81c:55009** 55N20
- Petkova, V. B. (with Mack, Gerhard) Comparison of lattice gauge theories with gauge groups Z_2 and $SU(2)$. *Ann. Physics* **123** (1979), no. 2, 442–467. (R. Kotecký) **81g:81054** 81E10 (22C10)
- Petković, Miodrag S. Some interval methods of the second order for the simultaneous approximation of polynomial roots. *Univ. Beograd. Publ. Elektrotehn. Fak. Ser. Mat. Fiz.* No. 634–677 (1979), 74–81. (E. Spedicato) **81i:65038** 65H05 (41A28)
- On an iterative method for the simultaneous determination of two adjacent roots of equation $F(X)=0$. *Univ. Beograd. Publ. Elektrotehn. Fak. Ser. Mat. Fiz.* No. 634–677 (1979), 82–88. (E. Spedicato) **81i:65039** 65H05
- Petkovski, Dj. (with Rakić, M.) A series solution of feedback gains for output-constrained regulators. *Internat. J. Control* **30** (1979), no. 4, 661–668. (Authors' summary) **81c:93042** 93C05
- Petocz, P. (with Hasofer, A. M.) Transient upcrossings of the linear oscillator and its envelope. *Applications of statistics and probability in soil and structural engineering (Proc. Third Internat. Conf., Sydney, 1979)*, Vol. I, II, pp. 110–115, Unisearch, Kensington, 1979. (Georg Lindgren) **81d:60047** 60G15
- Petráček, G. I. (with Ledovskaja, E. M.) General theory of multiple wave fields in multilayer elastic media with plane-parallel boundaries of division. (Russian) *Questions in the dynamical theory of seismic wave propagation*, No. 19 (Russian), pp. 5–48, 198, "Nauka" Leningrad, Otdel., Leningrad, 1979. (Authors' summary) **81d:73022** 73D15 (86A15)
- See also *Questions in the dynamical theory of seismic wave propagation*, **81b:86003**
- Petráček, M. I. (with Ledovskaja, E. M.) The symmetry group of an impure molecule in a crystal used in the interpretation of a vibrational-rotational spectrum. (Russian. English summary) *Vestnik Leningrad. Univ. Fiz. Him.* **1980**, vyp. 1, 34–38, 123–124. (E. E. Tarceva) **81k:82050** 82A60 (82A55)
- Petráček, P. V. (with Čubovskij, F. N.; Šulpiņa, I. L.) The physical foundations of the computer simulation of X-ray traverse topographs. *Acta Cryst. Sect. A* **36** (1980), no. 2, 287–295. (Authors' summary) **81m:92011** 92A07 (44A15, 68G10, 78A45)
- Petre, Augustin On the deformation of one-dimensional structures. *Rev. Roumaine Sci. Tech. Ser. Méc. Appl.* **25** (1980), no. 1, 85–97. (Author's summary) **81d:73051** 73J05
- Petrenko, A. F. (with Gurtovcev, A. L.; Čapenko, V. P.) State assignment for asynchronous automata with bistable cells. *Avtomat. i Vychisl. Tehn. (Riga)* **12** (1978), no. 5, 1–10 (Russian); translated as *Automat. Control Comput. Sci.* **12** (1978), no. 5, 1–8. (Authors' summary) **81b:68074** 68D50 (94C10)
- Petrenko, P. A. (with Kovalenko, N. N.) Mathematical model for determining the composition of communication facilities in computer networks. *Avtomat. i Telemekh.* **1979**, no. 12, 173–182 (Russian. English summary); translated as *Automat. Remote Control* **40** (1979), no. 12, part 2, 1850–1857 (1980). (Authors' summary) **81c:68004** 68A05 (68B15)
- Petrenko, V. P. Stability of the magnitudes of deviations of entire curves in quasiconformal mappings. (Russian) *Metric questions of the theory of functions and mappings*, No. VII (Proc. Fourth Colloq., Quasiconformal Mappings and their Generalizations, Donetsk, 1974) (Russian), pp. 119–144, "Naukova Dumka", Kiev, 1975. (See **80c:30023**) 30C60
- Growth of entire curves and algebraic functions. (Russian) *Dokl. Akad. Nauk SSSR* **248** (1979), no. 4, 788–791. (A. V. Brañević) **81d:30047** 30D15
- Petri, N. V. Unsolvability of the problem of recognition of cancelling iterative nets. (Russian) *Studies in the theory of algorithms and mathematical logic (Russian)*, pp. 90–98, 133, "Nauka", Moscow, 1979. (A. Astromoff) **81g:03043** 03D10
- (with Kračkovskij, S. N.; Manevič, V. A.) The Hausdorff representation of positive polynomials in convex approximations. (Russian) *Dokl. Akad. Nauk SSSR* **246** (1979), no. 4, 842–846. (B. Bojanov) **81c:41038** 41A29 (41A63)
- Petrík, Mario The conjugate hull of an inverse semigroup. *Glasgow Math. J.* **21** (1980), no. 2, 103–124. (Karl Byleen) **81m:20088** 20M20 (20M30)
- (with Reilly, Norman R.) Congruences on bisimple inverse semigroups. *J. London Math. Soc.* (2) **22** (1980), no. 2, 251–262. (Bridget B. Baird) **81k:20090** 20M10
- Some categorical equivalences for E -unitary inverse semigroups. *Trans. Amer. Math. Soc.* **259** (1980), no. 2, 493–503. (H.-J. Hoehnke) **81b:20083** 20M10 (18B10)
- Petríkovič, V. M. Absolute decomposability of matrix polynomials. (Russian) *Mat. Metody i Fiz.-Meh. Polja* No. 9 (1979), 37–41, 131. (D. P. Raikovič) **81b:15011** 15A23 (15A18)
- The number of solutions of a matrix equation. (Russian) *Mat. Metody i Fiz.-Meh. Polja* No. 12 (1980), 56–58, 121. (Nicholas Young) **81b:15010** 15A24
- Petrillo, Nicholas Distance and volume decreasing theorems for a family of harmonic mappings of Riemannian manifolds. *Harmonic analysis, Iraklion 1978 (Proc. Conf., Univ. Crete, Iraklion, 1978)*, pp. 157–170, *Lecture Notes in Math.*, 781, Springer, Berlin, 1980. (John C. Wood) **81j:58040** 58E20 (30C80)
- See also *Harmonic analysis*, **81c:42001**
- Petrie, Ted (with Oliver, Robert) G surgery in the homotopy category and $K_2(Z(G))$. *Geometric applications of homotopy theory (Proc. Conf., Evanston, Ill., 1977)*, I, pp. 361–374, *Lecture Notes in Math.*, 657, Springer, Berlin, 1978. (Czes Kosniowski) **81c:57033** 57R67 (57S17)
- (with Dovernann, Karl Heinz) Artin relation for smooth representations. *Proc. Nat. Acad. Sci. U.S.A.* **77** (1980), no. 10, part 1, 5620–5621. (S. C. Althoen) **81m:57032** 57S20 (20F38)
- Petrli, Titus Mouvement général d'un profil dans un fluide idéal en présence d'une paroi perméable illimitée. Cadre variationnel et approximation par une méthode d'éléments finis. *Anal. Numér. Théor. Approx.* **8** (1979), no. 1, 67–77. (Stephen W. Brady) **81m:76004** 76B10 (65N30)
- Une nouvelle méthode pour l'étude de l'écoulement produit par le déplacement d'un système de n profils mobiles dans un fluide idéal. *Rev. Roumaine Math. Pures Appl.* **24** (1979), no. 10, 1487–1504. (J. F. Heyda) **81g:76024** 76B99 (45E05)
- Une méthode pour le calcul de l'influence des parois sur l'écoulement fluide plan. *Rev. Roumaine Math. Pures Appl.* **25** (1980), no. 1, 99–110. (A. Pozzi) **81g:76005** 76B05
- Petrina, D. Ja. (with Ivanov, S. S.; Rebenko, A. L.) ★Уравнения для коэффициентов матрицы рассеяния. (Russian) [Equations for coefficient functions of the scattering matrix] "Nauka", Moscow, 1979. 296 pp. (L. A. Takhtajan (Tahtadjian)) **81a:81061** 81F15 (35P25, 47B38, 81E10)
- (with Davydov, A. S.; Parajuk, O. S.) Nikolai Nikolaevič Bogoljubov (on the occasion of his seventieth birthday). (Russian) *Ukrain. Fiz. Ž.* **24** (1979), no. 8, 1073–1075. (Editors) **81g:01020e** 01A70
- (with Gerasimenko, V. I.) Statistical mechanics of quantum-classical systems. Nonequilibrium systems. (Russian. English summary) *Teoret. Mat. Fiz.* **42** (1980), no. 1, 88–100. (L. A. Turaki) **81j:82017** 82A35
- (with Rebenko, A. L.) A projection-iteration method for solving quantum field theory equations and its relation to the normalization theory. Quantum field theory equations and ill-posed problems of mathematical physics. (Russian. English summary) *Teoret. Mat. Fiz.* **42** (1980), no. 2, 167–183. (James D. Fabrey) **81k:81070** 81E15
- Petrilin, R. I. (with Golec, B. I.; Golec, V. L.) On averaging in oscillatory systems passing through resonances. (Russian) *Ukrain. Mat. Ž.* **32** (1980), no. 4, 448–455. (D. Bafnov) **81j:34076** 34C29
- cf. *Cufaro Petroni, N.* See *Cufaro Petroni, N.*
- Petrojan, G. B. Alphabetic number systems. (Russian) *Istor.-Mat. Issled.* No. 23 (1978), 144–155, 358. (Author's summary) **81g:01006** 01A35 (01A10)
- Petrojan, L. A. (with Tihonova, T. F.; Petuhova, N. V.) A hierarchical model of planning industrial production. (Russian) *Some questions of differential and integral equations and their applications*, No. 2 (Russian), pp. 86–98, 190, *Jakutsk. Gos. Univ., Yakutsk*, 1977. (Authors' summary) **81c:90018** 90A11
- (with Tyško, N. M.) Mathematical model for a tree-like hierarchical control structure. (Russian) *Some questions of differential and integral equations and their applications*, No. 2 (Russian), pp. 160–171, 191, *Jakutsk. Gos. Univ., Yakutsk*, 1977. (Authors' summary) **81c:90023** 90A15
- (with Danilov, N. N.) Stability of the solutions in nonantagonistic differential games with transferable payoffs. (Russian. English summary) *Vestnik Leningrad. Univ. Mat. Meh. Astronom.* **1979**, vyp. 1, 52–59, 134. (A. B. Kuržanskij) **81c:90020** 90D25 (90D12)
- Yamakoishi Petrosky, Tomio See *Yamakoishi Petrosky, Tomio*
- Petrov, A. A. (with Pospelov, I. G.) Systems analysis of developing economics: on the theory of production functions. I. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* **1979**, no. 2, 18–27, 220 (Russian); translated as *Engng. Cybernetics* **17** (1979), no. 2, 10–18 (1980). (Authors' summary) **81c:90023** 90A11
- (with Pospelov, I. G.) Systems analysis of developing economics: a systems approach and a single sector model. II. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* **1979**, no. 3, 28–38, 219 (Russian); translated as *Engng. Cybernetics* **17** (1979), no. 3, 21–31 (1980). (Authors' summary) **81c:90022a** 90A16 (90A17)
- (with Pospelov, I. G.) Systems analysis of a developing economy: a multisector model and consideration of natural resources. III. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* **1979**, no. 4, 11–23, 218 (Russian); translated as *Engng. Cybernetics* **17** (1979), no. 4, 7–17 (1980). (Authors' summary) **81c:90022b** 90A16 (90A17)
- (with Pospelov, I. G.) Systems analysis of a developing economy: allowance for scientific and technological progress. IV. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* **1979**, no. 5, 13–24, 219 (Russian); translated as *Engng. Cybernetics* **17** (1979), no. 5, 7–18 (1980). (Authors' summary) **81c:90022c** 90A16 (90A17)
- Petrov, A. I. (with Minin, V. V.) Application of observers for optimal control of linear stochastic discrete systems. *Automatika* **1978**, no. 6, 33–40 (Russian. English summary); translated as *Soviet Automat. Control* **11** (1978), no. 6, 29–35. (S. G. Tzafestas) **81j:93073** 93E11
- (with Petrov, B. N.) Nonstationary stochastic control systems that are optimal with respect to insensitivity. (Russian) *Dokl. Akad. Nauk SSSR* **251** (1980), no. 5, 1081–1084. (Authors' introduction) **81g:93130** 93E20 (93B35)
- Petrov, A. S. (with Evdokimov, A. G.; Tejašev, A. D.) A problem of bounding the states of a steady-state flow distribution in engineering networks. (Russian) *Sistemy Upravlenija i Prirody Avtomat.* No. 54 (1980), 66–73, iii. (From the text) **81k:90037** 90B15
- Petrov, B. N. (with Babak, S. F.; Il'jasov, B. G.; Jusupov, I. Ju.) On the structures of linear stationary systems. (Russian) *Dokl. Akad. Nauk SSSR* **250** (1980), no. 1, 55–58. (P. Brunovsky) **81f:93037** 93C05
- (with Petrov, A. I.) Nonstationary stochastic control systems that are optimal with respect to insensitivity. (Russian) *Dokl. Akad. Nauk SSSR* **251** (1980), no. 5, 1081–1084. (Authors' introduction) **81g:93130** 93E20 (93B35)
- See also *Engineering cybernetics*, **81j:93003**
- Petrov, E. E. (with Černov, V. G.) The Radon transform in a Grassmann manifold over a local field. (Russian) *Functional analysis*, No. 13 (Russian), pp. 107–120, *Učebn. Gos. Ped. Inst., Ul'janovsk*, 1979. (S. Ju. Priščepionok) **81g:43012** 43A85 (12B40, 22E50)
- Harmonic analysis on a finite sphere. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* **1980**, no. 6, 80–82. (D. Miličević) **81m:43012** 43A65 (20G40)
- Petrov, G. I. (with Bogoljubov, P. N.; Matveev, V. A.; Robaschik, D.) Causality properties of form factors. *Rep. Math. Phys.* **10** (1976), no. 2, 195–202. (Authors' summary) **81f:1006** 81F10
- (with Špilevskij, Ė. K.) Identification of dynamic systems and parameter estimation by recognition methods. *Identification and system parameter estimation (Proc. Fourth IFAC Sympos., Tbilisi, 1976)*, Part 3, pp. 1901–1907, North-Holland, Amsterdam, 1978. (See **80d:93010c**) 93B30
- Petrov, Ju. G. A class of conformally Euclidean spaces. (Russian) *Current problems of geometry and its applications (Russian)*, pp. 10–14, 106, *Čuvš. Gos. Univ., Čeboksary*, 1975. (V. I. Olikar) **81c:53025** 53B20
- Petrov, Ju. P. Synthesis of optimal linear systems with account taken of realizability requirements. (Russian. English summary) *Vestnik Leningrad. Univ. Mat. Meh.*

- Astronom.* 1978, *exp.* 3, 97–102, 157. (Author's summary) **81i:93012** 93B50
- Petrov, L. K. On a stratifiable Cremona involution J_1 in A_2 . (Bulgarian. Russian and English summaries) *Godišnik Visš. Učebn. Zaved. Priložna Mat.* 13 (1977), no. 2, 155–166 (1978). (K. Burian) **81k:14012a** 14E10
- A stratifiable Cremona involution J_1 in the plane. (Bulgarian. Russian and English summaries) *Godišnik Visš. Učebn. Zaved. Priložna Mat.* 13 (1977), no. 2, 167–174 (1978). (K. Burian) **81k:14012b** 14E10
- Stratifiable Cremona involution I_2 in P_4 . (Bulgarian. Russian and English summaries) *Godišnik Visš. Učebn. Zaved. Priložna Mat.* 13 (1977), no. 3, 175–183 (1978). (K. Burian) **81k:14012c** 14E10
- Petrov, N. N. Solvability of linear equations in a product of Banach spaces. (Russian) *Topological spaces and their mappings* (Russian), pp. 102–106, 153, *Lato. Gos. Univ., Riga*, 1979. (S. G. Samko) **81m:47020** 47A53
- Continuity of the Bellman function in degenerate cases. (Russian) *Differentsial'nye Uravneniya* 15 (1979), no. 5, 809–814, 956. (Author's summary) **81a:93064** 93C99 (49C20, 57R27)
- An analogue of the Birkhoff theory for invariant sets of control systems. (Russian) *Differentsial'nye Uravneniya* 15 (1979), no. 12, 2155–2160, 2299. (Author's summary) **81d:93025** 93C15 (57R27, 58F19)
- A generalization of the notion of foliation. (Russian) *Differentsial'nye Uravneniya* 16 (1980), no. 6, 1032–1036, 1147. (D. B. Fuks) **81i:57025** 57R30
- Petrov, P. P. On the global stability of a certain regulation system. (Russian) *Some questions of differential and integral equations and their applications*, No. 2 (Russian), pp. 57–62, 189, *Jakutsk. Gos. Univ., Yakutsk*, 1977. (Author's summary) **81c:34042** 34D20
- Petrov, R. R. (with Mateeva, L. I.) New classes of equations representable by nomograms with a wavelike contour. (Bulgarian. Russian and English summaries) *Godišnik Visš. Učebn. Zaved. Priložna Mat.* 14 (1978), no. 4, 53–60 (1979). (Authors' summary) **81k:65139** 65S05
- (with Ruseva, L. K.) Nomographic representation of some equations with several variables. (Bulgarian. Russian and English summaries) *Godišnik Visš. Učebn. Zaved. Priložna Mat.* 14 (1978), no. 4, 61–72 (1979). (Authors' summary) **81i:65095** 65S05
- Petrov, V. G. An equation of mixed-composite type. (Bulgarian. Russian and English summaries) *Godišnik Visš. Učebn. Zaved. Priložna Mat.* 14 (1978), no. 3, 91–102 (1979). (Author's summary) **81f:35088** 35M05
- Petrov, V. Ju. (with Danilov, G. S.; Djalov, I. T.) Evolution operator and quark structure of states in two-dimensional massless electrodynamics. *Nuclear Phys. B* 174 (1980), no. 1, 68–88. (Authors' summary) **81i:81133** 81L05 (81E10, 81G05)
- Petrov, V. N. (with Selezov, I. T.) Solution of a problem on transient waves in a conducting elastic half-space. (Russian) *Numerical-analytic methods for the solution of problems of heat conduction and electrodynamics* (Russian), pp. 155–158, 186, *Akad. Nauk Ukrain. SSR, Inst. Mat., Kiev*, 1979. (M. Martinis) **81g:73113** 73R05 (65N20)
- Petrov, V. V. Identification and naming. (Evaluation of the concepts of Kripke and Donnellan). (Russian) *Logico-mathematical problems of the natural sciences and the social sciences* (Russian), pp. 15–27, "Nauka" Sibirsk. Otdel., Novosibirsk, 1977. (Siegfried Gottwald) **81h:03014** 03A05
- A remark on the lower limit of the absolute values of sums of independent random variables. (Russian. Lithuanian and English summaries) *Lietosk. Mat. Sb.* 18 (1978), no. 4, 115–119, 201. (S. A. Book) **81a:60045** 60F15
- Empirical content of a theory and discovered theoretical concepts. (Russian) *Methodological problems of mathematics* (Russian), pp. 239–246, "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. (Siegfried Gottwald) **81h:03015** 03A05
- (with Morozov, S. F.) Discontinuous solutions of irregular variational problems. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1979, no. 11, 40–47. (A. I. Perov) **81a:49010** 49A36
- (with Ageev, V. M.; Kort'ev, A. V.; Medvedev, S. B.; Zaporozec, A. V.; Lebedev, G. N.; Poljakov, I. N.) Informational theory of adaptive systems. (Russian) *Engineering cybernetics*, Vol. 12 (Russian), pp. 149–211, 239, *Akad. Nauk SSSR, Vsesojuz. Inst. Nauch. i Tehn. Informacii, Moscow*, 1980. (Authors' summary) **81h:93050** 93C40
- Dynamics of nonlinear surface waves in a stratified ocean. *Izv. Akad. Nauk SSSR Ser. Fiz. Atmosf. i Okeana* 15 (1979), no. 7 (Russian); translated as *Izv. Acad. Sci. USSR Atmosf. Ocean. Phys.* 15 (1980), no. 7, 508–513. (Author's summary) **81k:86004** 86A05 (76B15, 76B25, 76V05)
- Petrov, V. Yu. See Petrov, V. Ju.
- Petrov, Veselin P. (with Skordev, Dimit'r G.) Combinatorial structures. (Russian) *Serdica* 5 (1979), no. 2, 128–148. (S. A. Berezin) **81j:03079** 03D75
- Petrova, A. A. The Tricomi problem for first-order systems with two lines of degeneracy. (Russian) *Differentsial'nye Uravneniya* (Ryazan) No. 14 (1979), 138–148. (Author's summary) **81h:35073** 35M05
- Petrova, L. T. Algorithmic construction of problems of optimal processing of composite files. (Russian) *Optimizacija* No. 22(39) (1978), 103–114, 156. (Author's summary) **81h:68020** 68B15
- Petrova, M. P. (with Egorov, I. G.) Qualitative study of the behavior of the solutions to an equation of nonlinear oscillations. (Russian) *Some questions of differential and integral equations and their applications*, No. 2 (Russian), pp. 36–43, 188, *Jakutsk. Gos. Univ., Yakutsk*, 1977. (Authors' summary) **81c:34033** 34C15 (58F14)
- Petrova, O. M. (with Zablitzko, P. P.) Theorem on extension of bounded solutions for differential equations and the averaging principle. (Russian) *Sibirsk. Mat. Ž.* 21 (1980), no. 4, 50–61, 236. (D. Balnov) **81i:34002** 34A15 (34C29)
- Petrova, S. S. (with Romanowka, D. A.) The universal Hoëné-Wronski series. (Russian) *Istor.-Mat. Issled.* No. 24 (1979), 158–175, 387. (E. Stipančič) **81k:01023** 01A60 (40–03)
- See also Banach, Stefan, **81i:01022**
- Petrova, Svetlana Georgievna See Todorov, Ivan, **81m:01079**
- Petrovacki, Dušan The minimum time problem for a class of nonlinear distributed parameter systems. *Internat. J. Control* 32 (1980), no. 1, 51–62. (Author's summary) **81c:93050** 93C20 (93C10)
- Petrovič, A. Ju. Representation of a monotone function by a trigonometric series. (Russian) *Mat. Zametki* 27 (1980), no. 5, 691–699, 829. (M. Tomić) **81i:42009** 42A24
- Petrović, Vojislav Product-concircular curvature tensor. *Publ. Inst. Math. (Beograd) (N.S.)* 25(39) (1979), 131–137. (H. D. Pande) **81d:53015** 53B20
- Petrovskaja, M. S. The expansion of a perturbing function in Jacobi polynomials. (Russian. English summary) *Moskoo. Gos. Univ. Soobšč. Gos. Astronom. Inst. Sibirsk. No. 202-203* (1978), 68–71 (errata insert). (R. G. Langebartel) **81b:33019** 33A65 (70F15)
- Upward and downward continuations in the geopotential determination. *Bull. Géodésique* 53 (1979), no. 3, 259–271. (W. Buchheim) **81d:86009** 86A20
- Petrovski, Djordžija V. Calculation of the linear regulator with incomplete feedback in the case of weakly coupled systems. (Macedonian. English summary) *Makedon. Akad. Nauk. Umet. Oddel. Prirod.-Mat. Nauk. Prirozi* 10 (1978), no. 1, 19–27. (M. M. Konstantinov) **81g:93030** 93B50 (93C05)
- Petrovskii, I. G. See Ivasišen, S. D., **81d:35011**
- Petrovskii, Z. See Piotrowski, Zbigniew
- Petru, Otilian On a functional hierarchy system. *Proceedings of the International Symposium on Applications of Mathematics in System Theory* (Univ. Braşov, Braşov, 1978), I, pp. 99–109, Univ. Braşov, Braşov, 1979. (See **81j:93006a**) 93A13
- Petrucelli, Joseph D. On a best choice problem with partial information. *Ann. Statist.* 8 (1980), no. 5, 1171–1174. (Adhir K. Basu) **81m:62154** 62L15 (62C20)
- Petrusiev, P. P. Rational approximation of functions. (Russian) *The theory of the approximation of functions* (Proc. Internat. Conf., Kahuga, 1975) (Russian), pp. 277–279, "Nauka", Moscow, 1977. (B. D. Donevski) **81b:41037** 41A20
- The exact order of the best uniform rational approximation of some functional classes. *Fourier analysis and approximation theory* (Proc. Colloq., Budapest, 1976), Vol. II, pp. 603–624, *Colloq. Math. Soc. János Bolyai*, 19, North-Holland, Amsterdam, 1978. (V. N. Malozemov) **81b:41038** 41A20
- (with Tašev, Spas P.) Converse theorems in Hausdorff's metric. *Fourier analysis and approximation theory* (Proc. Colloq., Budapest, 1976), Vol. II, pp. 625–631, *Colloq. Math. Soc. János Bolyai*, 19, North-Holland, Amsterdam, 1978. (T. Bojanov) **81c:41035** 41A27 (41A44)
- Uniform rational approximations of functions of class V_r . (Russian) *C. R. Acad. Bulgare Sci.* 31 (1978), no. 12, 1535–1538. (J. Szabados) **81d:41019** 41A20 (41A15)
- Uniform rational approximations of functions of the class V_r . (Russian) *Mat. Sb. (N.S.)* 108(150) (1979), no. 3, 418–432, 478. (V. N. Malozemov) **81b:41039** 41A20
- (with Hristov, V. H.) Generalization of the Dini-Lipshitz test for uniform convergence of Fourier series. (Russian) *Mat. Zametki* 25 (1979), no. 4, 557–568, 636. (J. Németh) **81b:42023** 42A16
- Best rational approximations in the Hausdorff metric. (Russian) *Serdica* 6 (1980), no. 1, 29–41. (Bl. Sendov) **81f:41017** 41A20
- Petruska, Gy. (with Ceder, J.; Laczovich, M.) On a problem about Darboux points. *Acta Math. Acad. Sci. Hungar.* 34 (1979), no. 3–4, 279–286 (1980). (Á. Császár) **81j:26004** 26A15
- On a problem of M. Laczovich. *Real Anal. Exchange* 5 (1979/80), no. 2, 267–273. (A. M. Bruckner) **81e:26006** 26B05
- Petrusko, I. M. On boundary values in E_p , $p > 1$, of solutions to parabolic equations. (Russian) *Dokl. Akad. Nauk SSSR* 251 (1980), no. 5, 1067–1069. (P. C. Fife) **81g:35045** 35K20 (35D99)
- Petry, Herbert-Rainer (with Greub, Werner) On the lifting of structure groups. *Differential geometrical methods in mathematical physics, II* (Proc. Conf., Univ. Bonn, Bonn, 1977), pp. 217–246, *Lecture Notes in Math.*, 676, Springer, Berlin, 1978. (From the text) **81d:55019** 55R10 (53C05, 57S99)
- Petryskaya, W. V. Existence theorems for semilinear abstract and differential equations with noninvertible linear parts and noncompact perturbations. *Nonlinear equations in abstract spaces* (Proc. Internat. Sympos., Univ. Texas, Arlington, Tex., 1977), pp. 275–316, Academic Press, New York, 1978. (R. Kannan) **81j:47052** 47H15
- Fredholm theory for abstract and differential equations with noncompact nonlinear perturbations of Fredholm maps. *J. Math. Anal. Appl.* 72 (1979), no. 2, 472–499. (Jean Mawhin) **81b:47081** 47H15 (34B15)
- Using degree theory for densely defined A -proper maps in the solvability of semilinear equations with unbounded and noninvertible linear part. *Nonlinear Anal.* 4 (1980), no. 2, 259–281. (Jean Mawhin) **81b:47082** 47H15 (55M25)
- Pettit, A. N. Testing for bivariate normality using the empirical distribution function. *Comm. Statist. A—Theory Methods* 8 (1979), no. 7, 699–712. (C. R. Heathcote) **81f:62078** 62G10
- Two-sample Cramér-von Mises type rank statistics. *J. Roy. Statist. Soc. Ser. B* 41 (1979), no. 1, 46–53. (M. Knott) **81d:62036** 62G10
- A nonparametric approach to the change-point problem. *J. Roy. Statist. Soc. Ser. C* 28 (1979), no. 2, 126–135. (M. S. Srivastava) **81d:62039** 62G10
- A simple cumulative sum type statistic for the change-point problem with zero-one observations. *Biometrika* 67 (1980), no. 1, 79–84. (Author's summary) **81d:62036** 62F12
- Pettorossi, Alberto On the definition of hierarchies of infinite sequential computations. *Fundamentals of computation theory* (Proc. Conf. Algebraic, Arith. and Categorical Methods in Comput. Theory, Berlin/Wendisch-Rietz, 1979), pp. 335–341, *Math. Research*, 2, Akademie-Verlag, Berlin, 1979. (Author's summary) **81j:68021** 68B05 (03B40)
- A hierarchy of infinite computations in type free subtree replacement systems. *Les arbres en algèbre et en programmation* (4ème Colloq., Lille, 1979), pp. 181–195, Univ. Lille I, Lille, 1979. (Author's summary) **81b:68008** 68B05 (03B40)
- Petříček, Jiří (with Hájek, Milošlav; Brodán, Vladimír) Parameter estimation of models of biological systems. *Systems analysis and simulation*, 1980 (Proc. Internat. Sympos., Berlin, 1980), pp. 396–400, *Math. Research*, 5, Akademie-Verlag, Berlin, 1980. (Author's summary) **81m:92003** 92A05
- Petuhov, Ju. V. (with Pelinowski, E. N.; Fridman, V. E.) Approximate equations for the propagation of strong acoustic signals in the ocean. *Izv. Akad. Nauk SSSR Ser. Fiz. Atmosf. i Okeana* 15 (1979), no. 4 (Russian); translated as *Izv. Acad. Sci. USSR Atmosf. Ocean. Phys.* 15 (1979), no. 4, 299–304 (1980). (Authors' summary) **81e:86004** 86A05 (76Q05)
- Petuhova, N. V. (with Tihonova, L. F.; Petrosjan, L. A.) A hierarchical model of planning industrial production. (Russian) *Some questions of differential and integral equations and their applications*, No. 2 (Russian), pp. 86–98, 190, *Jakutsk. Gos. Univ., Yakutsk*, 1977.

- (Authors' summary) **81c:90018** 90A11
(with Višnevskii, V. M.; Žarkih, V. A.; Žožikavili, V. A.) Analysis of algorithms for interfacing a large and small electronic computer in remotely operated queueing systems. I. *Avtomat. i Telemekh.* 1979, no. 3, 150-164 (Russian. English summary); translated as *Automat. Remote Control* 40 (1979), no. 3, part 2, 448-459. (D. C. McNickle) **81f:68051a** 68C15 (60K25)
(with Višnevskii, V. M.; Žarkih, V. A.; Žožikavili, V. A.) Analysis of algorithms for interfacing a large and small electronic computer in remotely operated queueing systems. II. *Avtomat. i Telemekh.* 1979, no. 7, 156-165 (Russian. English summary); translated as *Automat. Remote Control* 40 (1979), no. 7, part 2, 1072-1079. (D. C. McNickle) **81f:68051b** 68C15 (60K25)
- Petukhov, Yu. V. See Petukhov, Ju. V.
Petukhova, N. V. See Petukhova, N. V.
- Petunin, Ju. I. (with Krein, S. G.; Semenov, E. M.) ★Интерполяция линейных операторов. (Russian) [Interpolation of linear operators] "Nauka", Moscow, 1978. 400 pp. (E. Gerlach) **81f:46006** 46M35 (46E30, 46E35)
(with Madreimov, I.) Some problems on order statistics. (Russian) *Vychisl. Prikl. Mat. (Kiev)* No. 38 (1979), 41-48, 163. (Authors' summary) **81k:62066** 62G30 (62F10)
(with Plíčko, A. M.) ★Теория характеристик подпространств и её приложения. (Russian) [The theory of the characteristics of subspaces and its applications] "Viśka Skola", Kiev, 1980. 216 pp. (G. J. O. Jameson) **81m:46025** 46B05 (46M35, 46N05)
- Petsche, Hans-Joachim On the $\Lambda_\alpha(\alpha)$ -nuclearity of hypoelliptic differential operators. *Bull. Soc. Roy. Sci. Liège* 49 (1980), no. 3-4, 117-118. (Ju. V. Egorov) **81m:35035** 35H05
- Pevnyi, A. B. (with Malozëmov, V. N.) Spline interpolation. (Russian) *Mat. Zametki* 26 (1979), no. 6, 817-822, 972. (S. D. Riemenschneider) **81g:41004a** 41A05 (41A15)
(with Vasil'ev, A. A.; Malozëmov, V. N.) Interpolation and approximation by spline functions of an arbitrary defect. (Russian. English summary) *Vestnik Leningrad. Univ. Mat. Meh. Astron.* 1979, vyp. 4, 23-30, 121. (S. D. Riemenschneider) **81g:41004b** 41A05 (41A15)
(with Malozëmov, V. N.) On the best quadrature formula on the class W_1^{r+1} . (Russian) *Dokl. Akad. Nauk SSSR* 252 (1980), no. 1, 37-40. (G. P. Ismatullaev) **81k:41020** 41A55 (41A65)
Estimates of minimal deviations in E. I. Zolotarev's problems connected with rational functions. (Russian) *Izv. Vysl. Učebn. Zased. Matematika* 1980, no. 2, 59-62. (W. H. J. Fuchs) **81i:41012** 41A20 (41A25)
- Peyret, R. (with Le Balleur, Jean-Claude; Viviand, Henri) Numerical studies in high Reynolds number aerodynamics. Special issue: computers in aerodynamics. *Comput. & Fluids* 8 (1980), no. 1, 1-30. (From the summary) **81d:76074** 76N10 (65P05, 76G99)
- Peyrière, Jacques Regularity of spherical means. *Harmonic analysis in Euclidean spaces* (Proc. Sympos. Pure Math., Williams Coll., Williamstown, Mass., 1978), Part 1, pp. 99-100, Proc. Sympos. Pure Math., XXXV, Part 1, Amer. Math. Soc., Providence, R.I., 1979. (Editors) **81a:46052** 46G99
Erratum: "Processus de naissance avec interactions des voisins" [C. R. Acad. Sci. Paris Sér. A-B 289 (1979), no. 3, A223-A224; MR 80i:60120]. *C. R. Acad. Sci. Paris Sér. A-B* 289 (1979), no. 10, A557. (Editors) **81f:60115** 60J80 (60J10)
- Peznec, Jean-Paul Propriétés topologiques de $[X, Y]$ et fantômes de finitude. (English summary) *Bull. Soc. Math. France* 107 (1979), no. 2, 113-126. (Author's summary) **81i:55013** 55Q05
(with Coelho, Michel) Fantômes de finitude en cohomologie tordue. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 291 (1980), no. 7, A473-A476. (Authors' summary) **81j:55006** 55N35
- Pezzoli, Luigi (with Alliney, Stefano; Barnabei, Marilena) W -optimal assignable sets and allocation problems. (Italian summary) *Boll. Un. Mat. Ital.* A (5) 17 (1980), no. 1, 131-136. (Uwe Zimmermann) **81c:90055** 90C10 (90B05, 90B10)
- Pfaff, J. F. See Demidov, S. S., **81a:01019**
- Pfaff, Rainer Gewöhnliche lineare Differentialgleichungen n -ter Ordnung mit Distributionskoeffizienten. (English summary) *Proc. Roy. Soc. Edinburgh Sect. A* 85 (1980), no. 3-4, 291-298. (Jerry Ridenhour) **81h:34006** 34A30 (46F99)
- Pfaffenberger, W. E. (with Hile, Gerald N.) The relative spectrum of elements in a real Banach algebra. *Math. Ann.* 250 (1980), no. 2, 113-133. (F. F. Bonsall) **81g:46060** 46H05
- Pfaffinger, Dieter D. Analytical evaluation of modal covariance matrices. *Comput. Methods Appl. Mech. Engrg.* 24 (1980), no. 3, 269-286. (Author's summary) **81k:70020** 70L05 (73K35, 93E25)
- Pfaltz, John L. (with Berman, William J.; Cagley, Edgar M.) Partial-match retrieval using indexed descriptor files. *Comm. ACM* 23 (1980), no. 9, 522-528. (Authors' summary) **81g:68128** 68H05
- Pfanzagl, J. (with Wefelmeyer, W.) An asymptotically complete class of tests. *Z. Wahrsch. Verw. Gebiete* 45 (1978), no. 1, 49-72. (Authors' summary) **81i:62044** 62F05 (62C07, 62E20)
First order efficiency implies second order efficiency. *Contributions to statistics*, pp. 167-196, Reidel, Dordrecht, 1979. (J. Steinbach) **81f:62048** 62F05 (62F12)
On optimal median unbiased estimators in the presence of nuisance parameters. *Ann. Statist.* 7 (1979), no. 1, 187-193. (W. E. Strawderman) **81e:62029** 62F10
(with Wefelmeyer, W.) Addendum to: "A third-order optimum property of the maximum likelihood estimator" [J. Multivariate Anal. 8 (1978), no. 1, 1-29; MR 80c:62037]. *J. Multivariate Anal.* 9 (1979), no. 1, 179-182. (R. Ponnappalli) **81c:62033** 62F12 (62C07, 62E20)
- Pfanzagl, Jonathan D. (with Letaw, John R.) Quantized scalar field in rotating coordinates. *Phys. Rev. D* (3) 22 (1980), no. 6, 1345-1351. (Authors' summary) **81h:81100** 81E99 (83C45)
- Pfeiffer, Washek Frank (with Gardner, R. J.) Some undecidability results concerning Radon measures. *Trans. Amer. Math. Soc.* 259 (1980), no. 1, 65-74. (A. H. Stone) **81e:54022** 54D20 (28A35, 54G20)
(with Gardner, R. J.) Interrelation between the regularity and σ -finiteness of Radon measures. (Russian) International Topology Conference (Moscow State Univ., Moscow, 1979). Translated from the English by A. V. Arhangel'skii. *Uspehi Mat. Nauk* 35 (1980), no. 3(213), 31-36. (Z. Lipecki) **81h:28016** 28C15 (54H05)
- Pfeiffer, Paul E. ★Conditional independence in applied probability. UMAP Modules and Monographs in Undergraduate Mathematics and its Applications Project. EDC/UMAP, Newton, Mass., 1978. 166 pp. (not consecutively pagged). (L. E. Clarke) **81h:60001** 60-01
- Pfeiffer, Wayne A graphical method for finding complex roots and its application to plasma physics problems. *J. Comput. Phys.* 33 (1979), no. 3, 397-404. (B. Buti) **81c:76056** 76X05 (34A20, 65S05)
- Pfiff, Traute ★Mathematischer Fachwortschatz. (German) [Technical mathematical terms] Friedrich-Schiller-Universität, Jena, 1980. 100 pp. (Editors) **81m:00011** 00A20
- Pfütz, P. (with Uzelac, K.; Jullien, R.) One-dimensional transverse-field Ising model in a complex longitudinal field from a real-space renormalization-group method at $T=0$. *Phys. Rev. B* (3) 22 (1980), no. 1, 436-444. (Authors' summary) **81c:82066** 82A67
(with Jullien, R.; Penson, K. A.; Uzelac, K.) Renormalization-group study of a two-dimensional frustrated-like quantum spin system. *Phys. Rev. Lett.* 44 (1980), no. 23, 1551-1558. (Authors' summary) **81c:82008** 82A15 (82A25)
- Pfister, R. (with Clarke, J.; Tamura, Takayuki) Identities E -2 and exponentiality. *Proc. Japan Acad. Ser. A Math. Sci.* 55 (1979), no. 7, 250-251. (Joseph Chacron) **81e:20008** 20M10
- Pfirsch, D. (with Berk, H. L.) WKB method for systems of integral equations. *J. Math. Phys.* 21 (1980), no. 8, 2054-2066. (H. K. Cheng) **81h:45028** 45M05 (49G05, 81C99)
- Pfister, Charles E. (with Blanchard, Philippe) Processus Gaussiens, équivalence d'ensembles et spécification locale. *Z. Wahrsch. Verw. Gebiete* 44 (1978), no. 3, 177-190. (Sergio Albeverio) **81c:60087** 60J65 (60G15, 60J30, 60J60, 60K35, 82A05)
(with Bricmont, Jean; Lebowitz, Joel L.) Non-translation-invariant Gibbs states with coexisting phases. III. Analyticity properties. *Comm. Math. Phys.* 69 (1979), no. 3, 267-291. (K. S. Viswanathan) **81c:82029** 82A67 (82A45)
(with Bricmont, Jean; Lebowitz, Joel L.) On the equivalence of boundary conditions. *J. Statist. Phys.* 21 (1979), no. 5, 573-582. (Authors' summary) **81j:82001** 82A05 (82A67)
- Pfister, Gerhard (with Mostowski, Tadeusz) Der Cohensche Eliminationsatz in positiver Charakteristik. Beiträge zur Algebra und Geometrie [Contributions to Algebra and Geometry], 8. Wiss. Beir. Martin-Luther-Univ. Halle-Wittenberg M 12 (1979), 115-123. (Leonard Lipshitz) **81k:13015** 13J05 (03C10)
- Pfisterer, H. An alternative method of solving Poisson's equation for MOS capacitors. (German summary) *Siemens Forsch. Entwickl.* 9 (1980), no. 6, 319-324, i. (From the introduction) **81k:65093** 65L10 (82A50)
- Pflug, Georg Ch. Stochastic approximation in time series regression. *Proceedings of the Second Prague Symposium on Asymptotic Statistics* (Hradec Králové, 1978), pp. 303-313, North-Holland, Amsterdam, 1979. (Katsuji Uonaki) **81h:62147** 62L20 (62M10)
Steitige stochastische Approximation. (English summary) *Metrika* 26 (1979), no. 3, 139-150. (V. Dupač) **81d:62153** 62L20
- Pfing, Peter Holomorphic functions of polynomial growth and applications. *Hyperbolic complex analysis* (Proc. All India Sem., Ramanujan Inst., Univ. Madras, Madras, 1977), pp. 141-163, Publ. Ramanujan Inst., 4, Univ. Madras, Madras, 1979. (Eiichi Sakai) **81h:32020** 32D05
Šilov boundaries of smooth pseudoconvex domains. *Hyperbolic complex analysis* (Proc. All India Sem., Ramanujan Inst., Univ. Madras, Madras, 1977), pp. 189-193, Publ. Ramanujan Inst., 4, Univ. Madras, Madras, 1979. (K. T. Hahn) **81d:32029** 32E25 (32F15, 46J15)
Ein Fortsetzungssatz für plurisubharmonische Funktionen über reell-2-kodimensionale Flächen. *Arch. Math. (Basel)* 33 (1979/80), no. 6, 559-563. (Eric Bedford) **81c:32022** 32F05 (31C10)
- Pfister, Albert On a coefficient inequality for schlicht functions. *Romanian-Finnish Seminar on Complex Analysis* (Proc., Bucharest, 1976), pp. 336-343, *Lecture Notes in Math.*, 743, Springer, Berlin, 1979. (S. Ruscheweyh) **81c:30027** 30C50
On the diameter of planar curves and Fourier coefficients. (German summary) *Z. Angew. Math. Phys.* 30 (1979), no. 2, 305-314. (M. Ohnaka) **81h:42024** 42A16 (30C35)
- Pfouts, Ralph W. Directional modeling. *Proceedings of the First International Conference on Mathematical Modeling* (St. Louis, Mo., 1977), Vol. V, pp. 2313-2322, Univ. Missouri-Rolla, Rolla, Mo., 1977. (Author's summary and introduction) **81m:90025** 90A10
- Phadia, E. G. A note on empirical Bayes estimation of a distribution function based on censored data. *Ann. Statist.* 8 (1980), no. 1, 226-229. (V. Susarla) **81f:62009** 62C12 (62G05)
(with Van Ryzin, John) A note on convergence rates for the product limit estimator. *Ann. Statist.* 8 (1980), no. 3, 673-678. (F. T. Wright) **81c:62042** 62G05 (60F99)
- Phadke, S. V. (with Thakare, Nimbakrishna) Projection operators on uniformly convex semi-inner product spaces. *Indian J. Pure Appl. Math.* 7 (1976), no. 12, 1438-1447. (M. M. Day) **81d:47027** 47B50 (46B20)
See also Brining, Jochen; et al., **81h:47004**
- Pham, Frédéric ★Singularités des systèmes différentiels de Gauss-Manin. (French) [Singularities of Gauss-Manin differential systems] With contributions by Lo Kam Chan, Philippe Maisonobe and Jean-Étienne Remboldi. Progress in Mathematics, 2. Birkhäuser, Boston, Mass., 1979. iv + 339 pp. ISBN 3-7643-3002-3 (Helmut Hamm) **81h:32015** 32C40 (14D05, 35C05, 58G07)
- Pham Dinh Tuan The estimation of parameters for autoregressive-moving average models from sample autocorrelations. *Biometrika* 66 (1979), no. 3, 555-560. (Raúl Pedro Mentz) **81g:62157** 62M10 (62F10)
(with Tran, Lanh Tat) Quelques résultats sur les modèles bilinéaires de séries chronologiques. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 7, A335-A338. (Authors' summary) **81a:62092** 62M10
- Pham-Gia, T. Extension of a result of S. Mandelbrojt. *Canad. Math. Bull.* 22 (1979), no. 3, 381-384. (V. Ganapathy Iyer) **81a:26017** 26E10
- Pham Mau Quan Géométrie du problème de Kepler: courbure et géodésiques. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 291 (1980), no. 3, A219-A221. (Author's summary) **81j:58044** 58F05 (70F05, 83C99)
Géométrie du problème de Kepler: orbites et variétés des orbites. (English

- summary) *C. R. Acad. Sci. Paris Sér. A-B* **291** (1980), no. 4, A299-A302. (Author's summary) **81j:58045** 58F05 (58F17, 70F05)
- Pham Ngoc Anh** Über die Struktur linear kompakter Ringe. II. *Acta Math. Acad. Sci. Hungar.* **34** (1979), no. 3-4, 245-251 (1980). (R. Wiegandt) **81h:16064** 16A80
- On the theory of linearly compact rings. I. *Beiträge Algebra Geom. No. 9* (1980), 13-27. (Eric Nummela) **81f:16055** 16A80
- Pham Ngoc Dinh, Alain** (with Boujot, Jacqueline) Un algorithme numérique pour la résolution d'une équation différentielle faiblement non linéaire. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **286** (1978), no. 22, A1063-A1066. (Authors' summary) **81e:65032** 65L05
- (with Boujot, Jacqueline; Veyrier, Jean-Pierre) Oscillateurs harmoniques faiblement perturbés: l'algorithme numérique des "pas de géants". (English summary) *RAIRO Anal. Numér.* **14** (1980), no. 1, 3-23. (W. F. Ames) **81f:65052** 65L05 (34E05)
- Pham The Lai** (with Bolley, P.; Camus, Jacques) Noyau, résolvante et valeurs propres d'une classe d'opérateurs elliptiques et dégénérés. *Équations aux dérivées partielles (Proc. Conf., Saint-Jean-de-Monts, 1977)*, pp. 33-46. *Lecture Notes in Math.*, **660**, Springer, Berlin, 1978. (M. H. Protter) **81h:35078** 35P20 (35J40)
- (with Robert, Didier) Sur un problème aux valeurs propres non linéaire. *Journées: Équations aux dérivées partielles (Saint-Cast, 1979)*, Exp. No. 15, 5 pp., École Polytech., Palaiseau, 1979. (C. Bardos) **81e:35098** 35P20 (47F05)
- Problème de Dirichlet dans un cône avec paramètre spectral pour une classe d'espaces de Sobolev à poids. *Séminaire Goulaouic-Schwartz* (1978/1979), Exp. No. 6, 14 pp., École Polytech., Palaiseau, 1979. (R. C. MacCamy) **81d:35026** 35J25
- (with Robert, Didier) Valeurs propres d'une classe d'équations différentielles singulières sur une demi-droite. *Ann. Scuola Norm. Sup. Pisa Cl. Sci. (4)* **6** (1979), no. 2, 335-366. (C. Bardos) **81e:35099** 35P20
- Meilleures estimations asymptotiques des restes de la fonction spectrale et des valeurs propres relatifs au laplacien. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **289** (1979), no. 8, A463-A466. (William Margulies) **81k:35122** 35P20 (35S15)
- Pham, H. V.** (with Desai, C. S.) Three-dimensional finite element analysis including material and geometric nonlinearities. *Computational methods in nonlinear mechanics (Proc. Second Internat. Conf., Univ. Texas, Austin, Tex., 1979)*, pp. 205-224, North-Holland, Amsterdam, 1980. (H. K. Verma) **81m:73058** 73K25 (73Q05)
- Pham Dinh Dieu** Some investigations on finite graphs and their applications. *Fundamentals of computation theory (Proc. Conf. Algebraic, Arith. and Categorical Methods in Comput. Theory, Berlin/Wendisch-Rietz, 1979)*, pp. 342-348, Math. Research, 2, Akademie-Verlag, Berlin, 1979. (W. G. Brown) **81e:68033** 68C25 (05C99, 68D40)
- Phan-Thien, N.** Flow enhancement mechanisms of a pulsating flow of non-Newtonian liquids. (German summary) *Rheol. Acta* **19** (1980), no. 3, 287-290. (From the introduction) **81f:76084** 76A10
- Phan Van Chur'ing** Version paramétrique du théorème de Krein-Mil'man et théorèmes de densité pour les applications multivoques mesurables. *Acta Math. Vietnam.* **3** (1978), no. 2, 99-112. (Jaures P. Coconni) **81g:58074** 90C25 (46G10, 49A27)
- Solutions continues à droite d'une équation intégrale multivoque. *Travaux Sémin. Anal. Convexe* **9** (1979), no. 1, exp. no. 3, 8 pp. (Author's introduction) **81m:45013** 45G10
- Phares, Alain J.** The energy eigenvalue equation for the linear potential. *J. Math. Phys.* **19** (1978), no. 10, 2239-2244. (Georges Bessis) **81e:81032** 81C05 (34B25)
- (with Simmons, Kim H.) Fibonacci numbers revisited: a combinatorics function point of view. *Amer. J. Phys.* **48** (1980), no. 2, 159-162. (G. L. Alexanderson) **81h:10016** 10A35
- Phariseau, P.** (with Dhoore, F.) A relativistic Green matrix method to calculate the surface states in a three-dimensional crystal slab. *Phys. A* **101** (1980), no. 1, 49-66. (Authors' summary) **81e:82025** 82A60
- Phatak, A. G.** Difference between BCR of size α and BCR of significance level α from a teaching standpoint. *Gujarat Statist. Rev.* **5** (1978), no. 2, 57-62. (A. N. Philippou) **81e:62001** 62-01
- Phatarfod, Ravindra M.** A note on the infinitely deep dam with a Markovian input. *J. Appl. Probab.* **16** (1979), no. 4, 917-922. (Emlyn Lloyd) **81d:60110** 60K30
- (with Tin, Pyke) On the first emptiness time of an infinite dam. *Opsearch* **16** (1979), no. 4, 136-142. (Neil S. Barnett) **81m:60176** 60K30
- The bottomless dam with seasonal inputs. *Austral. J. Statist.* **22** (1980), no. 2, 212-217. (N. U. Prabhu) **81f:60101** 60K30 (90B05)
- Phelps, Judy Kennedy** Homeomorphisms of products of universal curves. *Houston J. Math.* **6** (1980), no. 1, 127-134. (W. Kuperberg) **81k:54066** 54F99
- Phelps, K. T.** Latin square graphs and their automorphism groups. *Ars Combin.* **7** (1979), 273-299. (Charles C. Lindner) **81e:05062** 05C25 (05B15, 20F38)
- Infinite classes of cyclic Steiner quadruple systems. *Combinatorics 79 (Proc. Colloq., Univ. Montréal, Montréal, Que., 1979)*, Part I. *Ann. Discrete Math.* **8** (1980), 177-181. (A. Rosa) **81m:05027** 05B05
- Automorphism-free Latin square graphs. *Discrete Math.* **31** (1980), no. 2, 193-200. (D. Ja. Keszleman) **81m:05037** 05B15 (05B30)
- (with Rosa, Alexander) 2-chromatic Steiner quadruple systems. *European J. Combin.* **1** (1980), no. 3, 253-258. (H. Hanani) **81m:05028** 05B05 (51E10)
- Phelps, R. L.** (with Thomas, L. C.) On optimal performance in self-organizing paging algorithms. *J. Inform. Optim. Sci.* **1** (1980), no. 1, 80-93. (Authors' summary) **81g:68044** 68B20 (90B40)
- Phelps, R. R.** Integral representations for elements of convex sets. *Studies in functional analysis*, pp. 115-157, *MAA Studies in Math.*, **21**, Math. Assoc. America, Washington, D.C., 1980. (Wolfgang Lusky) **81m:46023** 46A55 (52A07)
- Phien, Huynh Ngoc** Water content in an infinite reservoir with independent gamma inflows. *Internat. J. Math. Ed. Sci. Tech.* **11** (1980), no. 2, 269-277. (Author's summary) **81g:60099** 60K30
- Philip, J. R.** The convergence and partial convergence of alternating series. *Math. Comp.* **35** (1980), no. 151, 907-916. (Tikam Singh) **81h:40004** 40A05 (65B10)
- Philipp, P.** Zum praktischen Schließen. *Wiss. Z. Karl-Marx-Univ. Leipzig Ges. Sprachwiss. Reihe* **28** (1979), no. 3, 333-340. (Peter Köhler) **81h:03031** 03B60 (03A05)
- Philipp, Walter** Almost sure invariance principles for sums of B -valued random variables. *Probability in Banach spaces, II (Proc. Second Internat. Conf., Oberwolfach, 1978)*, pp. 171-193, *Lecture Notes in Math.*, **709**, Springer, Berlin, 1979. (Gilles Pisier)
- 81h:60014** 60B12
- (with Berkes, István) A new method to prove limit theorems for mixing r.v.'s and its applications. *Transactions of the Eighth Prague Conference on Information Theory, Statistical Decision Functions, Random Processes (Prague, 1978)*, Vol. C, pp. 39-46, Reidel, Dordrecht, 1979. (Yutaka Kato) **81h:60033** 60F17
- Weak and L^p -invariance principles for sums of B -valued random variables. *Ann. Probab.* **8** (1980), no. 1, 68-82. (A. D. de Acosta) **81h:60011** 60B12 (60F17)
- Philippis, Gérard A.** (with Payne, L. E.) On some maximum principles involving harmonic functions and their derivatives. *SIAM J. Math. Anal.* **10** (1979), no. 1, 96-104. (N. I. Skiba) **81f:31011a** 31B15
- See also **Bandle, Catherine**, **81f:31011b**
- Phillips, C.** See *Survey of numerical methods for partial differential equations*, **81h:65002**
- Phillips, Don T.** (with Beightler, Charles S.; Wilde, Douglass J.) ★ Foundations of optimization. Second edition. Prentice-Hall International Series in Industrial and Systems Engineering. Prentice-Hall, Inc., Englewood Cliffs, N.J., 1979. xvii + 487 pp. ISBN 0-13-330332-2 (Albert Buckley) **81g:90001** 90-01
- Phillips, Esther R.** Nicolai Nicolaevich Luzin and the Moscow school of the theory of functions. (Russian and French summaries) *Historia Math.* **5** (1978), no. 3, 275-305. (Thomas Hawkins) **81c:01027** 01A60 (26-03)
- Phillips, G. D. A.** An asymptotic justification for using a jackknifed two-stage least squares estimator for bias reduction in a simultaneous equation model. *Comm. Statist. A—Theory Methods* **9** (1980), no. 1, 81-86. (P. C. B. Phillips) **81e:62076** 62J05 (62P20)
- (with Harvey, A. C.) Testing for serial correlation in simultaneous equation models. *Econometrica* **48** (1980), no. 3, 747-759. (G. Tintner) **81e:62112** 62P20
- Phillips, G. M.** Seventh degree integration rules for the sphere. *BIT* **20** (1980), no. 1, 117-119. (Stephen W. Brady) **81h:65029** 65D32 (41A55)
- (with Grundy, R. E.) Application of Hermite approximation to a boundary value problem. *J. Comput. Phys.* **38** (1980), no. 2, 251-256. (Siegfried Filippi) **81h:65135** 65L10 (34B15, 41A05)
- Phillips, John** (with Raeburn, Iain) On extensions of AF-algebras. *Amer. J. Math.* **101** (1979), no. 5, 957-968. (David Handelman) **81e:46042b** 46L05
- (with Raeburn, Iain) Perturbations of AF-algebras. *Canad. J. Math.* **31** (1979), no. 5, 1012-1016. (David Handelman) **81e:46042a** 46L05
- Phillips, Keith** Distributional and operational integral homogeneity over local fields. *Math. Ann.* **242** (1979), no. 1, 69-84. (James E. Daly) **81e:43018** 43A70 (12B40)
- Phillips, Peter C. B.** The sampling distribution of forecasts from a first-order autoregression. *J. Econometrics* **9** (1979), no. 3, 241-261. (Peter Schmidt) **81e:62172** 62M10 (62P20)
- The concentration ellipsoid of a random vector. *J. Econometrics* **11** (1979), no. 2-3, 363-365. (Anant M. Kshirsagar) **81d:62042** 62H05
- The exact distribution of instrumental variable estimators in an equation containing $n+1$ endogenous variables. *Econometrica* **48** (1980), no. 4, 861-878. (Yasuko Chikuse) **81h:62093** 62H10 (62P20)
- Phillips, R. G.** Reduced order modelling and control of two-time-scale discrete systems. *Internat. J. Control* **31** (1980), no. 4, 765-780. (Author's summary) **81d:93046** 93C55 (93C05)
- Phillips, Ralph S.** (with Lax, Peter D.) Translation representations for the solution of the non-Euclidean wave equation. *Comm. Pure Appl. Math.* **32** (1979), no. 5, 617-667. (L. A. Takhtajan (Tahtadjan)) **81a:43013** 43A85 (10D40, 22E30, 35P25, 47A40, 58G25)
- (with Lax, Peter D.) Scattering theory for automorphic functions. *Bull. Amer. Math. Soc. (N.S.)* **2** (1980), no. 2, 261-295. (L. A. Takhtajan (Tahtadjan)) **81e:10037** 10D40 (47A40)
- Phillips, Richard E.** (with Hickin, Kenneth K.; Plotkin, J. M.) Periodic groups generated by finite amalgams. *Math. Proc. Cambridge Philos. Soc.* **87** (1980), no. 2, 189-197. (R. C. Lyndon) **81g:20077** 20F50
- Philos, Ch. G.** Oscillations caused by delays. *An. Ştiinţ. Univ. "Al. I. Cuza" Iaşi Sect. I a Mat. (N.S.)* **24** (1978), no. 1, 71-76. (From the text) **81f:34062** 34K15
- Some results on the oscillatory and asymptotic behavior of the solutions of differential equations with deviating arguments. *Arch. Math. (Brno)* **15** (1979), no. 1, 19-36. (Yiannis Sficas) **81e:34065** 34K15
- (with Staikos, Vasilios Anast.) Quick oscillations with damping. *Math. Nachr.* **92** (1979), 153-160. (Bhagat Singh) **81e:34058** 34K15
- Bounded oscillations generated by retardations for differential equations of arbitrary order. *Utilitas Math.* **15** (1979), 161-182. (G. Ladas) **81m:34103** 34K15 (34C10)
- (with Staikos, Vasilios Anast.) Nonslow oscillations with damping. *Rev. Roumaine Math. Pures Appl.* **25** (1980), no. 7, 1099-1110. (Hiroshi Onose) **81m:34045** 34C10 (34K15)
- bui minh Phong** See **Bui Minh Phong**
- Phong, D. H.** (with Fefferman, Charles) Sharp Garding inequalities. *Harmonic analysis in Euclidean spaces (Proc. Sympos. Pure Math., Williams Coll., Williamstown, Mass., 1978)*, Part 2, pp. 137-141, *Proc. Sympos. Pure Math.*, XXXV, Part 2, Amer. Math. Soc. Providence, R.I., 1979. (J. Weidmann) **81h:35097** 35S05
- (with Fefferman, Charles) On the lowest eigenvalue of a pseudodifferential operator. *Proc. Nat. Acad. Sci. U.S.A.* **76** (1979), no. 12, 6055-6056. (V. S. Rabinovich) **81d:47032** 47G05 (35S05)
- ta Phouc Loc** See **Ta Phouc Loc**
- Phyllias, R.** (with Curtis, W. D.) Feynman's variational method applied to the randomly forced Duffing equation. *J. Phys. A* **13** (1980), no. 5, 1575-1586. (P. J. Holmes) **81d:34009** 34A34 (34F05, 58F13)
- On Lücke's theory of turbulence. *J. Phys. A* **13** (1980), no. 8, 2635-2643. (Author's summary) **81g:76063** 76F05
- Pl, S.-Y.** (with Hagiwara, T.; Tsao, H. S.) Point splitting regularization in a supersymmetric gauge field theory. *Phys. Lett. B* **94** (1980), no. 2, 166-169. (Author's summary) **81f:81058** 81E99 (81G25)
- Pianzani, Robert J.** Cohomology of fiber spaces is representable. *Illinois J. Math.* **23** (1979), no. 2, 334-344. (Michael Eggar) **81h:55033** 55P65 (55S40)
- Pianca, P.** (with Volpentea, A.; Zecchin, M.) On the solution of a class of extremal problems with integer variables connected with the problem of optimal allocation at

- service center. (Italian) *Proceedings of the First AMASES Meeting (Pisa, 1977) (Italian)*, pp. 309-331, Giappichelli, Turin, 1979. (Peter Bod) **81i:90151** 90C10 (90B35)
- Pisani, Giulio** On the existence of invariant measures. *Applied nonlinear analysis (Proc. Third Internat. Conf., Univ. Texas, Arlington, Tex., 1978)*, pp. 299-307, Academic Press, New York, 1979. (J. Král) **81d:28019** 28D05
- Piatetski-Shapiro, I. I.** Classical and adelic automorphic forms. An introduction. *Automorphic forms, representations and L-functions (Proc. Sympos. Pure Math., Oregon State Univ., Corvallis, Ore., 1977), Part 1*, pp. 185-188, Proc. Sympos. Pure Math., XXXIII, Amer. Math. Soc., Providence, R.I., 1979. (Marie-France Vignéras) **81c:10033** 10D24 (10D40, 12A67, 22E55)
- Multiplicity one theorems. *Automorphic forms, representations and L-functions (Proc. Sympos. Pure Math., Oregon State Univ., Corvallis, Ore., 1977), Part 1*, pp. 209-212, Proc. Sympos. Pure Math., XXXIII, Amer. Math. Soc., Providence, R.I., 1979. (From the text) **81m:22027** 22E55 (10D40)
- (with Howe, Roger E.) A counterexample to the "generalized Ramanujan conjecture" for (quasi-) split groups. *Automorphic forms, representations and L-functions (Proc. Sympos. Pure Math., Oregon State Univ., Corvallis, Ore., 1977), Part 1*, pp. 315-322, Proc. Sympos. Pure Math., XXXIII, Amer. Math. Soc., Providence, R.I., 1979. (A. B. Venkov) **81f:22036** 22E55 (10D40, 20G05)
- (with Gelbart, Stephen; Howe, Roger E.) Uniqueness and existence of Whittaker models for the metaplectic group. *Israel J. Math.* **34** (1979), no. 1-2, 21-37 (1980). (Joe Repka) **81j:22021** 22E50
- Pian, Monique** Delayed behavior of double shear perturbations of isotropic incompressible elastic-viscoplastic materials. *Internat. J. Engng. Sci.* **16** (1978), no. 3, 185-201. (S. C. Das) **81c:73027** 73E99
- di Piazza, L.** See Di Piazza, L.
- Pica, A.** (with Wood, R. D.; Hinton, E.) Finite element analysis of geometrically nonlinear plate behaviour using a Mindlin formulation. *Comput. & Structures* **11** (1980), no. 3, 203-215. (Authors' summary) **81b:73037** 73K25 (65N30, 73C50)
- Picard, Charles-Émile** ★ *Œuvres de Ch.-É. Picard. Tome I. (French) [Works of Ch.-É. Picard. Vol. I]* With a biographical sketch by J. Hadamard. With a forward by Jean Leray, Jean-Pierre Serre and Michel Hervé. *Éditions du Centre National de la Recherche Scientifique (CNRS), Paris*, 1978. lxxiv + 625 pp. (1 plate). ISBN 2-222-02232-0 (Phillip Griffiths) **81j:01049a** 01A75 (14-03, 30-03, 34-03, 53-03)
- ★ *Œuvres de Ch.-É. Picard. Tome II. (French) [Works of Ch.-É. Picard. Vol. II]* *Éditions du Centre National de la Recherche Scientifique (CNRS), Paris*, 1979. xiv + 737 pp. ISBN 2-222-02481-1 (Phillip Griffiths) **81j:01049b** 01A75 (14-03, 30-03, 34-03, 53-03)
- Picard, Claude François** Weighted probabilistic information measures. (French summary) *J. Combin. Inform. System Sci.* **4** (1979), no. 4, 343-356. (Author's summary) **81d:94014** 94A17
- ★ Graphs and questionnaires. Abridged translation from the French by J. C. Ault, M. Løbenberg and N. L. Aggarwal. North-Holland Mathematics Studies, 32. North-Holland Publishing Co., Amsterdam-New York, 1980. xiii + 431 pp. ISBN 0-444-85239-5 (Gur Dial) **81j:94017** 94A50 (05C99)
- Picard, Colette** (with Bénilan, Philippe) Quelques aspects non linéaires du principe du maximum. *Séminaire de Théorie du Potentiel, No. 4 (Paris, 1977/1978)*, pp. 1-37, *Lecture Notes in Math.*, 713, Springer, Berlin, 1979. (B. Walsh) **81c:47067** 47H99 (31C25, 35K60)
- (with Attouch, Hedy) Problèmes variationnels et théorie du potentiel non linéaire. (English summary) *Ann. Fac. Sci. Toulouse Math.* (5) **1** (1979), no. 2, 89-136. (Alano Ancona) **81h:31017** 31C25 (49A27, 90C25)
- Picard, Jean-Claude** (with Ratliff, H. Donald) A cut approach to the rectilinear distance facility location problem. *Oper. Res.* **26** (1978), no. 3, 422-433. (James G. Morris) **81d:90040** 90B05 (90C50)
- (with Ratliff, H. Donald) A cut approach to a class of quadratic integer programming problems. *Networks* **10** (1980), no. 4, 363-370. (Authors' summary) **81g:90066** 90C10 (90C20)
- Picard, Nicole** (with Girodet, Marie-Alix) Graphes des groupes du plan. (English summary) *Problèmes combinatoires et théorie des graphes (Colloq. Internat. CNRS, Univ. Orsay, Orsay, 1976)*, pp. 175-179, *Colloques Internat. CNRS*, 260, CNRS, Paris, 1978. (See 80c:05005) 05C25
- Picard, Philippe** Applications of martingale theory to some epidemic models. *J. Appl. Probab.* **17** (1980), no. 3, 583-599. (Pragneshu) **81m:92046** 92A15 (60G99)
- Picard, Rainer** On convergence and error estimates for the horizontal line method applied to Maxwell's initial-boundary problem in anisotropic, inhomogeneous media. *Proc. Roy. Soc. Edinburgh Sect. A* **86** (1980), no. 1-2, 53-59. (E. Meister) **81m:78010** 78A25 (47H15, 65N40)
- Picard, Richard R.** (with Fienberg, Stephen E.) Designing surveys for measuring change in categorical data structures over time. *Multivariate analysis, V (Proc. Fifth Internat. Sympos., Univ. Pittsburgh, Pittsburgh, Pa., 1978)*, pp. 543-560, North-Holland, Amsterdam, 1980. (Henry M. Finucan) **81h:62100** 62H17 (62D05)
- Picard, Rick** Randomization and design. II. R. A. Fisher: an appreciation, pp. 46-58, *Lecture Notes in Statist.*, 1, Springer, New York, 1980. (See 81k:01024) 62K99 (01A65)
- Picardello, Massimo A.** (with Mauerci, Giancarlo) Noncompact unimodular groups with purely atomic Plancherel measures. *Proc. Amer. Math. Soc.* **78** (1980), no. 1, 77-84. (Elliot C. Gootman) **81h:22005** 22D35 (43A65)
- Picard, Sophie** Le groupe \mathcal{B} de transformations bornées de \mathbb{Z} . (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **286** (1978), no. 5, A243-A245. (Author's summary) **81c:20003** 20B27
- Les groupes P -symétriques. *Publ. Centre Rech. Math. Pures* (1) No. 14 (1979), 1-28. (A. O. Morris) **81h:20033** 20E05
- Piccinini, Lelio Clemente** G-convergence for ordinary differential equations with Peano phenomenon. *Rend. Sem. Mat. Univ. Padova* **58** (1977), 65-86 (1978). (A. D. Ziebur) **81a:34015b** 34A99
- Homogenization problems for ordinary differential equations. *Rend. Circ. Mat. Palermo* (2) **27** (1978), no. 1, 95-112. (A. D. Ziebur) **81a:34015a** 34A99
- G-convergence for ordinary differential equations. *Proceedings of the International Meeting on Recent Methods in Nonlinear Analysis (Rome, 1978)*, pp. 257-279, Pitagora, Bologna, 1979. (A. D. Ziebur) **81a:34015c** 34A99
- Piccinini, Paolo** On symplectic Pontrjagin classes. (Italian. English summary) *Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur.* (8) **65** (1978), no. 3-4, 113-119 (1979). (Riccardo Benedetti) **81j:55019** 55R40 (57R20)
- Pico Botta, Luciana** (with Verra, Alessandro) Discrete Aleksandrov schemes. (Italian) *Matematiche (Catania)* **32** (1977), no. 1, 126-137 (1979). (Marco Fontana) **81j:14003** 14A15 (54D10)
- (with Verra, Alessandro) An example of unirational nonrational threefold which is a conic bundle over a rational surface. *Nederl. Akad. Wetensch. Indag. Math.* **42** (1980), no. 1, 19-32. (C. A. M. Peters) **81j:14021** 14J30
- Piccollella, Lia Floravanti** Umbilical tangent spaces of the V_n of S_{n+1} . (Italian. English summary) *Rend. Mat.* (6) **12** (1979), no. 1, 55-70. (Wendelin Degen) **81c:53003** 53A07
- Picht, E.** (with Delobel, C.) The design of relational information system according to different kinds of dependencies. *Information systems methodology (Proc. Second Conf. European Cooperation Inform., Venice, 1978)*, pp. 266-290, *Lecture Notes in Comput. Sci.*, 65, Springer, Berlin, 1978. (See 80c:94001) 68B15
- Pichler, Franz R.** (with Ottendörfer, Wilhelm) Decomposition of general dynamical systems. (Russian summary) *Systems Sci.* **5** (1979), no. 1, 5-18. (Authors' summary) **81c:93012** 93A10 (68G20)
- See also Progress in cybernetics and systems research, **81i:90006**
- Pichioris, Stylianos K.** Supplement to: Norms of exponential sums [Dépt. Math., Univ. Paris-Sud, Orsay, 1977; MR 57 #16222]. *Séminaire d'Analyse Harmonique (1977/1978)*, pp. 63-79, *Publ. Math. Orsay* **78**, 12, Univ. Paris XI, Orsay, 1978. (Ernst Heppner) **81d:10030** 10G10 (42A05)
- Quelques remarques sur les sommes exponentielles. *Séminaire de Théorie des Nombres 1977-1978, Exp. No. 2, 6 pp.*, CNRS, Talence, 1978. (Editors) **81k:10058** 10G10
- Une remarque sur les polynômes trigonométriques réels dont toutes les racines sont réelles. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **286** (1978), no. 1, A17-A19. (Author's summary) **81c:42002** 42A05
- On the L^p norm of exponential sums. *Harmonic analysis, Iraklion 1978 (Proc. Conf., Univ. Crete, Iraklion, 1978)*, pp. 171-176, *Lecture Notes in Math.*, 781, Springer, Berlin, 1980. (R. A. Askey) **81h:42003** 42A05 (10G10)
- On the L^1 norm of exponential sums. (French summary) *Ann. Inst. Fourier (Grenoble)* **30** (1980), no. 2, v, 79-89. (E. Stankus) **81j:10058** 10G10
- See also Harmonic analysis, **81c:42001**
- Pickard, David K.** (with Tanemura, Masaharu; Tory, Elmer M.; Hori, Motoko) Some comments on a paper by H. J. Weiner: "Sequential random packing in the plane" [J. Appl. Probab. **15** (1978), no. 4, 803-814; MR 80a:60015]. With an answer by Howard Weiner. *J. Appl. Probab.* **16** (1979), no. 3, 697-707. (Adrian Baddeley) **81b:60013** 60D05
- (with Tory, Elmer M.) Experimental implications of a Markov model for sedimentation. *J. Math. Anal. Appl.* **72** (1979), no. 1, 150-176. (George Marsaglia) **81c:76045** 76T05 (58G32, 60J70)
- Pickel, B. S.** The Shannon-McMillan-Breiman theorem for stationary processes that are spatially homogeneous. (Russian) *Uspehi Mat. Nauk* **35** (1980), no. 4(214), 203-204. (B. M. Gurevič) **81k:28020** 28D05 (60G10)
- Pickel, P. F.** (with Grunewald, Fritz J.; Segal, Daniel) Polycyclic groups with isomorphic finite quotients. *Ann. of Math.* (2) **111** (1980), no. 1, 155-195. (C. Y. Tang) **81i:20045** 20F22
- Pickert, G.** Habilitation und Vorlesungstätigkeit von M. Pasch. *Mitt. Math. Sem. Giessen* **No. 146** (1980), 46-57. (E. J. F. Primrose) **81k:01019** 01A55 (01A60, 01A70)
- Inzidenz, Anordnung und Kongruenz in Pasch's Grundlegung der Geometrie. *Mitt. Math. Sem. Giessen* **No. 146** (1980), 58-81. (E. J. F. Primrose) **81k:01020** 01A55 (51-03)
- Pikman, L.** (with Cvetič, M.) Scattering states for a finite chain in one dimension. *J. Phys. A* **14** (1981), no. 2, 379-382. (Authors' summary) **81m:81065** 81F99 (82A65)
- Pisegov, S. A.** Approximation by linear methods of functions that are continuous on a closed interval. (Russian) *Mat. Zametki* **24** (1978), no. 3, 343-348, 446. (T. Bojanov) **81c:41016** 41A10
- The multidimensional Jackson theorem for linear polynomial approximations. (Russian) *Dokl. Akad. Nauk SSSR* **245** (1979), no. 4, 792-794. (Luciana Lupag) **81h:41003** 41A10
- Picutti, Ettore** The 22 problems of indeterminate analysis in Codex L.IV.21 of the Biblioteca degli Intronati di Siena. (Italian. English summary) *Physica-Riv. Internaz. Storia Sci.* **20** (1978), no. 1-4, 357-379 (1979). (Eberhard Knobloch) **81d:01013** 01A40 (01A35)
- Pidkuiko, S. I.** (with Stepin, A. M.) Polynomial integrals of Hamiltonian systems. (Russian) *Dokl. Akad. Nauk SSSR* **239** (1978), no. 1, 50-53. (From the text) **81f:58022** 58F05
- Pidlipenko, Ju. K.** Polynomial approximation of the solution of the Cauchy problem for systems of ordinary differential equations. (Russian) *Studies in the theory of approximation of functions and their applications (Russian)*, pp. 146-161, 194, *Akad. Nauk Ukrain. SSR, Inst. Mat., Kiev*, 1978. (A. A. Fonarev) **81c:65033** 65L05
- Piechór, K.** Reflection of a weak shock wave from an isothermal wall. (Polish and Russian summaries) *Arch. Mech. (Arch. Mech. Stow.)* **32** (1980), no. 2, 233-249. (Author's summary) **81k:76044** 76L05
- Pieczemski, George** (with Nussinov, Ruth; Griggs, Jerrold R.; Kleitman, Daniel J.) Algorithms for loop matchings. *SIAM J. Appl. Math.* **35** (1978), no. 1, 68-82. (Authors' summary) **81c:92009** 92A09
- Piefke, Frank** Schnitte von zufälligen Geraden durch endliche Punktmengen in der Ebene. *Studia Sci. Math. Hungar.* **11** (1976), no. 3-4, 301-311 (1978). (Franz Streit) **81d:60017a** 60D05 (52A22, 53C65)
- Über eine Verallgemeinerung des Crofton'schen Seilliniensatzes. *Studia Sci. Math. Hungar.* **11** (1976), no. 3-4, 313-326 (1978). (Franz Streit) **81d:60017b** 60D05
- Maße für gerichtete Geraden und nicht-symmetrische Pseudometriken in der Ebene. II. (English summary) *Monatsh. Math.* **89** (1980), no. 1, 45-56. (L. A. Santaló) **81f:53059** 53C65 (60D05)
- Pieher, Joachim** Über Gitterpunkte in Kegeln. *Wiss. Z. Tech. Hochsch. Leuna-Merseburg*

- 22 (1980), no. 1, 80-85. (K. Zimmermann) **81f:90074** 90C10 (10J25, 52A20)
- Piekarski, Marián S.** (with Michalik, Czesław) A low-pass filter with a convex attenuation characteristic in the pass-band and with maximum asymptotic attenuation. (Polish. English, French, German and Russian summaries) *Rozprawy Elektrotech.* **26** (1980), no. 2, 511-523. (Authors' summary) **81f:94044** 94C05
- Piene, Ragni** Some formulas for a surface in P^n . *Algebraic geometry (Proc. Sympos., Univ. Tromsø, Tromsø, 1977)*, pp. 196-235, *Lecture Notes in Math.*, **687**, Springer, Berlin, 1978. (A. A. Iarrobino, Jr.) **81e:14034** 14N10 (14J25)
- Ideals associated to a desingularization. *Algebraic geometry (Proc. Summer Meeting, Univ. Copenhagen, Copenhagen, 1978)*, pp. 503-517, *Lecture Notes in Math.*, **732**, Springer, Berlin, 1979. (José M. Aroca) **81a:14001** 14M05 (14B05)
- Pielikowska, Izabela** (with Herczyński, Ryszard) Toward a statistical theory of suspension. *Annual review of fluid mechanics*, Vol. 12, pp. 237-269, *Annual Reviews*, Palo Alto, Calif., 1980. (J. Jimenez) **81d:76093** 76T05
- Piepenbrink, John** (with Christensen, Mark J.) Quantum dynamics of Hamiltonians perturbed by pulses. *J. Math. Phys.* **20** (1979), no. 11, 2187-2190. (Alexander Alenicya) **81e:81038a** 81C10
- Pieper, Herbert** Variationen über ein zahlentheoretisches Thema von Carl Friedrich Gauß. (German) [Variations on a number-theoretic theme of Carl Friedrich Gauß] With a foreword by Hans Reichardt. Wissenschaft und Kultur [Science and Culture], 33. Birkhäuser Verlag, Basel-Stuttgart, 1978. 183 pp. ISBN 3-7643-0959-8 (G. J. Rieger) **81b:10001** 10-01
- Pieprzyk, Józef** Generalization of Vigenere ciphers. (Polish. Russian and English summaries) *Arch. Automat. Telemekh.* **24** (1979), no. 4, 453-468. (Editors) **81b:94053** 94B99 (68B15)
- Random Vigenere ciphers and their application in computer systems. (Polish. Russian and English summaries) *Arch. Automat. Telemekh.* **25** (1980), no. 2, 237-256. (From the summary) **81k:94040** 94B99 (68K05)
- Pierce, David A.** R^2 measures for time series. *J. Amer. Statist. Assoc.* **74** (1979), no. 368, 901-910. (O. D. Anderson) **81d:62100** 62M10
- A survey of recent developments in seasonal adjustment. *Amer. Statist.* **34** (1980), no. 3, 125-134. (Author's summary) **81f:90035** 90A20 (62M10)
- See also Price, J. Michael, **81j:62106**
- Pierce, Donald A.** (with Kopecky, Kenneth J.) Testing goodness of fit for the distribution of errors in regression models. *Biometrika* **66** (1979), no. 1, 1-5. (Urs R. Maag) **81e:62074** 62J05 (62E20)
- (with Thomas, David R.) Neyman's smooth goodness-of-fit test when the hypothesis is composite. *J. Amer. Statist. Assoc.* **74** (1979), no. 366, part 1, 441-445. (M. Knott) **81f:62044** 62F03 (62F05)
- Pierce, J. F.** (with Whitman, A. P.) Topological properties of the manifolds of configurations for several simple deformable bodies. *Arch. Rational Mech. Anal.* **74** (1980), no. 2, 101-113. (Robert Connelly) **81g:73058** 73G05 (51F99, 57Q99, 57S05, 58D10)
- Pierce, Keith R.** (with Glass, A. M. W.) Existentially complete abelian lattice-ordered groups. *Trans. Amer. Math. Soc.* **261** (1980), no. 1, 255-270. (B. I. Zil'ber) **81k:03032** 03C60 (03C35, 06F20)
- Pierce, Stephen** Divisibility questions in the general linear group. *Houston J. Math.* **5** (1979), no. 3, 387-394. (T. Ono) **81d:10014** 10C30 (20G15)
- Pierl, G.** Variational characterization of the uniqueness of the optimal state for the minimal-time problem. *J. Optim. Theory Appl.* **30** (1980), no. 4, 635-642. (M. A. Jagubov) **81g:49032** 49D20 (49B10, 49E10, 93C15)
- del Piero, Giampietro See Del Piero, Giampietro
- Saint-Pierre, Jean** See Saint-Pierre, Jean
- Pierre, Michel** (with Bénéilan, Philippe) Inéquations différentielles ordinaires avec obstacles irréguliers. (English summary) *Ann. Fac. Sci. Toulouse Math.* (5) **1** (1979), no. 1, 1-8. (H. Hochstadt) **81e:34006** 34A40
- Saint-Pierre, Patrick** See Saint-Pierre, Patrick
- Pierre, Percy A.** On the independence of linear functionals of linear processes. *Black mathematicians and their works*, pp. 167-180 (1 plate), Dorrance, Ardmore, Pa., 1980. (See **81e:00004**) 60G07
- Pierskalla, William P.** (with Voelker, John A.) Test selection for a mass screening program. *Naval Res. Logist. Quart.* **27** (1980), no. 1, 43-55. (Authors' summary) **81b:90085** 90B25
- Pierzchalski, Antoni** (with Kalina, Jerzy) A variation of the modulus of submanifold families. *Analytic functions*, Kozubnik 1979 (Proc. Seventh Conf., Kozubnik, 1979), pp. 250-257, *Lecture Notes in Math.*, **798**, Springer, Berlin, 1980. (J. Eells) **81f:53026** 53C20
- Plesak, St.** (with Galar, R.) Identification of a dynamic nonlinear N -degree-of-freedom system in terms of Legendre polynomials. *Identification and system parameter estimation (Proc. Fourth IFAC Symposium, Tbilisi, 1976)*, Part 3, pp. 1771-1779, North-Holland, Amsterdam, 1978. (See **80d:93010c**) 93B30
- Pietraszkiewicz, Wojciech** ★Finite rotations and Lagrangian description in the nonlinear theory of shells. With Polish and Russian summaries. *PWN—Polish Scientific Publishers*, Warsaw, 1979. 103 pp. ISBN 83-01-01441-5 (From the introduction) **81e:73070** 73L99
- Finite rotations in shells. *Theory of shells (Proc. Third IUTAM Sympos., Tbilisi, 1978)*, pp. 445-471, North-Holland, Amsterdam, 1980. (Hilmi Demiryaz) **81e:73066** 73L05
- Pietsch, Albrecht** ★Operator ideals. Translated from the German by the author. *Mathematische Monographien [Mathematical Monographs]*, 16. VEB Deutscher Verlag der Wissenschaften, Berlin, 1978. 451 pp. (D. J. H. Garling) **81a:47002** 47-02 (46-02, 47D30)
- ★Operator ideals. Translated from German by the author. North-Holland Mathematical Library, 20. North-Holland Publishing Co., Amsterdam-New York, 1980. 451 pp. ISBN 0-444-85293-X (Editors) **81j:47001** 47-02 (47D30)
- Open problems, presented at the third seminar (Poland-GDR) on operator ideals and geometry of Banach spaces, Georgenthal, April 2-11, 1979. *Math. Nachr.* **95** (1980), 299-303. (Zvi Altshuler) **81k:46015** 46B20 (47D25)
- (with Guskina, E. D.; Puhl, J.) A generalization of Khintchine's inequality and its application in the theory of operator ideals. *Studia Math.* **67** (1980), no. 2, 149-155. (Bernsd Rosenberger) **81m:47031** 47B10 (47D30)
- Pietschmann, H.** Elementary introduction to gauge theories. *Facts and prospects of gauge theories (Proc. XVII. Internat. Universitätswochen für Kernphysik, Schladingen, 1978)*, pp. 5-46, *Acta Phys. Austriaca Suppl.*, **XIX**, Springer, Vienna, 1978. (M. Carmeli) **81f:81043** 81E10
- Pignatelli, Pierre** Solutions du type Robertson-Walker en théorie unitaire. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **286** (1978), no. 21, A1027-A1030. (Author's summary) **81e:83058** 83F05
- Pigno, Louis** (with Dressler, Robert E.) The Haar measure of certain sets in the Bohr group. *Colloq. Math.* **41** (1979), no. 2, 297-301. (L. Thomas Ramsey) **81j:43002** 43A05 (10K50, 43A46, 43A75)
- (with Smith, Brent) Quantitative behavior of transforms with norm-bound partial sums. *Amer. J. Math.* **102** (1980), no. 2, 321-326. (Douglas Kurtz) **81e:42015** 42A38 (42A16)
- (with Smith, Brent) Almost idempotent measures on compact abelian groups. *J. Funct. Anal.* **38** (1980), no. 1, 61-70. (Benjamin B. Wells) **81j:43011** 43A25
- Transforms which almost vanish at infinity. *Math. Proc. Cambridge Philos. Soc.* **87** (1980), no. 1, 75-79. (S. Hartman) **81b:42046** 42A38 (43A25)
- (with Smith, Brent) A remark on the F. and M. Riesz theorem. *Proc. Amer. Math. Soc.* **79** (1980), no. 4, 585-586. (Takahiko Nakazi) **81f:43006** 43A17 (46J10)
- Pignoni, Roberto** Generic functions on a stratified space. (Italian summary) *Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur.* (8) **65** (1978), no. 3-4, 95-96 (1979). (Peter Giblin) **81f:58011** 58C27 (32B20, 58A35)
- Density and stability of Morse functions on a stratified space. *Ann. Scuola Norm. Sup. Pisa Cl. Sci.* (4) **6** (1979), no. 4, 593-608. (Felice Ronga) **81e:58017** 58C25 (58A35)
- Pigozzi, Don** Minimal, locally-finite varieties that are not finitely axiomatizable. *Algebra Universalis* **9** (1979), no. 3, 374-390. (Alden Pixley) **81a:08007** 08B05
- Universal equational theories and varieties of algebras. *Ann. Math. Logic* **17** (1979), no. 1-2, 117-150. (Heinrich Werner) **81b:03034** 03C05 (08B05)
- (with Köhler, Peter) Varieties with equationally definable principal congruences. *Algebra Universalis* **11** (1980), no. 2, 213-219. (Stanley N. Burris) **81k:08006** 08B10 (03C05)
- Piguet, O.** (with Sibold, K.; Schweda, M.) Radiative mass generation in perturbation theory and the renormalization group. *Nuclear Phys. B* **168** (1980), no. 2, 337-353. (Authors' summary) **81d:81110** 81G25 (81D20, 81E15)
- (with Clark, T. E.; Sibold, K.) The gauge invariance of the supercurrent in supersymmetric QED. *Nuclear Phys. B* **169** (1980), no. 1-2, 77-87. (Authors' summary) **81h:81200** 81L05
- (with Clark, T. E.; Sibold, K.) The renormalized supercurrents in supersymmetric QED. *Nuclear Phys. B* **172** (1980), no. 1, 201-223. (Authors' summary) **81h:81255** 81G25
- Pihl, Mogens** Two contributions of L. V. Lorenz to mathematical physics. Special issue dedicated to Olaf Pedersen on his sixtieth birthday. *Centaurus* **24** (1980), 361-368. (M. Kline) **81j:01031** 01A60 (76D99)
- Pijls, Wim** Congruence and similarity. (Dutch) *Euclides (Groningen)* **55** (1979/80), no. 4, 129-139. (H. W. Guggenheimer) **81b:51002** 51-01 (51M05)
- Piklaj, O. V.** Green's function of an optically thick layer. *Astrofizika* **16** (1980), no. 2, 351-361 (Russian); translated as *Astrophysics* **16** (1980), no. 2, 209-215. (Author's summary) **81m:78002** 78A10 (85A25)
- Pikal', V. V.** Mathematical model of thick plate bending. (Russian) *Dokl. Akad. Nauk SSSR* **250** (1980), no. 5, 1100-1104. (Z. Kączkowski) **81d:73055** 73K10
- Pikus, D. L.** Congruence of symmetric figures in a Lobachevskii plane. (Russian) *Current problems of geometry and its applications (Russian)*, pp. 48-52, 107, *Uspehi. Gos. Univ., Cheboksary*, 1975. (Author's summary) **81i:51015** 51M10
- Pilat, M.** (with Taranko, E.; Taranko, R.; Wysokiński, K. I.) Optical conductivity of substitutionally disordered alloys: intraband transitions. *Z. Phys. B* **39** (1980), no. 3, 187-192. (Authors' summary) **81h:82037** 82A42 (82-04)
- Pilecka, Barbara** Le prolongement de la solution de l'équation de translation. *Wyd. Szkół Ped. Krakow. Rocznik Nauk.-Dydakt. Prace Mat.* No. 9 (1979), 105-118. (Józef Tabór) **81e:39011** 39B50 (53A55)
- Pileckas, K. I.** Univalent solvability of boundary value problems for a system of Stokes equations in domains with noncompact boundaries. (Russian) Boundary value problems of mathematical physics, 10. *Trudy Mat. Inst. Steklov.* **147** (1980), 115-123, 204. (P. A. Mišneva) **81k:35134** 35Q10
- On spaces of solenoidal vectors. (Russian) Boundary value problems of mathematical physics and related questions in the theory of functions, 12. *Zap. Nauch. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* **96** (1980), 237-239, 310-311. (Vasil Ionescu) **81k:46035** 46E35 (35Q10, 76D05)
- Pilidi, V. S.** Reducibility of operators of two-sided multiple weighted shift. (Russian) *Funktsional. Anal. i Prilozhen.* **12** (1978), no. 2, 89-90. (From the text) **81h:47029** 47B37
- A priori estimates for a class of one-dimensional singular integral operators with discontinuous coefficients. (Russian) *Mat. Zametki* **26** (1979), no. 2, 227-234, 317. (R. V. Dudučava) **81k:47072** 47G05 (45E99, 47D30)
- Unitary equivalence of multiple weighted shift operators. (Russian) *Teor. Funktsii Funktsional. Anal. i Prilozhen.* No. 34 (1980), 96-103, iv. (Richard E. Frankfurt) **81h:47033** 47B37
- Pilipčuk, N. I.** Synchronization errors in an adaptive quantizer. *Problemy Peredachi Informacii* **15** (1979), no. 3, 83-92 (Russian); translated as *Problems Inform. Transmission* **15** (1979), no. 3, 223-230 (1980). (Author's summary) **81e:94018** 94A24
- Pilipčuk, S. S.** Convergence of Lagrange interpolation processes with respect to Jacobi nodes. (Russian) *Azerbaidžan. Gos. Univ. Učen. Zap.* **1979**, no. 1, 60-70. (D. D. Stancu) **81m:41004** 41A05 (65D05)
- Divergence of Lagrange interpolation processes on sets of second category. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* **1979**, no. 3, 45-52. (Hans Jürgen Albrand) **81a:41007** 41A05 (65D05)
- Tests for the convergence of interpolation processes. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* **1979**, no. 12, 39-44. (P. Vértési) **81e:41007** 41A05 (41A10)
- Pilipenko, Ju. N.** Topological groups with Sylow subgroups of rank one. (Russian)

- Theoretical and applied questions of differential equations and algebra (Russian)*, pp. 196–199, 269, "Naukova Dumka", Kiev, 1978. (Helmut Boscack) **81c:22011** 22D05
- Piliponjan, T. E.** (with Muradian, D. O.) Minimal numberings of vertices of a rectangular lattice. (Russian. Armenian summary) *Akad. Nauk Armjan. SSR Dokl.* **70** (1980), no. 1, 21–27. (A. K. Kelmans) **81a:05121** 05C99
- Pilipović, S.** The space of generalized functions whose elements have a Laguerre expansion—the sequential approach. (Serbo-Croatian. English summary) *Univ. u Novom Sadu Zb. Rad. Prirod.-Mat. Fak.* **8** (1978), 33–39. (Editors) **81d:46046** 46F12
- Piljavič, Valerij** (with Baraukas, Arunas; Žilinskas, Antanas; Šul'man, V. S.; Juškene, Elena) Investigation of optimization problems in synthesis of pigment compositions. (Russian. Lithuanian and English summaries) *Teor. Optimal. Rešenii—Trudy Sem. Protsessy Optimal. Upravlenija VI Sekcija No. 6* (1980), 57–74, 155. (Authors' summary) **81j:90136** 90C50 (92A27)
- Piljagova, V. B.** Investigation of a system with a triple zero characteristic root. (Russian) *Differentsial'nye Uravnenija* **16** (1980), no. 8, 1520–1522, 1535. (L. Reizig) **81k:59056** 58F21 (34C05)
- Pillai, C. Chudalanthu** (with Srinivasan, S. K.) Correlation functions in the $G/M/1$ system. *Adv. in Appl. Probab.* **12** (1980), no. 2, 530–540. (Bruce D. Craven) **81f:60137** 60K25 (90B22)
- Pillai, K. C. S.** (with Hsu, Yu Sheng) Exact robustness studies of the test of independence based on four multivariate criteria and their distribution problems under violations. *Ann. Inst. Statist. Math.* **31** (1979), no. 1, 85–101. (Dennis L. Young) **81a:62041** 62H10 (62H15)
- (with Hsu, Yu Sheng) The distribution of the characteristic roots of $S_1 S_2^{-1}$ under violations in the complex case and power comparisons of four tests. *Ann. Inst. Statist. Math.* **31** (1979), no. 3, 445–463. (Nariaki Sugiura) **81f:62087** 62H10 (62H15)
- (with Saweris, N. B.) Asymptotic formulae for the percentiles and c.d.f. of Hotelling's trace under violations. (Spanish summary) *Rev. Tec. Fac. Ingr. Univ. Zulia* **2** (1980), no. 1–2, 105–122. (Minoru Siotani) **81i:62064** 62H10
- Pillat, U. M.** (with Schulze, Bert-Wolfgang) Elliptische Randwertprobleme für Komplexe von Pseudodifferentialoperatoren. *Math. Nachr.* **94** (1980), 173–210. (J. Lawryniewicz) **81k:58064** 58G20 (35J65, 47G05)
- Pilly, Anand** Theories with exactly three countable models and theories with algebraic prime models. *J. Symbolic Logic* **45** (1980), no. 2, 302–310. (G. Fuhrken) **81c:03028** 03C15
- Instability and theories with few models. *Proc. Amer. Math. Soc.* **80** (1980), no. 3, 461–468. (Bruno Poizat) **81k:03070** 03C45 (03C15)
- Pilly, P.** On semiereditary noncommutative polynomial rings. *Proc. Amer. Math. Soc.* **78** (1980), no. 4, 473–474. (Chr. U. Jensen) **81g:16018** 16A30
- di Pillio, G.** See **Di Pillio, G.**
- Pilsworth, B. W.** (with Baldwin, J. F.) A model of fuzzy reasoning through multivalued logic and set theory. *Internat. J. Man-Mach. Stud.* **11** (1979), no. 3, 351–380. (Jifi Šustal) **81h:03051** 03B52 (94D05)
- (with Baldwin, J. F.) Fuzzy truth definition of possibility measure for decision classification. Special issue on fuzzy reasoning (Workshop, Queen Mary Coll., London, 1978). *Internat. J. Man-Mach. Stud.* **11** (1979), no. 4, 447–463. (V. D. Dimitrov) **81h:94082** 94D05 (03B52, 03E72, 94A17)
- Pila, Günter** Rings: theory and applications. (Italian. English summary) *Rend. Sem. Mat. Fis. Milano* **48** (1978), 79–86 (1980). (J. R. Clay) **81d:16028** 16A76 (05B05)
- (with So, Yong Sian) Near-rings of polynomials and polynomial functions. *J. Austral. Math. Soc. Ser. A* **29** (1980), no. 1, 61–70. (Steve Ligh) **81d:16029** 16A76
- Pila, Jürgen** (with Bandemer, Hans) Optimum experimental design for a Bayes estimator in linear regression. *Transactions of the Eighth Prague Conference on Information Theory, Statistical Decision Functions, Random Processes (Prague, 1978), Vol. A*, pp. 93–102, Reidel, Dordrecht, 1978. (Valery Fedorov) **81d:20772** 62K05
- Entscheidungstheoretische Darstellung des Problems der bayesschen Schätzung und Versuchsplanung im linearen Regressionsmodell. (English and Russian summaries) *Papers on the optimal design of experiments, Part V (German)*, pp. 7–20, Freiberger Forschungshefte D, 117, Deutscher Verlag für Grundstoffindustrie, Leipzig, 1979. (See **81k:62103**) 62K05 (62C10, 62J05)
- Das bayessche Schätzproblem im linearen Regressionsmodell. (English and Russian summaries) *Papers on the optimal design of experiments, Part V (German)*, pp. 21–55, Freiberger Forschungshefte D, 117, Deutscher Verlag für Grundstoffindustrie, Leipzig, 1979. (See **81k:62103**) 62K05 (62C10, 62J05)
- Optimalitätskriterien, Zuverlässigkeit und Vollständigkeit im Planungsproblem für eine bayessche Schätzung im linearen Regressionsmodell. (English and Russian summaries) *Papers on the optimal design of experiments, Part V (German)*, pp. 67–94, Freiberger Forschungshefte D, 117, Deutscher Verlag für Grundstoffindustrie, Leipzig, 1979. (See **81k:62103**) 62K05
- Konstruktion von optimalen diskreten Versuchsplänen für eine Bayes-Schätzung im linearen Regressionsmodell. (English and Russian summaries) *Papers on the optimal design of experiments, Part V (German)*, pp. 123–152, Freiberger Forschungshefte D, 117, Deutscher Verlag für Grundstoffindustrie, Leipzig, 1979. (See **81k:62103**) 62K05 (62C10)
- Pimbley, George H.** The nonoccurrence of secondary bifurcation with Hammerstein operators. *Bifurcation theory and applications in scientific disciplines (Papers, Conf., New York, 1977)*, pp. 168–177. *Ann. New York Acad. Sci.*, **316**, New York Acad. Sci., New York, 1979. (S. Burjéky) **81f:45005** 45C05 (45G10, 65R10)
- Pimenov, Ju. V.** (with Davydov, A. G.; Zaharov, E. V.) On integral equations for problems of electromagnetic wave diffraction by unclosed cylindrical surfaces. (Russian) *Dokl. Akad. Nauk SSSR* **253** (1980), no. 1, 82–84. (Piero Bassanini) **81m:78021** 78A45 (45B05)
- (with Davydov, A. G.) Radiation from a vertical electric vibrator located on the axis of an ideally conducting disk. *Izv. Vys. Učebn. Zaved. Radiofizika* **23** (1980), no. 1, 101–112. (Russian. English summary); translated as *Radiophys. and Quantum Electronics* **23** (1980), no. 1, 79–88. (Authors' summary) **81f:78015** 78A40
- Pimenov, R. I.** ★Негладкие и другие обобщения в теории пространства-времени и электростатика. (Russian) [Nonsmooth and other generalizations in the theory of space-time and electricity] Серия Препринтов "Научные Доклады" [Preprint Series "Scientific Lectures"], 47. *Akad. Nauk SSSR Komi Filial, Syktyvkar*, 1979. 60 pp. (O. K. Davjan) **81k:83041** 83D05 (51N99, 53A40)
- Pimenov, Yu. V.** See **Pimenov, Ju. V.**
- Pimenova, L. M.** Lebesgue functions for some interpolation polynomials in two variables. (Russian) *Dokl. Akad. Nauk SSSR* **249** (1979), no. 1, 52–54. (V. G. Verdiev) **81c:41008** 41A05 (42B05)
- Pinn, Stuart L.** (with Hallett, James G.) Direct estimation of competition. *Amer. Natur.* **113** (1979), no. 4, 593–600. (Authors' summary) **81k:92055** 92A17
- Pinner, Mihai V.** (with Popa, Sorin T.) The Ext-groups of some C^* -algebras considered by J. Cuntz. *Rev. Roumaine Math. Pures Appl.* **23** (1978), no. 7, 1069–1076. (Uffe Haagerup) **81j:46094** 46L05 (46M05, 46M20)
- Pis, J.-E.** Holoides factoriels. (English summary) *Studia Sci. Math. Hungar.* **12** (1977), no. 1–2, 169–184 (1980). (Joseph Chacron) **81h:20094** 20M14
- (with Perrot, J.-F.) Finite syntactic monoids. *Fundamentals of computation theory (Proc. Conf. Algebraic, Arith. and Categorical Methods in Comput. Theory, Berlin/Wendisch-Rietz, 1979)*, pp. 544–558, Math. Research, 2, Akademie-Verlag, Berlin, 1979. (Heinrich Seidel) **81i:68111** 68F05 (20M35)
- Pina, H. L.** Extremum principles in thermostatics. *Portugal. Phys.* **10** (1979), no. 3–4, 197–206. (R. R. Huilgol) **81d:80002** 80A10 (49H05)
- Pineard, M.** (with Laloë, F.) The role of the Pauli principle in spin exchange collisions. (French summary) *J. Physique* **41** (1980), no. 8, 769–797. (From the summary) **81i:8116a** 81G45
- (with Laloë, F.) The role of the Pauli principle in metastability exchange collisions. (French summary) *J. Physique* **41** (1980), no. 8, 799–818. (From the summary) **81i:8116b** 81G45
- Pinegar, Jan** The English contribution to logic before Ockham. *Synthese* **40** (1979), no. 1, 19–42. (A. G. Molland) **81a:01011** 01A35 (03–03)
- Pineh, E. R.** Time-optimal control to target sets. *Bull. Inst. Math. Appl.* **15** (1979), no. 8–9, 197–200. **81i:93042** 93C50
- Pinehard, Louis** Regularization procedures and distributions in electrostatics and magnetostatics. *Rev. Roumaine Math. Pures Appl.* **24** (1979), no. 6, 933–946. (Author's summary) **81i:78012** 78A30 (46F10)
- The theory of distributions and the axiomatics of electromagnetism. *Rev. Roumaine Math. Pures Appl.* **24** (1979), no. 7, 1089–1103. (Author's summary) **81i:78013** 78A25 (46F05)
- Pinehouse, Didier** (with Moulin Ollagnier, Jean) Dynamical systems of total orders. *Ergodic theory (Proc. Conf., Math. Forschungsinst., Oberwolfach, 1978)*, pp. 153–162, *Lecture Notes in Math.*, 729, Springer, Berlin, 1979. (John C. Kieffer) **81c:43001** 43A07 (28D05, 54H20)
- Pineuk, I. L.** Hot electrons in semiconductors in longitudinal quantizing magnetic fields. (Russian summary) *Phys. Status Solidi (B)* **97** (1980), no. 1, 355–365. (Author's summary) **81a:82046** 82A65
- Pineuk, S. I.** Biholomorphic inequivalence of bounded domains with smooth and piecewise-smooth boundaries. (Russian) *Dokl. Akad. Nauk SSSR* **247** (1979), no. 3, 554–557. (G. M. Henkin) **81c:32051** 32H99 (32F99)
- Holomorphic inequivalence of certain classes of domains in C^n . (Russian) *Mat. Sb. (N.S.)* **111**(153) (1980), no. 1, 67–94, 159. (I. T. Davidov) **81f:32034** 32H99 (32F15)
- Pinezon, G.** (with Simon, Jacques) Extensions of representations and cohomology. *Rep. Math. Phys.* **16** (1979), no. 1, 49–77. (J. Gil de Lamadrid) **81k:22011** 22E45 (22D30, 81C40)
- Pineor, Maciej** Padé approximants and rational functions as tools for finding poles and zeros of analytical functions measured experimentally. *Padé approximation and its applications (Proc. Conf., Univ. Antwerp, Antwerp, 1979)*, pp. 338–351, *Lecture Notes in Math.*, 765, Springer, Berlin, 1979. (E. Frank) **81c:65016** 65E05 (41A21, 65D15)
- Pinedo, Michael** (with Weiss, Gideon) Scheduling tasks with exponential service times on nonidentical processors to minimize various cost functions. *J. Appl. Probab.* **17** (1980), no. 1, 187–202. (Jacek Błażewicz) **81c:68026** 68C15
- Scheduling spares with exponential lifetimes in a two-component parallel system. *J. Appl. Probab.* **17** (1980), no. 4, 1025–1032. (Richard F. Serfoso) **81m:90061** 90B35 (90C40)
- Pineis, I. F.** The rate of convergence in boundary problems for a class of domains. (Russian) *Dokl. Akad. Nauk SSSR* **250** (1980), no. 4, 816–817. (D. V. Gusak) **81c:60022** 60F05 (60J15)
- Estimates for moments of infinite-dimensional martingales. (Russian) *Mat. Zametki* **27** (1980), no. 6, 953–958, 990. (W. A. Woyczyński) **81k:60012** 60B99 (60G42)
- Pines, A.** (with Warren, W. S.; Weitekamp, D. P.) Theory of selective excitation of multiple-quantum transitions. *J. Chem. Phys.* **73** (1980), no. 5, 2084–2099. (Authors' summary) **81h:81175** 81G55
- Pinettes, M. J.** Diffraction d'une onde solitaire par une île circulaire. (English summary) *J. Engng. Math.* **14** (1980), no. 3, 207–218. (Author's summary) **81d:78020** 78B25 (86A05)
- Pinglot, D.** (with Kontaratos, D.) Optimisation en boucle ouverte du fonctionnement d'une colonne d'absorption avec deux points d'action. (English summary) *RAIRO Automat.* **14** (1980), no. 3, 255–270. (Authors' summary) **81m:49021** 49B22
- calvo Pinilla, Manuel** See **Calvo Pinilla, Manuel**
- tort Pinilla, Manuel** See **Tort Pinilla, Manuel**
- Pink, D. A.** (with Georgallas, A.; Zuckermann, M. J.) Phase transition and critical indices of a phospholipid bilayer model. *Z. Phys. B* **40** (1980/81), no. 1–2, 103–110. (Authors' summary) **81k:92016** 92A09 (82A25)
- Pinkava, Ja.** Probability distributions in statistical ranking problems. (Russian) Expert estimates. *Voprosy Kibernet. (Moscow)* No. 58 (1979), 34–52. (Author's summary) **81m:60030** 60E15 (62G99, 90A06, 92A25)
- Pinkava, Václav** On potential tautologies in k -valued calculi and their assessment by means of normal forms. *Fuzzy sets (Proc. Sympos. Policy Anal. Inform. Systems, Duke Univ., Durham, N.C., 1980)*, pp. 77–86, Plenum, New York, 1980. (László T. Kóczy) **81m:03030** 03B50
- Pinkus, Allan** Some extremal properties of perfect splines and the pointwise Landau problem on the finite interval. *J. Approx. Theory* **23** (1978), no. 1, 37–64. (Avraham A. Melkman) **81c:41019** 41A15 (41A44)
- On n -widths of periodic functions. *J. Analyse Math.* **35** (1979), 209–235. (M.

- Zerner) **81b:41830** 41A45 (41A50, 42A85, 46E35)
(with Ziegler, Zvi) Interlacing properties of the zeros of the error functions in best L^p -approximations. *J. Approx. Theory* **27** (1979), no. 1, 1-18. (John W. Lee) **81c:41063** 41A50
- nieva de del Pino, M. E. See Nieva de del Pino, M. E.
- Pinsker, A. G. The general linear programming problem in ordered spaces and some of its applications. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* **1979**, no. 7, 72-75. (E. Ja. Gabovici) **81b:90126** 90C05
- General problem of linear optimization in K -spaces. (Russian) *Optimizacija* **No. 23(40)** (1979), 9-16, 128. (A. D. Ioffe) **81j:90133** 90C48 (90C05)
- A linear programming problem with variable coefficients in the objective function. (Russian) *Sibirsk. Mat. Ž.* **20** (1979), no. 3, 667-670, 695. (Štefan Tičan) **81b:90107** 90C06
- A general problem of linear programming in ordered spaces. (Russian) *Uspehi Mat. Nauk* **34** (1979), no. 5(209), 219-220. (G. D. Maistrovskii) **81b:90104** 90C05
- Pinsker, I. Š. The randomization principle and its application in processing observations. (Russian) *Models. Algorithms. Decision making* (Russian), pp. 5-38, 249, "Nauka", Moscow, 1979. (Authors' summary) **81d:62057** 62H30
- (with Kipnis, V. M.) Forecasting short time series based on the randomization principle. (Russian) *Models. Algorithms. Decision making* (Russian), pp. 38-61, 249, "Nauka", Moscow, 1979. (Authors' summary) **81d:62097** 62M10 (90A20)
- (with Trunov, V. G.) Comparison of criteria for efficiency of learning with reconstruction of dependence according to empirical data. (Russian) *Models. Algorithms. Decision making* (Russian), pp. 90-100, 249, "Nauka", Moscow, 1979. (Authors' summary) **81d:62062** 62J05
- See also Models. Algorithms. Decision making, **81c:62003**
- Pinsker, M. S. (with Orsević, I. A.) Linear transmission of Gaussian messages over a nonstationary Gaussian channel with feedback. *Problemy Peredaci Informacii* **15** (1979), no. 2, 3-22 (Russian); translated as *Problems Inform. Transmission* **15** (1979), no. 2, 85-99. (Shunsuke Ihara) **81b:94031** 94A40 (94A15, 94B05)
- (with Basalyko, L. A.; Zinov'ev, V. A.; Zjablov, V. V.; Poltyrev, G. Š.) Bounds for codes with unequal protection of two sets of messages. *Problemy Peredaci Informacii* **15** (1979), no. 3, 40-49 (Russian); translated as *Problems Inform. Transmission* **15** (1979), no. 3, 190-197 (1980). (Authors' summary) **81c:94016** 94A24 (94B05)
- (with Gelfand, S. I.) Capacity of a broadcast channel with one deterministic component. *Problemy Peredaci Informacii* **16** (1980), no. 1, 24-34 (Russian); translated as *Problems Inform. Transmission* **16** (1980), no. 1, 17-25. (Authors' summary) **81i:94019** 94A40
- Pinski, F. J. Solutions to the Boltzmann equation for electrons in a metal: energy dependence. *Phys. Rev. B* (3) **21** (1980), no. 10, 4380-4388. (Author's summary) **81c:82026** 82A65
- Pinsky, Peter M. (with Taylor, Robert Lee) A finite deformation formulation for elasto/viscoplastic beam structures. *Computational methods in nonlinear mechanics* (Proc. Second Internat. Conf., Univ. Texas, Austin, Tex., 1979), pp. 393-411, North-Holland, Amsterdam, 1980. (Authors' summary) **81j:73086** 73K25 (73E99, 73K05)
- Platacoda, N. Coupons collectors via the martingales. (Italian summary) *Boll. Un. Mat. Ital. A* (5) **17** (1980), no. 1, 174-177. (A. N. Philippou) **81d:60053** 60G40 (60G42)
- Plater, Charles C. A note on the decomposition of theories with respect to amalgamation, convexity, and related properties. *Notre Dame J. Formal Logic* **19** (1978), no. 1, 115-118. (A. M. W. Glass) **81a:03031** 03C52
- Topological duality theory in algebraic logic. *Mathematical logic in Latin America* (Proc. IV Latin Amer. Sympos. Math. Logic, Santiago, 1978), pp. 255-266, *Studies in Logic and Foundations of Math.*, 99, North-Holland, Amsterdam, 1980. (D. Monk) **81g:03077** 03G15
- Plater, János On the convergence and numerical effectiveness of random search procedures. (Hungarian. English summary) *Alkalmaz. Mat. Lapok* **4** (1978), no. 3-4, 197-228 (1979). (Author's summary) **81c:90054** 90B40 (90C15)
- On a stochastic model of reservoir system sizing. *Optimization techniques* (Proc. Ninth IFIP Conf., Warsaw, 1979), Part 2, pp. 546-558, *Lecture Notes in Control and Information Sci.*, 23, Springer, Berlin, 1980. (See **81j:9001b**) 90B05 (90C15)
- Pinto, Immacenzo (with Franceschetti, Giorgio) Nonlinearly loaded antennas. *Nonlinear electromagnetics*, pp. 303-341, Academic Press, New York, 1980. (See **81j:78001**) 78A50
- Pinto, Roberto Carvalho Engler (with Loibel, Gilberto Francisco) A classification of immersions by surgery. (Portuguese) *An. Acad. Brasil. Ciênc.* **52** (1980), no. 3, 445-450. (From the introduction) **81m:57022** 57R42
- Pinz, János (with Bentz, Hans-J.) Über eine Verallgemeinerung des Tachebsch-Problems. *Math. Z.* **174** (1980), no. 1, 35-41. (Jürgen G. Hinze) **81m:10067** 10H99
- Pins, A. G. Eliminability of the quantifiers Q_0 and Q_1 on symmetric groups. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* **1979**, no. 12, 45-47. (O. V. Belegradek) **81d:03039** 03C80 (03C10, 03C60, 20B99)
- Existence of n -dimension of partial orders. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* **1980**, no. 5, 32-36. (E. Gedeonová) **81j:06002** 06A10
- Weak commutativity of scattered summation of linear orders. (Russian) *Sibirsk. Mat. Ž.* **21** (1980), no. 2, 155-159, 238. (D. Adnadjević) **81b:04003** 04A05 (06A05)
- Pinzer, Laurence Denominators of Dedekind sums. *J. Number Theory* **9** (1977), no. 3, 361-369. (Author's introduction) **81g:10011** 10A20
- Piochi, Brunetto Note on adequate matrices for general predicate calculi. (Italian. English summary) *Boll. Un. Mat. Ital. A* (5) **17** (1980), no. 2, 271-273. (Editors) **81i:03034** 03B60
- Piotrowski, Zbigniew On semihomomorphisms. (Italian summary) *Boll. Un. Mat. Ital. A* (5) **16** (1979), no. 3, 501-509. (T. R. Hamlett) **81a:54013** 54C05 (54C10)
- Somewhat continuity on linear topological spaces implies continuity. *Math. Slovaca* **29** (1979), no. 3, 289-292. (T. Husain) **81b:46014** 46A30 (54C10)
- (with Szymański, Andrzej) Some remarks on Blumberg spaces. (Russian) Translated from the English by V. V. Fedoruk. *Uspehi Mat. Nauk* **34** (1979), no. 6(210), 183-184. (Teodor Przymusiński) **81f:54007** 54C05
- Piper, F. Unitary block designs. *Graph theory and combinatorics* (Proc. Conf., Open Univ., Milton Keynes, 1978), pp. 98-105, *Res. Notes in Math.*, 34, Pitman, San Francisco, Calif., 1979. (Author's introduction) **81i:05045** 05B25
- Pipitone, Vincenzo (with Russo, Giuseppe) Measurability of the families of nondegenerate quadrics of hyperbolic and elliptic types of the projective space P_3 . (Italian. English summary) *Atti Accad. Sci. Lett. Arti Palermo Parte I* (4) **36** (1976/77), 389-396 (1978). (L. A. Santaló) **81f:53057c** 53C65 (60D05)
- (with Russo, Giuseppe) Measurability of the family of hyperboloids and paraboloids with hyperbolic points of the projective space P_3 . (Italian. English summary) *Atti Accad. Sci. Lett. Arti Palermo Parte I* (4) **36** (1976/77), 397-410 (1978). (L. A. Santaló) **81f:53057d** 53C65 (60D05)
- (with Russo, Giuseppe) Measurability families of ellipses of the affine plane A_2 . (Italian) *Atti Accad. Sci. Lett. Arti Palermo Parte I* (4) **36** (1976/77), 443-444 (1978). (L. A. Santaló) **81f:53057h** 53C65 (60D05)
- (with Russo, Giuseppe) The measurability of the families of quadrics of hyperbolic and elliptic types of the projective space P_3 . (Italian) *Atti Accad. Sci. Lett. Arti Palermo Parte I* (4) **36** (1976/77), 445-448 (1978). (L. A. Santaló) **81f:53057i** 53C65 (60D05)
- (with Russo, Giuseppe) Sous-familles mesurables de la famille des ellipses du plan affini A_2 . (English summary) *Rend. Circ. Mat. Palermo* (2) **27** (1978), no. 3, 391-409. (L. A. Santaló) **81b:53044** 53C65 (60D05)
- (with Russo, Giuseppe) Sur la mesure des familles de quadriques de type hyperbolique et elliptique de l'espace projectif P_3 . (English summary) *Rev. Roumaine Math. Pures Appl.* **24** (1979), no. 3, 423-432. (M. Decuyper) **81c:53005** 52A22 (53A20, 53C65, 60D05)
- Pipkin, A. C. Some developments in the theory of inextensible networks. *Quart. Appl. Math.* **38** (1980/81), no. 3, 343-355. (P. Podio-Guidugli) **81m:73056** 73K15 (73C30)
- Pippel, Winfried (with Dao Van Luong; Schmidt-Naake, Gudrun) Fehlerbetrachtungen bei der Beschreibung von Diffusionsprozessen als Markov-Ketten. *Wiss. Z. Tech. Univ. Dresden* **29** (1980), no. 1, 109-115. (D. Szász) **81g:62060** 82A70 (60J27)
- Pippenger, Nicholas (with Miller, Raymond E.; Rosenberg, Arnold L.; Snyder, Lawrence) Optimal 2,3-trees. Preliminary version. *Proceedings of a Conference on Theoretical Computer Science* (Univ. Waterloo, Waterloo, Ont., 1977), pp. 30-35, Univ. Waterloo, Waterloo, Ont., 1978. (Authors' summary) **81b:68058** 68E10
- A time-space trade-off. *J. Assoc. Comput. Mach.* **25** (1978), no. 3, 509-515. (Author's summary) **81f:68055** 68C25
- The minimum number of edges in graphs with prescribed paths. *Math. Systems Theory* **12** (1979), no. 4, 325-346. (J. B. Kelly) **81c:05079** 05C20 (05C35, 10F20)
- On another Boolean matrix. *Theoret. Comput. Sci.* **11** (1980), no. 1, 49-56. (Author's summary) **81f:94044** 94C10 (68C25)
- Piprek-Piochi, Adam Convergence d'un vecteur invariante d'une matrice stochastique $Q(e) = (1-e)Q_1 + eQ_2$, où $Q_1^2 = Q_1$. *Wyz. Szkoła Ped. Krakow. Rocznik Nauk.-Dydak. Prace Mat.* **9** (1979), 119-123. (R. L. Tweedie) **81k:60071** 60J10
- Markoff's chain describing a certain experimental pattern. *Wyz. Szkoła Ped. Krakow. Rocznik Nauk.-Dydak. Prace Mat.* **9** (1979), 129-135. (R. L. Tweedie) **81k:60072** 60J10 (60C05)
- Just-Piquard, F. See Just-Piquard, F.
- Pirages, L. E. The effect of high frequency forces on the dynamics of a test particle in general relativity. (Russian) *Dokl. Akad. Nauk SSSR* **254** (1980), no. 1, 81-83. (J. D. Zund) **81j:83032** 83C99 (85A99)
- Piran, Tsvi Numerical codes for cylindrical general relativistic systems. *J. Comput. Phys.* **35** (1980), no. 2, 254-283. (A. H. Taub) **81j:83024** 83C35 (83-04, 83C25)
- Pirani, Z. A. (with Aslanidi, N. P.; Sulaberidze, T. G.) Explicit formulas for the optimal linear predictor and its mean square error for a stationary sequence. (Russian. Georgian and English summaries) *Soboch. Akad. Nauk Gruz. SSR* **93** (1979), no. 1, 37-40. (M. I. Jadrénko) **81j:60051** 60G25
- Pirani, F. A. E. Geometry of Bäcklund transformations. *Nonlinear evolution equations and dynamical systems* (Proc. Meeting, Univ. Lecce, Lecce, 1979), pp. 212-217, *Lecture Notes in Phys.*, 120, Springer, Berlin, 1980. (Editors) **81j:58007** 58A15 (35A30, 58A20, 81F99)
- Pirani, George (with Weitsman, Allen) Level sets of infinite length. *Comment. Math. Helv.* **53** (1978), no. 2, 161-164. (N. Toda) **81j:30029** 30C55
- Piras, F. (with Cerlienco, L.) Linear recurrence sequences and division of polynomials. (Italian. English summary) *Rend. Sem. Fac. Sci. Univ. Cagliari* **49** (1979), no. 34, 469-474. (Winfried Müller) **81j:13021** 13F20 (12E05, 39A99)
- Piravilli, T. I. The nonabelian derived functors. (Russian. English summary) Collection of articles on algebra, 2. *Trudy Tbiliss. Mat. Inst. Razmadze Akad. Nauk Gruz. SSR* **62** (1979), 91-104. (Gencho Skordev) **81d:18023** 18G10 (18F25)
- Some properties of Karoubi-Villamayor algebraic K -functors. (Russian. Georgian and English summaries) *Soboch. Akad. Nauk Gruz. SSR* **97** (1980), no. 2, 289-292. (Keith Dennis) **81i:18013** 18F25
- Pirdanov, B. Limit theorem for the size of a jump. (Russian) *Analytical methods of probability theory* (Russian), pp. 89-95, 153, "Naukova Dumka", Kiev, 1979. (O. K. Zakusilo) **81m:60133** 60J15 (60J45)
- Piret, Philippe Graphe d'automorphisme des codes convolutionnels. Colloquium on Discrete Mathematics: Codes and Hypergraphs (Brussels, 1978). *Cahiers Centre Études Rech. Opér.* **20** (1978), no. 3-4, 419-426. (A. T. Amin) **81c:94019** 94B10
- Good linear codes of length 27 and 28. *IEEE Trans. Inform. Theory* **26** (1980), no. 2, 227. (Author's summary) **81c:94028** 94B05
- (with Delsarte, Philippe) Combinatorial properties of good codes for binary autoregressive sources. *IEEE Trans. Inform. Theory* **26** (1980), no. 3, 341-345. (Author's summary) **81b:94024** 94A29
- Basic encoders for abelian convolutional codes. *IEEE Trans. Inform. Theory* **26** (1980), no. 5, 534-539. (John Karlof) **81c:94029** 94B10
- Wire-tapping of a binary symmetric channel. *Philips J. Res.* **35** (1980), no. 3, 251-258. (Author's summary) **81i:94014** 94A24
- Pir'ev, Ju. O. (with Mokrik, R. I.) Dynamical properties of the solutions of problems of thermelasticity. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* **1980**, no. 4, 44-47, 99. (M. Sokolowski) **81f:73057** 73U05 (35B05)
- Pirlot, Marc A strong variational principle for continuous spin systems. *J. Appl. Probab.* **17** (1980), no. 1, 47-58. (Masuo Suzuki) **81g:82076** 82A67 (49H05, 82A15)
- Pirogov, S. A. See Newman, Charles M., (See **81f:81002**); Dunlop, François; et al. (See

- 81f:81002** and Fröblich, Jürg. (See 81f:81002)
- Piron, Constantino** The Galilean particle. *Quantum theory and the structures of time and space, Vol. 2* (Second Conf., Tübingen, 1976), pp. 193–200, Hanser, Munich, 1977. (See 81f:81002a) 81G25
- Un nouveau principe d'évolution réversible et une généralisation de l'équation de Schrödinger. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 286 (1978), no. 16, A713–A715. (Author's summary) 81e:81017 81B05
- (with Giovannini, N.) On the group-theoretical foundations of classical and quantum physics: kinematics and state spaces. *Helv. Phys. Acta* 52 (1979), no. 4, 518–540 (1980). (U. Cattaneo) 81e:81005 81B99 (70A05)
- Pironneau, Olivier** (with Perrier, Pierre) Couplage des grosses et petites structures turbulentes par l'homogénéisation. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 286 (1978), no. 14, A635–A638. (Authors' summary) 81e:69064 65N99 (76D05)
- (with Bardos, Claude; Bercovier, Michel) Approximation numérique des solutions de l'équation d'Euler en dimension 2. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 289 (1979), no. 16, A829–A832. (Authors' summary) 81f:65079 65N30
- (with Bercovier, Michel) Error estimates for finite element method solution of the Stokes problem in the primitive variables. *Numer. Math.* 33 (1979), no. 2, 211–224. (Todd Dupont) 81g:65145 65N30
- (with Bristeau, M. O.; Glowinski, Roland; Mantel, B.; Periaux, J.; Perrier, Pierre) A finite element approximation of Navier-Stokes equations for incompressible viscous fluids. Iterative methods of solution. *Approximation methods for Navier-Stokes problems* (Proc. Sympos., Univ. Paderborn, Paderborn, 1979), pp. 78–128, Lecture Notes in Math., 771, Springer, Berlin, 1980. (Authors' summary) 81h:65098 65N30 (76D05)
- (with Glowinski, Roland; Mantel, B.; Periaux, J.; Poirier, G.) An efficient preconditioned conjugate gradient method applied to nonlinear problems in fluid dynamics via least square formulations. *Computing methods in applied sciences and engineering* (Proc. Fourth Internat. Sympos., Versailles, 1979), pp. 445–487, North-Holland, Amsterdam, 1980. (Nima Geffen) 81h:76035 76H05 (49D07, 65N30)
- (with Glowinski, Roland; Periaux, J.) An efficient preconditioning scheme for iterative numerical solutions of partial differential equations. *Appl. Math. Modelling* 4 (1980), no. 3, 187–192. (L. Fox) 81j:65107 65Nxx (65F10)
- Pirner, U. G.** (with Nikulin, G. Z.; Pchelkina, L. V.; Rosljakov, G. S.) Three-dimensional flows of a gas in jets. (Russian) Numerical methods in continuum mechanics. *Vychisl. Metody i Programirovanie* No. 30 (1979), 30–74. (From the text) 81a:76032 76J99 (65N05, 76B10)
- (with Averkova, G. L.; Egorova, N. I.) Motion of a polydisperse mixture of a gas and particles in a supersonic jet. (Russian) Numerical methods in continuum mechanics. *Vychisl. Metody i Programirovanie* No. 30 (1979), 94–108. (From the text) 81h:76056 76T05 (65M25, 76J99)
- (with Kireev, V. I.) The calculation of steady-state supersonic flows with nonequilibrium chemical reactions. (Russian) *Zh. Vychisl. Mat. i Mat. Fiz.* 20 (1980), no. 1, 182–190, 262. (Authors' summary) 81h:76040 76J99 (80A30)
- Pisacane, S. I.** Strong convergence of the sequence of diffusion type processes. (Russian. English summary) *Teor. Veroyatnost. i Primenen.* 24 (1979), no. 4, 866–872. (Constantin Tudor) 81g:60062 60H10
- Pisacane, Domingos A.** Theory of infinite Lie groups. (Portuguese) *Proceedings of the Eleventh Brazilian Mathematical Colloquium* (Poços de Caldas, 1977), Vol. I (Portuguese), pp. 155–166, Inst. Mat. Pura Apl., Rio de Janeiro, 1978. (See 80c:00010a) 58H05 (22E65)
- An application of Frobenius theorem in a Banach scale. *4th Latin-American School of Mathematics* (Lima, 1978), pp. 326–334, IV ELAM, Lima, 1979. (Cefeferio Ruiz) 81d:22021 22E65 (58B25, 58H05)
- Linear connected subgroups of a Lie group in a locally convex space. *An. Acad. Brasil. Ciênc.* 51 (1979), no. 4, 599–603. (Pierre de la Harpe) 81e:22029 22E65 (58B25)
- Pisani, Tomaž** (with Batagelj, V.) On partially directed Eulerian multigraphs. *Publ. Inst. Math. (Beograd) (N.S.)* 25(39) (1979), 16–24. (Authors' summary) 81a:05054 05C20 (05C45)
- (with Parsons, T. D.; Jackson, Brad) Dual imbeddings and wrapped quasicoverings of graphs. *Discrete Math.* 31 (1980), no. 1, 43–52. (Jonathan L. Gross) 81f:05069 05C10 (94C15)
- Genus of Cartesian products of regular bipartite graphs. *J. Graph Theory* 4 (1980), no. 1, 31–42. (W. Dörfler) 81f:05070 05C10
- Pell's equation. (Slovenian. English summary) *Obzornik Mat. Fiz.* 27 (1980), no. 4, 102–107. (Author's summary) 81h:10022 10B05
- Pisarenko, G. S.** See *Current problems in theoretical and applied mechanics*, 81h:70001
- Pisarenko, V. G.** (with Plotnickii, T. A.) Approximation by splines of functions of several variables from spaces with a dominating mixed derivative. (Russian) *Boundary value problems of mathematical physics* (Russian), pp. 155–158, 181–182, Akad. Nauk Ukrain. SSR, Inst. Mat., Kiev, 1978. (S. D. Riemenschneider) 81f:41011 41A15
- Interpolation with smoothing by convex cubic splines with optimization of terminal conditions. (Russian) *Physics and mechanics of nonlinear phenomena* (Russian), pp. 115–131, 209, "Naukova Dumka", Kiev, 1979. (Yury Girshovich) 81b:41018 41A15 (65D07)
- The exterior two-body problem in general relativity with account taken of the deviation of the argument. (Russian) *Physics and mechanics of nonlinear phenomena* (Russian), pp. 132–156, 210, "Naukova Dumka", Kiev, 1979. (Author's summary) 81a:83011 83C25 (53C80)
- (with Plotnickii, T. A.) Investigation of the eigenfunctions and eigenvalues of a boundary value problem for a three-dimensional nonlinear Schrödinger equation by projection methods. (Russian) *Physics and mechanics of nonlinear phenomena* (Russian), pp. 156–167, 210, "Naukova Dumka", Kiev, 1979. (Woodford W. Zachary) 81b:35081 35P30 (81C05)
- (with Pripik, O. S.) Estimation of the approximation of functions in interpolation by cubic splines with application to the problem of approximation of a three-dimensional curve. (Russian) *Physics and mechanics of nonlinear phenomena* (Russian), pp. 167–179, 211, "Naukova Dumka", Kiev, 1979. (Yury Girshovich) 81b:41019 41A15
- Pisarenko, Helena** A characterization of a family of distributions. *Comment. Math. Prace Mat.* 21 (1980), no. 2, 347–350. (Javad Behboodian) 81j:62033 62E10
- Piseculina, I. Ja.** (with Anan'ev, B. I.) Minimax quadratic filtering for systems with time lag. (Russian) *Trudy Inst. Mat. i Meh. Ural. Nauch. Centr Akad. Nauk SSSR* No. 26 *Differential. Sistemy Upravlen.* (1979), 3–12, 95. (A. Haimovici) 81k:34082 34K99 (93E10)
- Pisier, Gilles** Les inégalités de Khintchine-Kahane, d'après C. Borell. *Séminaire sur la Géométrie des Espaces de Banach* (1977–1978), Exp. No. 7, 14 pp., École Polytech., Palaiseau, 1978. (J.-P. Kahane) 81e:60005 60B11 (42A05, 43A46)
- Lacunarité et processus gaussiens. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 286 (1978), no. 21, A1003–A1006. (Author's summary) 81e:43014 43A46 (60G15)
- La méthode d'interpolation complexe: applications aux treillis de Banach. *Séminaire d'Analyse Fonctionnelle* (1978–1979), Exp. No. 17, 18 pp., École Polytech., Palaiseau, 1979. (Mario Milman) 81d:46068 46M35 (46B30)
- (with Marcus, Michael B.) Random Fourier series on locally compact abelian groups. *Séminaire de Probabilités, XIII* (Univ. Strasbourg, Strasbourg, 1977/78), pp. 72–89, Lecture Notes in Math., 721, Springer, Berlin, 1979. (J.-P. Kahane) 81m:60063 60G15 (43A99)
- A remarkable homogeneous Banach algebra. *Israel J. Math.* 34 (1979), no. 1–2, 38–44 (1980). (Michael Marcus) 81k:43009 43A15 (46J10, 60G15)
- De nouveaux espaces de Banach sans la propriété d'approximation [d'après A. Szankowski]. *Séminaire Bourbaki* (1978/79), Exp. No. 542, pp. 312–327, Lecture Notes in Math., 770, Springer, Berlin, 1980. (D. J. H. Garling) 81e:46014 46B05
- Semi-groupes holomorphes et géométrie des espaces de Banach. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 291 (1980), no. 5, A341–A342. (Author's summary) 81j:46025 46B20
- Piskarev, S. I.** Error estimates in the approximation of semigroups of operators by Padé fractions. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1979, no. 4, 33–38. (M. M. Konstantinov) 81j:47032 47D05
- Discretization of an abstract hyperbolic equation. (Russian. English summary) *Tartu Riikl. Ül. Toimetised* No. 500 *Tudy Mat. i Meh.* no. 25 (1979), 3–23. (H. O. Fattorini) 81a:34053a 34G10 (65M10)
- Solution of an inhomogeneous abstract linear hyperbolic equation. (Russian. English summary) *Tartu Riikl. Ül. Toimetised* No. 500 *Tudy Mat. i Meh.* no. 25 (1979), 24–32. (H. O. Fattorini) 81a:34053b 34G10 (65M10)
- Piskarev, M. V.** (with Sugaev, F. V.) A special case of the density distribution behind an unsteady shock wave. (Russian) *Izv. Akad. Nauk SSSR Meh. Zhidk. Gaza* 1979, no. 6, 163–167. 81h:76035 76L05
- Piskun, V. V.** (with Ševčenko, Ju. M.; Babeško, M. E.; Savčenko, V. G.) ★Пространственные задачи термопластичности. (Russian) [Three-dimensional problems of thermoplasticity] "Naukova Dumka", Kiev, 1980. 263 pp. (Vadim Komkov) 81h:73058 73U05 (73C03, 73E99)
- Piskunov, V. N.** (with Domolovskii, E. R.; Lušnikov, A. A.) Monte Carlo simulation of coagulation processes. *Izv. Akad. Nauk SSSR Ser. Fiz. Atmosf. i Okeana* 15 (1979), no. 2 (Russian); translated as *Izv. Acad. Sci. USSR Atmosf. Ocean. Phys.* 15 (1979), no. 2, 129–134 (1980). (Authors' summary) 81e:86016 86A35 (82A42)
- Pisil, Milan** See Jankovský, Zdeněk, 81h:01057
- Pisot, C.** See Séminaire: Delange-Pisot-Poitou, 81h:10002
- Pistone, G.** (with Bellomo, Nicola) Dynamical systems with a large number of degrees of freedom: a stochastic mathematical analysis for a class of deterministic problems. *Mech. Res. Comm.* 6 (1979), no. 2, 75–80. (Kazimierz Sobczyk) 81h:70008 70H99 (58F11, 82A05)
- Pitacco, Ermanno** Some approaches of inference for processes of arrivals of accident claims. (Italian. English summary) *Riv. Mat. Sci. Econom. Social.* 2 (1979), no. 2, 127–156. (Marc Hallin) 81g:62170 62P05
- Pitavskii, L. P.** (with Lifšic, E. M.) ★Теоретическая физика ("Ландау-Лифшиц"). Том 10. (Russian) [Theoretical physics ("Landau-Lifšic"). Vol. 10] ФИЗИЧЕСКАЯ КНИЖКА. [Physical kinetics] "Nauka", Moscow, 1979. 528 pp. (M. Drăganu) 81h:82001 82–02 (76X05, 82A35, 82A45, 82A70)
- (with Zaharov, V. E.; Manakov, S. V.; Novikov, S. P.) ★Теория солитонов. (Russian) [Theory of solitons] Метод обратной задачи. [The method of the inverse problem] "Nauka", Moscow, 1980. 320 pp. (Eugene Gutkin) 81g:35112 35Q99 (35P25, 58F07, 76B99, 81C05)
- Pitavitch, Francisco F.** See Michavila Pitarch, Francisco F.
- Pitcher, N.** (with McKee, S.) On the convergence of advanced linear multistep methods. *BIT* 19 (1979), no. 4, 476–481. (Joseph Oliver) 81g:65104 65L07 (65L05)
- Pitberg, V. I.** See *Random processes. Sample functions and intersections*, 81j:60049
- Pitkäranta, Juhani** On the spatial differencing of the discrete ordinate neutron transport equation. *SIAM J. Numer. Anal.* 15 (1978), no. 5, 859–869. (Author's summary) 81j:82038 82A70 (65P05)
- (with Babuška, I.; Kellogg, R. B.) Direct and inverse error estimates for finite elements with mesh refinements. *Numer. Math.* 33 (1979), no. 4, 447–471. (Reinhard Scholz) 81e:65054 65N30
- (with Babuška, I.; Osborn, John E.) Analysis of mixed methods using mesh dependent norms. *Math. Comp.* 35 (1980), no. 152, 1039–1062. (Rolf Rannacher) 81m:65166 65N30 (65N15, 73K10)
- Local stability conditions for the Babuška method of Lagrange multipliers. *Math. Comp.* 35 (1980), no. 152, 1113–1129. (V. Thomée) 81m:65174 65N30
- A conforming finite element method with Lagrange multipliers for the biharmonic problem. (French summary) *RAIRO Anal. Numér.* 14 (1980), no. 3, 309–324. (Manfred Dobrowolski) 81m:65175 65N30 (65N15)
- Estimates for the derivatives of solutions to weakly singular Fredholm integral equations. *SIAM J. Math. Anal.* 11 (1980), no. 6, 952–968. (H. E. Fettis) 81m:45006 45E05 (45B05, 45L05)
- Pitman, E. J. G.** ★Some basic theory for statistical inference. Monographs on Applied Probability and Statistics. Chapman and Hall, London; A Halsted Press Book, John Wiley & Sons, New York, 1979. vii + 110 pp. ISBN 0-470-26554-X (C. R. Rao) 81f:62001 62–02 (62F10, 62F12)
- Subexponential distribution functions. *J. Austral. Math. Soc. Ser. A* 29 (1980), no. 3, 337–347. (Charles M. Goldie) 81f:60021 60E05
- Pitman, Jim** (with Aldous, David) On the zero-one law for exchangeable events. *Ann.*

- Probab.** 7 (1979), no. 4, 704–723. (Eric V. Slud) **81h:60032** 60F20 (60J10)
(with Greenwood, Priscilla) Fluctuation identities for Lévy processes and splitting at the maximum. *Adv. in Appl. Probab.* 12 (1980), no. 4, 893–902. (Bert Fristedt) **81j:60084** 60J30
(with Dubins, Lester E.) A divergent, two-parameter, bounded martingale. *Proc. Amer. Math. Soc.* 78 (1980), no. 3, 414–416. (R. T. Smythe) **81h:60060** 60G42 (60G44)
(with Dubins, Lester E.) A maximal inequality for skew fields. *Z. Wahrsch. Verw. Gebiete* 52 (1980), no. 3, 219–227. (Allan Gut) **81f:60027** 60E15 (60C42)
- Plitt, Joseph C.** See *New perspectives on Galileo*, **81a:01013**
- Plitt, B.** Closed exponential networks of queues with saturation: the Jackson-type stationary distribution and its asymptotic analysis. *Math. Oper. Res.* 4 (1979), no. 4, 357–378. (Adam Wolisz) **81h:60098** 60K25
- Plittner, Franz** A fixed point theorem in complete metric spaces. *Studia Sci. Math. Hungar.* 11 (1976), no. 3–4, 357–361 (1978). (Benjamin Halpern) **81a:54048** 54H25
(with Wyrwich, Herbert) Ganze Funktionen mit endlich vielen vorgeschriebenen asymptotischen Entwicklungen. *Math. Z.* 161 (1978), no. 1, 1–8. (J. Winkler) **81j:30044** 30D20
On the solution of linear integro-differential equations with degenerate kernels. *Multivariate approximation theory (Proc. Conf., Math. Res. Inst., Oberwolfach, 1979)*, pp. 272–288. *Internat. Ser. Numer. Math.*, 51, Birkhäuser, Basel, 1979. (Baruch Cahlon) **81h:45020** 45J05 (34A10, 65R20)
- Plittner, L.** (with Gesztesy, F.) Uncertainty relations and quadratic forms. *J. Phys. A* 11 (1978), no. 9, 1765–1770. (Authors' summary) **81a:81028** 81C10 (47B47)
(with Gesztesy, F.) On the Friedrichs extension of ordinary differential operators with strongly singular potentials. *Acta Phys. Austriaca* 51 (1979), no. 3–4, 259–268. (Adriaan Timp) **81j:47035** 47E05 (81C10)
- Plitts, A. M.** (with Hyland, J. M. E.; Johnstone, Peter T.) Tripos theory. *Math. Proc. Cambridge Philos. Soc.* 88 (1980), no. 2, 205–231. (Anna Labella) **81i:03102** 03G30 (18B25)
- Plitts, C. G. C.** On the divergence in r th mean of a class of eigenfunction expansions. *Proc. Roy. Soc. Edinburgh Sect. A* 84 (1979), no. 3–4, 347–363. (E. Rieksip) **81c:34013** 34B25 (33A65, 42C10)
- Piven, N. N.** Inverse boundary value problem for domains meromorphically equivalent to a bidisc. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1979, no. 9, 84–88. (S. G. Samko) **81c:32022** 32A40 (30E25)
- Pitney, Alden F.** (with Istinger, M.; Kaiser, H. K.) Interpolation in congruence permutable algebras. *Colloq. Math.* 42 (1979), 229–239. (Heinrich Werner) **81g:08007** 08A40
★Applied linear algebra. *University Press of America, Lanham, Md.*, 1980.
vi+258 pp. ISBN 0-8191-1169-4, 0-8191-1170-8 (B. Reichstein) **81m:15002** 15–01 (65Fxx)
- Pitney, C.** (with Michael, Ernest A.) A unified theorem on continuous selections. *Pacific J. Math.* 87 (1980), no. 1, 187–188. (P. J. Collins) **81m:54025a** 54C65 (46B99, 90C25)
de Toledo Piza, A. F. R. See *de Toledo Piza, A. F. R.*
- Pizer, Arnold** Theta series and modular forms of level p^2M . *Compositio Math.* 40 (1980), no. 2, 177–241. (A. N. Andrianov) **81k:10040** 10D12 (10C15)
(with Hijikata, Hiroaki; Shemanske, Tom) The basis problem for modular forms on $\Gamma_0(N)$. *Proc. Japan Acad. Ser. A Math. Sci.* 56 (1980), no. 6, 280–284. (Hiroshi Saito) **81k:10045** 10D25
- Pisot, Tomasz** (with Balcer, Marek; Mika, Andrzej) The construction of admissible words of a certain alphabet as equivalent concepts by means of arithmetic term expressions. (Polish. Russian and French summaries) *Zeszyty Nauk. Politech. Śląsk. Mat.-Fiz.* No. 34 (1979), 5–12. (Ryszard Janicki) **81h:68121a** 68F25 (03D05, 68E10)
(with Balcer, Marek; Mika, Andrzej) A theorem on the equivalence of the definitions of admissible words of a certain alphabet and arithmetic term expressions. (Polish. Russian and French summaries) *Zeszyty Nauk. Politech. Śląsk. Mat.-Fiz.* No. 34 (1979), 13–19. (Ryszard Janicki) **81h:68121b** 68F25 (03D05, 68E10)
(with Balcer, Marek; Mika, Andrzej) An algorithm for deciding the truth of an equation between two arbitrary arithmetic expressions. (Polish. Russian and French summaries) *Zeszyty Nauk. Politech. Śląsk. Mat.-Fiz.* No. 34 (1979), 21–27. (Ryszard Janicki) **81h:68121c** 68F25 (03D05, 68E10)
(with Balcer, Marek; Mika, Andrzej) Quasigroupoid. (Polish. Russian and French summaries) *Zeszyty Nauk. Politech. Śląsk. Mat.-Fiz.* No. 34 (1979), 29–35. (Authors' summary) **81f:20071** 20L99 (20N99)
- Pizzamiglio, Pier Luigi** ★La raccolta Carlo Viganò. (Italian) [The Carlo Viganò collection] Rassegna di storia delle scienze matematiche e fisiche: manoscritti, incunaboli e cinquecentesche. [Catalogue of the history of the mathematical and physical sciences: manuscripts, incunabula and sixteenth century works]. With a preface by Carlo Felice Manara. *Editrice La Scuola, Brescia*, 1979. 219 pp. (P. Bockstaël) **81e:01014** 01A40 (01A75)
- Pizzarello, Gaetano** Polynomials in n indeterminates over a finite field. (Italian. English summary) *Ricerca (4) (Napoli)* 28 (1977), no. 3, 3–7 (1979). (L. Carlitz) **81d:12016** 12C05
- Pizzorno, Benedetto** Some logical aspects of the drama of Galileo. (Italian. English summary) *Physica—Riv. Internaz. Storia Sci.* 20 (1978), no. 1–4, 271–283 (1979). (Maurizio Fattorosi-Barnaba) **81j:03033** 03B45 (01A45)
- Pjanylo, Ja. D.** (with Poberezhnyy, O. V.) Error estimation and conditions of convergence of an approximate inversion of the Laplace transform by means of orthogonal polynomials. (Russian) *Mat. Metody i Fiz.-Meh. Polja* No. 12 (1980), 91–94, 123. (J. Kofroň) **81h:65125** 65R10
- Pjaneckij, V. S.** Classification of convex cones of finite type and of rank three. (Russian) *Trudy Sem. Vektor. Tenzor. Anal.* No. 19 (1979), 202–217. (S. Kaneyuki) **81g:32026** 32M10 (53C30)
- Pjatak, P. A.** Excitation of Love waves propagating along a cylindrical surface. *Akust. Ž.* 26 (1980), no. 2, 237–241 (Russian); translated as *Soviet Phys. Acoust.* 26 (1980), no. 2, 130–132. (Author's summary) **81g:73028** 73D20
- Pjatak, S. G.** An equation of composite type. (Russian) *Differentsial'nye Uravneniya* 16 (1980), no. 1, 117–123, 189. (J. Christina) **81a:35092** 35Q20 (35M05)
- Pjateckaja, G. N.** (with Sinitsyn, I. G.) Infinite turnpikes in a graph and optimal placement of figures of the same type in an infinite narrow strip. (Russian) *Ž. Vyčisl. i Mat. i Mat.* **Fiz.** 19 (1979), no. 5, 1304–1312, 1358. (Authors' summary) **81d:52013** 52A45 (05C99, 90A99)
- Pjaticskij, A. L.** A parabolic equation with rapidly oscillating coefficients. (Russian. English summary) *Vestnik Moskov. Univ. Ser. I Mat. Meh.* 1980, no. 3, 33–39, 107. (P. Szeptycki) **81f:35050** 35K15 (35B40)
- Plá Carrera, José** On negations in lattices. (Spanish) *Proceedings of the First Spanish-Portuguese Mathematical Conference (Madrid, 1973)* (Spanish), pp. 354–366. *Consejo Sup. Inv. Cient., Madrid*, 1977. (R. W. Quackenbush) **81m:06022** 06C99
A formalization of the Lewis system S1 without rules of substitution. *Stochastica* 3 (1979), no. 1, 39–45. (Akira Nakamura) **81a:03019** 03B45 (03G25)
- Plachky, Detlef** (with Baringhaus, Ludwig) A comparison of two exponential families. *Transactions of the Eighth Prague Conference on Information Theory, Statistical Decision Functions, Random Processes (Prague, 1978)*, Vol. A, pp. 103–111. *Reidel, Dordrecht*, 1978. (Alain Hillion) **81h:62026** 62F03
Bestimmung ungünstigster Dichten durch Minimierung von Abständen bei Verteilungen. (English summary) *Metrika* 26 (1979), no. 3, 151–155. (A. L. Rukhin) **81c:62021** 62F03
(with Mussmann, Dieter) Die Cantorsche Abbildung ist ein Borel-Isomorphismus. *Elem. Math.* 35 (1980), no. 2, 42–43. (A. Appert) **81h:28005** 28A20 (26B35)
- Plackett, R. L.** (with Paul, S. R.) Dirichlet models for square contingency tables. Special issue on theory and practice for categorical data analysis. *Comm. Statist. A—Theory Methods* 7 (1978), no. 10, 939–952. (See **80d:62042**) **62H17**
(with Cox, M. A. A.) Small samples in contingency tables. *Biometrika* 67 (1980), no. 1, 1–13. (H. T. Amundsen) **81g:62109** 62H99
- Plashotnik, V. V.** Inverse semigroups that are a union of two abelian groups. (Russian) *Theoretical and applied questions of differential equations and algebra (Russian)*, pp. 200–203, 269. “Naukova Dumka”, Kiev, 1978. (Anna Ja. Alzenštat) **81g:20117** 20M10
- Plaut, Michèle** Q -variétés banachiques. Application à l'intégrabilité des algèbres de Lie. (English summary) *C. R. Acad. Sci. Paris Sér. A–B* 290 (1980), no. 4, A185–A188. (W. T. van Est) **81h:58013** 58B25 (22E65, 57N20)
- Plaut, David A.** Abstraction mappings in mechanical theorem proving. *5th Conference on Automated Deduction (Les Arcs, 1980)*, pp. 264–280. *Lecture Notes in Comput. Sci.* 87, Springer, Berlin, 1980. (From the introduction) **81h:68071** 68G15 (03B35)
On the distribution of independent formulae of number theory. *Conference Proceedings of the Twelfth Annual ACM Symposium on Theory of Computing (La Angeles, Calif., 1980)*, pp. 39–44. *ACM, New York*, 1980. (See **81j:68006**) **03F30** (68C30)
(with Supowit, Kenneth J.; Reingold, Edward M.) Heuristics for weighted perfect matching. *Conference Proceedings of the Twelfth Annual ACM Symposium on Theory of Computing (Los Angeles, Calif., 1980)*, pp. 398–419. *ACM, New York*, 1980. (See **81j:68006**) **68E10** (68C25, 90B35, 90C35)
(with Zaks, Shmuel) An NP-complete matching problem. *Discrete Appl. Math.* 2 (1980), no. 1, 65–72. (Authors' summary) **81g:68071** 68C25 (05C70)
- Plamenitskiy, B. A.** (with Maz'ja, V. G.) Weighted spaces with inhomogeneous norms, and boundary value problems in domains with conical points. (Russian) *Elliptische Differentialgleichungen (Meeting, Rostock, 1977)*, pp. 161–190. *Wilhelm-Pieck-Univ., Rostock*, 1978. (P. Szeptycki) **81k:35045** 35J55 (46E35)
(with Maz'ja, V. G.) Schauder estimates for the solutions of elliptic boundary value problems in domains with edges on the boundary. (Russian) *Partial differential equations (Russian)*, pp. 69–102, 143. *Trudy Sem. S. L. Soboleva*, No. 2, 1978. *Akad. Nauk SSSR Sibirsk. Otdel., Inst. Mat., Novosibirsk*, 1978. (H. Triebel) **81d:35029** 35J40 (46E15, 46E35)
(with Maz'ja, V. G.) Elliptic boundary value problems in domains with nonsmooth boundaries. (Russian) *Proceedings of an All-Union Conference on Partial Differential Equations (Moscow State Univ., Moscow, 1976)* (Russian), pp. 149–152. *Moskov. Gos. Univ., Meh.-Mat. Fakul'tet, Moscow*, 1978. (See **80f:35002**) **35J40**
(with Maz'ja, V. G.) Estimates of the Green functions and Schauder estimates of the solutions of elliptic boundary value problems in a two-sided corner. (Russian) *Sibirsk. Mat. Ž.* 19 (1978), no. 5, 1065–1082, 1214. (P. A. Mišakovskij) **81k:35026** 35J40
(with Maz'ja, V. G.) L_p -estimates of solutions of elliptic boundary value problems in domains with ribs. (Russian) *Trudy Moskov. Mat. Obšč.* 37 (1978), 49–93, 270. (P. A. Mišakovskij) **81h:35027** 35J40
(with Maz'ja, V. G.) Asymptotic behavior of the fundamental solutions of elliptic boundary value problems in domains with conical points. (Russian) *Boundary value problems. Spectral theory (Russian)*, pp. 100–145, 243. *Probl. Mat. Anal.*, 7, Leningrad. Univ., Leningrad, 1979. (J. S. Joel) **81c:35042** 35J40 (35J55, 35P15, 58G15, 58G25)
(with Maz'ja, V. G.; Stupelis, L.) The three-dimensional problem of the steady-state motion of a fluid with a free surface. (Russian. English and Lithuanian summaries) *Differentsial'nye Uravneniya i Primenenija.—Trudy Sem. Processy Optimal. Upravlenija i Sekcija No. 23* (1979), 157 pp. (P. C. File) **81m:76019** 76D05 (35Q10, 35R35)
Algebras generated by pseudodifferential operators with isolated singularities of symbols. (Russian) *Dokl. Akad. Nauk SSSR* 248 (1979), no. 2, 298–302. (Toader Jucan) **81f:58035** 58G15 (35S05, 47G05)
(with Maz'ja, V. G.; Nazarov, S. A.) Asymptotic behavior of the solutions of elliptic boundary value problems in the case of variation of the domain near conic points. (Russian) *Dokl. Akad. Nauk SSSR* 249 (1979), no. 1, 94–96. (A. M. T'in) **81a:35011** 35B25 (35J99)
(with Maz'ja, V. G.) A problem of the motion of a fluid with a free surface in a faceted vessel. (Russian) *Dokl. Akad. Nauk SSSR* 250 (1980), no. 6, 1315–1317. (Muri M. Gupta) **81h:76020** 76D05
Boundary value problems for meromorphic pseudodifferential operators. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1980, no. 4, 69–78. (Stephan Rempel) **81g:35121** 35S15 (47G05)
(with Maz'ja, V. G.) On the first boundary value problem for the equations of hydrodynamics in a domain with a piecewise smooth boundary. (Russian) *Boundary value problems of mathematical physics and related questions in the theory of functions*, 12. *Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 96 (1980), 179–186, 309. (Miroslav Krbeć) **81k:35133** 35Q10 (35B45, 76D05)
- Planchard, J.** Computation of the acoustic eigenfrequencies of cavities containing a tube

- bundle. *Comput. Meths Appl. Mech. Engrg.* 24 (1980), no. 2, 125-135. (Author's summary) **81h:76059** 76Q05 (49D50)
- Plant, Richard E.** The role of direct feedback in the cardiac pacemaker. *Applied nonlinear analysis (Proc. Third Internat. Conf., Univ. Texas, Arlington, Tex., 1978)*, pp. 309-321, Academic Press, New York, 1979. (See **80d:00003**) 92A07
- Plante, André** On the validation of fiducial techniques. (French summary) *Canad. J. Statist.* 7 (1979), no. 2, 217-226 (1980). (D. A. Sprott) **81h:62007** 62A30
- Structured probability statements. (French summary) *Canad. J. Statist.* 7 (1979), no. 2, 227-232 (1980). (D. A. Sprott) **81h:62009** 62A99
- Plante, J. F.** (with Goodman, S. E.) Holonomy and averaging in foliated sets. *J. Differential Geom.* 14 (1979), no. 3, 401-407 (1980). (Robert Roussarie) **81m:57020** 57R30
- Locally free affine group actions. *Trans. Amer. Math. Soc.* 259 (1980), no. 2, 449-456. (P. Orlik) **81d:57037** 57S20
- Platil, Jan** Problems of optimal organization of flows in a transportation network. (Czech summary) *Ekonom.-Mat. Obzor* 16 (1980), no. 1, 56-63. (Author's summary) **81c:90041** 90B10 (90B35)
- Plattett, J. S.** (with Barton, G.) Analysis of the adsorption potential in the hydrodynamic model of metals. *Proc. Roy. Soc. London Ser. A* 372 (1980), no. 1750, 415-439. (From the summary) **81m:82036** 82A60 (41A60)
- Plasmans, Joseph E. J.** (with de Zeeuw, Aart J.) Incentives to cooperate in linear quadratic difference games. *Internat. J. Systems Sci.* 11 (1980), no. 5, 607-619. (Authors' summary) **81d:90124** 90D30 (90A17)
- Platnick, R. A.** (with Berger, M. S.) On the singularities of nonlinear Fredholm operators of positive index. *Proc. Amer. Math. Soc.* 79 (1980), no. 2, 217-221. (A. J. Tromba) **81d:58011** 58B15 (47H99)
- Plautz, Frank** Tightness in the lattice of topologies. *Ann. Fac. Sci. Univ. Nat. Zaire (Kinshasa) Sect. Math.-Phys.* 4 (1978), no. 2, 171-185 (1979). (Anne K. Steiner) **81h:54007** 54A25 (54D55)
- Platon, G.** (with Fayard, D.) Un problème du knapsack non linéaire en variables 0-1. *Bull. Direction Études Rech. Sér. C Math. Inform.* 1979, no. 2, 51-77. (From the introduction) **81h:90095** 90C09 (68B20)
- Platen, Eckhard** Approximation of positive recurrent Markov chains. *Transactions of the Eighth Prague Conference on Information Theory, Statistical Decision Functions, Random Processes (Prague, 1978)*, Vol. B, pp. 89-96, Reidel, Dordrecht, 1978. (Esa Nummelin) **81b:60067** 60J10
- Plath, P. J.** (with Wildeboer, G.) Eulersche Polyederformel und Gibbs'sche Phasenregel. *Proceedings of Bremer Konferenz zur Chemie (Univ. Bremen, Bremen, 1978)*, Part II. *Match No.* 7 (1979), 163-175. (From the text) **81b:80001** 80A10 (52A25)
- Plato See Lafrance, Yvon** **81e:01004**
- Platonov, A. S.** (with Bašmakov, I. A.) Objects with variable structure and classes of problems that arise in studying them. (Russian) *Trudy Moskov. Orden. Lenin. Energet. Inst. No.* 412 (1979), 7-12, 153. (Authors' summary) **81j:93011** 93A99
- Platonov, V. P.** (with Jančevskii, V. I.) Stability in reduced K-theory. (Russian) *Dokl. Akad. Nauk SSSR* 242 (1978), no. 4, 769-772. (P. M. Cohn) **81d:12007** 12A62 (12A80)
- (with Rapinčuk, A. S.) On the group of rational points of three-dimensional groups. (Russian) *Dokl. Akad. Nauk SSSR* 247 (1979), no. 2, 279-282. (Daniel Coray) **81a:12014** 12A80 (14G25, 20G30)
- On the problem of the rationality of spin varieties. (Russian) *Dokl. Akad. Nauk SSSR* 248 (1979), no. 3, 524-527. (V. L. Popov) **81a:14027** 14M20
- (with Jančevskii, V. I.) SK₁ for division rings of noncommutative rational functions. (Russian) *Dokl. Akad. Nauk SSSR* 249 (1979), no. 5, 1064-1068. (Helmut Koch) **81e:12023** 12E15 (16A54)
- Algebraic groups and reduced K-theory. *Proceedings of the International Congress of Mathematicians (Helsinki, 1978)*, pp. 311-317, Acad. Sci. Fennica, Helsinki, 1980. (Daniel Coray) **81h:12017** 12E15 (12A62, 16A54)
- (with Černousov, V. I.) On the rationality of canonical spin varieties. (Russian) *Dokl. Akad. Nauk SSSR* 252 (1980), no. 4, 796-800. (Daniel Coray) **81h:14019** 14G05 (10C30, 14L35, 20G15)
- Platynowicz, Barbara** On some extremal problems in special classes of holomorphic functions at certain additional condition. *Demonstratio Math.* 12 (1979), no. 3, 753-768. (Stanisław Walczak) **81h:30043** 30C70
- Plant, Raymond H.** Post-buckling behavior of continuous, nonconservative elastic systems. (German summary) *Acta Mech.* 30 (1978), no. 1-2, 51-64. (Z. Kępcowski) **81d:73048** 73H05
- Buckling of shallow elastic structures. *New approaches to nonlinear problems in dynamics (Proc. Conf., Pacific Grove, Calif., 1979)*, pp. 361-375, SIAM, Philadelphia, Pa., 1980. (See **81h:00006**) 73H05
- Plavík, M.** (with Naeirovič-Veljković, Natalija) Thermidiffusion in dipolar elastic materials. *Bull. Acad. Serbe Sci. Arts Cl. Sci. Math. Natur. (N.S.)* No. 10 (1979), 29-39. (Authors' summary) **81j:73006** 73B25 (73B05, 73B30)
- Plazzi, Piero** A theorem on Fourier L^p-multipliers. (Italian. English summary) *Atti Sem. Mat. Fis. Univ. Modena* 26 (1977), no. 2, 244-255 (1979). (A. Figà-Talamanca) **81g:42012** 42A45
- Plennans, P. A. B.** (with Allen, S.) The number of different lengths of irreducible factorization of a natural number in an algebraic number field. *Acta Arith.* 36 (1980), no. 1, 59-86. (Bart Rees) **81h:12017** 12A75 (10H25, 20D15)
- Pledger, K. E.** Location of some modal systems. *Notre Dame J. Formal Logic* 21 (1980), no. 4, 683-684. (From the text) **81h:03024** 03B45
- Pleiser, H.** (with Brand, H.) Nonlinear reversible hydrodynamics of liquid crystals and crystals. (French summary) *J. Physique* 41 (1980), no. 6, 553-564. (T. Janssen) **81h:82043** 82A60 (82A50)
- Plemmons, Robert J.** Adjustment by least squares in geodesy using block iterative methods for sparse matrices. *Proceedings of the 1979 Army Numerical Analysis and Computers Conference (White Sands Missile Range, White Sands, N.M., 1979)*, pp. 151-186, ARO Rep. 79, 3, U. S. Army Res. Office, Research Triangle Park, N.C., 1979. (Author's summary) **81h:65030** 65F10 (86A30)
- (with Neumann, Michael) Generalized inverse-positivity and splittings of M-matrices. *Linear Algebra Appl.* 23 (1979), 21-35. (A. Lee) **81j:15021** 15A48 (15A09)
- (with Gunzburger, Max D.) Energy-conserving norms for the solution of hyperbolic systems of partial differential equations. *Math. Comp.* 33 (1979), no. 145, 1-10. (Authors' summary) **81a:35059** 35L50 (65N20)
- (with Golub, Gene H.) Large-scale geodetic least-squares adjustment by dissection and orthogonal decomposition. *Linear Algebra Appl.* 34 (1980), 3-28. (K. R. Koch) **81h:96010** 86A30 (15A23, 65F10)
- Plešinskaja, I. E.** Effective solution of the Tricomi problem for a system of mixed type. (Russian) *Trudy Sem. Krav. Zadacham No.* 15 (1978), 108-116, 217. (Author's summary) **81i:35122** 35M05
- On the solution of the boundary value problem M. (Russian) *Trudy Sem. Krav. Zadacham No.* 15 (1978), 117-122, 217-218. (Author's summary) **81g:35069** 35M05
- Plešinská, N. B.** (with Čibrikova, L. I.) Integral equations with generalized logarithmic and power kernels. IV. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1979, no. 9, 62-74. (R. V. Dudučava) **81h:45010** 45E99
- (with Čibrikova, L. I.) Integral equations with generalized logarithmic and power kernels. V. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1979, no. 10, 74-87. (R. V. Dudučava) **81j:45006** 45E05 (47G05)
- Plesken, Wilhelm** (with Pohst, Michael) On maximal finite irreducible subgroups of GL(n, Z). III. The nine-dimensional case. *Math. Comp.* 34 (1980), no. 149, 245-258. (Wolfgang Knapp) **81h:20012a** 20C10
- (with Pohst, Michael) On maximal finite irreducible subgroups of GL(n, Z). IV. Remarks on even dimensions with applications to n=8. *Math. Comp.* 34 (1980), no. 149, 259-275. (Wolfgang Knapp) **81h:20012b** 20C10
- (with Pohst, Michael) On maximal finite irreducible subgroups of GL(n, Z). V. The eight-dimensional case and a complete description of dimensions less than ten. *Math. Comp.* 34 (1980), no. 149, 277-301, *micro microfiche suppl.* (Wolfgang Knapp) **81h:20012c** 20C10
- Pleśniak, Wiesław** On some polynomial conditions of the type of Leja in Cⁿ. *Analytic functions, Kozubnik 1979 (Proc. Seventh Conf., Kozubnik, 1979)*, pp. 384-391, *Lecture Notes in Math.*, 798, Springer, Berlin, 1980. (Gary A. Harris) **81m:32019** 32E20 (31C15)
- Sur les conditions polynomiales du type Leja dans Cⁿ. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 7, A309-A311. (Author's summary) **81a:32012** 32E20
- Plesník, Ján** Remark on matchings in regular graphs. (Slovak and Russian summaries) *Acta Fac. Rerum Natur. Univ. Comenian. Math.* 34 (1979), 63-67. (Charles H. C. Little) **81g:05009** 05C70
- Coloring of graphs by partitioning. (Russian summary) *Math. Slovaca* 30 (1980), no. 2, 121-126. (B. R. Myers) **81j:05060** 05C15
- Pless, Vera** (with Bergstrand, Deborah; Favor, Fred; Grace, Thomas; Leon, Jeffrey S.) Verification of the isomorphism of two groups. *Second International Conference on Combinatorial Mathematics (New York, 1978)*, pp. 595-596, Ann. New York Acad. Sci., 319, New York Acad. Sci., New York, 1979. (Editors) **81d:20005** 20B25 (05C25)
- (with Sloane, N. J. A.; Ward, Harold N.) Ternary codes of minimum weight 6 and the classification of the self-dual codes of length 20. *IEEE Trans. Inform. Theory* 26 (1980), no. 3, 305-316. (Authors' summary) **81h:94033** 94B05
- (with Conway, J. H.) On the enumeration of self-dual codes. *J. Combin. Theory Ser. A* 28 (1980), no. 1, 26-53. (Authors' summary) **81a:94032** 94B05 (05A05)
- Plessem, W.** (with Gesztesy, F.; Thaller, B.) On the high-energy behaviour of scattering phase shifts for Coulomb-like potentials. *J. Phys. A* 13 (1980), no. 8, 2659-2671. (Marcel Coz) **81k:81083** 81F05 (35P25)
- du Plessis, Andrew** On the determinacy of smooth map-germs. *Invent. Math.* 58 (1980), no. 2, 107-160. (Takuo Fukuda) **81h:50016** 58C27 (57R45)
- Pleszczyńska, Elżbieta** (with Kowalczyk, Teresa; Ćwik, Jan) Chronological ordering of Poisson streams. *Transactions of the Eighth Prague Conference on Information Theory, Statistical Decision Functions, Random Processes (Prague, 1978)*, Vol. C, pp. 221-232, Reidel, Dordrecht, 1979. (Paul T. Holmes) **81h:60008** 60G55
- (with Ćwik, Jan; Kowalczyk, Teresa; Kowalski, Adam; Szczesny, Wiesław; Wierzbowska, Teresa) Monotone dependence function: background, new results and applications. *Mathematical statistics and probability theory (Proc. Sixth Internat. Conf., Włsla, 1978)*, pp. 111-121, *Lecture Notes in Statist.*, 2, Springer, New York, 1980. (Jiří Anděl) **81h:62100** 62H20
- (with Kowalczyk, Teresa; Kowalski, Adam; Matuszewski, A.) Applications of monotonic dependence functions: descriptive aspects. (Polish summary) *Zastos. Mat.* 16 (1980), no. 4, 579-591. (A. D. Gordon) **81m:62100** 62H20
- Pleš, Andrew** Profinite duality groups. I. *J. Pure Appl. Algebra* 16 (1980), no. 1, 55-74. (S. P. Demuškin) **81h:12027** 12G05 (18G99, 20E18)
- Profinite duality groups. II. *J. Pure Appl. Algebra* 16 (1980), no. 3, 285-297. (S. P. Demuškin) **81h:12028** 12G05 (18G20, 20E18)
- Pletajuhov, V. A.** (with Stražev, V. I.) Wave equations with multiple representations and two-potential formalism of electrodynamics. (Russian) *Izv. Vysš. Učebn. Zaved. Fizika* 1979, no. 12, 14-18. (S. A. Vladimirov) **81h:81118** 81L05
- Pletnev, N. G.** Linear supergravity. (Russian. English summary) *Teoret. Mat. Fiz.* 43 (1980), no. 1, 48-56. (H. S. Green) **81g:81103** 81G20 (17B10)
- Plečko, A. M.** (with Petunin, Ju. I.) Теория характеристик подпространств и её приложения. (Russian) [The theory of the characteristics of subspaces and its applications] "Vil'na Škola". Kien, 1980. 216 pp. (G. J. O. Jameson) **81m:46025** 46B05 (46M35, 46N05)
- Construction of bounded fundamental and total biorthogonal systems from unbounded systems. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* 1980, no. 5, 19-23, 93. (P. Wojtaszczyk) **81h:46012** 46B15
- Existence of a bounded total biorthogonal system in a Banach space. (Russian) *Teor. Funkcii Funkcional. Anal. i Prilozhen.* 33 (1980), 111-118, iv. (Z. Čanturia) **81e:46011** 46B05
- Plindor, G. I.** (with Dmitrieva, I. K.) Energy approximants and perturbation theory. *Phys. Lett. A* 74 (1979), no. 6, 387-390. (Y. Kato) **81j:81009** 81C05 (35P15)
- (with Dmitrieva, I. K.) Rearranged perturbation theory for the Schrödinger equation. *Phys. Scripta* 22 (1980), no. 4, 386-388. (Authors' summary) **81h:81022** 81C12
- Pliner, V. M.** Large deviations of the Kolmogorov, Kuiper and Rényi statistics. (Russian.

- English summary) *Vestnik Leningrad. Univ. Mat. Meh. Astronom.* 1980, *opp.* 2, 39-44, 124. (Sándor Csörgő) **81i:60027** 60F10 (62G20)
- Plis, A. F.** Integral representation of a class of generalized functions of quantum field theory. (Russian) *Ukrain. Mat. Ž.* 32 (1980), no. 4, 567-569. (M. Martinis) **81i:81039** 81E05 (46F12, 81C30)
- Pliska, Joseph S.** (with Mendelson, Haim; Yechiali, Uri) A stochastic allocation problem. *Oper. Res.* 28 (1980), no. 3, part 2, 687-693. (Authors' summary) **81d:90056** 90B30 (90B05)
- Pliska, Joseph S.** (with Pliska, Joseph S.; Sakalauskaitė, J.; Jukna, S. P.) On the logic of programs. *Kibernetika (Kiev)* 1979, no. 2, 12-19 (Russian); translated as *Cybernetics* 15 (1979), no. 2, 167-176. (From the text) **81a:68017** 68B10
- Pliska, Joseph S.** (with Pliska, Joseph S.; Sakalauskaitė, J.; Jukna, S. P.) On the logic of programs. *Kibernetika (Kiev)* 1979, no. 2, 12-19 (Russian); translated as *Cybernetics* 15 (1979), no. 2, 167-176. (From the text) **81a:68017** 68B10
- Pliska, V. Ju.** Solution of operator equations by the Kantorovich method. (Russian) *Difference and variational-difference methods (Proc. Second Sem. Methods of Numer. Appl. Math., Novosibirsk, 1977)* (Russian), pp. 118-126. *Akad. Nauk SSSR Sibirsk. Otdel. Vyčisl. Centr. Novosibirsk, 1977.* (Hans-Jürgen Albrand) **81j:65075** 65J10
- Plotki, Adam** See **Plotki, Plotki, Adam**
- Plotnikov, K. E.** On the question of modeling turbulent motion. (Russian. English summary) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 7* (1980), 27 pp. (Author's summary) **81i:76030** 76F99
- A model of turbulence that is isotropic and homogeneous with respect to the impulse moment of a quasispair. (Russian. English summary) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 8* (1980), 30 pp. (J. D. Atkinson) **81i:76030** 76F05
- Plotov, A. G.** Sufficient conditions for solvability of an optimal stabilization problem. (Russian) *Dynamics of control systems (Third All-Union Cetaeo Conf., Irkutsk, 1977)* (Russian), pp. 217-223, 342. "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. (M. M. Konstantinov) **81f:49019** 49B10 (49E20, 93D99)
- The existence of a continuous function of synthesis in an optimal control problem. (Russian) *Differentsial'nye Uravneniya (Ryazan)* No. 13 (1979), 101-106. (Author's summary) **81e:49016** 49B10
- Plotka, Ernest** Remarks on characters of discrete nilpotent groups. *Math. Ann.* 240 (1979), no. 2, 97-102. (Karin Erdmann) **81a:22006** 22D12 (20C15)
- Plotkin, J.** On automorphism groups of relational systems and universal algebras. *Colloq. Math.* 42 (1979), 341-344. (Tadashi Ohkuma) **81e:04003** 04A05 (03C55, 08A35)
- Plotkin, B. I.** Varieties of representations of groups and varieties of associative algebras. (Russian) *A collection of papers on algebra (Russian)*, pp. 172-187. *Minist. Oborony SSSR, 1978.* (I. D. Macdonald) **81i:20006** 20C07 (16A38, 20E10)
- Locally finite and locally bounded varieties of pair-representations of groups. (Russian) *A collection of papers on algebra (Russian)*, pp. 188-245. *Minist. Oborony SSSR, 1978.* (I. D. Macdonald) **81i:20007** 20C07 (20E10, 20F29)
- Plotkin, E. B.** (with Vavilov, N. A.) Net subgroups of Chevalley groups. (Russian) *Rings and modules, 2. Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 94 (1979), 40-49, 150. (James E. Humphreys) **81i:20059** 20G35
- Plotkin, Gordon** LCF considered as a programming language. *Theoret. Comput. Sci.* 5 (1977/78), no. 3, 223-255. (Author's summary) **81e:68016** 68B10 (03D05)
- (with Hennessy, Matthew C. B.) Full abstraction for a simple parallel programming language. *Mathematical foundations of computer science, 1979 (Proc. Eighth Symp., Olomouc, 1979)*, pp. 108-120. *Lecture Notes in Comput. Sci.*, 74, Springer, Berlin, 1979. (Authors' introduction) **81e:68007** 68B05
- (with Nielsen, Mogens; Winskel, Glynn) Petri nets, event structures and domains. *Semantics of concurrent computation (Proc. Internat. Symp., Eötvös, 1979)*, pp. 266-284. *Lecture Notes in Comput. Sci.*, 70, Springer, Berlin, 1979. (Authors' introduction) **81e:68043** 68B20
- (with Hennessy, Matthew C. B.) A term model for CCS. *Mathematical foundations of computer science, 1980 (Proc. Ninth Symp., Rytzyna, 1980)*, pp. 261-274. *Lecture Notes in Comput. Sci.*, 88, Springer, Berlin, 1980. (See **81i:68003**) **68B20**
- Plotkin, J. M.** (with Rosenthal, John) Some asymptotic methods in combinatorics. *J. Austral. Math. Soc. Ser. A* 28 (1979), no. 4, 452-460. (Edward A. Bender) **81i:05014** 05A15
- (with Hickin, Kenneth K.; Phillips, Richard E.) Periodic groups generated by finite amalgams. *Math. Proc. Cambridge Philos. Soc.* 87 (1980), no. 2, 189-197. (R. C. Lyndon) **81g:20077** 20F50
- Plotkin, Ja. D.** A generalized Green function for a two-point boundary value problem in a Banach space. (Russian) *Mathematical analysis and probability theory (Russian)*, pp. 134-139, 219. "Naukova Dumka", Kiev, 1978. (C. Corduneanu) **81b:34052** 34G10
- (with Turbin, A. F.) Decompositions of singularly perturbed analytic semigroups. (Russian) *Asymptotic methods in the theory of nonlinear oscillations (Proc. All-Union Conf. Asymptotic Methods in Nonlinear Mech., Katsiveli, 1977)* (Russian), pp. 156-166, 276. "Naukova Dumka", Kiev, 1979. (J. Kisyński) **81h:47035** 47D05 (47A55)
- Plotnicki, W. J.** (with Garfinkel, R. S.) A solvable cyclic scheduling problem with serial precedence structure. *Oper. Res.* 28 (1980), no. 5, 1236-1240. (Authors' summary) **81i:90110** 90B35
- Plotnicki, T. A.** (with Pisarenko, V. G.) Approximation by splines of functions of several variables from spaces with a dominating mixed derivative. (Russian) *Boundary value problems of mathematical physics (Russian)*, pp. 155-158, 181-182. *Akad. Nauk Ukrain. SSR, Inst. Mat., Kiev, 1978.* (S. D. Riemenschneider) **81i:41011** 41A15
- (with Pisarenko, V. G.) Investigation of the eigenfunctions and eigenvalues of a boundary value problem for a three-dimensional nonlinear Schrödinger equation by projection methods. (Russian) *Physics and mechanics of nonlinear phenomena (Russian)*, pp. 156-167, 210. "Naukova Dumka", Kiev, 1979. (Woodford W. Zachary) **81b:35081** 35P30 (81C05)
- Plotnikov, N. I.** Existence of three-dimensional waves on the surface of an ideal fluid. (Russian. English summary) *Boundary value problems of mathematical physics and related questions in the theory of functions, 11. Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 84 (1979), 211-219, 314, 320. (Author's summary) **81e:76013** 76B15
- Plotnikov, P. I.** (with Nalimov, V. I.) Boundary value problems for the dynamics of an ideal fluid with free boundaries. (Russian) *Proceedings of an All-Union Conference on Partial Differential Equations (Moscow State Univ., Moscow, 1976)* (Russian), pp. 169-171. *Moskov. Gos. Univ., Meh.-Mat. Fakul'tet, Moscow, 1978.* (See **80i:35002**) **35Q20** (76B99)
- Ill-posedness of the nonlinear problem of the development of Taylor instability. (Russian) *Boundary value problems of mathematical physics and related questions in the theory of functions, 12. Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 96 (1980), 240-246, 311. (Stefan Balint) **81j:76041** 76E30 (35Q20)
- Plotnikov, V. A.** Partial averaging of differential inclusions. (Russian) *Mat. Zametki* 27 (1980), no. 6, 947-952, 990. (J. Jarník) **81j:34023** 34A60 (34C29)
- Plucienik, Ryszard** An application of modular spaces to integral equations of Uryson type. *Funct. Approx. Comment. Math.* 7 (1979), 71-81. (Donald Kershaw) **81d:45022** 45N05 (45G10, 47H15)
- On some criteria for compactness of sets in spaces E_p . *Comment. Math. Prace Mat.* 21 (1980), no. 1, 207-217. (Diethard Pallaschke) **81m:46049** 46E30
- Plucińska, Agnieszka** A property of series of quasidiffusion processes. *Demonstratio Math.* 12 (1979), no. 2, 509-519. (D. Kannan) **81g:60080** 60J60
- Some problems concerning the quasidiffusion processes. *Rev. Roumaine Math. Pures Appl.* 25 (1980), no. 3, 403-412. (V. Mackevičius) **81m:60146** 60J60
- Pluciński, Edmund** On a property of the sum of discrete stochastic processes. *Demonstratio Math.* 12 (1979), no. 3, 821-832. (E. Çinlar) **81b:60051** 60G99
- Plummer, M. D.** (with Lovász, László; Neumann Lara, Victor) Mengerian theorems for paths of bounded length. *Period. Math. Hungar.* 9 (1978), no. 4, 269-276. (From the text) **81i:05097** 05C38
- On n -extendable graphs. *Discrete Math.* 31 (1980), no. 2, 201-210. (Michael O. Albertson) **81i:05083** 05C70
- Plummer, O. R.** See **Differential and integral equations, 81j:34003**
- Plusquellec, Yves** Dual ordonné d'un module. *C. R. Math. Rep. Acad. Sci. Canada* 2 (1980), no. 1, 23-26. (Author's summary) **81b:06014** 06F25 (16A53)
- Plymen, R. J.** The Laplacian and the Dirac operator in infinitely many variables. *Compositio Math.* 41 (1980), no. 1, 137-152. (Pierre de la Harpe) **81g:58003** 58C20 (35R99, 81D25)
- (with Parthasarathy, Kalyanapuram Rangachari) On the outer and inner invariants of Connes. *J. Funct. Anal.* 38 (1980), no. 1, 1-15. (Christopher Lance) **81h:46004** 46L40 (22D40)
- Cyclotomic integers and the inner invariant of Connes. *J. London Math. Soc.* (2) 22 (1980), no. 1, 14-20. (Andrew Bremner) **81i:10028** 10B25 (46L10)
- Plyushkavichene, A. Yu.** See **Pliska, Joseph S.**
- Plyushkavichyus, R. A.** See **Pliska, Joseph S.**
- Pneumatikos, Spyros N.** Structures hamiltoniennes en présence de contraintes. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 289 (1979), no. 16, A799-A802. (V. Oprou) **81e:58027** 58F05
- Pnueli, Amir** (with Francez, Nissim) A proof method for cyclic programs. *Acta Inform.* 9 (1977/78), no. 2, 133-157. (Przemysław Prusinkiewicz) **81e:68014** 68B10
- (with Manna, Zohar) The modal logic of programs. *Automata, languages and programming (Sixth Colloq., Graz, 1979)*, pp. 385-409. *Lecture Notes in Comput. Sci.*, 71, Springer, Berlin, 1979. (Authors' summary) **81d:68022** 68B10 (03B45, 68C01)
- The temporal semantics of concurrent programs. *Theoret. Comput. Sci.* 13 (1981), no. 1, 45-60. (Author's summary) **81j:68023** 68B10 (03B45, 68B20)
- Pobedja, B. E.** (with Šešenin, S. V.) On the matrix of influence. (Russian. English summary) *Vestnik Mosk. Univ. Ser. I Mat. Meh.* 1979, no. 6, 76-81, 108. (Authors' summary) **81b:73009** 73C99
- A new formulation of the problem of the mechanics of a deformable solid in stresses. (Russian) *Dokl. Akad. Nauk SSSR* 253 (1980), no. 2, 295-297. (P. P. Teodorescu) **81m:73018** 73C15
- Poberežnyi, O. V.** (with Kit, G. S.) Integral equations of nonstationary problems of heat conduction for bodies with cracks. (Russian) *Mat. Metody i Fiz.-Meh. Polja* No. 12 (1980), 58-63, 121. (Authors' summary) **81i:80005** 80A20
- (with P'janylo, Ja. D.) Error estimation and conditions of convergence of an approximate inversion of the Laplace transform by means of orthogonal polynomials. (Russian) *Mat. Metody i Fiz.-Meh. Polja* No. 12 (1980), 91-94, 123. (J. Koltr) **81h:65125** 65R10
- Poborčev, S. V.** Approximation of elements of anisotropic spaces by local functions. (Russian. English summary) *Vestnik Leningrad. Univ. Mat. Meh. Astronom.* 1979, *opp.* 1, 60-64, 134. (G. Godini) **81h:46036** 46E35
- Some estimates of an approximation of functions of class $W_p^k(\Omega)$ in a domain with a conic point and an edge. (Russian. English summary) *Vestnik Leningrad. Univ. Mat. Meh. Astronom.* 1979, *opp.* 3, 46-50, 122. (Ju. K. Dem'janovič) **81i:41018** 41A20 (41A25, 41A63, 46E35, 65N30)
- Pobyvance, I. P.** On an integral equation of Volterra type and asymptotic equivalences. (Russian) *Mat. Fiz. No. 27* (1980), 51-56, 121. (A. Corduneanu) **81j:45023** 45M05 (45D05)
- Poceluev, A. V.** (with Topil'skii, S. V.) Investigation of complicated dynamic systems by the method of local statistical nodes. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* 1979, no. 2, 190-198, 223 (Russian); translated as *Engng. Cybernetics* 17 (1979), no. 2, 118-127 (1980). (Authors' summary) **81b:93019** 93C10 (93E99)
- Pocesić, Apostol** From deformation to mixed and hybrid formulation of the finite element method. (Russian and Serbo-Croatian summaries) *Teor. Primen. Meh. No. 5* (1979), 135-150. (Rolf Rannacher) **81h:65117** 65N30 (73K25)
- Poch, A.** (with Gomis, J.; Pons, J. M.) Poincaré wave equations as Fourier transforms of Galilei wave equations. *J. Math. Phys.* 21 (1980), no. 11, 2682-2685. (Authors' summary) **81j:81034** 81D25
- Pochtman, Yu. M.** See **Pochtman, Ju. M.**
- Pochwalak, Ryszard** k -class estimators under conditions of autocorrelation of a random component. (Polish. Russian and English summaries) *Przegląd Statyst.* 26 (1979), no. 1-2, 79-86 (1980). (P. Vondráček) **81m:62196** 62P20 (62J05)
- Počtarenko, M. V.** (with Burlakova, L. A.; Irtegov, V. D.) Application of a computer for deriving and studying differential equations of motion of mechanical systems in a symbolic form. (Russian) *Theory of stability and its applications (Russian)*, pp. 247-253, 303. "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. (Authors' summary) **81e:70019** 70H35 (70E99)

- Poelman, J. M.** (with Gurvii, I. B.; Zaharčenko, V. G.) A randomized algorithm for solving nonlinear programming problems. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* 1979, no. 5, 30-33, 219 (Russian); translated as *Engrg. Cybernetics* 17 (1979), no. 5, 18-22 (1980). (Authors' summary) **81i:90177** 90C30
- Podaru, V.** (with Lupu, M.; Pascu, N.) Calculation of the order of starlikeness for α -starlike functions. (Romanian. English summary) *Bul. Univ. Braşov Ser. C* 20 (1978), 73-77. (Sanford S. Miller) **81i:30027** 30C45
- (with Lupu, M.; Pascu, N.) On some classes of hypergeometrical functions which lead to conformal mapping. *Proceedings of the International Symposium on Applications of Mathematics in System Theory* (Univ. Braşov, Braşov, 1978), II, pp. 343-344. Univ. Braşov, Braşov, 1979. (See **81j:93006b**) 33A30 (30C20)
- Podolskii, V. A.** On the problem of continuous linear filtering in a Kalman-Bucy posing. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* 1979, no. 5, 166-171, 223 (Russian); translated as *Engrg. Cybernetics* 17 (1979), no. 5, 119-123 (1980). (Author's summary) **81j:93061** 93E11 (93E15)
- Podubnyi, V. I.** (with Saltanov, M. V.) Oscillations of an elastic thread in a flow. (Russian) *Gidromek. (Kiev)* No. 42 (1980), 99-106, 123. (Authors' summary) **81e:73031** 73D99
- Podewski, Klaus-Peter** (with Holz, Michael; Steffens, Karsten) Hall families and the marriage problem. *J. Combin. Theory Ser. A* 27 (1979), no. 2, 161-180. (Paul E. Howard) **81e:04005** 04A20 (05A05, 90A06)
- (with Holz, Michael; Steffens, Karsten) A Hall criterion for countable families of sets. *J. London Math. Soc.* (2) 21 (1980), no. 1, 1-12. (N. H. Williams) **81g:04002** 04A25 (05A05)
- Podhorodnyi, Marian** (with Brückner, Damian; Skalmierski, Bogdan) Statistical characteristics of a random variable in a distributional formulation. (Polish. Russian and English summaries) *Zeszyty Nauk. Politech. Śląsk. Mat.-Fiz.* No. 29 (1979), 13-31. (Authors' summary) **81m:60006b** 60A99 (60E05)
- (with Brückner, Damian; Skalmierski, Bogdan) Statistical characteristics of a random vector in a distributional formulation. (Polish. Russian and English summaries) *Zeszyty Nauk. Politech. Śląsk. Mat.-Fiz.* No. 29 (1979), 33-50. (Authors' summary) **81m:60006c** 60A99 (60E05)
- (with Brückner, Damian; Skalmierski, Bogdan) Foundations of probability theory in a distributional formulation. (Polish. Russian and English summaries) *Zeszyty Nauk. Politech. Śląsk. Mat.-Fiz.* No. 29 (1979), 67-81. (Authors' summary) **81m:60006a** 60A99
- Podil'nik, Ju. N.** (with Kirichenko, A. M.) Solution of some boundary value problems of elasticity theory for a hyperboloid of revolution of one sheet. (Russian. English summary) *Vychisl. Prikl. Mat. (Kiev)* 1980, no. 41, 124-132, 160. (D. P. Raiković) **81k:73009** 73C02 (45C05)
- Podinovskii, V. V.** The guaranteed result principle for particular preference relations. (Russian) *Ž. Vychisl. Mat. i Mat. Fiz.* 19 (1979), no. 6, 1436-1450, 1628. (A. Rapoport) **81h:90008** 90A06 (06A99, 90D05)
- Podio-Guidugli, P.** (with Martins, L. C.) A variational characterization of vorticity. (Italian. English summary) *Rend. Sem. Mat. Univ. Padova* 61 (1979), 313-317 (1980). (L. G. Chambers) **81d:76021** 76C05 (49H05)
- (with Martins, L. C.) An elementary proof of the polar decomposition theorem. *Amer. Math. Monthly* 87 (1980), no. 4, 288-290. (R. Merris) **81b:15002** 15A04
- Podkorytov, A. N.** Fejér means in a two-dimensional case. (Russian. English summary) *Vestnik Leningrad. Univ. Mat. Meh. Astronom.* 1978, vyp. 3, 32-39, 155. (Author's summary) **81g:42010** 42A24
- Iterations of polynomial operators in the multidimensional case. (Russian. English summary) *Vestnik Leningrad. Univ. Mat. Meh. Astronom.* 1979, vyp. 3, 51-56, 122. (Luciana Lupas) **81d:42063** 42B15
- The summation of multiple Fourier series over polyhedra. (Russian. English summary) *Vestnik Leningrad. Univ. Mat. Meh. Astronom.* 1980, vyp. 1, 51-58, 119. (R. L. Cooke) **81d:42025** 42B05
- Podlaha, M. F.** On the impossibility to measure one-way velocity of light (complementary remarks to T. Sjödén's paper [83005 above]). *Lett. Nuovo Cimento* (2) 28 (1980), no. 6, 216-220. (Editors) **81f:83006** 83A05
- Podlipsky, Ju. K.** See **Podlipsky, Ju. K.**
- Podlipsky, V. S.** (with Ljubchenko, G. G.) Graph invariants enabling one to determine their isomorphism. *Automatika* 1979, no. 6, 36-41, 94 (Russian. English summary); translated as *Soviet Automat. Control* 12 (1979), no. 6, 28-32. (B. Manvel) **81k:05060** 05C25
- Podman, V. E.** The structure of spherical one-sheeted hypersurfaces with a horn. (Russian) *Modern geometry* (Russian), pp. 84-93, Leningrad. Gos. Ped. Inst., Leningrad, 1978. (Valentin Boju) **81b:53039** 53C40
- Podolski, Antoni** (with Sobociński, Jacek) Streams of information in the process of systematic modelling of complex technical objects on the example of vessel engines. *Optimization techniques* (Proc. Ninth IFIP Conf., Warsaw, 1979), Part 2, pp. 609-615, *Lecture Notes in Control and Information Sci.*, 23, Springer, Berlin, 1980. (See **81j:49001b**) 68J10
- Podsypanin, E. V.** Distribution of integer points on the determinant surface. (Russian) Studies in number theory, 6. *Zap. Nauch. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 93 (1980), 30-40, 225. (R. W. K. Odoni) **81k:10079** 10J25 (10J10)
- Podulav, N. D.** 3-characterizations of finite groups. (Russian) *Algebra i Logika* 18 (1979), no. 4, 442-462, 508. (A. A. Kondrat'ev) **81k:20025** 20D05
- Podulav, V. D.** On groups with β -pronormal β -normalizers. (Russian. English summary) *Dokl. Akad. Nauk BSSR* 24 (1980), no. 6, 489-492, 572. (Gerhard Pazderski) **81j:20033** 20D10
- Podolskii, A. E.** (with Košarčenko, V. N.; Meležič, P. N.; Šestopalov, V. P.) A rigorous method for the study of electromagnetic interaction of a system of several resonance scatterers. (Russian) *Dokl. Akad. Nauk SSSR* 252 (1980), no. 2, 328-331. (N. D. Kazanoff) **81e:78038** 78A50
- Poescu, S.** Linear operators constructed on Cartesian products of Euclidean spaces. (Romanian. German summary) *Bul. Ştiinţ. Teor. Inst. Politehn. "Traian Vuia" Timişoara* 23(37) (1978), no. 1, 22-24 (1979). (G. Godini) **81f:46032** 46C05
- Poescu, Valentin** Homotopie régulière et isotopie. *Rend. Sem. Mat. Univ. Politec. Torino* 37 (1979), no. 2, 15-56 (1980). (P. J. Kahn) **81h:57014** 57R42 (57R52)
- Poet, R.** Symmetrically coupled partial differential equations in scattering. I. Model electron-hydrogen collisions. *J. Phys. B* 13 (1980), no. 15, 2995-3008. (André Hautot) **81k:81089** 81F99
- Poganj, Tibor** On finding the covariance function of a stationary random process with an (I) -symmetric rational spectral function. (Serbo-Croatian) *Mat. Vesnik* 31(31) (1979), no. 1, 65-69. (From the summary) **81k:60043** 60G10
- Pogány, Csaba** Some recent problems concerning computers. III. (Hungarian) *Magyar Tud. Akad. Mat. Fiz. Oszt. Közl.* 23 (1977), no. 3-4, 365-372. (Editors) **81j:68004** 68-02
- Pogarev, A. G.** New algorithms for combined minimization of Boolean functions. *Automat. i Vychisl. Tehn. (Riga)* 1980, no. 1, 34-41, 97 (Russian); translated as *Automat. Control Comput. Sci.* 14 (1980), no. 1, 31-37. (Author's summary) **81i:94038** 94C10
- Poggio, T.** (with Reichardt, W.) On the representation of multi-input systems: computational properties of polynomial algorithms. *Biol. Cybernet.* 37 (1980), no. 3, 167-186. (P. Bertrand) **81j:92015** 92A09 (68C05, 92A27)
- Pogonowska, Anna** (with Palej, Marian) On a property of a band of conics resulting from a plane transformation. (Polish. Russian and English summaries) *Zeszyty Nauk. Politech. Śląsk. Mat.-Fiz.* No. 35 (1979), 185-190. (E. Otio) **81b:51026** 51N20
- Pogorelec, A. V.** An analogue of the Minkowski problem for infinite complete convex hypersurfaces. (Russian) *Dokl. Akad. Nauk SSSR* 250 (1980), no. 3, 553-556. (W. J. Firey) **81e:52004** 52A20 (53C45)
- Pogorelec, D. Ju.** (with Beleckii, V. V.; Levin, E. M.) On the problem of the resonance rotation of Venus. *Astronom. Zh.* 57 (1980), no. 1, 158-167 (Russian); translated as *Soviet Astronom.* 24 (1980), no. 1, 94-99. (Authors' summary) **81k:70004** 70F15 (70K20)
- Pogojan, Ė. M.** On the classification of description decoding problems. (Russian. Armenian summary) *Akad. Nauk Armjan. SSR Dokl.* 68 (1979), no. 1, 29-34. (Giuseppe Longo) **81e:68052** 68C25 (68J10)
- Pogojan, N. B.** Summability of Haar-Walsh series to $+\infty$. (Russian) *Uspehi Mat. Nauk* 35 (1980), no. 2(212), 219-220. (M. F. Timan) **81f:42026** 42C10
- Pogojan, T. I.** (with Savchenko, O. Ja.) Motion of a Lagrange gyroscope in a force field that is variable with respect to direction. (Russian) *Mek. Teor. Tela* No. 12 (1980), 85-90, 119. (Z. Janković) **81e:70006** 70E05 (70H35)
- Pogrebinskii, B. M.** Finite groups with specified properties of noninvariant maximal subgroups. (Russian) *Izv. Sverdlovsk. Nauch. Centra Vysl. Školy Ser. Estestv. Nauk* 1979, no. 3, 10-13, 107. (S. S. Levčenko) **81g:20045** 20D25
- Pogrebkov, A. K.** (with Diordžadze, G. P.; Polivanov, M. K.) Global solutions of the Cauchy problem for the Liouville equation $q_t(t, x) - q_{xx}(t, x) = \frac{1}{2} m^2 \exp q(t, x)$. (Russian) *Dokl. Akad. Nauk SSSR* 243 (1978), no. 2, 318-320. (V. Gheorghijă) **81j:35103** 35Q99 (35L70)
- Pogutke, Detlev** Gewisse Segalsche Algebren auf lokalkompakten Gruppen. *Arch. Math. (Basel)* 33 (1979/80), no. 5, 454-460. (Hans G. Feichtinger) **81e:43007** 43A15 (43A65)
- (with Leptin, Horst) Symmetry and nonsymmetry for locally compact groups. *J. Funct. Anal.* 33 (1979), no. 2, 119-134. (A. Hulanicki) **81e:43010** 43A20
- Symmetry (or simple modules) of some Banach algebras. *Harmonic analysis, Iraklion 1978* (Proc. Conf., Univ. Crete, Iraklion, 1978), pp. 177-193, *Lecture Notes in Math.*, 781, Springer, Berlin, 1980. (J. W. Jenkins) **81e:43013** 43A20
- Pogutke, Werner** A note on semidistributive lattices. *Algebra Universalis* 9 (1979), no. 3, 398-399. (From the text) **81e:06006** 06B05
- (with Duffus, Dwight; Rival, Ivan) Retracts and the fixed point problem for finite partially ordered sets. *Canad. Math. Bull.* 23 (1980), no. 2, 231-236. (James B. Nation) **81h:06001** 06A10
- Pohle, V. O.** (with Zmorović, V. A.) α -convex functions for $\alpha < 0$. (Russian) *Ukrain. Mat. Ž.* 31 (1979), no. 4, 431-433, 478. (Ola Beresiewicz-Rajca) **81k:30026** 30C45
- (with Kaidan, V. O.) Boundaries of α -convexity for subclasses of starlike functions. (Russian) *Ukrain. Mat. Ž.* 31 (1979), no. 5, 551-555, 620. (P. T. Mocanu) **81k:30024** 30C45
- Pohjanpelto, H.** System identifiability based on the power series expansion of the solution. *Math. Biosci.* 41 (1978), no. 1-2, 21-33. (Author's summary) **81g:93024** 93B30 (92A09, 93C15)
- Pohjola, Seppo** On the discrete-time quadratic optimum control problem in reflexive Banach space. *Control of distributed parameter systems* (Proc. Second IFAC Sympos., Coventry, 1977), pp. 319-328, IFAC, Düsseldorf, 1978. (From the introduction) **81m:49024** 49B27
- On the discrete-time regulator problem in infinite-dimensional spaces. *J. Optim. Theory Appl.* 30 (1980), no. 2, 319-327. (G. Zaitsev) **81b:93045** 93C55
- Pohlers, W.** Ordinals connected with formal theories for transitively iterated inductive definitions. *J. Symbolic Logic* 43 (1978), no. 2, 161-182. (Jane E. Kister) **81k:03061** 03F05 (03F50)
- trych-Pohlmeier, Ewa B.** See **Trych-Pohlmeier, Ewa B.**
- Pohlmeier, K.** (with Rehren, K.-H.) Reduction of the two-dimensional $O(n)$ nonlinear σ -model. *J. Math. Phys.* 20 (1979), no. 12, 2628-2632. (Charles A. Nelson) **81a:81072** 81E99
- On the Lagrangian theory of anti-self-dual fields in four-dimensional Euclidean space. *Comm. Math. Phys.* 72 (1980), no. 1, 37-47. (P. G. L. Leach) **81e:81072** 81E10 (58A15)
- Pohorilová, V.** See **Kirková-Pohorilová, V.**
- Pohoděl, B. B.** (with Nekrutkin, V. V.) The use of pseudorandom numbers in the Box-Müller transformation. (Russian. English summary) *Vestnik Leningrad. Univ. Mat. Meh. Astronom.* 1979, vyp. 3, 40-45, 122. (Gheorghe Bocsan) **81b:65010** 65C10
- Pohozhaev, S. I.** Questions of the nonexistence of solutions of nonlinear boundary value problems. (Russian) *Proceedings of an All-Union Conference on Partial Differential Equations* (Moscow State Univ., Moscow, 1976) (Russian), pp. 200-203, *Moskov. Gos. Univ., Meh.-Mat. Fakul'tet*, Moscow, 1978. (See **80f:35002**) 35G30
- Periodic solutions of some nonlinear systems of ordinary differential equations. (Russian) *Differentsial'nye Uravnenija* 16 (1980), no. 1, 109-116, 188-189. (Stefan Mirică) **81e:34038** 34C25 (58E05)
- Polak, Michael** (with Zassenhaus, Hans) On unit computation in real quadratic fields. *Symbolic and algebraic computation (EUROSAM '79, Internat. Sympos., Marseille, 1979)*, pp. 140-152, *Lecture Notes in Comput. Sci.*, 72, Springer, Berlin, 1979. (Duncan A.

- Buell) 81h:12001 12-04 (12A45)
(with Plesken, Wilhelm) On maximal finite irreducible subgroups of $GL(n, \mathbb{Z})$. III. The nine-dimensional case. *Math. Comp.* 34 (1980), no. 149, 245-258. (Wolfgang Knapp) 81h:20012a 20C10
- (with Plesken, Wilhelm) On maximal finite irreducible subgroups of $GL(n, \mathbb{Z})$. IV. Remarks on even dimensions with applications to $n=8$. *Math. Comp.* 34 (1980), no. 149, 259-275. (Wolfgang Knapp) 81h:20012b 20C10
- (with Plesken, Wilhelm) On maximal finite irreducible subgroups of $GL(n, \mathbb{Z})$. V. The eight-dimensional case and a complete description of dimensions less than ten. *Math. Comp.* 34 (1980), no. 149, 277-301, loose microfiche suppl. (Wolfgang Knapp) 81h:20012c 20C10
- Point, Nelly (with Ukai, Seiji; Ghidouche, Hamid) Sur la solution globale du problème mixte de l'équation de Boltzmann nonlinéaire. *J. Math. Pures Appl.* (9) 57 (1978), no. 3, 203-229. (From the introduction) 81i:45018 45K05 (47D05, 76P05)
- Pointer, Patrick C. See Good, I. J.; et al. 81g:62073
- Poirier, Dale J. A Lagrange multiplier test for skewness in binary logit models. *Econom. Lett.* 5 (1980), no. 2, 141-143. (Author's summary) 81j:6204 62P20
- Poirier, G. (with Glowinski, Roland; Mantel, B.; Periaux, J.; Pironneau, Olivier) An efficient preconditioned conjugate gradient method applied to nonlinear problems in fluid dynamics via least square formulations. *Computing methods in applied sciences and engineering (Proc. Fourth Internat. Sympos., Versailles, 1979)*, pp. 445-487, North-Holland, Amsterdam, 1980. (Nima Geffen) 81h:76035 76H05 (49D07, 65N30)
- Polito, Georges Sur les petits discriminants. *Séminaire Delange-Pisot-Poitou, 18e année: (1976/77), Théorie des nombres, Fasc. 1 (French)*, Exp. No. 6, 18 pp., Secrétariat Math., Paris, 1977. (Author's introduction) 81i:12007 12A50
See also Séminaire: Delange-Pisot-Poitou, 81h:10002
- Polzat, Bruno Une preuve d'un théorème de James Ax sur les extensions algébriques de corps. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 291 (1980), no. 4, A245. (D. J. Lewia) 81m:12026 12L05 (03C60)
- Pokalo, A. K. Summation of integrals in a Banach space with a Cesàro approximate unit. Multiplicative operators. Bernstein's theorem. I. (Russian. English summary) *Vesci Akad. Nauk BSSR Ser. Fiz.-Mat. Nauk* 1979, no. 1, 50-55, 140. (Enno Kolk) 81k:46011a 46B15 (40J05)
- Summation of integrals in a Banach space with a Cesàro approximate unit. Asymptotic formulas. Jackson type theorem. II. (Russian. English summary) *Vesci Akad. Nauk BSSR Ser. Fiz.-Mat. Nauk* 1979, no. 2, 16-21, 138. (Enno Kolk) 81k:46011b 46B15 (40J05)
- Pokashev, V. I. A class of Appell functions for doubly periodic groups. (Russian) *Izv. Vys. Ucheb. Zaved. Matematika* 1979, no. 7, 90-93. (A. D. Mednyh) 81e:30055 30F35 (45E05)
- Pokhar'yal, G. P. W_2 -curvature tensor in Kähler, almost Kähler and almost Tachibana manifolds. *Ann. Fac. Sci. Univ. Nat. Zaire (Kinshasa) Sect. Math.-Phys.* 4 (1978), no. 1, 83-92. (T. Okubo) 81j:53060 53C55
- Pokorná, Olga On the pseudoinversion of matrix products. *Numerical methods (Third Colloq., Keszthely, 1977)*, pp. 501-506, *Colloq. Math. Soc. János Bolyai*, 22, North-Holland, Amsterdam, 1980. (S. T. Tihonuk) 81m:65058 65F20
- Pokorný, Dan (with Havránek, Tomáš) Rank correlation coefficients and orderings on the space of permutations. *Transactions of the Eighth Prague Conference on Information Theory, Statistical Decision Functions, Random Processes (Prague, 1978), Vol. A*, pp. 279-291, Reidel, Dordrecht, 1978. (Z. Šidák) 81e:62057 62G99 (68C25)
- Pókos, Z. (with Iványi, A.) The effect of page size on the speed. Theory of operating systems (Fifth Visegrád Winter School, Visegrád, 1979). *Tanulmányok—MTA Számítástech. Automat. Kutató Int. Budapest No. 100* (1979), 301-310. (From the text) 81g:68039 68B20
- Pokras, David Levitzki radical for certain varieties. *Canad. J. Math.* 31 (1979), no. 5, 1005-1011. (G. V. Dorofeev) 81b:17004 17A30
- Pokrovskaja, L. A. Some estimates of the number of states of probabilistic automata representing regular events. (Russian) *Problemy Kibernet.* No. 36 (1979), 181-194, 279. (R. G. Buharaev) 81h:68004 68D25
- Pokrovskii, A. V. (with Krasnosel'skii, M. A.) Identification of some nonlinear transformers. *Identification and system parameter estimation (Proc. Fourth IFAC Sympos., Tbilisi, 1976), Part 3*, pp. 1797-1814, North-Holland, Amsterdam, 1978. (See 80d:93010c) 93B30
- (with Krasnosel'skii, M. A.) Equations with discontinuous nonlinearities. (Russian) *Dokl. Akad. Nauk SSSR* 248 (1979), no. 5, 1056-1059. (Ja. I. Al'ber) 81e:45010 45G10 (47H15)
- Pokrovskii, V. L. (with Talanov, A. L.) The theory of two-dimensional incommensurate crystals. *Ž. Éksp. Teoret. Fiz.* 78 (1980), no. 1, 269-295 (Russian); translated as *Soviet Phys. JETP* 51 (1980), no. 1, 134-148. (Authors' summary) 81e:82054 82A60
- Pokrovsky, A. V. See Pokrovskii, A. V.
- Pokrzywa, Andrzej Method of orthogonal projections and approximation of the spectrum of a bounded operator. *Studia Math.* 65 (1979), no. 1, 21-29. (Richard Bouldin) 81m:47022 47A55 (47A12)
- Spectra of compressions of an operator with compact imaginary part. *J. Operator Theory* 3 (1980), no. 2, 151-158. (Lawrence Williams) 81k:47028 47B05 (47A10, 47B40)
- Pol, Elzbieta (with Pol, Roman) A hereditarily normal strongly zero-dimensional space containing subspaces of arbitrarily large dimension. *Fund. Math.* 102 (1979), no. 2, 137-142. (Authors' summary) 81g:54037 54F45 (54B05, 54D15)
- On the covering dimension of Tychonoff spaces. *Topology (Proc. Fourth Colloq., Budapest, 1978), Vol. II*, pp. 963-964, *Colloq. Math. Soc. János Bolyai*, 23, North-Holland, Amsterdam, 1980. (See 81i:54001) 54F45
- The Lindelöf property and its convex analogue in function spaces with the weak topology. *Topology (Proc. Fourth Colloq., Budapest, 1978), Vol. II*, pp. 965-969, *Colloq. Math. Soc. János Bolyai*, 23, North-Holland, Amsterdam, 1980. (B. T. Sims) 81m:54033 54D20 (46E15)
- Pol, Roman (with Pol, Elzbieta) A hereditarily normal strongly zero-dimensional space containing subspaces of arbitrarily large dimension. *Fund. Math.* 102 (1979), no. 2, 137-142. (Authors' summary) 81g:54037 54F45 (54B05, 54D15)
- (with Alster, K.) On function spaces of compact subspaces of Σ -products of the real line. *Fund. Math.* 107 (1980), no. 2, 135-143. (E. Michael) 81h:54019 54D20 (54D30)
- Polak, E. (with Gonzaga, C.) On constraint dropping schemes and optimality functions for a class of outer approximations algorithms. *SIAM J. Control Optim.* 17 (1979), no. 4, 477-493. (Chanchal Singh) 81h:90119 90C30 (58C15, 65K10, 68B20)
- Polansky, O. E. (with Gutman, Ivan) On the calculation of the largest eigenvalue of molecular graph. *Match No. 5* (1979), 149-159. (M. Doob) 81e:05064 05C50 (92A40)
- (with Gutman, Ivan) On the matching polynomial of the graph $G\{R_1, R_2, \dots, R_n\}$. *Match No. 8* (1980), 315-322. (M. Doob) 81j:05004 05C50
- Polechik, V. M. (with Čarin, V. S.) A class of locally compact solvable groups. (Ukrainian. English and Russian summaries) *Viznik Kifo. Unio. Ser. Mat. Meh.* No. 20 (1978), 98-108, 166. (K. A. Ross) 81h:22003 22D05
- An open mapping. (Russian) *Ukrain. Mat. Ž.* 31 (1979), no. 6, 692-697, 766. (H. H. Wicke) 81d:22005 22D05 (54C10, 54H13)
- Polemarchakis, H. M. (with Geanakoplos, J. D.) On the disaggregation of excess demand functions. *Econometrica* 48 (1980), no. 2, 315-331. (Hildegard Dierker) 81h:90029 90A14
- Poleja, I. V. Bifurcations of a singular point of multidimensional dynamical systems. (Russian) *Theoretical and applied questions of differential equations and algebra (Russian)*, pp. 209-212, 269, "Naukova Dumka", Kiev, 1978. (M. I. Brin) 81g:34063 34D05 (58F14, 58F30)
- The averaging method and bifurcations of autonomous differential systems. (Russian) *Asymptotic methods in the theory of nonlinear oscillations (Proc. All-Union Conf. Asymptotic Methods in Nonlinear Mech., Katsiveli, 1977)* (Russian), pp. 166-171, 276, "Naukova Dumka", Kiev, 1979. (V. G. Zadorozhnyi) 81g:34058 34C29
- Polevoi, B. N. Temperature bending of a transverse-isotropic plate with a curvilinear opening. (Russian) *Mat. Metody i Fiz.-Meh. Polja* No. 11 (1980), 111-115, 124. (Author's summary) 81g:73125 73U05 (73K10)
- Polevoi, V. I. A method of choosing systems of coordinate functions in the solution of an exterior Dirichlet boundary value problem for a domain of complex form. (Russian) *Theoretical and applied questions of differential equations and algebra (Russian)*, pp. 203-208, 269, "Naukova Dumka", Kiev, 1978. (Author's summary) 81h:65004 65N05 (65P05)
- Poleze, Raluca Sur la représentation intégrale des mesures à valeurs dans des espaces d'opérations définies sur des champs de vecteurs. (Romanian summary) *Bul. Univ. Braşov Ser. C* 19 (1977), 47-55 (1978). (From the introduction) 81a:46048 46G10 (28B05)
- On the G-derivate of an additive set function and its properties. (Romanian. French summary) *Bul. Univ. Braşov Ser. C* 20 (1978), 115-118. (O. Costinescu) 81d:28008 28B05
- Poleznev, V. I. (with Daikovsky, A. G.; Fedoseev, A. I.) Calculation of boundary conditions for non-steady-state Navier-Stokes equations in "stream function, vorticity variables". (Russian) *Čisl. Metody Meh. Splōn. Sredy* 10 (1979), no. 2, *Mat. Modelirovanie*, 49-58. (Muri M. Gupta) 81d:76027 76D05
- (with Brailovskaja, V. A.; Kogan, V. R.) Influence of anisotropy of the permeability on the convection and heat transfer in a porous annular layer. *Izv. Akad. Nauk SSSR Meh. Židk. Gaza* 1980, no. 1, 59-64 (Russian); translated as *Fluid Dynamics* 15 (1980), no. 1, 48-52. (From the summary) 81f:76043 76S05 (76R10, 80A20)
- Poll, Alain Codes dans les algèbres de groupes abéliens (codes semi-simples, et codes modulaires). (English summary) *Information theory (Proc. Internat. CNRS Colloq., Cachan, 1977)* (French), pp. 261-271, *Colloques Internat. CNRS*, 276, CNRS, Paris, 1978. (Sami Harari) 81m:94021 94B15
- Codes stables sous le groupe des automorphismes isométriques de $A = F_2[X_1, \dots, X_n]/(X_i^2 - 1, \dots, X_n^2 - 1)$. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 21, A1029-A1032. (Author's summary) 81g:94031 94B15
- Poljanin, A. D. See Poljanin, A. D.
- Polinastro, Mario The diagonal realization: a tool for solving zero and pole assignment problems. *Internat. J. Control* 32 (1980), no. 5, 803-820. (Author's summary) 81m:93036 93B55 (15A23, 93B15)
- Policello, George E., II (with Randles, Ronald H.; Fligner, Michael A.; Wolfe, Douglas A.) An asymptotically distribution-free test for symmetry versus asymmetry. *J. Amer. Statist. Assoc.* 75 (1980), no. 369, 168-172. (R. Ponnappalli) 81d:62040 62G10
- Polinial, Albert D. (with Chartrand, Gary; Gould, Ronald J.) Some Ramsey type results on trees versus complete graphs. *Proceedings of the Tenth Southeastern Conference on Combinatorics, Graph Theory and Computing (Florida Atlantic Univ., Boca Raton, Fla., 1979)*, pp. 241-249, *Congress. Numer., XXIII-XXIV, Utilitas Math., Winnipeg, Man.*, 1979. (Authors' summary) 81f:05124 05C55
- (with Chartrand, Gary; Gould, Ronald J.) A note on locally connected and Hamiltonian-connected graphs. *Israel J. Math.* 33 (1979), no. 1, 5-8. (David P. Sumner) 81h:05092 05C45 (05C40)
- (with Chartrand, Gary; Gould, Ronald J.) On Ramsey numbers of forests versus nearly complete graphs. *J. Graph Theory* 4 (1980), no. 2, 233-239. (Authors' summary) 81e:05101 05C55
- Polin, S. V. Minimal varieties of semirings. (Russian) *Mat. Zametki* 27 (1980), no. 4, 527-537, 668. (G. Pollák) 81i:16050 16A78 (08B99)
- Političuk, E. G. On a certain nonlinear differential game. *Izv. Akad. Nauk SSSR Teh. Kibernet.* 1979, no. 5, 25-29, 219 (Russian); translated as *Engng. Cybernetics* 17 (1979), no. 5, 18 (1980). (Author's summary) 81k:90118 90D25
- Političuk, G. I. Fluid flow induced by wave motion of the walls of a channel. *Akust. Ž.* 26 (1980), no. 3, 440-445 (Russian); translated as *Soviet Phys. Acoust.* 26 (1980), no. 3, 241-244. (From the text) 81j:76114 76Z05 (76D05)
- Političuk, I. M. (with Lebedev, Yu. N.) Some properties of the problem of diffraction at (or from) a strip. *Radioelektronika i Elektronika* 22 (1977), no. 12, 2489-2493 (Russian); translated as *Radio Engng. Electron. Phys.* 22 (1977), no. 12, 27-30. (Authors' summary) 81g:78033 78A45 (45E99)
- Političuk, V. N. A problem with nonlocal boundary conditions for hyperbolic equations with variable coefficients. (Russian) *Approximate and qualitative methods in the theory of differential and functional-differential equations (Russian)*, pp. 54-64, 110, *Akad. Nauk Ukrain. SSR, Inst. Mat., Kiev*, 1979. (Author's summary) 81i:35074 35L35

- (with Plišnik, B. I.) Periodic solutions of a system of partial differential equations with constant coefficients. (Russian) *Ukrain. Mat. Ž.* 32 (1980), no. 2, 239–243, 286. (D. Babinov) **81c:35015** 35B10
- Pollack, G. I.** See **Polláček, E. G.**
- Pollack, G. I.** See **Polláček, G. I.**
- Pollack, I. M.** See **Polláček, I. M.**
- Polláček, F. T.** Symmetry breaking in the decay of unstable states. *Lett. Nuovo Cimento* (2) 27 (1980), no. 15, 486–490. **81f:10095** 81K05 (82A35)
- Diffusion in bistable potentials. *Lett. Nuovo Cimento* (2) 27 (1980), no. 16, 535–537. (From the text) **81g:2010** 82A05
- Polláček, V. P.** The global solvability of nonlinear transport equations. (Russian) *Differentsial'nye Uravneniya* 15 (1979), no. 5, 868–877, 957. (Hans Kaper) **81f:45022** 45K05 (82A40)
- Method of solution of nonlinear integral Hammerstein equations. (Russian) *Trudy Moskov. Orden. Lenin. Energet. Inst. No. 438* (1979), 20–23, 165. (J. Kolomy) **81c:45014** 45G10
- Solution of certain nonlinear operator equations and their application to integro-differential equations. (Russian) *Dokl. Akad. Nauk SSSR* 250 (1980), no. 4, 818–822. (J. Kolomy) **81b:47067** 47H07 (47H15)
- Pollitzer, H. David** Power corrections at short distances. *Nuclear Phys. B* 172 (1980), no. 2–3, 349–382. (Author's summary) **81b:81137** 81G05 (81N05)
- Pollivanov, M. K.** (with Džordžadze, G. P.; Pogrebkov, A. K.) Global solutions of the Cauchy problem for the Liouville equation $\varphi_{xx}(t, x) - \varphi_{xx}(t, x) = \frac{1}{2} m^2 \exp \varphi(t, x)$. (Russian) *Dokl. Akad. Nauk SSSR* 243 (1978), no. 2, 318–320. (V. Gheorghijă) **81j:35103** 35Q99 (35L70)
- Polliva, J.** (with Demuth, Oswald) The representation of linear functionals in the space of codes of constructive functions that are uniformly continuous on the segment Δ_1 . (Russian) *Comment. Math. Univ. Carolin.* 20 (1979), no. 4, 765–780. (Max I. Kanovič) **81h:03113** 03F60 (26A42, 46E99)
- Pollizzotto, C.** On work-hardening adaptation of discrete structures under dynamic loadings. (Polish and Russian summaries) *Arch. Mech. Stos.* 32 (1980), no. 1, 81–99. (Author's summary) **81g:73038** 73E05
- Polljakenco, V. L.** (with Šuhman, I. G.) Nonlinear waves in collisionless gravitating systems. *Astronom. Ž.* 56 (1979), no. 5, 957–964. (Russian); translated as *Soviet Astronom.* 23 (1979), no. 5, 539–543. (Authors' summary) **81a:85003** 85A05 (76B25)
- Instability of prolate stellar systems. *Astronom. Ž.* 56 (1979), no. 6, 1158–1164. (Russian); translated as *Soviet Astronom.* 23 (1979), no. 6, 653–656. (Author's summary) **81c:85003** 85A05
- Polljak, B. T.** (with Cypkin, Ja. Z.) Robust identification. *Identification and system parameter estimation* (Proc. Fourth IFAC Sympos., Tbilisi, 1976), Part 1, pp. 203–224, North-Holland, Amsterdam, 1978. (See **80d:93010a**) 90B99
- On the Bertsekas method for minimization of composite functions. *International Symposium on Systems Optimization and Analysis* (Rocquencourt, 1978), pp. 179–186, *Lecture Notes in Control and Information Sci.*, 14, Springer, Berlin, 1979. (Kailash C. Kapur) **81a:49019** 49D27 (90C30)
- Nonlinear programming methods in the presence of noise. *Survey of mathematical programming* (Proc. Ninth Internat. Math. Programming Sympos., Budapest, 1976), Vol. 2, pp. 155–165, North-Holland, Amsterdam, 1979. (Vladimir Katkovnik) **81j:90159** 90C15
- (with Cypkin, Ja. Z.) Adaptive estimation algorithms (convergence, optimality, stability). *Avtomat. i Telemekh.* 1979, no. 3, 71–84. (Russian. English summary); translated as *Automat. Remote Control* 40 (1979), no. 3, part 1, 378–389. (Naohiro Ishii) **81c:93080** 93E10
- (with Cypkin, Ja. Z.) Robust identification. *Automatica—J. IFAC* 16 (1980), no. 1, 53–63. (Authors' summary) **81j:93120** 93E12 (93B30)
- (with Cypkin, Ja. Z.) Optimal pseudogradient algorithms of stochastic optimization. (Russian) *Dokl. Akad. Nauk SSSR* 250 (1980), no. 5, 1084–1087. (A. Prékopa) **81j:90160** 90C15 (65K05)
- Polljak, R. A.** Controlling sequence methods for the solution of dual problems of convex programming. (Russian) *Mathematical methods of solution of economic problems*, No. 8 (Russian), pp. 95–111, "Nauka", Moscow, 1979. (N. I. Janev) **81j:90071** 90C25
- Relaxation operators on nonlinear manifold. *Survey of mathematical programming* (Proc. Ninth Internat. Math. Programming Sympos., Budapest, 1976), Vol. 1, pp. 307–316, North-Holland, Amsterdam, 1979. (Marco Gaviato) **81j:90178** 90C30
- Polljak, Svatopluk** (with Turzik, Daniel) Some equivalent formulations of the intersection problem of finitely generated classes of graphs. *Acta Sci. Math. (Szeged)* 41 (1979), no. 3–4, 357–364. (P. Ungar) **81c:05035** 05C10
- Polljak, A. M.** Gauge fields as rings of glue. *Nuclear Phys. B* 164 (1980), no. 1, 171–188. (Jorge André Swieca) **81c:81060** 81G05 (81E99)
- Polljak, E. A.** On the theory of recursive functionals and effective operations. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1980, no. 5, 37–39. (G. Asser) **81j:03078** 03D65
- See also **Recursive functions**, **81m:03007**
- Polljakov, I. N.** (with Petrov, V. V.; Ageev, V. M.; Kor'ev, A. V.; Medvedev, S. B.; Zaporozec, A. V.; Lebedev, G. N.) Informational theory of adaptive systems. (Russian) *Engineering cybernetics*, Vol. 12 (Russian), pp. 149–211, 239, *Akad. Nauk SSSR, Vsesojuz. Inst. Nauch. i Tehn. Informacii*, Moscow, 1980. (Authors' summary) **81h:93050** 93C40
- Polljakov, N. D.** An affine connection Γ on a manifold with an almost contact structure. (Russian) *Kaliningrad. Gos. Univ. Differentsial'naja Geom. Mnogobraz. Figur* No. 10 (1979), 75–83, 163. (Alan West) **81k:53034** 53C15
- Polljakov, L. N.** (with Dem'janov, V. F.) Conditions for a minimum of a quasidifferentiable function on a quasidifferentiable set. (Russian) *Ž. Vyšš. Mat. i Mat. Fiz.* 20 (1980), no. 4, 849–856, 1083. (K. Zimmermann) **81j:90102** 90C30 (26B05, 90C99)
- Polljakov, A. D.** (with Sergeev, Ju. A.) Diffusion to an absorbing particle with mixed kinetics. *Prikl. Mat. Meh.* 41 (1977), no. 4, 667–677. (Russian); translated as *J. Appl. Math. Mech.* 41 (1977), no. 4, 681–691. (Author's summary) **81c:80008** 80A20 (35K55)
- Polljakov, A. A.** (with Garanin, V. A.) Some analogues of the Hardy-Littlewood problem. (Russian) *Kulbyšev. Gos. Ped. Inst. Nauch. Trudy* 215 (1978), Issled. po Additional Teor. Čisel, 19–26. (A. I. Vinogradov) **81m:10009** 10J10
- Polljakov, A. N.** Computer realization of macroparticle models. (Russian. English summary) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint* No. 160 (1979), 34 pp. (Author's summary) **81a:82035** 82A45 (76X05)
- Poll, John F.** An algorithm for heat transfer in gun barrels. *Transactions of the Twenty-Fifth Conference of Army Mathematicians* (Johns Hopkins Univ., Baltimore, Md., 1979), pp. 125–145, *ARO Rep.* 80, 1, U. S. Army Res. Office, Research Triangle Park, N.C., 1980. (See **80m:73002**) 80A20
- Pollack, John** (with Harvey, Reese) Fundamental solutions in complex analysis. I. The Cauchy-Riemann operator. *Duke Math. J.* 46 (1979), no. 2, 253–300. (G. M. Henkin) **81c:32042a** 32F20 (35N15)
- (with Harvey, Reese) Fundamental solutions in complex analysis. II. The induced Cauchy-Riemann operator. *Duke Math. J.* 46 (1979), no. 2, 301–340. (G. M. Henkin) **81c:32042b** 32F20 (35N15)
- Pollakowski, L.** On N. Noble's theorems concerning powers of spaces and mappings. *Colloq. Math.* 41 (1979), no. 2, 215–217. (S. P. Franklin) **81j:54019** 54C10 (54B10)
- Pollack, Jordan** (with Klarner, David A.) Domino tilings of rectangles with fixed width. *Discrete Math.* 32 (1980), no. 1, 45–52. (I. Debroey) **81k:05008** 05A15 (05B45)
- Pollack, Richard** (with Goodman, Jacob E.) On the combinatorial classification of nondegenerate configurations in the plane. *J. Combin. Theory Ser. A* 29 (1980), no. 2, 220–235. (Cyril W. L. Garner) **81m:51004** 51A20 (05B30)
- Pollak, Edward** With selection for fecundity the mean fitness does not necessarily increase. *Genetics* 90 (1978), no. 2, 383–389. (Author's summary) **81k:92036** 92A10
- Pollak, Georg** Construction of bisimile inverse semigroups from right cancellative semigroups. *Math. Sem. Notes Kobe Univ.* 7 (1979), no. 2, 421–426. (R. McFadden) **81f:20085** 20M10
- Pollak, Moshe** A class of robust estimators. *Comm. Statist. A—Theory Methods* 8 (1979), no. 6, 509–531. (Rudolph J. Beran) **81a:62028** 62F35 (62G05)
- (with Rinott, Yosef) A stochastic ordering induced by a concept of positive dependence and monotonicity of asymptotic test sizes. *Ann. Statist.* 8 (1980), no. 1, 190–198. (Mir Maswood Ali) **81k:62041** 62E99 (60E15)
- Pollard, David** Induced weak convergence and random measures. *Z. Wahrsch. Verw. Gebiete* 37 (1976/77), no. 4, 321–328. (Author's introduction) **81j:60088** 60B10 (28C15, 46E30)
- (with Elker, J.; Stute, W.) Glivenko-Cantelli theorems for classes of convex sets. *Adv. in Appl. Probab.* 11 (1979), no. 4, 820–833. (J. M. Steele) **81a:60042** 60F15
- Weak convergence on nonseparable metric spaces. *J. Austral. Math. Soc. Ser. A* 28 (1979), no. 2, 197–204. (J. Štěpán) **81a:60009** 60B10
- General chi-square goodness-of-fit tests with data-dependent cells. *Z. Wahrsch. Verw. Gebiete* 50 (1979), no. 3, 317–331. (M. S. Nikulin) **81k:62082** 62G10 (60F05)
- The minimum distance method of testing. *Metrika* 27 (1980), no. 1, 43–70. (M. D. Burke) **81f:62079** 62G10 (62E20)
- Pollard, J. H.** Matrix analysis of the cash flows and reserves of a life office. *Austral. J. Statist.* 21 (1979), no. 3, 315–324. (Graham Lord) **81k:62184** 62P05 (92A15)
- (with Sherris, M.) Application of matrix methods to pension funds. *Scand. Actuar. J.* 1980, no. 2, 77–95. (Jean Lemaire) **81k:62152** 62P05 (90A09)
- Pollard, J. M.** On not storing the path of a random walk. *BIT* 19 (1979), no. 4, 545–548. (R. P. Brent) **81c:65006** 65C05 (68C05)
- Pollatschek, M. A.** (with Hammer, Peter L.; Peled, Uri N.) An algorithm to dualize a regular switching function. *IEEE Trans. Comput.* 28 (1979), no. 3, 238–243. (Authors' summary) **81d:94034** 94C10
- (with Cramer, John G.) Candidate to job allocation problem with a lexicographic objective. *Management Sci.* 25 (1979/80), no. 5, 466–473. (James G. Morris) **81b:90141** 90C31 (90B05)
- Pollington, A. D.** The Hausdorff dimension of a set of nonnormal well approximable numbers. *Number theory, Carbondale* 1979 (Proc. Southern Illinois Conf., Southern Illinois Univ., Carbondale, Ill., 1979), pp. 256–264, *Lecture Notes in Math.*, 751, Springer, Berlin, 1979. (V. Drobot) **81j:10082** 10K25 (10K50)
- Pollack, D. S. G.** ★The algebra of econometrics. Wiley Series in Probability and Mathematical Statistics. John Wiley & Sons, Ltd., Chichester, 1979. xv + 360 pp. ISBN 0-471-99753-6 (Peter Schmidt) **81k:62123** 62P20
- Pollack, M. D.** (with Bonometto, S. A.) The unitary Bogoliubov transformation for a quantized scalar field in a Friedman space-time. *Gen. Relativity Gravitation* 12 (1980), no. 7, 511–520. (S. G. Mamaev) **81k:83024** 83C45 (47D45, 81M05)
- Pollack, V. N.** The accumulation of perturbations in linear systems with respect to some coordinates. (Russian. English summary) *Vestnik Moskov. Univ. Ser. I Mat. Meh.* 1978, no. 2, 106–116. (Author's summary) **81k:34058** 34D10 (34C35, 65G99)
- Polombo, A.** Classes de Chern. *Première classe de Chern et courbure de Ricci: prence de la conjecture de Calabi* (Papers, Sémin., Centre Math. École Polytech., Palaiseau, 1978), pp. 51–75, *Astérisque*, 58, Soc. Math. France, Paris, 1978. (See **80j:32064**) 53C55 (57R20)
- Pollányi, J.** (with Kuti, Julius; Szlachányi, K.) Monte Carlo study of SU(2) gauge theory at finite temperature. *Phys. Lett. B* 98 (1981), no. 3, 199–204. (From the summary) **81k:81060** 81E10 (81–04)
- Poltavskii, V. N.** On the maximal errors of an asymptotic state identifier. *Avtomat. i Telemekh.* 1978, no. 8, 26–32. (Russian); translated as *Automat. Remote Control* 39 (1978), no. 8, part 1, 1116–1121. (Yakov Yavin) **81c:93028** 93B30
- Poltavskii, E. S.** Nonautonomous differential games. (Russian) *Differentsial'nye Uravneniya* 15 (1979), no. 6, 1007–1017, 1148. (O. Hájek) **81k:90184** 90D25
- Poltavskii, V. I.** Convergence of sequences of cubature formulas with a boundary layer on concrete functions. (Russian) *Mathematical analysis and related mathematical questions* (Russian), pp. 183–191, 353, "Nauka" Sibirsk. Otdel., Novosibirsk, 1978. (A. Cojbu) **81g:65038** 65D32
- Lattice cubature formulas with positive coefficients. (Russian) *Theory of cubature formulas and the application of functional analysis to problems of mathematical physics* (Russian), pp. 79–87, 166, *Trudy Sem. S. L. Soboleva*, No. 1, 1978, *Akad. Nauk SSSR Sibirsk. Otdel., Inst. Mat., Novosibirsk*, 1978. (G. P. Ismatullayev) **81m:41031** 41A55 (65D32)
- Poltavcev, A. A.** Choice of the approximate solution of a linear programming problem with

- inexact initial data. (Russian) *Mathematical methods of optimization and structuring of systems* (Russian), pp. 156-160, 186, Kaliningrad, Gos. Univ., Kaliningrad, 1979. (Author's summary) **81m:90070** 90C05
- Polytyev, G. S.** (with Bassalygo, L. A.; Zinov'ev, V. A.; Zjablov, V. V.; Pinskiy, M. S.) Bounds for codes with unequal protection of two sets of messages. *Problemy Peredachi Informatsii* 15 (1979), no. 3, 40-49. (Russian); translated as *Problems Inform. Transmission* 15 (1979), no. 3, 190-197 (1980). (Authors' summary) **81c:94016** 94A24 (94B05)
- Polunov, Ju. L.** (with Guter, R. S.) Binary arithmetic in the instrument calculations of John Napier. (Russian) *Istor.-Mat. Issled.* No. 23 (1978), 156-167, 358. (C. J. Scriba) **81c:01016** 01A45 (68-03)
- Polya, George** (with Szegő, Gábor) ★Problems and theorems in analysis. I. Series, integral calculus, theory of functions. Translated from the German by D. Aepli. Corrected printing of the revised translation of the fourth German edition. Grundlehren der Mathematischen Wissenschaften [Fundamental Principles of Mathematical Sciences], 193. Springer-Verlag, Berlin-New York, 1978. xix + 389 pp. ISBN 3-540-05672-6 (Editors) **81c:00002** 00A07
- Polynchenko, V. L.** See Poljachenko, V. L.
- Polyak, B. T.** See Poljak, B. T.
- Polyakov, A. M.** See Poljakov, A. M.
- Polymeris, André** Conjecturally stable coalition structures. *Combinatorics* 79 (Proc. Colloq. Univ. Montréal, Montréal, Que., 1979), Part II. *Ann. Discrete Math.* 9 (1980), 229-233. (Author's summary) **81k:90114** 90D12 (92A20)
- Polyzine, Wayne N.** Combinatorics, partitions, and many-body physics. *J. Math. Phys.* 21 (1980), no. 3, 506-513. (G. R. Allcock) **81d:81126** 81Hxx (05A17)
- Pomene, Yves** (with Zaleski, Stéphane) Sélection du nombre d'onde dans les structures cellulaires convectives. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 23, 505-507. (Authors' summary) **81h:76027** 76E15 (58E07, 58F13)
- (with Manneville, Paul) Intermittent transition to turbulence in dissipative dynamical systems. *Comm. Math. Phys.* 74 (1980), no. 2, 189-197. (Authors' summary) **81g:58024** 58F13 (65L20)
- (with Manneville, Paul) Different ways to turbulence in dissipative dynamical systems. *Phys. D* 1 (1980), no. 2, 219-226. (Authors' summary) **81h:58041** 58F13 (76F05, 86A10)
- (with Derrida, B.) Feigenbaum's ratios of two-dimensional area preserving maps. *Phys. Lett. A* 80 (1980), no. 4, 217-219. (Frederick R. Marotto) **81m:58051** 58F13 (76F99, 82A05)
- Pomel'nikov, Ju. V.** (with Suvorov, G. D.) A new family of conformally invariant metrizable bicompart extensions of a plane domain. (Russian) *Sibirsk. Mat. Ž.* 21 (1980), no. 3, 144-161, 237. (L. A. Akse'ev) **81k:30057** 30D40
- Pomerance, Carl** (with Diamond, Harold G.) Nearly parallel vectors. *Mathematika* 26 (1979), no. 2, 258-268 (1980). (A. D. Pollington) **81h:10055** 10F99
- (with Suryanarayana, D.) On a problem of Evelyn-Linfoot and Page in additive number theory. *Publ. Math. Debrecen* 26 (1979), no. 3-4, 237-244. (Karl-Heinz Indlekofer) **81g:10066** 10J20
- Collinear subsets of lattice point sequences—an analog of Szemerédi's theorem. *J. Combin. Theory Ser. A* 28 (1980), no. 2, 140-149. (H. G. Meijer) **81m:10104** 10L20 (05A05)
- A note on the least prime in an arithmetic progression. *J. Number Theory* 12 (1980), no. 2, 218-223. (S. L. Segal) **81m:10081** 10H15 (10H20)
- (with Selfridge, J. L.) Proof of D. J. Newman's coprime mapping conjecture. *Mathematika* 27 (1980), no. 1, 69-83. (T. M. Apostol) **81h:10008** 10A20
- Popular values of Euler's function. *Mathematika* 27 (1980), no. 1, 84-89. (Karl-Heinz Indlekofer) **81k:10076** 10H32 (10A20)
- (with Erdős, Paul) Matching the natural numbers up to n with distinct multiples in another interval. *Nederl. Akad. Wetensch. Indag. Math.* 42 (1980), no. 2, 147-161. (N. G. de Bruijn) **81h:10053** 10H15
- Pomerol, Jean-Charles** Application de la programmation convexe à la programmation différentiable. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 22, A1041-A1044. (Carl G. Looney) **81g:90075** 90C25 (58C20, 90C48)
- (with Levine, P.) Sufficient conditions for Kuhn-Tucker vectors in convex programming. *SIAM J. Control Optim.* 17 (1979), no. 6, 689-699. (S. R. Mohan) **81a:90155** 90C48 (49B27)
- Pommaret, Jean-François** ★Systems of partial differential equations and Lie pseudogroups. With a preface by André Lichnerowicz. Mathematics and its Applications, 14. Gordon & Breach Science Publishers, New York, 1978. xiv + 411 pp. ISBN 0-677-00270-X (A. M. Vinogradov) **81f:58046** 58Hxx (35A30)
- Problème de Bäcklund généralisé. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 289 (1979), no. 2, A119-A122. (A. M. Vinogradov) **81a:58056** 58H15
- Pommerenke, Christian** On Fuchsian groups of convergence type. *Proceedings of the Roff Necanlinna Symposium on Complex Analysis* (Math. Res. Inst., Univ. Istanbul, Silivri, 1976), pp. 71-78. *Publ. Math. Res. Inst. Istanbul*, 7, Univ. Istanbul, Istanbul, 1978. (M. Nakai) **81c:30084** 30F35
- (with Hayman, W. K.) On analytic functions of bounded mean oscillation. *Bull. London Math. Soc.* 10 (1978), no. 2, 219-224. (Albert Baernstein, II) **81g:30044** 30D55 (30F35)
- On the growth of normal analytic functions. *J. Analyse Math.* 36 (1979), 227-232 (1980). (S. M. Shah) **81k:30037** 30D45
- Pomorski, K.** (with Dietrich, K.) Derivation of a proximity interaction between nuclei from the Hartree-Fock functional with Skyrme interactions. *Z. Phys. A* 295 (1980), no. 4, 355-364. (From the summary) **81d:81118** 81G35
- Pomphrey, Neil** (with Aref, Hassan) Integrable and chaotic motions of four vortices. *Phys. Lett. A* 78 (1980), no. 4, 297-300. (J. S. Joel) **81k:76014** 76C99 (58F13)
- Pomraning, G. C.** Radiative transfer via spherical harmonics. *Transport Theory Statist. Phys.* 8 (1979), no. 2, 67-97. (R. N. Pandey) **81a:82061** 82A70 (65T05)
- (with Larsen, E. W.) Asymptotic analysis of nonlinear Marshall waves. *SIAM J. Appl. Math.* 39 (1980), no. 2, 201-212. (Jan P. Grant) **81k:85009** 85A25
- Ponarjadova, R. S.** Conditions for the convexity of a closed surface with a given sum of the principal conditional radii of curvature. (Russian) *Questions of global geometry* (Russian), pp. 43-53. Leningrad, Gos. Ped. Inst., Leningrad, 1979. (M. C. Chaki) **81h:53066** 53C45
- Ponath, H.-E.** Streuung elektromagnetischer Oberflächen- und Volumenwellen an rauen Oberflächen. I. Allgemeine Grundlagen. (English summary) *Ann. Physik* (7) 36 (1979), no. 6, 438-452. (I. Kay) **81m:78024a** 78A45 (35R60)
- Streuung elektromagnetischer Oberflächen- und Volumenwellen an rauen Oberflächen. II. Die Streulichtverteilung; Ein- und Auskopplung von Oberflächenwellen. (English summary) *Ann. Physik* (7) 36 (1979), no. 6, 453-470. (I. Kay) **81m:78024b** 78A45 (35R60)
- Poncel, Alain** Écriture d'un code d'éléments finis. *Journées "Éléments Finis"* (Rennes, 1975), 17 pp., Univ. Rennes, Rennes, 1975. (Author's summary) **81d:65066** 65N30
- Pondžiček, B.** The intersection graph of a simply ordered semigroup. *Semigroup Forum* 18 (1979), no. 3, 229-233. (P. F. Conrad) **81a:06019** 06F05 (20M99)
- Ponizovskii, I. S.** Correction: "Semisimplicity of the algebra of indecomposable representations of a finite commutative semigroup" (Russian) [Zap. Nauch. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI) 57 (1976), 125-128; MR 58 #6026] (Russian) Rings and modules, 2. *Zap. Nauch. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 94 (1979), 112-113, 151. (Editors) **81f:20095** 20M30
- Ponomarenko, L. L.** An infinite-dimensional stochastic Goursat problem. (Russian) *Mathematical analysis and probability theory* (Russian), pp. 140-143, 219, "Naukova Dumka", Kiev, 1978. (Author's summary) **81b:60060** 60H15 (35R60)
- Ponomarenko, S. P.** (with Virčenko, N. O.) Properties of the generalized Mehler-Fock integral transformation and its application to the solution of dual-integral equations. (Russian, English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A No. 2* (1979), 83-86, 155. (Vojislav Marić) **81a:44003** 44A15 (45F10)
- Ponomarev, A. S.** See Ponomarov, O. S.
- Ponomarev, K.** The cigarette smoking problem. (Russian. Bulgarian and German summaries) *Godišnik Visk. Učeln. Zaved. Tehn. Fiz.* 13 (1976), no. 2, 23-34 (1980). (Author's summary) **81f:90009** 80A25
- Ponomarev, L. I.** (with Mogilevskii, O. A.; Vukajlović, F. R.) The hydrogen molecule in the adiabatic representation. *J. Phys. B* 13 (1980), no. 13, 2489-2496. (Authors' summary) **81c:81171** 81G55
- Ponomarev, S. E.** (with Korneev, V. G.) Solution by the relaxation iteration method of finite element method schemes for elliptic equations of order $2n$. (Russian) *Cisl. Metody Meh. Splošn. Sredy* 8 (1977), no. 7, 72-86. (B. I. Kvasov) **81b:65104** 65N30
- Ponomarev, S. M.** On the theory of boundary value problems for equations of mixed type in three-dimensional domains. (Russian) *Dokl. Akad. Nauk SSSR* 246 (1979), no. 6, 1303-1306. (A. M. Nahušev) **81b:35074** 35M05
- An eigenvalue problem. (Russian) *Dokl. Akad. Nauk SSSR* 249 (1979), no. 5, 1068-1070. (K. Moszyński) **81c:34014** 34B25
- The eigenvalue problem for an equation of mixed type. (Russian) *Dokl. Akad. Nauk SSSR* 251 (1980), no. 5, 1070-1072. (Jan Bochenek) **81k:35119** 35P10 (35M05)
- Ponomarev, V. A.** See Dlab, Vlastimil, **81m:06019**
- Ponomarev, V. I.** (with Gončarenko, A. A.) Stochastic stability of solutions of a class of nonlinear inverse problems. (Russian) *Mathematical methods of cybernetics* (Russian), pp. 18-26. *Inst. Kibernet., Akad. Nauk Ukrain. SSR, Kiev*, 1978. (See **80d:00013**) **65C99** (65L99)
- Ponomarev, V. M.** Stability of a class of axisymmetric flows of an incompressible liquid. *Izv. Akad. Nauk SSSR Meh. Židk. Gaza* 1980, no. 1, 3-9 (Russian); translated as *Fluid Dynamics* 15 (1980), no. 1, 1-5. (From the summary) **81f:76023** 76E20
- Ponomarev, V. N.** (with Ceitlin, A. A.) Microscopic gravity as a Yang-Mills field. *Phys. Lett. A* 70 (1979), no. 3, 164-166. (Authors' summary) **81h:83034** 83C99
- (with Ceitlin, A. A.) A variational principle in general relativity. (Russian) *Vestnik Moskov. Univ. Ser. III Fiz. Astronom.* 20 (1979), no. 5, 68-70, 109. (B. N. Frolov) **81g:83007** 83C05 (49H05)
- Ponomarev, O. S.** Almost periodic self-oscillations in a two-contour damping system. (Russian) *Ukrain. Mat. Ž.* 32 (1980), no. 2, 244-248, 286. (V. G. Zadorozhnyi) **81f:34055** 34C27
- Pons, J. M.** (with Gomis, J.; Poch, A.) Poincaré wave equations as Fourier transforms of Galilei wave equations. *J. Math. Phys.* 21 (1980), no. 11, 2682-2685. (Authors' summary) **81j:81034** 81D25
- Pons, Montserrat** On some topologies on a generalized metric space. *Stochastica* 3 (1979), no. 1, 71-75. (Gheorghe Bocsan) **81c:08004** 08A02 (54G15)
- Ponsard, J.-P.** (with Sorin, S.) The LP formulation of finite zero-sum games with incomplete information. *Internat. J. Game Theory* 9 (1980), no. 2, 99-105. (Authors' summary) **81c:90117** 90D15 (90D10)
- Ponstein, J.** Fenchel duality in Banach spaces. *Survey of mathematical programming* (Proc. Ninth Internat. Math. Programming Sympos., Budapest, 1976), Vol. 1, pp. 317-320. North-Holland, Amsterdam, 1979. (Pierre Lorian) **81m:90088** 90C25 (46B99, 52A05)
- Pontrjagin, L. S.** Optimization and differential games. (Hungarian) Translated from Russian by Miklós Farkas. *Alkalmaz. Mat. Lapok* 5 (1979), no. 1-2, 203-209. (Editor) **81h:90151** 90D26
- Pooler, D. R.** Continuous group invariances of linear Jahn-Teller systems. *J. Phys. A* 11 (1978), no. 6, 1045-1055. (Authors' summary) **81f:81091** 81G50
- 3-jm, 6-j and isoscalar symbols for the icosahedral group. *J. Phys. A* 13 (1980), no. 4, 1197-1216. (P. M. van den Broek) **81d:20043** 20H15 (81C40)
- Poon, Ting Chung** (with Korpel, Adrianus) Explicit formalism for acousto-optic multiple plane-wave scattering. *J. Opt. Soc. Amer.* 70 (1980), no. 7, 817-820. (Authors' summary) **81h:78031** 78A45 (76Q05)
- Poon, Yiu Tung** (with Au-Yeung, Yik Hoi) 3×3 orthostochastic matrices and the convexity of generalized numerical ranges. *Linear Algebra Appl.* 27 (1979), 69-79. (Adolf Rhodius) **81a:15025** 15A60 (15A57, 47A12)
- (with Au-Yeung, Yik Hoi) A remark on the convexity and positive definiteness concerning Hermitian matrices. *Southeast Asian Bull. Math.* 3 (1979), no. 2, 85-92. (R. A. Horn) **81h:15026** 15A60
- Another proof of a result of Westwick. *Linear and Multilinear Algebra* 9 (1980), no. 1, 35-37. (Authors' summary) **81h:15015** 15A60
- Poor, H. Vincent** On robust Wiener filtering. *IEEE Trans. Automat. Control* 25 (1980), no. 3, 531-536. (Authors' summary) **81c:93085** 93E11
- Robust decision design using a distance criterion. *IEEE Trans. Inform. Theory* 28

- (1980), no. 5, 575-587. (Author's summary) **81h:94008** 94A12 (62F35)
- Posr, W. A.** A holonomy proof of the positive curvature operator theorem. *Proc. Amer. Math. Soc.* **79** (1980), no. 3, 454-456. (J. L. Kazdan) **81c:53043** 53C20
- Posna, R.** (with Darewych, J. W.) Upper and lower bounds in nonrelativistic scattering theory. *J. Math. Phys.* **21** (1980), no. 9, 2398-2405. (Francesco Calogero) **81i:81083** 81F05 (35P25, 81F10)
- Posre, A. B.** (with Al-Rawi, A.) Some applicable Hopf bifurcation formulas and an application in wind engineering. *Bifurcation theory and applications in scientific disciplines (Papers, Conf., New York, 1977)*, pp. 590-604. *Ann. New York Acad. Sci.*, **316**, New York Acad. Sci., New York, 1979. (From the introduction) **81a:76027** 76E99 (34C25)
- van der Poorten, Alfred J.** See **Van der Poorten, Alfred J.**
- Pop, Fulga** Convex functions with respect to a distribution on a Riemannian manifold. *An. Ştiinţ. Univ. "Al. I. Cuza" Iaşi Sect. I a Mat. (N.S.)* **25** (1979), no. 2, 411-416. (V. T. Fomenko) **81c:53044** 53C20 (26B25)
- Pop, I.** On some orbit spaces. *An. Ştiinţ. Univ. "Al. I. Cuza" Iaşi Sect. I a Mat. (N.S.)* **25** (1979), no. 2, 381-387. (Edgar H. Brown, Jr.) **81c:55023** 55R10 (57S99)
- Some remarks on the path fibration of a topological space. (Romanian summary) *Bul. Inst. Politehn. Iaşi Sect. I* **25**(29) (1979), no. 3-4, 17-20. (Marshall Walker) **81h:55011** 55R05
- Bicofibrations. *An. Ştiinţ. Univ. "Al. I. Cuza" Iaşi Sect. I a Mat. (N.S.)* **26** (1980), no. 1, 117-122. (A. H. Copeland, Jr.) **81k:55021** 55P99
- Pop, Maria S.** On the reduction of n -groups to groups. (Romanian. English summary) *Studia Univ. Babeş-Bolyai Math.* **24** (1979), no. 1, 38-40. (Author's summary) **81d:20067** 20N15 (18B99)
- Popa, Aurel** (with Vraciu, George) An algorithm for approximating the solution of an elliptic equation. *An. Univ. Craiova Mat. Fiz.-Chim.* **5** (1977), 55-60. (Editors) **81c:65161** 65N30
- Popa, Nicolae** Die Permanenzeigenschaften der Tensorprodukte von Banachverbänden. *Romanian-Finnish Seminar on Complex Analysis (Proc., Bucharest, 1976)*, pp. 627-647. *Lecture Notes in Math.*, **743**, Springer, Berlin, 1979. (R. J. Nagel) **81b:46032** 46B30 (46M05)
- Popa, Sorin T.** (with Pimsner, Mihai V.) The Ext-groups of some C^* -algebras considered by J. Cuntz. *Rev. Roumaine Math. Pures Appl.* **23** (1978), no. 7, 1069-1076. (Uffe Haagerup) **81j:46094** 46L05 (46M05, 46M20)
- (with Rieffel, Marc A.) The Ext groups of the C^* -algebras associated with irrational rotations. *J. Operator Theory* **3** (1980), no. 2, 271-274. (Vern Paulsen) **81j:46106** 46L55 (46L05, 46M20)
- Popa, Valeriu** A common fixed point theorem for a sequence of multifunctions. (Romanian summary) *Studia Univ. Babeş-Bolyai Math.* **24** (1979), no. 2, 39-41. (V. V. Obuhovskii) **81j:54076** 54H25 (47H10, 54C60)
- Pope, C. N.** (with Hawking, S. W.) Yang-Mills instantons and the S-matrix. *Nuclear Phys. B* **161** (1979), no. 1, 93-111. (Authors' summary) **81a:81053** 81E10 (58G40, 81F15)
- Pope, J. A.** (with Bartmann, D. R.) Ein Scoring-Modell bei mehrfacher Zielsetzung mit unsicheren oder fehlenden Daten und abhängigen Zielen. (English summary) *Z. Oper. Res. Ser. A-B* **24** (1980), no. 2, B29-B45. (Authors' summary) **81g:90015** 90A09 (90D35)
- Popeas, C.** (with Lupuş, Laurenţiu) Optimal output feedback for decentralized linear systems with quadratic cost. (German and French summaries) *Rev. Roumaine Sci. Tech. Sér. Électrotech. Énerg.* **23** (1978), no. 4, 607-614, vii, viii. (Authors' summary) **81i:93034** 93E20 (49D30)
- (with Ionescu, Vi.) Feedback realizations by polynomial matrix computations. (French and German summaries) *Rev. Roumaine Sci. Tech. Sér. Électrotech. Énerg.* **25** (1980), no. 2, 259-265, viii, x. (Authors' summary) **81h:93023** 93C05
- Popek, G. J.** (with London, Ralph L.; Guttag, John V.; Horning, James J.; Lampson, B. W.; Mitchell, J. G.) Proof rules for the programming language EUCLID. *Langages et traducteurs (Papers, IRIA Sem., Rocquencourt, 1977)*, pp. 77-100. *IRIA, Rocquencourt, 1977*. (See **80c:68002**) **68B10**
- Popelar, C. H.** (with Atkinson, C.) Dynamic crack propagation in a viscoelastic strip. *J. Mech. Phys. Solids* **28** (1980), no. 2, 79-93. (M. Sokolowski) **81m:73069** 73M05 (73F99)
- Popescu, Dragos** Hamiltonian properties of some classes of graphs which extend Petersen's graph. (Romanian. English summary) *Stud. Cerc. Mat.* **31** (1979), no. 1, 77-103. (T. Zamfirescu) **81a:05067** 05C45
- Popescu, Emil** Inverse context operators. (Romanian. French summary) *Bul. Univ. Braşov Ser. C* **20** (1978), 119-124. (Author's summary) **81c:68062** 68F05
- Popescu, Mariana** (with Boju, Valentin) Espaces à courbure quasi-constante. *J. Differential Geom.* **13** (1978), no. 3, 373-383. (Franco Tricerni) **81c:53041** 53C20
- (with Boju, Valentin; Ianus, S.) Isotropic distributions on some Riemannian manifolds. *Proceedings of the National Conference on Nonholonomic Spaces (Iasi, 1976)*, pp. 149-155. *Ed. Acad. R.S. România, Bucharest, 1979*. (George Virsik) **81f:53035** 53C25
- Popescu, Mihai** La détermination de l'extrémum absolu de la classe des extrémales admissibles concernant le transfert des véhicules spatiaux des points colinéaires de libération du système terre-lune à la distance maximum. *Rev. Roumaine Sci. Tech. Sér. Méc. Appl.* **25** (1980), no. 2, 183-198. (Author's summary) **81f:70028** 70M05
- Popov, S. V.** (with Zahar'jačev, M. V.) A deduction search procedure based on the syntactic tree method. (Russian. English summary) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 111* (1978), 51 pp. (Gábor Dávid) **81h:68014** 03B35 (68G15)
- Popov, N. I.** Equations of mixed type with two lines of degeneracy in unbounded domains. I. Imbedding theorem. Uniqueness theorem. (Russian) *Differential'nye Uravnenija* **14** (1978), no. 2, 304-317, 388. (A. Džuraev) **81i:35082a** 35M05
- Equations of mixed type with two lines of degeneracy in unbounded domains. II. Existence of a strong solution. (Russian) *Differential'nye Uravnenija* **14** (1978), no. 4, 665-679, 765. (A. Džuraev) **81j:35082b** 35M05
- Popkiewicz, Maciej** (with Nowicki, Eugeniusz) A method for planning continuous experiments with regard to cost. (Polish. English and Russian summaries) *Prace Nauk. Inst. Cybernet. Tech. Politech. Wrocław. Ser. Stud. Materiały No. 26 Wybrane Problemy Teorii Eksperymentu i Identyfikacji Obiektów* (1978), 17-30. (Authors' summary) **81a:90105** 90B99
- Poplavski, R. P.** On energetically optimal channels and effective coding. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* **1979**, no. 4, 66-76, 219. (Russian); translated as *Engng. Cybernetics* **17** (1979), no. 4, 56-65 (1980). (Author's summary) **81k:94024** 94A40
- Maxwell demon and the correspondence between information and entropy. *Uspehi Fiz. Nauk* **128** (1979), no. 1, 165-176. (Russian); translated as *Soviet Phys. Uspekhi* **22** (1979), no. 5, 371-380. (Author's summary) **81d:80003** 80A10 (81K05)
- Poppe, J. A.** (with Krishnan, R.; Schlegel, H. B.) Derivative studies in configuration-interaction theory. *J. Chem. Phys.* **72** (1980), no. 8, 4654-4655. (From the text) **81c:11770** 81G55
- Popov, V. N.** Detection and correction of syntactical errors in analysis of LR(k)-grammars. (Russian) *Control of technical and organizational systems by application of computer technology (Russian)*, pp. 79-83, 227. "Nauka", Moscow, 1979. (Author's summary) **81f:68087** 68F05
- Popov, A. Ju.** A method for the approximation of the solution of differential equations. (Russian) *Mathematical methods in operations research and reliability theory (Russian)*, pp. 44-47. *Akad. Nauk Ukrain. SSR, Inst. Kibernet., Kiev, 1978*. (W. S. Loud) **81a:65068** 65L05
- Popov, A. P.** Some finitely based varieties of rings. *C. R. Acad. Bulgare Sci.* **32** (1979), no. 7, 855-858. (Ju. N. Mal'cev) **81i:16021** 16A38
- Popov, Blagov S.** Bilinear generating functions of second-order recurrence sequences. (Macedonian. English summary) *Makedon. Akad. Nauk. Umet. Oddel. Prirod.-Mat. Nauk. Priroz.* **10** (1978), no. 2, 5-15. (I. Kátai) **81h:10017** 10A35
- Sums of powers of certain sequences of numbers. (Macedonian. English summary) *Prirod.-Mat. Fak. Univ. Kirit Metodij Skopje Godišen Zb.* **29** (1978), 9-19. (T. Šalát) **81g:10022** 10A35
- Popov, E. P.** ★ Теория нелинейных систем автоматического регулирования и управления. (Russian) [Theory of nonlinear systems of automatic regulation and control] "Nauka", Moscow, 1979. 256 pp. (E. G. Af'breht) **81m:93001** 93-01 (93C10)
- (with Medvedev, V. S.; Leskov, A. G.; Jul'chenko, A. S.) Semi-automatic and interactive control systems for manipulation robots. (Russian) *Dynamics of control systems (Third All-Union Cetaev Conf., Irkutsk, 1977)* (Russian), pp. 224-236, 342. "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. (Authors' summary) **81c:93003** 93A10 (93D99)
- (with Krut'ko, P. D.) Construction of algorithms for controlling the motions of linear systems. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* **1979**, no. 2, 168-174, 222. (Russian); translated as *Engng. Cybernetics* **17** (1979), no. 2, 99-105 (1980). (Authors' summary) **81h:93014** 93C05 (93D20)
- (with Krut'ko, P. D.) The construction of algorithms for control of the motion of discrete systems. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* **1979**, no. 3, 159-167, 222-223. (Russian); translated as *Engng. Cybernetics* **17** (1979), no. 3, 115-122 (1980). (Authors' summary) **81h:93064** 93C55 (93B50)
- Popov, G. Ju.** (with Tolkačev, V. M.) Problem of contact between rigid bodies and thin-walled elements. *Izv. Akad. Nauk SSSR Meh. Tverd. Tela* **15** (1980), no. 4, 192-206. (Russian); translated as *Mech. Solids* **15** (1980), no. 4, 156-171. (From the introduction) **81m:73078** 73T05
- Popov, Ju. D.** Construction of simple decision rules for estimation of the parameters under cyclic three-scale measurements. (Russian. English summary) *Vysš. Prikl. Mat. (Kiev)* **No. 40** (1980), 65-73, 159. (Author's summary) **81h:92062** 92A27
- Popov, Ju. L.** Fundamental objects of a regular hyperband of an affine space. (Russian) *Kaliningrad. Gos. Univ. Differential'naja Geom. Mnogoozrač. Figur* **No. 10** (1979), 84-96, 163. (L. Tamásy) **81i:53010** 53A25 (53A15)
- Popov, Ju. P.** (with Koldoba, A. V.; Povečenko, A. V.; Popov, S. B.) Numerical modeling of the dynamics of heating and dispersion of matter in absorption of a high-current relativistic electron beam. (Russian) *Differential'nye Uravnenija* **16** (1980), no. 7, 1235-1244, 1350. (Authors' summary) **81f:76111** 76W05 (78A35)
- Popov, Ju. V.** (with Gessel, M.; Sragovič, V. G.) Adaptive control of generalized processes with independent values. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* **1978**, no. 6, 186-192. (Russian); translated as *Engng. Cybernetics* **16** (1978), no. 6, 157-163. (Lennart Ljung) **81h:93081** 93E20
- Popov, K.** (with Hadžov, K.) Stability of a straight polymer rod with variable properties. (Bulgarian. Russian and French summaries) *Godišnik Vizl. Učeln. Zased. Tehn. Meh.* **13** (1978), no. 2, 101-106 (1979). (Authors' summary) **81h:73032** 73H99 (73F05)
- Popov, M. M.** (with Krasavin, V. G.) Excitation coefficients of whispering gallery waves in the vicinity of vanishing curvature of the concave boundary. (Russian. English summary) *Interference waves in layered media, I. Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* **99** (1980), 138-145, 160. (Authors' summary) **81h:76060** 76Q05
- Popov, N. N.** Geometric ergodicity of Markov chains with an arbitrary phase state. (Russian) *Dokl. Akad. Nauk SSSR* **247** (1979), no. 4, 798-802. (M. Iosifescu) **81a:60071** 60J05
- Popov, P. S.** (with Simonov, R. O.; Stjažkin, N. I.) Logic in Russia at the end of the fifteenth century. (Russian) *Ideas of natural science in Old Russia (Russian)*, pp. 98-112. "Nauka", Moscow, 1978. (Roman Murawski) **81i:01015** 01A35 (03-03)
- Popov, S. B.** (with Koldoba, A. V.; Povečenko, A. V.; Popov, Ju. P.) Numerical modeling of the dynamics of heating and dispersion of matter in absorption of a high-current relativistic electron beam. (Russian) *Differential'nye Uravnenija* **16** (1980), no. 7, 1235-1244, 1350. (Authors' summary) **81f:76111** 76W05 (78A35)
- Popov, V. A.** Some characteristics of functions and their applications to spline-approximation and rational approximation. (Russian) *The theory of the approximation of functions (Proc. Internat. Conf., Kaluga, 1975)* (Russian), pp. 286-293. "Nauka", Moscow, 1977. (J. Szabados) **81c:41024** 41A15 (41A20)
- A note on one-sided approximation of functions. (Russian) *C. R. Acad. Bulgare Sci.* **32** (1979), no. 10, 1319-1322. (Bl. Sendov) **81g:42006** 42A10
- (with Skibenko, I. T.) Combinatorial approach to the classification of k -valued logical functions. *Kibernetika (Kiev)* **1979**, no. 6, 15-18. (Russian); translated as *Cybernetics* **15** (1979), no. 6, 789-793 (1980). (From the text) **81j:68016** 05A15 (03B50, 94C10)
- On the connection between uniform approximation and polynomial L_p approximation of functions. *Quantitative approximation (Proc. Internat. Sympos., Bonn,*

- 1979), pp. 267-277, *Academic Press, New York*, 1980. (J. Szabadec) **81j:41025** 41A20 (41A10, 65D15)
- (with Dimitrov, Dimitar G.) A generalization of Timan's theorem for approximation of functions by algebraic polynomials. *Serdica* **6** (1980), no. 1, 9-15. (A. B. Fevny) **81j:41010** 41A10
- Popov, V. I. On Hilbert's theorem on invariants. (Russian) *Dokl. Akad. Nauk SSSR* **249** (1979), no. 3, 551-555. (James E. Humphreys) **81e:14029** 14L30 (14D25, 15A72)
- Popov, V. N. (with Rudnickii, M. P.) Analysis of the stability "in the large" of a second-order nonlinear system using an approximation of the nonlinearity by a function of relay type. (Russian) *Theory of stability and its applications* (Russian), pp. 122-128, 300, "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. (Authors' summary) **81g:93078** 93D05 (34D05)
- Popov, V. S. (with Mur, V. D.) Quasiclassical approximation for the Dirac equation in strong fields. *Jadernaja Fiz.* **28** (1978), no. 3, 837-849 (Russian); translated as *Soviet J. Nuclear Phys.* **28** (1978), no. 3, 429-435. (Alexander Alenicyan) **81e:81008** 81M05 (34B25, 34E20)
- Popov, V. V. An exponential curve, Σ -products and k -spaces. (Russian) *Topological spaces and their mappings* (Russian), pp. 107-108, 153, *Lato. Gos. Univ., Riga*, 1979. (Teodor Przymusiński) **81h:54030** 54D50 (54B10, 54B20)
- Popov, Vasil A. See Popov, V. A.
- Popov, Ye. P. See Popov, E. P.
- Popov, Yu. V. See Popov, Ju. V.
- Popova, A. D. (with Gričuk, L. P.) Weak supergravity. *Ž. Eksp. Teoret. Fiz.* **77** (1979), no. 5, 1665-1682 (Russian); translated as *Soviet Phys. JETP* **50** (1979), no. 5, 835-843. (Authors' summary) **81h:83004** 83C45 (81M05)
- Popova, A. M. (with Komarov, V. V.; Šablov, V. L.; Osborn, T. A.) Failure of the connected-kernel method. *Phys. Rev. C* **32** (1980), no. 3, 976-984. (Authors' summary) **81h:81113** 81F10
- Popova-Popova, Z. See Černeva-Popova, Z.
- Popović-Bolić, M. (with Marić, Z.) Coefficients of fractional parentage for the states of an arbitrary number of $j=1$ bosons. *J. Phys. A* **13** (1980), no. 9, 2881-2888. (Authors' summary) **81h:81167** 81G50 (22E70)
- Popovich, Miodrag V. (with Raković, Branko D.) Characteristic function of least-mean-square passband filters with finite attenuation poles. *IEEE Trans. Circuits and Systems* **27** (1980), no. 12, 1225-1233. (Authors' summary) **81m:94007** 94A12
- Popović, Iulian (with Brezulescu, Al.; Cuculescu, I.; Turtoi, Adriana) Computation of areas on earth-ellipsoid. *Proceedings of the International Symposium on Applications of Mathematics in System Theory* (Unio. Braşov, Braşov, 1978), II, pp. 231-238, Unio. Braşov, Braşov, 1979. (See **81j:93006b**) **86A30** (65D30)
- Sur la structure des espaces fibrés à métrique invariante. *Proceedings of the National Conference on Nonholonomic Spaces* (Iasi, 1976), pp. 140-148, Ed. Acad. R.S. România, Bucharest, 1979. (Elisa Udeschini-Brinis) **81e:53048** 53C50 (83E15)
- Sur les espaces à connexion constante attachés aux algèbres de Jordan simples et centrales. I. *An. Ştiinţ. Univ. "Al. I. Cuza" Iaşi Sect. I a Mat. (N.S.)* **25** (1979), no. 2, 365-380. (R. Iordănescu) **81h:53014** 53B15 (53C15)
- (with Turtoi, Adriana) Sur les espaces bidimensionnels à connexion constante. I. *Bull. Math. Soc. Sci. Math. R. S. Roumanie (N.S.)* **23** (71) (1979), no. 4, 373-389. (T. J. Willmore) **81d:53014** 53B05
- Contribution à l'étude des espaces fibrés à métrique invariante. *Rev. Roumaine Math. Pures Appl.* **24** (1979), no. 5, 775-800. (Virgil Obădeanu) **81e:53028a** 53C20 (83E15)
- Corrigendum à l'article: "Contribution à l'étude des espaces fibrés à métrique invariante". *Rev. Roumaine Math. Pures Appl.* **24** (1979), no. 9, 1411. (Editors) **81e:53028b** 53C20 (83E15)
- (with Iancu, S.) Gheorghe Vrăncianu: a precursor of global differential geometry. *An. Univ. Bucureşti Mat.* **29** (1980), 107-116. (Bernard Rouxel) **81m:01054** 01A70 (53-03)
- (with Anastasiu, Mihai) Sur les bases de la géométrie finalienne. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **290** (1980), no. 17, A807-A810. (Authors' summary) **81e:53055** 53C60
- Popoviciu, Nicolae (with Halanay, Aristide) Remarks on the optimal control of a continuous time Markov chain with varying probabilities. *Rev. Roumaine Math. Pures Appl.* **24** (1979), no. 8, 1183-1193. (H. J. Kushner) **81h:93082** 93E20 (90C40)
- (with Halanay, Aristide) Remarks on the optimal control of a finite state discrete Markov chain with varying time probabilities. *Rev. Roumaine Math. Pures Appl.* **25** (1980), no. 1, 51-65. (A. A. Juškevič) **81m:90106** 90C40 (90C39, 93E20)
- Popoviková, Marta Local characterizations of Darboux Baire I functions. (Russian summary) *Math. Slovaca* **30** (1980), no. 4, 345-350. (A. M. Bruckner) **81k:26005** 26A15
- Popowicz, Ziemowit Some remarks about the lattice chiral field. *Phys. Lett. A* **81** (1981), no. 4, 235-236. (Authors' summary) **81m:81050** 81E99 (35A30, 82A67)
- Poppi, K. (with Müller, P. C.) Kovarianzanalyse von linearen Zufallsschwingungen mit zeitlich verschobenen Erregerprozessen. *Z. Angew. Math. Mech.* **59** (1979), no. 5, T144-T146. (From the text) **81c:70020** 70L05 (93E03)
- Poppe, Harry (with Stürk, Andreas) A two-dimensional induction lemma with applications to the proof of combinatorial formulas. *Math. Sem. Notes Kobe Univ.* **8** (1980), no. 1, 219-223. (W. R. Heise) **81k:05010** 05A15 (05A10)
- Popykina, A. I. Spectral properties of the stationary diffusion multigroup approximation. (Russian) *Dokl. Akad. Nauk SSSR* **250** (1980), no. 3, 607-610. (D. A. Šulajka) **81e:82072** 82A70
- Porada, E. Jeu de Choquet. *Colloq. Math.* **42** (1979), 345-353. (Y. Kodama) **81d:54004** 54A99 (54E50)
- Porat, I. Axisymmetrical auxiliary mass nutation-damper. *Israel J. Tech.* **17** (1979), no. 4, 201-206 (1980). (Authors' summary) **81m:70011** 70E05
- Porati, A. (with Granero Porati, M. I.; Vecchi, A.) Analytical conditions for the conservative form of the ecological equations. *Bull. Math. Biol.* **40** (1978), no. 2, 257-264. (Authors' summary) **81e:92020** 92A17
- granero Porati, M. I. See Granero Porati, M. I.
- Porubka, Mielogost On impivational algebras. *Polish Acad. Sci. Inst. Philos. Sociol. Bull. Sect. Logic* **8** (1979), no. 1, 30-35. (From the text) **81m:08014** 08B05
- (with Kabziński, Jacek K.; Wroński, Andrzej) On (\leftrightarrow, \neg) -reduct of the intuitionistic consequence operation. *Polish Acad. Sci. Inst. Philos. Sociol. Bull. Sect. Logic* **8** (1979), no. 3, 161-165. (Editors) **81a:03026** 03B60
- Poroda, S. J. (with Tepper, David E.) Approximation to linear functionals on H^1 by point evaluations. *Numer. Funct. Anal. Optim.* **1** (1979), no. 3, 273-280. (Charles K. Chui) **81e:41051** 41A65 (30D55)
- Portet, Darwin H. The representation of partial knowledge as a linear-convex set of probability distributions. (French summary) *Information theory (Proc. Internat. CNRS Colloq., Cachan, 1977)* (French), pp. 463-472, *Colloques Internat. CNRS*, 276, CNRS, Paris, 1978. (Author's summary) **81f:62054** 62F10 (62B10, 94A17)
- Porolkin, A. G. (with Isakov, V. N.) Integrals with respect to an outer measure. (Russian) *Functions of sets* (Russian), pp. 5-16, *Komi Gos. Ped. Inst., Syktyvkar*, 1977. (L. Ja. Savel'ev) **81e:28002** 28A25
- On the question of the normability of Boolean algebras with a continuous outer measure. (Russian) *Sibirsk. Mat. Ž.* **21** (1980), no. 4, 216-220, 240. (Aleksander Błaszczyk) **81j:06019** 06E99 (28C99)
- Porter, F. O. (with Eidel'man, S. D.) Theorems on the asymptotic nearness of solutions of second-order multidimensional parabolic equations. (Russian) *Uspehi Mat. Nauk* **35** (1980), no. 1(211), 211-212. (Ju. V. Egorov) **81g:35042** 35K10 (35B40)
- Porta, Giovanni Quasiconformal mappings in normed spaces. *Romanian-Finnish Seminar on Complex Analysis (Proc., Bucharest, 1976)*, pp. 215-222, *Lecture Notes in Math.*, 74, Springer, Berlin, 1979. (P. Caraman) **81g:30031** 30C60 (30G35, 46G05)
- Degenerate elliptic operators of order $2m$ and G -convergence. (Italian. English summary) *Rend. Sem. Fac. Sci. Univ. Cagliari* **49** (1979), no. 1-2, 113-136. (Ja. A. Roitberg) **81m:35062** 35J70 (49A22)
- The boundary correspondence under mappings with bounded triangular dilatation in real normed spaces. *Analytic functions, Kozubnik 1979 (Proc. Seventh Conf., Kozubnik, 1979)*, pp. 392-401, *Lecture Notes in Math.*, 798, Springer, Berlin, 1980. (P. Caraman) **81h:30025** 30C60 (46B25)
- Porshching, T. A. (with Frey, A. E.; Hall, Charles Allen) Numerical integration and the constant strain condition. *Linear Algebra Appl.* **29** (1980), 151-159. (Authors' summary) **81a:65029** 65D30 (65Nxx)
- Portneva, V. N. On a new variant of an algorithm for designing extensive units, based on the method of sequential analysis of variants. (Russian) Combinatorial algorithms for optimal decision making. *Akad. Nauk Ukrain. SSR Inst. Kibernet. Preprint No. 10* (1978), 3-11. (Editors) **81h:90082** 90B25
- Port, Hans-Eberhard (with Wischniewsky, Manfred Bernd) Existence and applications of monoidally closed structures in topological categories. *Categorical topology (Proc. Internat. Conf., Free Univ. Berlin, Berlin, 1978)*, pp. 277-292, *Lecture Notes in Math.*, 719, Springer, Berlin, 1979. (Bodo Pareigis) **81b:18003** 18D20
- A survey on the categorical treatment of dualities. *Structure of topological categories (Proc. Conf., Univ. Bremen, Bremen, 1978)*, pp. 181-194, *Mathematik—Arbeitspapiere*, 18, Univ. Bremen, Bremen, 1979. (From the text) **81e:18003** 18A40 (54B30)
- See also Structure of topological categories, **81a:18001**
- Porta, Horacio (with Berkson, Earl) The p -norms of peak functions. *Operator theory and functional analysis (Papers, Summer Meeting, Amer. Math. Soc., Providence, R.I., 1978)*, pp. 115-121, *Res. Notes in Math.*, 38, Pitman, San Francisco, Calif., 1979. (E. L. Stout) **81h:32007** 32A35 (46J15)
- (with Berkson, Earl) The group of isometries of H^p . *Ann. Mat. Pura Appl.* (4) **119** (1979), 231-238. (D. N. Clark) **81e:43009** 43A17 (30D55, 32A35)
- (with Lotz, Heinrich P.; Peck, N. T.) Semi-embeddings of Banach spaces. *Proc. Edinburgh Math. Soc.* (2) **22** (1979), no. 3, 233-240. (E. Beckenstein) **81f:46029** 46B99 (46E25)
- (with Berkson, Earl) The group of isometries on Hardy spaces of the n -ball and the polydisc. *Glasgow Math. J.* **21** (1980), no. 2, 199-204. (J. Mitchell) **81m:32006** 32A35 (46J15, 47B38)
- (with Dubuc, Eduardo J.) Uniform spaces, Spanier quasitopologies, and a duality for locally convex algebras. *J. Austral. Math. Soc. Ser. A* **29** (1980), no. 1, 99-128. (W. Zelazko) **81d:46009** 46M99 (18B99, 46J10, 54E15)
- Portat, Frédéric Théorème de grandes déviations pour des martingales et des processus ponctuels. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **290** (1980), no. 23, 1107-1108. (Authors' summary) **81h:60037** 60F10 (60G55)
- Porte, Jean Simplifying the axioms of the predicate calculus. *Notre Dame J. Formal Logic* **21** (1980), no. 2, 346-350. (David W. Miller) **81f:03016** 03B10
- Portenko, M. I. Stochastic differential equations with a generalized drift vector. (Russian. English summary) *Teor. Veroyatnost. i Primenen.* **24** (1979), no. 2, 332-347. (Constantin Tudor) **81g:60063** 60H10 (60J60)
- Porter, A. Duane (with Mousouris, Nick) Ranked solutions of the matrix equation $A_1 X_1 = A_2 X_2$. *Internat. J. Math. Math. Sci.* **3** (1980), no. 2, 293-304. (George D. Poot) **81f:15022** 15A24
- (with Mousouris, Nick) Exponential sums and rectangular partitions. *Linear Algebra Appl.* **29** (1980), 347-355. (Don Redmond) **81k:10054** 10G05
- Porter, B. (with Grujić, Ljubomir T.) Continuous-time tracking systems incorporating Lur'e plants with multiple nonlinearities. *Internat. J. Systems Sci.* **11** (1980), no. 7, 827-840. (Authors' summary) **81g:93045** 93C10
- See also Mita, T., **81m:93026**
- Porter, D. (with Sewell, Michael J.) Constitutive surfaces in fluid mechanics. *Math. Proc. Cambridge Philos. Soc.* **88** (1980), no. 3, 517-546. (J. Dunwoody) **81j:76003** 76A02 (49H05, 58C28)
- Porter, Jack R. (with Woods, R. Grant) Ultra-Hausdorff H -closed extensions. *Pacific J. Math.* **84** (1979), no. 2, 399-411. (K. D. Magill, Jr.) **81f:54013** 54D35 (54D15)
- Porter, James F. (with Feldman, William Alan) Banach lattices with locally compact representation spaces. *Math. Z.* **174** (1980), no. 3, 233-239. (R. C. James) **81m:46036** 46B30
- Porter, R. Michael Computation of a boundary point of Teichmüller space. *Bol. Soc. Mex. Mexicana* (2) **24** (1979), no. 1, 15-26. (C. Earle) **81j:32026** 32G15 (30F10)
- Porter, Richard (with Cenkl, Bohumil) Modèles pour la théorie de l'homotopie modérée. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **290** (1980), no. 13, A613-A615. (Jean-Michel Lemaire) **81f:55016** 55Q99 (55P15)
- Milnor's $\bar{\mu}$ -invariants and Massey products. *Trans. Amer. Math. Soc.* **257** (1980),

- no. 1, 39-71. (Willi Meier) **81a:57021** 57Q45 (55S30)
- Porter, Timothy Essential properties of pro-objects in Grothendieck categories. *Cahiers Topologie Géom. Différentielle* 20 (1979), no. 1, 3-57. (Harold Hastings) **81c:18002** 18A35 (55P60)
- Porter, William A. Multiple signal extraction by polynomial filtering. *Math. Systems Theory* 13 (1979/80), no. 3, 237-254. (S. Csibi) **81m:94006** 94A12 (62M20, 93E11)
- Synthesizing cluster operators. *Pattern Recognition* 11 (1979), no. 2, 127-132. (Manabu Ichino) **81a:68103** 68G10
- Polylogic realization of switching functions. *IEEE Trans. Comput.* 29 (1980), no. 7, 657-662. (Author's summary) **81f:94045** 94C10
- Porter, William J. Joint interpolation and approximation of causal systems. *J. Math. Anal. Appl.* 72 (1979), no. 2, 399-412. (R. Saeks) **81d:93030** 93C25 (47C05)
- Porteus, Evan L. (with Kreps, David M.) Temporal von Neumann-Morgenstern and induced preferences. *J. Econom. Theory* 20 (1979), no. 1, 81-109. (From the introduction) **81a:90037** 90A10 (90A06)
- Portnov, V. R. Solvability of nonlinear operator equations. (Russian) *Theory of cubature formulas and the application of functional analysis to problems of mathematical physics* (Russian). pp. 72-121, 166. *Trudy Sem. S. L. Soboleva*, No. 1, 1976, Akad. Nauk SSSR Sibirsk. Otdel., Inst. Mat., Novosibirsk, 1976. (Author's summary) **81f:65044** 65J15 (47H15)
- S. L. Sobolev representations. (Russian) *Theory of cubature formulas and the application of functional analysis to problems of mathematical physics* (Russian). pp. 88-109, 166. *Trudy Sem. S. L. Soboleva*, No. 1, 1978, Akad. Nauk SSSR Sibirsk. Otdel., Inst. Mat., Novosibirsk, 1978. (H. Triebel) **81g:46044** 46E35
- Existence theorems in the theory of flexible solids. (Russian) *Partial differential equations* (Proc. Sem. S. L. Sobolev, No. 2, 1979) (Russian). pp. 92-123, 148. *Trudy Sem. S. L. Soboleva*, No. 2, 1979, Akad. Nauk SSSR Sibirsk. Otdel., Inst. Mat., Novosibirsk, 1979. (V. M. Isakov) **81j:49002** 49A22 (35J70, 73C99)
- da Silva Porto, Paulo Ferreira See da Silva Porto, Paulo Ferreira, Jr.
- Porubský, Štefan Sums of distinct terms from a fixed sequence. *Nordisk Mat. Tidskr.* 25/26 (1978), no. 3-4, 185-187. (H. Gupta) **81m:10090** 10J15
- Über die Dichtigkeit der Werte multiplikativer Funktionen. (Russian summary) *Math. Slovaca* 29 (1979), no. 1, 69-72. (Aleksandar Ivić) **81a:10066** 10L10 (10H25)
- Porubský, Štefan. N. A. See Nicorovici-Porubský, N. A.
- Pötschke, Reinhard (with Kaluznin, L. A.) \star Funktionen- und Relationenalgebren. (German) [Function and relation algebras] Ein Kapitel der diskreten Mathematik. [A chapter in discrete mathematics] Mathematische Monographien [Mathematical Monographs], 15. VEB Deutscher Verlag der Wissenschaften, Berlin, 1979. 259 pp. (V. V. Gorlov) **81f:03075** 03G20 (94C10)
- \star A general Galois theory for operations and relations and concrete characterization of related algebraic structures. With German and Russian summaries. Report 1980, 1. Akademie der Wissenschaften der DDR, Zentralinstitut für Mathematik und Mechanik, Berlin, 1980. 101 pp. (G. Bruns) **81h:08003** 08A30 (08A35)
- On a conjecture of H. Werner. *Algebra Universalis* 10 (1980), no. 1, 133-134. (Heinrich Werner) **81h:08001** 08A02
- Pötschke, Viktor Marston Morse. (German) *Jbuch. Heidelberger Akad. Wiss.* 1978, 57-58 (1979). (Editors) **81f:01034** 01A70
- Pouder, H. (with Delves, F.-J.) Reduced trivariate Hermite interpolation. *Mathematics of finite elements and applications, III* (Proc. Third MAFAEL Conf., Brunel Univ., Uxbridge, 1978), pp. 77-82, Academic Press, London, 1979. (C. Dagnino) **81g:65009** 65D05
- (with Baszenski, G.; Delves, F.-J.) Boolean methods in bivariate reduced Hermite interpolation. *Multivariate approximation theory* (Proc. Conf., Math. Res. Inst., Oberwolfach, 1979), pp. 11-29, Internat. Ser. Numer. Math., 51, Birkhäuser, Basel, 1979. (R. A. Lorentz) **81g:41002** 41A05 (41A63, 65D05)
- Poischoon, Ju. Ja. (with Vabšičević, P. N.; Degjarčev, L. M.) Numerical solution of direct and inverse problem of MHD-equilibrium with surface current. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 20 (1980), no. 2, 491-500, 552. (Jaroslav Jeleň) **81j:76099** 76W05
- Pöser, Hans Leibniz Parisaufenthalt in seiner Bedeutung für die Monadenlehre. *Leibniz in Paris* (1672-1676) (Sympos. G. W. Leibniz Soc./CNRS, Chantilly, 1976), Vol. II (French), pp. 131-144, Studia Leibnitiana Suppl., XVIII, Steiner, Wiesbaden, 1978. (See **81m:01022b**) 01A45
- See also Symposium: Einstein, 81c:83001
- Pötschke, Andrzej A sufficient condition for the Hamiltonian evolution. *Rep. Math. Phys.* 10 (1976), no. 2, 185-188. (G. D. Allen) **81j:81013** 81C10 (47B10, 47D05, 82A15)
- Extension of quantum dynamical semigroups. *Rep. Math. Phys.* 15 (1979), no. 3, 417-420. (Author's summary) **81a:47041** 47D05 (47D45)
- One property of dynamical semigroups. *Rep. Math. Phys.* 15 (1979), no. 3, 421-422. (Author's summary) **81a:47042** 47D05 (47D45)
- Poult, D. S. (with Tremayne, A. R.) Testing the specification of a fitted autoregressive-moving average model. *Biometrika* 67 (1980), no. 2, 359-363. (L. G. Godfrey) **81j:62185** 62M10
- Pomer, Marc E. (with Wu, Chu Tao) A note on programming problem with maximin objective function. *Opsearch* 15 (1978), no. 2-3, 117-119. (M. Vlach) **81h:90124** 90C25
- Pospelov, D. A. (with Averkin, A. N.; Guida, Giovanni; Somalvico, Marco) Generalized strategies in problem solvers. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* 1979, no. 5, 71-83, 220 (Russian); translated as *Engrg. Cybernetics* 16 (1978), no. 5, 55-63. (Masaharu Mizumoto) **81k:68072** 68G20 (94D05)
- Pospelov, L. G. (with Petrov, A. A.) Systems analysis of developing economies: on the theory of production functions. I. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* 1979, no. 2, 18-27, 220 (Russian); translated as *Engrg. Cybernetics* 17 (1979), no. 2, 10-18 (1980). (Authors' summary) **81h:90023** 90A11
- (with Petrov, A. A.) Systems analysis of developing economies: a systems approach and a single sector model. II. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* 1979, no. 3, 28-38, 219 (Russian); translated as *Engrg. Cybernetics* 17 (1979), no. 3, 21-31 (1980). (Authors' summary) **81h:90022a** 90A16 (90A17)
- (with Petrov, A. A.) Systems analysis of a developing economy: a multisector model and consideration of natural resources. III. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* 1979, no. 4, 11-23, 218 (Russian); translated as *Engrg. Cybernetics* 17 (1979), no. 4, 7-17 (1980). (Authors' summary) **81k:90022b** 90A16 (90A17)
- (with Petrov, A. A.) Systems analysis of a developing economy: allowance for scientific and technological progress. IV. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* 1979, no. 5, 13-24, 219 (Russian); translated as *Engrg. Cybernetics* 17 (1979), no. 5, 7-18 (1980). (Authors' summary) **81k:90022c** 90A16 (90A17)
- Pospíšil, Jaroslav Study of mechanical and electrical oscillations of two coupled harmonical oscillators. (Czech. Russian and English summaries) *Sb. Práci Přírodověd. Fak. Univ. Palackého v Olomouci Fyz.* 18 (1979), 83-165. (J. Švejda) **81f:70017** 70J05 (78A55)
- Post, E. J. Local versus global conservation and Noether's theorem. *Phys. Lett. A* 79 (1980), no. 4, 288-290. (H. Rund) **81m:49048** 49H05 (70H99)
- Post, John F. Infinite regresses of justification and of explanation. *Philos. Stud.* 38 (1980), no. 1, 31-52. (From the introduction) **81f:03029** 03B45 (03A05)
- Post, W. M. (with Travis, C. C.; DeAngelis, D. L.) Infectious disease in a spatially heterogeneous environment. *Differential equations* (Proc. Eighth Fall Conf., Oklahoma State Univ., Stillwater, Okla., 1979), pp. 271-278, Academic Press, New York, 1980. (H. W. Hethcote) **81i:92022** 92A15 (34D99)
- Postaire, Jack G. (with Vasseur, Christian P. A.) A convexity testing method for cluster analysis. *IEEE Trans. Systems Man Cybernet.* 10 (1980), no. 3, 145-149. (Authors' summary) **81h:68112** 68G10
- Posthoff, Christian (with Tichatschke, Rainer) Zu einigen philosophischen Aspekten der mathematischen Durchdringung der Wissenschaften unter besonderer Berücksichtigung der Rolle der Digitaltechnik. *Wiss. Z. Tech. Hochsch. Karl-Marx-Stadt* 21 (1979), no. 7, 941-952. (F. J. Murray) **81f:00007** 00A25
- Postlethwaite, L. (with MacFarlane, A. G. J.) Extended principle of the argument. *Internat. J. Comput. Math.* 27 (1978), no. 1, 49-55. (Authors' summary) **81c:93071** 93D99 (30C15)
- Postrelwate, Andrew (with Kalai, Ehud; Roberts, John) Arbitration of exchange situations with public goods. *Applied game theory* (Proc. Conf., Inst. Adv. Stud., Vienna, 1978), pp. 198-203, IHS—Studies, 1, Physica, Würzburg, 1979. (Authors' summary) **81d:90026** 90A14 (90D40)
- (with Schneider, David) Notes on optimality and feasibility of informationally decentralized allocation mechanisms. *Game theory and related topics* (Proc. Sem., Bonn and Hagen, 1978), pp. 365-382, North-Holland, Amsterdam, 1979. (Edwin Burmeister) **81h:90033** 90A14
- Postnikov, A. G. A new derivation of a formula for the number of classes of binary quadratic forms of a negative discriminant in the function-field case. (Russian) *Algebra, number theory and their applications. Trudy Mat. Inst. Steklov.* 148 (1978), 195-200, 277. (R. W. K. Odoni) **81b:10013** 10C07 (12A90)
- (with Romanov, N. P.) A simplification of A. Selberg's elementary proof of the asymptotic law of distribution of prime numbers. *Twelve papers in logic and algebra*, pp. 75-87, Amer. Math. Soc. Transl., 113, Amer. Math. Soc., Providence, R.I., 1979. (See **80m:00006**) 10H15
- Poston, Tim (with Magnus, Robert) Infinite dimensions and the fold catastrophe. *Structural stability in physics* (Proc. Internat. Symposia Appl. Catastrophe Theory and Topological Concepts in Phys., Inst. Inform. Sci., Univ. Tübingen, Tübingen, 1978), pp. 63-83, Springer Ser. in Synergetics, 4, Springer, Berlin, 1979. (D. R. J. Chillingworth) **81h:58018** 58C28 (47A53, 58E07, 73C50)
- Potapenko, I. F. (with Čujanov, V. A.) Completely conservative difference schemes for a two-dimensional Landau equation. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 20 (1980), no. 2, 513-517, 553. (Nina B. Maslova) **81k:65037** 82A45 (65N05, 76X05)
- Potapenko, P. P. (with Bol'sakov, N. E.) The Ljapunov theorem for systems of equations in total differentials. (Russian) *Differentsial'nye Uravnenija* 16 (1980), no. 5, 934-936, 959. (Ju. V. Kostarčuk) **81k:35020** 35B35
- Potapov, M. A. A modified direct search method. (Russian) *Operations research (models, systems, solutions)*, No. 7 (Russian), pp. 115-120, 3, Akad. Nauk SSSR, Vyčisl. Centr, Moscow, 1979. (Author's summary) **81h:90094** 90C30
- Potapov, M. K. (with Berila, M.) Modul of smoothness and the Fourier coefficients of periodic functions of one variable. (Russian) *Publ. Inst. Math. (Beograd) (N.S.)* 26(40) (1979), 215-228. (S. Aljančić) **81e:42009** 42A16 (42A55)
- Potapov, M. M. Approximation with respect to the function of maximin problems with connected variables. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 19 (1979), no. 3, 610-621, 796. (Boro Döring) **81e:65028** 65K10 (93C99)
- Potapov, S. V. (with Šimel'nen, O. V.) Search algorithms for guaranteeing strategies on the basis of the method of game factorization. (Russian) *Mathematical models of behavior* (Russian), pp. 88-100, 126, Saratov. Gos. Univ., Saratov, 1978. (Authors' summary) **81h:90195** 90D42
- Potapov, V. P. Linear-fractional transformations of matrices. (Russian) *Studies in the theory of operators and their applications* (Russian), pp. 75-97, 177, "Naukova Dumka", Kiev, 1979. (Author's summary) **81f:15023** 15A24 (10D07)
- Potapov, V. S. Convergence of the Born series in the three-particle scattering problem at high energies. (Russian) *English summary* *Theoret. Mat. Fiz.* 43 (1980), no. 1, 65-77. (Gheorghe Nenciu) **81h:81116** 81F10 (35J10)
- Potashnik, V. Ja. (with Zamanskiĭ, L. Ja.; Kononov, V. M.) Study of graphs of intersections of code sets for the synthesis of data transmission circuits. (Russian) *Questions of modeling complex systems* (Russian), pp. 39-47, Akad. Nauk Ukrain. SSR, Inst. Kibernet., Kiev, 1978. (Authors' introduction) **81c:94062** 94C15
- Potra, Florian Alexandru On an iterative method for solving nonlinear equations in ordered Banach spaces. *Anal. Numer. Theor. Approx.* 8 (1979), no. 1, 79-82. (L. B. Rall) **81h:65042** 65J05 (58C15, 65J15)
- On a modified secant method. *Anal. Numer. Theor. Approx.* 8 (1979), no. 2, 203-214. (Marian Fabian) **81h:65057** 65J05 (58C15)
- (with Plák, Vlastimil) On a class of modified Newton processes. *Numer. Funct. Anal. Optim.* 2 (1980), no. 1, 107-120. (Marian Fabian) **81h:65096** 65J15 (58C15)
- (with Plák, Vlastimil) Sharp error bounds for Newton's process. *Numer. Math.* 34 (1980), no. 1, 63-72. (Marian Fabian) **81c:65027** 65J05 (58C15, 65H10)
- Pötschke, K. Schwache Auftriebskräfte in laminaren, vertikalen, runden Freistrahlen. (English summary) *Acta Mech.* 36 (1980), no. 1-2, 1-14. (G. Paria) **81e:76008** 76B10 (76D05, 76R10)
- Pötschke, Dieter Über die mittlere Länge und die Anzahl optimaler regulärer Suchcodes.

- Rostock. *Math. Kolloq.* No. 12 (1979), 113-120. (From the text) **81g:94037** 94B25
- Potseluyev, A. V. See Pochuev, A. V.
- Potter, Janet M. (with Riley, N.) Free convection from a heated sphere at large Grashof number. *J. Fluid Mech.* **100** (1980), no. 4, 769-783. (Authors' summary) **81k:76062** 76R10
- Potter, John M. (with Anderson, Brian D. O.) Partial prior information and decision-making. *IEEE Trans. Systems Man Cybernet.* **10** (1980), no. 3, 125-133. (Authors' summary) **81g:62012** 62C10 (90C40, 93E03)
- Potter, Randall W. (with Srivastava, R. C.) Statistical inference for the Galton-Watson branching process. *Optimizing methods in statistics (Proc. Internat. Conf., Indian Inst. Tech., Bombay, 1977)*, pp. 461-473, Academic Press, New York, 1979. (Niels Keiding) **81g:62148** 62M05 (60J80, 62M02)
- Pottinger, Garrel On analyzing relevance constructively. *Studia Logica* **38** (1979), no. 2, 171-185. (Stephen Read) **81k:03025** 03B45
- Potts, C. N. An adaptive branching rule for the permutation flow-shop problem. *European J. Oper. Res.* **5** (1980), no. 1, 19-25. (Author's summary) **81e:90052** 90B35
- An algorithm for the single machine sequencing problem with precedence constraints. *Combinatorial optimization, II (Proc. Conf., Univ. East Anglia, Norwich, 1979)*, *Math. Programming Stud.* No. 13 (1980), 78-87. (Author's summary) **81m:90062** 90B35
- Poucher, W. B. (with Andersen, L. D.; Häggkvist, R.; Hilton, A. J. W.) Embedding incomplete Latin squares in Latin squares whose diagonal is almost completely prescribed. *European J. Combin.* **1** (1980), no. 1, 5-7. (Charles C. Lindner) **81i:05033** 05B15
- Pouget, J. (with Chandon, J. L.; Lemaire, J.) Construction de l'ultramétrie la plus proche d'une dissimilarité au sens des moindres carrés. (English summary) *RAIRO Rech. Opér.* **14** (1980), no. 2, 157-170. (M. Knott) **81k:62104** 62H30 (92A25)
- Poularikas, Alexander D. (with Seely, Samuel) ★Electromagnetics. Classical and modern theory and applications. *Engineering and Electronics, R. Marcel Dekker, Inc., New York-Basel, 1979*. xii + 790 pp. ISBN 0-8247-6820-5 (L. G. Chambers) **81i:78002** 78-01
- Poulizcos, A. An iterative method for calculating the sample serial correlation coefficient. *IEEE Trans. Automat. Control* **25** (1980), no. 4, 834-836. (Author's summary) **81g:93099** 93E03 (93E11)
- Pound, A. (with Barrett, A. J.) Self-avoiding lattice walks with high coordination and small excluded volume. *J. Phys. A* **13** (1980), no. 5, 1811-1823. (C. A. Hurst) **81g:82069** 82A67 (82A70)
- Pounder, J. R. (with Meir, A.; Moon, J. W.) On the order of random channel networks. *SIAM J. Algebraic Discrete Methods* **1** (1980), no. 1, 25-33. (A. K. Dewdney) **81k:05042a** 05C05
- (with Meir, A.; Moon, J. W.) Acknowledgment of priority: "On the order of random channel networks". *SIAM J. Algebraic Discrete Methods* **1** (1980), no. 4, 462. (Editors) **81k:05042b** 05C05
- Pourcin, Geneviève Fibres holomorphes dont la base et la fibre sont des espaces de Stein. *Séminaire Bourbaki, 30e année (1977/78)*, *Exp. No. 517*, pp. 206-220, *Lecture Notes in Math.*, **710**, Springer, Berlin, 1979. (Gerd Fischer) **81d:32028** 32E10
- Pour-El, Marian Boykan Computer science and recursion theory. *ACM 78 (Proc. Annual Conf., Assoc. Comput. Mach., Washington, D.C., 1978)*, pp. 15-20, ACM, New York, 1978. (From the introduction) **81d:68003** 68-03 (01A65, 03D80)
- (with Richards, Ian) A computable ordinary differential equation which possesses no computable solution. *Ann. Math. Logic* **17** (1979), no. 1-2, 61-90. (From the introduction) **81k:03064** 03F60 (34A99)
- Pousse, Alain (with Arconte, Alain; Dauxois, Jacques) Utilisation de propriétés de convergence pour l'approximation d'analyses factorielles. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **286** (1978), no. 9, A423-A425. (Authors' summary) **81e:62067** 62H25 (92A25)
- (with Arconte, Alain; Dauxois, Jacques; Romain, Yves) Étude asymptotique de l'analyse en composantes principales linéaire d'une fonction aléatoire à valeurs dans un espace de Hilbert. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **291** (1980), no. 4, A319-A322. (Authors' summary) **81j:62110** 62H25
- Poussin, F. Énumération des permutations par nombre de marches. (English summary) *RAIRO Inform. Théor.* **13** (1979), no. 3, 251-255. (F. T. Howard) **81g:05015** 05A15
- Pozet, J. Estimation of a surface with known discontinuities for automatic contouring purposes. *J. Internat. Assoc. Math. Geol.* **12** (1980), no. 6, 559-575. (Author's summary) **81m:65022** 65D10 (86A99)
- Pozet, Maurice Chaînes de théories universelles. *Fund. Math.* **103** (1979), no. 2, 133-149. (Author's summary) **81j:03025** 03B10
- Note sur le problème de Ulam. *J. Combin. Theory Ser. B* **27** (1979), no. 3, 231-236. (F. Harary) **81g:05004** 05C60
- Relation minimale pour son âge. *Z. Math. Logik Grundlag. Math.* **25** (1979), no. 4, 315-344. (N. H. Williams) **81a:04001** 04A05
- (with Charretton, Christine) Les chaînes dans les modèles d'Ehrenfeucht-Mostowski. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **290** (1980), no. 16, A715-A717. (Authors' summary) **81d:03034** 03C50
- Povelchik, A. V. (with Koldoba, A. V.; Popov, Ju. P.) Numerical modeling of the dynamics of heating and dispersion of matter in absorption of a high-current relativistic electron beam. (Russian) *Differentsial'nye Uravneniya* **16** (1980), no. 7, 1235-1244, 1350. (Authors' summary) **81g:76111** 76W05 (78A35)
- Povolockii, A. I. (with Gango, E. A.) Existence of periodic solutions of differential equations with multi-valued right-hand side. (Russian) *Mathematical analysis and the theory of functions*, No. 8 (Russian), pp. 106-113, *Moskov. Oblast. Ped. Inst., Moscow*, 1977. (See **81c:32001**) 34C25
- (with Zabreiko, P. P.) The Hammerstein operator and Orlicz spaces. (Russian) *Qualitative and approximate methods for the investigation of operator equations*, No. 2 (Russian), pp. 39-51, *Yaroslavl. Gos. Univ., Yaroslavl*, 1977. (J. Kolomý) **81c:47067** 47H15 (45P05, 46E30)
- Povstenko, Ju. Z. Dependence of surface stresses in solids on the curvature of the surface. (Russian) *Mat. Metody i Fiz.-Meh. Polja* No. 11 (1980), 81-85, 122. (Author's summary) **81g:73098** 73L99
- Powersynski, Roland (with Spiegel, Hartmut) Über zwei besondere Eigenschaften von Dreiecksflächennetzen. *Elem. Math.* **34** (1979), no. 6, 140-146. (B. Artmann) **81b:52008** 52A25
- Powgala, Zbigniew Über stetige Lösungen der Funktionalgleichung $\varphi(x+y) = F(\varphi(x), \varphi(y))$. *Wyż. Szkoła Ped. Krakow. Rocznik Nauk.-Dydakt. Prace Mat.* **9** (1979), 137-146. (J. Aczél) **81c:39008** 39B20 (22A25)
- Powder, Charles On the asymptotic behavior of a fundamental set of solutions. *Trans. Amer. Math. Soc.* **255** (1979), 91-110. (J. Nikolaus) **81d:34006** 34A20 (34E05)
- Powderly, M. On insertion of a continuous function. *Proc. Amer. Math. Soc.* **81** (1981), no. 1, 119-120. (Ernest P. Lane) **81i:54009** 54C30 (54C05)
- Powell, Barry J. Primitive densities of certain sets of primes. *J. Number Theory* **12** (1980), no. 2, 210-217. (R. W. K. Odoni) **81k:10093** 10L99 (10A25)
- Powell, M. J. D. Algorithms for nonlinear constraints that use Lagrangian functions. *Survey of mathematical programming (Proc. Ninth Internat. Math. Programming Sympos., Budapest, 1976)*, Vol. 1, pp. 513-537, North-Holland, Amsterdam, 1979. (M. Yamasaki) **81j:90107** 90C30
- Variable metric methods for constrained optimization. *Nonlinear optimization (Proc. Internat. Summer School, Univ. Bergamo, Bergamo, 1979)*, pp. 279-294, Birkhäuser, Boston, Mass., 1980. (Auréli Galántai) **81m:65107** 65K10 (49D30)
- Optimization algorithms in 1979. *Optimization techniques (Proc. Ninth IFIP Conf., Warsaw, 1979)*, Part 1, pp. 83-98, *Lecture Notes in Control and Information Sci.*, **22**, Springer, Berlin, 1980. (See **81j:49001a**) 65K05
- Power, E. A. (with Thirunamachandran, T.) A canonical transformation in neoclassical radiation theory. *Foundations of radiation theory and quantum electrodynamics*, pp. 65-81, Plenum, New York, 1980. (See **81i:81002**) 78A40
- (with Thirunamachandran, T.) The multipolar Hamiltonian in radiation theory. *Proc. Roy. Soc. London Ser. A* **372** (1980), no. 1749, 265-273. (Authors' summary) **81b:81196** 81K05
- Power, Henry M. The Lotka-Volterra equations. Conclusions from a coordinate transformation. *Internat. J. Control* **30** (1979), no. 4, 669-672. (T. G. Hallam) **81f:92033** 92A17 (34C05, 58F40)
- Power, S. C. Simplicity of C^* -algebras of minimal dynamical systems. *J. London Math. Soc.* (2) **18** (1978), no. 3, 534-538. (Dorje Olesen) **81e:46057** 46L55 (28D05)
- The distance to upper triangular operators. *Math. Proc. Cambridge Philos. Soc.* **88** (1980), no. 2, 327-329. (Peter Lancaster) **81i:47022** 47A66 (47A55)
- Hankel operators with PQC symbols and singular integral operators. *Proc. London Math. Soc.* (3) **41** (1980), no. 1, 45-65. (D. Sarason) **81k:47039** 47B35
- Powers, David L. (with Lovass-Nagy, Victor) On the application of matrix generalized inverses to the determination of unknown inputs of linear control systems. *Information linkage between applied mathematics and industry, II (Proc. Second Annual Workshop, Monterey, Calif., 1979)*, pp. 215-220, Academic Press, New York, 1980. (See **81j:93004**) 93C05
- (with Lovass-Nagy, Victor) Determination of zeros and zero directions of linear time-invariant systems by matrix generalized inverses. *Internat. J. Control* **31** (1980), no. 6, 1161-1170. (Authors' summary) **81d:93042** 93C45
- Powers, Robert T. Resistance inequalities for the isotropic Heisenberg model. *Algebra d'opérateurs et leurs applications en physique mathématique (Proc. Colloq., Marseille, 1977)*, pp. 291-299, *Colloques Internat. CNRS*, **274**, CNRS, Paris, 1979. (W.-H. Steeb) **81d:82009** 82A05 (82A25)
- Pozdjaković, E. V. (with Kononiyin, G. A.) A study of the stability of inertial motion of two axially symmetric bodies. (Russian) *Meh. Teor. Tela* No. 12 (1980), 63-67, 119. (Authors' summary) **81f:70006** 70E15
- Assunta Pozio, M. See Assunta Pozio, M.
- Poznjak, A. S. (with Kel'mans, G. K.; Ljubčik, L. M.) Adaptive control of closed priority queueing systems. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* **1978**, no. 4, 81-93 (Russian); translated as *Engrg. Cybernetics* **16** (1978), no. 4, 58-70 (1979). (Authors' summary) **81f:90050** 90B22 (68C15)
- Convergence of stochastic approximation algorithms in parameter identification of dynamic plants. *Automat. i Telemekh.* **1979**, no. 8, 186-190 (Russian); translated as *Automat. Remote Control* **40** (1979), no. 8, part 2, 1254-1258 (1980). (Author's summary) **81a:93093** 93E10 (93E12)
- Estimating the parameters of autoregression processes by the method of least squares. *Internat. J. Systems Sci.* **11** (1980), no. 5, 577-588. (Marc Hallin) **81i:62173** 62M10
- Jimenez Pozo, Miguel A. See Jimenez Pozo, Miguel A.
- Pozosky, R. I. See Berman, G. N., **81j:26001**
- Pozmentov, I. E. Statistical characterization of adaptive antenna systems that maximize signal-to-noise ratio. *Izv. Vysš. Učebn. Zaved. Radiofizika* **23** (1980), no. 1, 56-60 (Russian). English summary; translated as *Radiophys. and Quantum Electronics* **23** (1980), no. 1, 45-48. (Author's summary) **81f:93083** 93E20
- Pozoli, R. (with Lontano, M.) Ponderomotive effects and modulational instability in a magnetoactive plasma. (Italian and Russian summaries) *Nuovo Cimento B* (11) **58** (1980), no. 1, 45-63. (Authors' summary) **81g:76126** 76X05
- Prabhakar, J. (with Mathews, P. M.; Govindarajan, T. R.; Seetharaman, M.) Relativistic wave equations coupled to external fields: an algebraic study of the problem of constraints. *J. Math. Phys.* **21** (1980), no. 6, 1495-1505. (Jean Nuyts) **81j:81061** 81G10 (81D25)
- Prabhakar, T. R. (with Reva) An Appell cross-sequence suggested by the Bernoulli and Euler polynomials of general order. *Indian J. Pure Appl. Math.* **10** (1979), no. 10, 1216-1227. (L. Carlitz) **81e:10018** 10A40 (05A15, 33A70)
- (with Kashyap, N. K.) A new class of hypergeometric integral equations. *Indian J. Pure Appl. Math.* **11** (1980), no. 1, 92-97. (A. G. Gibbs) **81b:45010** 45H05
- (with Kashyap, N. K.) A biorthogonal pair of polynomial sets suggested by a class of Jacobi polynomials. *Indian J. Pure Appl. Math.* **11** (1980), no. 9, 1147-1154. (J. P. Singhal) **81j:33011** 33A65
- (with Gupta, Sharda) Bernoulli polynomials of the second kind and general order. *Indian J. Pure Appl. Math.* **11** (1980), no. 10, 1361-1368. (Anton Hut'a) **81m:05011** 05A15 (39A70, 41A10)
- Prabhakara Rao, G. V. (with Jamal, N. G.; Kamala, V.; Nigam, S. D.) Complementary variational principles for Poiseuille flow. *J. Math. Phys. Sci.* **13** (1979), no. 5, 469-478. (Peter Smith) **81f:76015** 76D05 (49H05)

- Prabhu, Bhaskaram** (with Sethi, Ravi) Efficient computation of expressions with common subexpressions. *J. Assoc. Comput. Mach.* 27 (1980), no. 1, 146–163. (Authors' summary) 81a:68092 68F25
- Prabhu, R. A.** (with Bhonsle, B. R.) An inversion formula for a distributional finite-Hankel-Laplace transformation. *Pacific J. Math.* 80 (1979), no. 2, 313–324. (Hans-Jürgen Glaeske) 81d:44003 44A15 (46F12)
- Prabhu, S. S.** (with Gomathi, K.; Pai, M. A.) A suboptimal controller for minimum sensitivity of closed loop eigenvalues to parameter variations. *IEEE Trans. Automat. Control* 25 (1980), no. 3, 587–588. (Authors' summary) 81g:93072 93C45 (93C35)
- Prachar, Karl** ★Primzahlverteilung. (German) [The distribution of primes] Reprint of the 1957 original. *Grundlehren der Mathematischen Wissenschaften [Fundamental Principles of Mathematical Sciences]*, 91. Springer-Verlag, Berlin-New York, 1978. x+421 pp. ISBN 3-540-08558-0 (Editors) 81k:10060 10Hxx (10-02)
- Prada Blanco, J.** A generalisation of certain results of G. Jameson. *Kyungpook Math. J.* 19 (1979), no. 2, 175–181. (G. J. O. Jameson) 81a:46015 46A99
- On nuclear sequence spaces. *Math. Japon.* 25 (1980), no. 1, 125–129. (Christian Fenske) 81f:46006 46A12 (46A45)
- Prade, Henri M.** (with Dubois, Didier) Outline of fuzzy set theory. *Advances in fuzzy set theory and applications*, pp. 27–48, North-Holland, Amsterdam, 1979. (Koroljan Gilezan) 81a:03052 03E72
- (with Dubois, Didier) Decision-making under fuzziness. *Advances in fuzzy set theory and applications*, pp. 279–302, North-Holland, Amsterdam, 1979. (V. D. Dimitrov) 81f:90003 90A05 (03E72, 90D35)
- (with Baldwin, J. F.; Guild, N. C. F.) Comments on the "fuzzy max" operator of Dubois and Prade. *Internat. J. Systems Sci.* 10 (1979), no. 9, 1063–1064. (Jiri Šustál) 81h:03103 03E72 (90A05)
- (with Dubois, Didier) New results about properties and semantics of fuzzy set-theoretic operators. *Fuzzy sets (Proc. Sympos. Policy Anal. Inform. Systems, Duke Univ., Durham, N.C., 1980)*, pp. 59–75, Plenum, New York, 1980. (Siegfried Gottwald) 81m:03063 03E72
- Nomenclature of fuzzy measures. *Proceedings of the International Seminar on Fuzzy Set Theory (Inst. Math., Johannes Kepler Univ., Linz, 1979)*, pp. 7–25, Johannes Kepler Univ., Linz, 1980. (See 81m:03067) 03E72 (28A12, 94D05)
- (with Dubois, Didier) Systems of linear fuzzy constraints. *Fuzzy Sets and Systems* 3 (1980), no. 1, 37–48. (A. K. Viatkin) 81f:90125 90C05 (03E72)
- de la Pradelle, Arnaud** (with Feyel, Denis) ★Exercices sur les fonctions analytiques. (French) [Exercises on analytic functions] *Librairie Armand Colin, Paris*, 1973. no paging available. (R. B. Burckel) 81m:30001 30-02 (30-01)
- Cônes de potentiels dans des espaces de Banach adaptés et dualité. *Séminaire de Théorie du Potentiel*, No. 3 (Paris, 1976/1977), pp. 215–233, *Lecture Notes in Math.*, 681, Springer, Berlin, 1978. (Thomas E. Armstrong) 81h:31023 31D05
- (with Feyel, Denis) Représentations d'espaces de Riesz-Banach sur des espaces quasi-topologiques. *Acad. Roy. Belg. Bull. Cl. Sci. (5)* 64 (1978), no. 6, 340–350. (Thomas E. Armstrong) 81h:31020 31D05
- (with Feyel, Denis) Produits tensoriels d'espaces de Banach adaptés. Applications à la fonction de Green. *Séminaire de Théorie du Potentiel*, No. 4 (Paris, 1977/1978), pp. 56–66, *Lecture Notes in Math.*, 713, Springer, Berlin, 1979. (Thomas E. Armstrong) 81h:31019 31D05
- Pradhan, Dhruj K.** (with Hsiao, M. Y.; Patel, A. M.; Su, Stephen Y. H.) Shift registers designed for on-line fault detection. *FTCS-8 (Eighth Ann. Internat. Conf. Fault-Tolerant Comput., Toulouse, 1978)*, pp. 173–178, IEEE, New York, 1978. (Authors' summary) 81c:94052 94C30
- A theory of Galois switching functions. *IEEE Trans. Comput.* 27 (1978), no. 3, 239–248. (Author's summary) 81c:94042 94C10
- Asynchronous state assignments with unateness properties and fault-secure design. *IEEE Trans. Comput.* 27 (1978), no. 5, 396–404. (Author's summary) 81c:68072 68D50 (94C30)
- A new class of error-correcting/detecting codes for fault-tolerant computer applications. *IEEE Trans. Comput.* 29 (1980), no. 6, 471–481. (Author's summary) 81c:94019 94A24 (68A05, 94C05)
- (with Kodandapani, Kolar L.) A uniform representation of single- and multistage interconnection networks used in SIMD machines. *IEEE Trans. Comput.* 29 (1980), no. 9, 777–791. (Authors' summary) 81g:94061 94C10
- Pradhan, K. M.** The generalized Bessel transform. *Jñānabha* 7 (1977), 13–16. (B. S. Tavathia) 81f:44010 44A15
- Certain double integral transformations of generalized hypergeometric polynomials. (Hindi. English summary) *Vijnana Parishad Anusandhan Patrika* 22 (1979), no. 4, 311–317. (C. M. Joshi) 81c:44006 44A30 (33A35)
- Pradhan, Meena** (with Sathe, Y. S.; Shah, S. P.) Inequalities for the probability of the occurrence of at least m out of n events. *J. Appl. Probab.* 17 (1980), no. 4, 1127–1132. (J. Galambos) 81f:60015 60C05 (60E15, 60G30)
- Pradhan, Promod Sagar Singh** On the source and sink flow past a porous spherical shell. *Nepali Math. Sci. Rep.* 3 (1978), no. 1, 28–35. (Author's summary) 81c:76027 76D05 (76S05)
- Pradhan, T.** (with Jena, P. K.; Naik, P. C.) Photon as the zero-mass limit of DKP field. *J. Phys. A* 13 (1980), no. 9, 2975–2978. (Authors' summary) 81f:81120 81G99 (81D25, 81E10)
- Prager, Cheryl E.** (with Saxl, Jan) On fixed points in paired suborbits. *Arch. Math. (Basel)* 33 (1979/80), no. 4, 325. (Editors) 81f:20002 20B05
- On elements of prime order in primitive permutation groups. *J. Algebra* 60 (1979), no. 1, 126–157. (Peter Rowlinson) 81a:20008 20B15
- (with Saxl, Jan) On the orders of primitive permutation groups. *Bull. London Math. Soc.* 12 (1980), no. 4, 303–307. (Peter Rowlinson) 81g:20003 20B20
- (with Henstridge, J. D.) Note on primitive permutation groups and a Diophantine equation. *Discrete Math.* 31 (1980), no. 2, 181–183. (Author's review (C.E.P.)) 81k:20003 20B15 (10B05, 10B35)
- Pragacz, Piotr** (with Józefiak, Tadeusz) Ideals generated by Pfaffians. *J. Algebra* 61 (1979), no. 1, 189–198. (E. Graham Evans, Jr.) 81c:13005 13D25 (14M12)
- Prager, D. L.** (with Wellstead, P. E.) Interactive maximum likelihood estimation. *Internat. J. Control* 32 (1980), no. 6, 1005–1030. (Authors' summary) 81k:93066 93E10
- Präger, Milan** Universally optimal approximation of functionals. (Czech and Russian summaries) *Appl. Mat.* 24 (1979), no. 6, 406–420. (David W. Kammler) 81c:41068 41A55 (41A30, 65D15)
- Pras, R.** See Price, Richard H.
- Prasanna, M. L.** (with Joshi, C. M.) A triple integral transformation and certain hypergeometric expansions. *Proc. Nat. Acad. Sci. India Sect. A* 47 (1977), no. 2, 95–101. (J. P. Singhal) 81a:33002 33A30 (44A30)
- Prasanna, M. L.** (with Sen, Kanwar) Joint distribution of crossings and their runs. *Metron* 35 (1977), no. 1–2, 181–188. (Authors' summary) 81m:60134 60J15 (62G10)
- Two-species systems in random environment. *Austral. J. Statist.* 20 (1978), no. 3, 275–281. (A. C. Trajstman) 81h:60082 60H10 (92A15)
- Diffusion approximations for models of population growth with logarithmic interactions. *Stochastic Process. Appl.* 10 (1980), no. 1, 87–99. (R. L. Tweedie) 81j:60091 60J70 (92A15)
- Prasanna Rao, B. L. S.** On a property of generalized random fields. *Studia Sci. Math. Hungar.* 11 (1976), no. 3–4, 277–282. (C. L. Scheffer) 81c:60042 60G20
- The equivalence between (modified) Bayes estimator and maximum likelihood estimator for Markov processes. *Ann. Inst. Statist. Math.* 31 (1979), no. 3, 499–513. (I. M. Stojanov) 81h:62148 62M05 (62F10)
- On central limit theorems, invariance principle and rates of convergence for backwards martingale arrays. (Lithuanian and Russian summaries) *Litovsk. Mat. Sb.* 19 (1979), no. 4, 153–165, 212. (David J. Scott) 81d:60033 60F05 (60F17, 60G42)
- Nonparametric estimation for continuous time Markov processes via delta-families. *Publ. Inst. Statist. Univ. Paris* 24 (1979), no. 3–4, 79–97. (G. Banon) 81h:62078 62G05 (62M05, 93E10)
- (with Basawa, Ishwar V.) Asymptotic inference for stochastic processes. *Stochastic Process. Appl.* 10 (1980), no. 3, 221–254. (Hung Trung Nguyen) 81c:62123 62M07
- Prakash, B. G.** Flexure of elastically supported and elastically restrained rectangular plates. *Mech. Res. Comm.* 7 (1980), no. 2, 99–102. (From the introduction) 81c:73057 73K10
- Prakash, H.** (with Bhatnagar, G. S.) Steady pulse propagation in an inhomogeneously broadened resonant medium. *Phys. Lett. A* 70 (1979), no. 5–6, 399–400. (Authors' summary) 81h:81197 81K05
- Prakash, J. S.** (with Ranganathan, N. R.) Two algorithms for symmetric groups. *J. Phys. A* 13 (1980), no. 8, 2653–2658. (Authors' summary) 81f:20003 20B07
- Prakash, Nirmla** Sectional curvatures of arbitrary order and isometry in complex manifolds. *Hyperbolic complex analysis (Proc. All India Sem., Ramanujan Inst., Univ. Madras, Madras, 1977)*, pp. 194–204, *Publ. Ramanujan Inst., Univ. Madras, Madras*, 1979. (Shūkichi Tanno) 81h:53043 53C55
- Prakash, S.** A plane symmetric universe. *Indian J. Pure Appl. Math.* 11 (1980), no. 7, 931–934. (Sotirios Persides) 81f:83041 83F05 (53B50)
- (with Roy, S. R.) An inhomogeneous magnetohydrostatic universe. *J. Phys. A* 13 (1980), no. 12, 3773–3777. (Authors' summary) 81m:83048 83F05
- Prakash, Surekha** (with Griffiths, William E.; Drynan, Ross G.) Bayesian estimation of a random coefficient model. *J. Econometrics* 10 (1979), no. 2, 201–220. (Authors' summary) 81h:62120 62P20
- Prakash, Ved** On the absolute summability of a series related to Fourier series. *Jñānabha* 7 (1977), 125–131. (Prem Chandra) 81f:42008 42A28 (40D15, 40G05)
- (with Soni, S. L.) On some results involving a generalized function of two variables. *I. Math. Ed. (Siwan)* 13 (1979), no. 4, A53–A64. (R. Kesarwani) 81h:33003 33A30
- Pranevicius, Henrikas** (with Rimidis, Al'fredas) Application of the Bayesian approach in statistical estimation of the results of modeling non-steady-state systems. (Russian. Lithuanian and English summaries) *Statist. Problemy Upravlenija—Trudy Sem. Protsessy Optimal. Upravlenija V Sekcija No. 41* (1979), 75–96, 101. (Authors' summary) 81h:93104 93E10
- Prank, R.** Expressibility in the elementary theory of recursive sets with realizability logic. (Russian. English summary) *Tartu Riikl. Üli. Toimetised No. 500 Trudy Mat. i Meh.* no. 25 (1979), 119–129. (S. A. Berezin) 81a:03043 03D20
- Semantics of realizability for a language with variables for recursively enumerable sets. (Russian) *Trudy Vysht. Centra Tartu. Gos. Univ.* no. 43 (1980), 112–131. (G. N. Kobzev) 81h:03111 03F35
- Prasad, B. N.** On a transformation associated with sets of n fundamental forms of Minkowskian hypersurfaces. *Indian J. Pure Appl. Math.* 10 (1979), no. 9, 1068–1075. (M. S. Al-Borney) 81h:53028 53B40
- Prasad, C. M.** (with Srivastava, R. K.) On special congruences of a Finster space. *Ann. Mat. Pura Appl. (4)* 119 (1979), 195–203. (B. B. Sinha) 81a:53030 53B40
- Prasad, G.** (with Mittal, M. L.) On absolute matrix summability of a sequence of Fourier coefficients. *An. Univ. Timişoara Ser. Ştiinţ. Mat.* 16 (1978), no. 1, 69–75 (1979). (N. Kishore) 81d:42013 42A28 (40C05)
- Prasad, Gopal** Lattices in semisimple groups over local fields. *Studies in algebra and number theory*, pp. 285–356, *Advances in Math., Suppl. Studies, 6*, Academic Press, New York, 1979. (G. A. Soffer) 81g:22014 22E40 (20C99)
- Prasad, Gurnaj** On the geometry of relativistic magnetofluid flows. *Gen. Relativity Gravitation* 11 (1979), no. 3, 177–188. (A. H. Klotz) 81g:83037 83C50 (53A55, 83C55)
- On relativistic electromagnetic fluid flows. *Internat. J. Theoret. Phys.* 18 (1979), no. 5, 329–343. (B. K. Datta) 81g:83040 83C55 (76Y05)
- (with Sinha, B. B.) Relativistic magnetofluids and spacelike conformal mapping. *Ann. Inst. H. Poincaré Sect. A (N.S.)* 32 (1980), no. 1, 15–20. (Gérard A. Maugin) 81c:76094 76Y05 (76W05)
- (with Singh, Gulab) Relativistic electromagnetic fluids and time-like FCRC mappings. *I. Indian J. Pure Appl. Math.* 11 (1980), no. 8, 1064–1071. (Ilija Lukačević) 81h:83028 83C55
- Prasad, Jagdish** On the rate of convergence of interpolation polynomials of Hermite-Fejér type. *Bull. Austral. Math. Soc.* 19 (1978), no. 1, 29–37. (Werner Haussmann) 81a:41015 41A10 (41A05)
- (with Bojanic, R.; Saxena, R. B.) An upper bound for the rate of convergence of the Hermite-Fejér process on the extended Chebyshev nodes of the second kind. *J. Approx. Theory* 26 (1979), no. 3, 195–203. (Martin Bartel) 81c:41032 41A25
- (with Varma, A. K.) A contribution to the problem of L. Fejér on Hermite-Fejér

- interpolation. *J. Approx. Theory* 28 (1980), no. 3, 185–196. (P. Vértési) **81i:41005** 41A05 (41A10)
- Prasad, Kamalya** On the strong matrix summability of ultraspherical series. *Indian J. Pure Appl. Math.* 11 (1980), no. 9, 1170–1175. (Sarjoo Prasad Yadav) **81i:42011** 42A28 (33A45)
- Prasad, L. S. R. K.** (with Bharathi, K.) $6j$ symbols and $3jm$ factors for the group chain $D_{4h} \supset D_{2h} \supset C_{4v}$. *J. Phys. A* 13 (1980), no. 3, 781–788. (R. Delbourgo) **81i:20015** 20C35 (81G40)
- (with Krishnamurthy, T. S. G.; Rama Mohana Rao, K.) Quasisymmetry and double point groups. *J. Phys. A* 13 (1980), no. 6, 1947–1956. (Authors' summary) **81i:62056** 82A60 (20C35, 81C40)
- Prasad, Phoolan** (with Ravindran, Renuka) On signal propagation velocity and phase velocity. *Proceedings of the Conference on Mathematical Methods in Physics (Mysore, 1978), Part B*, pp. 52–59, *Matscience Rep.*, 96, Inst. Math. Sci., Madras, 1979. (Authors' summary) **81i:76011** 76B15
- Group velocity. *J. Math. Phys. Sci.* 14 (1980), no. 1, 71–83. (Author's summary) **81i:76013** 76B15
- See also Krishnam, E. V., **81i:35032**
- Prasad, Rajendra** (with Saxena, Ashok) On the uniform Nörlund summability of the conjugate series of the Fourier series. *Ann. Fac. Sci. Univ. Nat. Zaire (Kinshasa) Sect. Math.-Phys.* 4 (1978), no. 2, 235–246 (1979). (Shri Nivas Bhatt) **81j:42014** 42A24 (42A50)
- Prasad, S. N.** (with Thakur, P. J.) Two-dimensional universal motions of Navier-Stokes fluids. *Math. Ed. (Siwan)* 14 (1980), no. 1, A1–A7. (P. D. S. Verma) **81j:76025** 76D05 (35Q10, 76C05)
- Prasad, Shankar** On almost contingent submanifolds. *Ann. Fac. Sci. Univ. Nat. Zaire (Kinshasa) Sect. Math.-Phys.* 4 (1978), no. 2, 187–204 (1979). (V. C. Gupta) **81i:53038** 53C15 (53C40)
- Prasad, Tribhuvan** (with Beatty, Denis C.) Modeling of cellular membrane characteristics using stochastic approximation techniques. *Proceedings of the First International Conference on Mathematical Modeling (St. Louis, Mo., 1977), Vol. II*, pp. 987–995, *Univ. Missouri-Rolla, Rolla, Mo.*, 1977. (Authors' summary) **81j:92004** 92A05
- Modeling in biosystems: some current trends. *Proceedings of the Second International Conference on Mathematical Modelling (St. Louis, Mo., 1979), Vol. I, II*, pp. 83–95, *Univ. Missouri-Rolla, Rolla, Mo.*, 1980. (Author's summary) **81i:92004** 92A05 (92A07)
- (with Hladik-Obe, O.) The separation hypothesis and quasilinearization approach to continuous nonlinear stochastic controls. *Appl. Math. Modelling* 4 (1980), no. 2, 133–135. (Authors' introduction) **81i:93110** 93E20
- Prasad, V. C.** (with Gaur, P. B. L.) Sufficient conditions for global homeomorphism of piecewise linear functions. *Electron. Lett.* 16 (1980), no. 9, 335–337. (W.-K. Chen) **81j:54039** 94C05 (58C15, 90C30)
- Prasad, Y. N.** (with Singh, S. N.) On a generalized multiple transform and its basic properties. *Bull. Calcutta Math. Soc.* 70 (1978), no. 4, 253–259. (S. D. Bajpai) **81i:44003** 44A30
- (with Singh, Awadhesh K.) Finite integration of certain products associated with the H -function of two variables. *Indian J. Pure Appl. Math.* 10 (1979), no. 12, 1497–1503. (Ram Kishore Saxena) **81i:33010** 33A35
- (with Maurya, R. P.) Some finite integrals and Fourier sine series for the H -function of several complex variables. (Turkish summary) *İstanbul Tek. Üniv. Bil. 32* (1979), no. 1, 65–71. (P. Anandani) **81i:33005** 33A30 (33A35)
- (with Singh, Awadhesh K.) A new generalized function of r variables as kernel of integral transforms. (Turkish summary) *İstanbul Tek. Üniv. Bil. 32* (1979), no. 2, 72–89. (C. L. Koul) **81i:33006** 33A35 (44A20)
- (with Maurya, R. P.) Some theorems on a multidimensional integral transformation. *Pure Appl. Math. Sci.* 11 (1980), no. 1–2, 55–60. (S. D. Bajpai) **81g:44006** 44A20
- (with Singh, Awadhesh Kumar) Integrals with respect to parameter involving a new H -function of r complex variables. (Hindi. English summary) *Vijnana Parishad Anusandhan Patrika* 23 (1980), no. 1, 69–75. (R. K. Saxena) **81i:33004** 33A35
- Prasada Rao, D. R. V.** (with Krishna, D. V.) Hemisphere in a mhd rotating stratified fluid. *J. Math. Phys. Sci.* 14 (1980), no. 2, 153–160. (Authors' summary) **81i:76050** 76W05
- (with Krishna, D. V.) Hemisphere in a MHD rotating stratified fluid. *Rev. Roumaine Sci. Tech. Sér. Méc. Appl.* 25 (1980), no. 2, 199–205. (Authors' summary) **81i:76106** 76W05
- Prasanna, Shanti** (with Sheth, I. H.) A remark on a paper: "On a class of normaloid operators" [Math. Z. 124 (1972), 199–202; MR 45 #944] by V. I. Istrăţescu. *Indian J. Pure Appl. Math.* 11 (1980), no. 2, 212–214. (Authors' summary) **81i:47034** 47B20
- Priestaro, Agostino** Geometrodynamics of some nonrelativistic incompressible fluids. *Stochastica* 3 (1979), no. 2, 15–31. (Mauro Francaviglia) **81i:76014** 76B99
- On the general structure of continuum physics. I. Derivative spaces. (Italian summary) *Boll. Un. Mat. Ital. B* (5) 17 (1980), no. 2, 704–726. (Gérard A. Maugin) **81i:73012** 73A05 (53A55, 58A99, 73B05)
- Pratelli, Maurizio** Le support exact du temps local d'une martingale continue. *Séminaire de Probabilités, XIII (Univ. Strasbourg, Strasbourg, 1977/78)*, pp. 126–131, *Lecture Notes in Math.*, 721, Springer, Berlin, 1979. (Rolando Rebolledo) **81i:60062** 60G44
- Prather, Carl L.** (with Boas, R. P., Jr.) Final sets for operators on finite Fourier transforms. *Houston J. Math.* 5 (1979), no. 1, 29–36. (Hans P. Heinig) **81i:42045** 42A38 (30C15, 30D20)
- On the zeros of derivatives of balanced trigonometric polynomials. *Pacific J. Math.* 81 (1979), no. 2, 515–523. (N. K. Govil) **81j:42002** 42A05 (30C15, 42A75)
- (with Shaw, J. K.) Zeros of successive derivatives and iterated operators on analytic functions. *Proc. Amer. Math. Soc.* 79 (1980), no. 2, 225–232. (R. P. Boas, Jr.) **81i:30014** 30C15
- On special classes of entire functions whose zeros and growth are restricted. *Trans. Amer. Math. Soc.* 258 (1980), no. 1, 181–189. (D. F. Shea) **81i:30052** 30D15
- da Prato, Giuseppe** See Da Prato, Giuseppe
- battey-Pratt, E. P.** See Battey-Pratt, E. P.
- Pratt, Lawrence R.** Effective field of a dipole in nonpolarizable fluids. *Molecular Phys.* 40 (1980), no. 2, 347–360. (Author's summary) **81i:82049** 82A50
- Pratt, R. H.** (with Iwinski, Z. R.; Kim, Young Soon) Generalized Fermi-Segrè formula. *Phys. Rev. A* (3) 22 (1980), no. 4, 1358–1360. (Authors' summary) **81i:81109** 81G40
- Pratt, Vaughan R.** Dynamic logic. *Foundations of computer science, III (Third Adu. Course, Amsterdam, 1978), Part 2*, pp. 53–82, *Math. Centre Tracts*, 109, Math. Centrum, Amsterdam, 1979. (G. Mirkowska) **81i:03056** 03B60 (68B10)
- Axioms or algorithms. *Mathematical foundations of computer science, 1979 (Proc. Eighth Sympos., Olomouc, 1979)*, pp. 160–169, *Lecture Notes in Comput. Sci.*, 74, Springer, Berlin, 1979. (Author's summary) **81i:68023** 68B10 (03B35)
- Dynamic algebras and the nature of induction. *Conference Proceedings of the Twelfth Annual ACM Symposium on Theory of Computing (Los Angeles, Calif., 1980)*, pp. 22–28, *ACM, New York*, 1980. (See **81j:68006**) 68C01 (03B45, 03C05)
- (with Rodeh, Michael; Even, Shimon) Linear algorithm for data compression via string matching. *J. Assoc. Comput. Mach.* 28 (1981), no. 1, 16–24. (Authors' summary) **81i:68036** 68C25
- Pravdina, M. H.** On the determination of the mixing length for turbulent channel flow. A translation of *Izv. Sibirsk. Otdel. Akad. Nauk SSSR Ser. Teh.* 8 (1978), no. 2, 86–90. *Fluid Mech.—Soviet Res.* 8 (1979), no. 3, 7–13. (Author's summary) **81i:76031** 76F99
- Pravil'skiĭ, P. A.** (with Parhomenko, P. P.) Software diagnosis (review). *Automat. i Telemekh.* 1980, no. 1, 103–121. (Russian. English summary); translated as *Automat. Remote Control* 41 (1980), no. 1, part 2, 82–96. (Authors' summary) **81i:68024** 68B10
- Pravitz, Dag** Proofs and the meaning and completeness of the logical constants. *Essays on mathematical and philosophical logic (Proc. Fourth Scandinavian Logic Sympos. and First Soviet-Finnish Logic Conf., Jyväskylä, 1976)*, pp. 25–40, *Synthese Library*, 122, Reidel, Dordrecht, 1979. (Carlo Cellucci) **81g:03075** 03F99
- Pradny, K.** Egomotion and relative depth map from optical flow. *Biol. Cybernet.* 36 (1980), no. 2, 87–102. (Author's summary) **81i:92035** 92A27
- Precauppan, Anca** Almost automorphic functions on topological semigroups. *Rev. Roumaine Math. Pures Appl.* 25 (1980), no. 5, 783–788. (Anne C. Baker) **81i:22005** 22A20 (43A60)
- Preda, Petre** a, b -dichotomie des équations différentielles linéaires. *An. Univ. Timişoara Ser. Ştiinţ. Mat.* 17 (1979), no. 1, 65–71. (Jan Prüss) **81g:34080** 34G10
- Preda, Vasile** Upon the completeness of the class of Bayes solutions in the wide sense. *Rev. Roumaine Math. Pures Appl.* 25 (1980), no. 2, 253–255. (Norbert Schmitz) **81i:62013** 62C07 (62C10)
- Strict determination of a statistical decision problem. *Rev. Roumaine Math. Pures Appl.* 25 (1980), no. 3, 429–439. (A. L. Rukhin) **81i:62006** 62C05 (62C20)
- Predeleanu, M.** (with Dahan, Marc) Solutions fondamentales pour un milieu élastique à isotropie transverse. (English summary) *Z. Angew. Math. Phys.* 31 (1980), no. 3, 413–424. (P. Ladeveze) **81i:73006** 73C30
- Prelm, Renate** Injektive Gruppen über Fastringen. *Publ. Math. Debrecen* 26 (1979), no. 1–2, 75–90. (G. Betsch) **81i:16052** 16A76 (20N15)
- Prehu, Uwe** Die mittlere Quellzeit subkritischer Verzweigungsprozesse. *Math. Nachr.* 88 (1979), 409–410. (Anthony G. Pakes) **81i:60093** 60B80
- Preiser, Udo** Finite groups with a strongly closed 2-subgroup, whose commutator subgroup is cyclic. *Arch. Math. (Basel)* 33 (1979/80), no. 1, 10–17. (F. Pérez Monzor) **81i:20015** 20D05
- Prékopa, Andrius** (with Kelle, Péter) Reliability type inventory models based on stochastic programming. *Survey of mathematical programming (Proc. Ninth Internat. Math. Programming Sympos., Budapest, 1976), Vol. 2*, pp. 167–182, *North-Holland, Amsterdam*, 1979. (Wolf-Rüdiger Heilmann) **81i:90076** 90C15 (90B25)
- The use of stochastic programming for the solution of some problems in statistics and probability. *Extremal methods and systems analysis (Internat. Sympos., Univ. Texas, Austin, Tex., 1977)*, pp. 522–538, *Lecture Notes in Econom. and Math. Systems*, 174, Springer, Berlin, 1980. (Author's summary) **81i:90122** 90C15 (60K30, 62Fxx)
- Network planning using two-stage programming under uncertainty. *Recent results in stochastic programming (Proc. Meeting, Oberwolfach, 1979)*, pp. 215–237, *Lecture Notes in Econom. and Math. Systems*, 179, Springer, Berlin, 1980. (Author's summary) **81i:90077** 90C15
- Stochastic programming models and their application. (Hungarian) *Tanulmányok—MTA Számítástech. Automat. Kutató Int. Budapest No. 106* (1980), 25 pp. (Istvan Deak) **81i:90092** 90C15 (90C50)
- See also Survey of mathematical programming, **81i:90004** Recent results in stochastic programming, **81i:90006** and Studies on mathematical programming, **81i:90009**
- Prenter, P. M.** (with Graves, Jack) Numerical iterative filters applied to first kind Fredholm integral equations. *Numer. Math.* 30 (1978), no. 3, 281–299. (Authors' summary) **81i:65091** 65R20 (65F20)
- Prentice, Ross L.** (with Pyke, Ronald) Logistic disease incidence models and case-control studies. *Biometrika* 66 (1979), no. 3, 403–411. (George W. Williams) **81i:62042** 62F99 (62P10)
- (with Kalbfleisch, John D.) ★The statistical analysis of failure time data. *Wiley Series in Probability and Mathematical Statistics. John Wiley and Sons, New York-Chichester-Brisbane*, 1980. xi+321 pp. ISBN 0-471-05519-0 (Bruce W. Turnbull) **81i:62186** 62P10 (62N05)
- (with Farewell, V. T.) The approximation of partial likelihood with emphasis on case-control studies. *Biometrika* 67 (1980), no. 2, 273–278. (Bruce W. Turnbull) **81i:62185** 62P10 (62F10)
- Preparata, F. P.** A note on locating a set of points in a planar subdivision. *SIAM J. Comput.* 8 (1979), no. 4, 542–545. (D. T. Lee) **81i:68056** 68C25
- See also Camlou, Paul, **81i:94047**
- Prepelici, Valeriu** Reachability criteria for partial differential dynamical systems. (Romanian. English summary) *Bul. Inst. Politehn. Bucureşti Ser. Electrotehn.* 40 (1978), no. 3, 3–8. (Claudia Simionescu) **81g:49007** 49A22 (93C20)
- Réalisations minimales des systèmes linéaires à plusieurs indices. (German and English summaries) *Rev. Roumaine Sci. Tech. Sér. Electrotech. Énerg.* 23 (1978), no. 4, 615–622, vii, ix. (Author's summary) **81i:93015** 93B20 (93C05)
- A minimal realization algorithm and a commutative diagram for multi-index dynamical systems. (Romanian. English summary) *Bul. Inst. Politehn. Bucureşti Ser. Mec.* 41 (1979), no. 2, 3–13. (M. M. Konstantinov) **81g:93037** 93C05

- Linear hybrid systems. *Bull. Math. Soc. Sci. Math. R. S. Roumanie (N.S.)* 25(71) (1979), no. 4, 391-403. (Vladimir Katkovnik) **81c:93033** 93C05 (93B05)
- Pole assignment in a class of linear partial differential systems. (French and German summaries) *Rev. Roumaine Sci. Tech. Sér. Électrotech. Énergét.* 25 (1980), no. 1, 67-72, viii, ix. (Authors' summary) **81c:93059** 93C20 (93C05)
- Prescott, P. (with Walden, A. T.) Maximum likelihood estimation of the parameters of the generalized extreme-value distribution. *Biometrika* 67 (1980), no. 3, 723-724. (Authors' summary) **81m:26046** 62F10
- Prüder, Z. See Prüder, Siegfried
- Prelli, Marica D. On Ostrowski's fundamental existence theorem in the complex case. *Publ. Inst. Math. (Beograd) (N.S.)* 26(40) (1979), 229-232. (T. L. Freeman) **81g:65062** 65H05 (30C15)
- On the greatest congruence of relations. *Publ. Inst. Math. (Beograd) (N.S.)* 26(40) (1979), 233-247. (Heinrich Werner) **81h:03068** 03C30
- Prelić, Slavica B. On quasi-algebras and the word problem. *Publ. Inst. Math. (Beograd) (N.S.)* 26(40) (1979), 255-268. (Stanley N. Burris) **81g:08010** 08A50 (03D40)
- Prekšins, Kenneth J. (with O'Farrell, Anthony G.) Approximation of polynomials in two complex variables. *Math. Ann.* 246 (1979/80), no. 3, 225-232. (Thomas Bloom) **81c:32018** 32E30 (32E20)
- Preskill, John (with Eichten, Estia; Lane, Kenneth) CP nonconservation without elementary scalar fields. *Phys. Rev. Lett.* 45 (1980), no. 4, 225-228. (Authors' summary) **81e:81131** 81G15
- Preisner, P. Extraction of ignorable variables from the Hamiltonian of the Yang-Mills field. *Acta Phys. Polon. B* 10 (1979), no. 9, 825-829. (José M. Cervero) **81k:81065** 81E10 (53C05, 58F05)
- Dynamical systems with the Bäcklund transformation. *Czechoslovak J. Phys. B* 30 (1980), no. 1, 47-50. (C. S. Sharma) **81e:81033** 81C05 (35Q20, 58A15)
- Press, S. James Multivariate group judgments by qualitative controlled feedback. *Multivariate analysis, V (Proc. Fifth Internat. Sympos., Univ. Pittsburgh, Pittsburgh, Pa., 1978)*, pp. 581-591. North-Holland, Amsterdam, 1980. (From the introduction) **81c:62069** 62H99 (90A08, 92A25)
- Press, William H. (with Lightman, Alan P.; Price, Richard H.; Teukolsky, Saul A.) Сборник задач по теории относительности и гравитации. (Russian) [Problem book in relativity and gravitation] Edited by I. M. Halatnikov. Translated from the English by A. P. Bondarev and Ju. A. Danilov. Moscow, 1979. 536 pp. (Editors) **81f:83001** 83-01
- (with Vishniac, Ethan T.) Tenacious myths about cosmological perturbations larger than the horizon size. *Astrophys. J.* 239 (1980), no. 1, part 1, 1-11. (Authors' summary) **81g:83071** 83F05 (83B05)
- Pressacco, Flavio Balanced arbitration for homogeneous weighted majority games. (Italian. English summary) *Ric. Mat. Sci. Econom. Social.* 1 (1978), no. 1, 55-69. (Marc Hallin) **81h:90153** 90D99
- Fairness and stability: a two criteria arbitration scheme for homogeneous weighted majority games. *Cahiers Centre Études Rech. Opér.* 22 (1980), no. 1, 91-100. (Author's summary) **81h:90171** 90D12
- Presley, Andrew Decompositions of the space of loops on a Lie group. *Topology* 19 (1980), no. 1, 65-79. (Mihai Dediú) **81b:57037** 57T15 (22E99, 30D50, 32M10, 55P15, 55P35, 57R99)
- Pressman, D. B. See Proceedings: Operations Research, **81c:90003**
- Prest, Mike Model completions of some theories of modules. *J. London Math. Soc. (2)* 20 (1979), no. 3, 369-372. (Paul C. Eklof) **81c:03023** 03C60 (16A63)
- Preuß, Alexander Artin's conjecture on p -adic number fields. *Proceedings of the 5th School of Algebra (Rio de Janeiro, 1978)*, pp. 79-109. *Proc. Brasil. Mat., Rio de Janeiro, 1978*. (Leonard Lipshitz) **81j:10029** 10C20 (10B40, 12L10)
- (with Szczerba, Lesław W.) Nonaxiomatizability of real general affine geometry. *Fund. Math.* 104 (1979), no. 3, 193-202. (M. Boffa) **81a:03013** 03B30 (03C65, 03D35, 51N10)
- Preuß, Marc-Antoine (with Acker, Felipe) Convergence d'un schéma de minimisation alternée. (English summary) *Ann. Fac. Sci. Toulouse Math. (5)* 2 (1980), no. 1, 1-9. (A. I. Şchiop) **81m:65081** 65J10
- Preuß, Elena Restriction theorems for the Fourier transform to some manifolds in \mathbb{R}^n . *Harmonic analysis in Euclidean spaces (Proc. Sympos. Pure Math., Williams Coll., Williamstown, Mass., 1978)*, Part 1, pp. 101-109. *Proc. Sympos. Pure Math., XXXV, Part 1, Amer. Math. Soc., Providence, R.I., 1979*. (A. L. Brodskii) **81d:42028** 42B10
- Preston, D. Kris (with Daverman, Robert J.) Shrinking certain sliced decompositions of E^{n+1} . *Proc. Amer. Math. Soc.* 79 (1980), no. 3, 477-483. (Michael Starbird) **81f:54003** 54B15 (54B10)
- Preston, G. B. Semigroups and graphs. *Semigroups (Proc. Conf., Monash Univ., Clayton, 1979)*, pp. 225-237. Academic Press, New York, London. (Hugo S. Sun) **81m:20073** 20M05 (05C25)
- See also Semigroups, **81i:20074**
- Preuß, E. (with Benfatto, G.; Cassandro, M.; Gallavotti, G.; Nicolò, F.; Olivieri, E.; Scacciatelli, E.) Some probabilistic techniques in field theory. *Comm. Math. Phys.* 59 (1978), no. 2, 143-166. (Sergio Albeverio) **81e:81061** 81E15 (60G20, 60H15, 60J45, 82A05)
- (with Benfatto, G.; Cassandro, M.; Gallavotti, G.; Nicolò, F.; Olivieri, E.; Scacciatelli, E.) Ultra-violet stability in Euclidean scalar field theories. *Comm. Math. Phys.* 71 (1980), no. 2, 95-130. (Francesco Guerra) **81e:81045** 81E10 (60G20)
- (with Benfatto, G.; Marchioro, C.; Pulvirenti, M.) Superstability estimates for anharmonic systems. *J. Statist. Phys.* 22 (1980), no. 3, 349-362. (Richard S. Ellis) **81c:82028** 82A67 (82A25)
- del Prete, Immacolata See Del Prete, Immacolata
- del Prete, Vincenza Maucci See Maucci Del Prete, Vincenza
- Pretzel, Oliver Convergence of the iterative scaling procedure for nonnegative matrices. *J. London Math. Soc. (2)* 21 (1980), no. 2, 379-384. (B. Levinger) **81j:15022** 15A48
- Preuß, Miroslav Decomposition of stiff dynamical systems for hybrid simulation. *Third Formator Symposium on Mathematical Methods for the Analysis of Large-Scale Systems*, pp. 299-308. Academia, Prague, 1979. (See **81j:90007**) 93C05
- Preuss, Lucien G. A class of statistics based on the information concept. *Comm. Statist. A—Theory Methods* 9 (1980), no. 15, 1563-1585. (Jana Zvárová) **81k:62077** 62H17 (62B10, 94A17)
- Preuss, W. (with Bleyer, A.) A note to general notions of the derivation and its applications. *Period. Math. Hungar.* 11 (1980), no. 1, 61-68. (R. A. Struble) **81j:46072** 46H05 (44A40)
- Previsto, Emma A lattice-theoretic characterization of finitely generated solvable groups. (Italian) *Istit. Veneto Sci. Lett. Atti Cl. Sci. Mat. Natur.* 136 (1977/78), 7-11. (Federico Menegazzo) **81a:20037** 20E15
- Prevot, Daniel (with Schott, René) Marches aléatoires sur les espaces homogènes des groupes de Lie nilpotents simplement connexes. *Analyse harmonique sur les groupes de Lie (Sém., Nancy-Strasbourg 1976-1978)*, II, pp. 404-426. *Lecture Notes in Math.*, 739, Springer, Berlin, 1979. (Hubert Hennion) **81f:60097** 60J15 (60B99)
- (with Crépel, Pierre; Huard, Alain) Discussion sur "les mathématiques et le monde réel". *Se École d'Été de Calcul des Probabilités de Saint-Flour (Saint-Flour, 1978)*. *Ann. Sci. Univ. Clermont Math.* No. 17 (1979), 32-36. (Editors) **81a:00001** 00A05
- Price, Edward L. (with Vandelinde, V. David) Robust estimation using the Robbins-Monro stochastic approximation algorithm. *IEEE Trans. Inform. Theory* 25 (1979), no. 6, 698-704. (Madanlal T. Wason) **81j:62142** 62L20
- Price, J. Michael The characterization of instantaneous causality. Correction to: "Causality in temporal systems: characterizations and a survey" [*J. Econometrics* 5 (1977), no. 3, 265-293; MR 56 #1631] by D. A. Pierce and L. D. Haugh. With a reply by Pierce and Haugh. *J. Econometrics* 10 (1979), no. 2, 253-259. (Peter M. Robinson) **81j:62106** 62M10
- Price, John F. (with McMullen, J. R.) Duality for finite abelian hypergroups over splitting fields. *Bull. Austral. Math. Soc.* 20 (1979), no. 1, 57-70. (Authors' summary) **81f:20106** 20N99 (20C99)
- Price, Michael H. (with Brock, William H.) Squared paper in the nineteenth century: instrument of science and engineering, and symbol of reform in mathematical education. *Ed. Stud. Math.* 11 (1980), no. 4, 365-381. (Authors' summary) **81j:01052** 01A80 (00A69, 01A55)
- Price, Richard H. (with Lightman, Alan P.; Press, William H.; Teukolsky, Saul A.) Сборник задач по теории относительности и гравитации. (Russian) [Problem book in relativity and gravitation] Edited by I. M. Halatnikov. Translated from the English by A. P. Bondarev and Ju. A. Danilov. Moscow, 1979. 536 pp. (Editors) **81f:83001** 83-01
- Price, T. G. (with Blasgen, M. W.; Astrahan, M. M.; Chamberlin, D. D.; Gray, James N.; King, W. F.; Lindsay, B. G.; Lorie, R. A.; Mehl, J. W.; Putzolu, G. R.; Schkolnick, M.; Selinger, P. G.; Slutz, D. R.; Strong, H. R.; Traiger, I. L.; Wade, B. W.; Yost, R. A.) System R: an architectural overview. *IBM Systems J.* 20 (1981), no. 1, 41-62. (Authors' summary) **81m:68079** 68H05
- Price, T. M. Towards classifying all manifolds. *Math. Chronicle* 7 (1978), no. 1-2, 1-47. (James M. Kister) **81f:57008** 57Nxx
- Prichett, G. D. (with Lapenta, J. F.; Furno, Anne L.) An algorithm to determine self-producting r -digit g -adic integers. *J. Reine Angew. Math.* 310 (1979), 100-110. (Jack P. Tull) **81h:10011a** 10A30 (05B10)
- Priddy, Stewart A cellular construction of BP and other irreducible spectra. *Math. Z.* 173 (1980), no. 1, 29-34. (J. F. Adams) **81f:55006** 55N22 (55P42)
- Pride, Stephen J. The concept of "largeness" in group theory. *Word problems, II (Conf. on Decision Problems in Algebra, Oxford, 1976)*, pp. 299-335. *Studies in Logic and Foundations of Math.*, 95, North-Holland, Amsterdam, 1980. (B. H. Neumann) **81i:20038** 20E34
- Prise, Latz Über eine minimale universelle Turing-Maschine. *Theoretical computer science (Fourth GI Conf., Aachen, 1979)*, pp. 244-259. *Lecture Notes in Comput. Sci.*, 67, Springer, Berlin, 1979. (Author's summary) **81j:68063** 68C40 (03D10)
- Towards a precise characterization of the complexity of universal and nonuniversal Turing machines. *SIAM J. Comput.* 8 (1979), no. 4, 508-523. (Cristian Calude) **81k:03035** 03D15 (03D10, 68C25, 68C40)
- Über ein 2-dimensionales True-System mit zwei Regeln und unentscheidbarem Wortproblem. *Z. Math. Logik Grundlagen Math.* 25 (1979), no. 2, 179-192. (H. Jürgensen) **81d:03041** 03D03 (03D40)
- (with Kleine-Büning, Hans) Universal asynchronous iterative arrays of Mealy automata. *Acta Inform.* 13 (1980), no. 3, 269-285. (Katsuhiko Inoue) **81c:68062** 68D20
- Prieto, Carlos ★The relative spectral sequence of Leray-Serre for fibration pairs. *Monografías del Instituto de Matemáticas [Monographs of the Institute of Mathematics]*, 8. Universidad Nacional Autónoma de México, Instituto de Matemáticas, México City, 1979. i + 102 pp. (From the introduction) **81c:55028** 55T10
- Prigogine, I. (with George, C.) Coherence and randomness in quantum theory. *Phys. A* 99 (1979), no. 3, 369-382. (R. Koteky) **81e:81014** 81B05 (58F05, 82A15)
- (with Nicolis, G.) Irreversible processes at nonequilibrium steady states and Lyapunov functions. *Proc. Nat. Acad. Sci. U.S.A.* 76 (1979), no. 12, 6060-6061. (L. A. Turksi) **81f:82013** 82A35
- Prigorshii, V. A. (with Botja, F. V.) Basis mappings in a space with two norms. (Russian) *Studies in functional analysis and differential equations (Russian)*, pp. 43-49, 77, "Sinteca", Kishinev, 1978. (Luciana Lupas) **81h:46098** 46N05
- Prigogine, S. A. (with Borisov, N. V.; Ioffe, M. V.; Eides, M. I.) Investigation of perturbation theory in a string field model. (Russian. English summary) *Vestnik Leningrad. Univ. Fiz. Him.* 1980, vyp. 2, 6-12, 122. (Authors' summary) **81h:81130** 81G05 (81C12)
- Prilobko, N. P. Periodic solutions of a system with switching. (Russian) *Differentsial'nye Uravneniya (Ryazan)* No. 13 (1979), 107-112. (V. G. Zadorozhnyi) **81g:34051** 34C25 (34C35)
- Primak, V. G. (with Rodstvenskii, B. L.; Simakin, I. N.) Numerical modeling of one-dimensional turbulence. (Russian. English summary) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 168* (1979), 27 pp. (Authors' summary) **81k:76033** 76F99
- Prikarpatskii, A. K. An exactly solvable system of nonlinear differential equations. (Russian) *Ukrain. Mat. Zh.* 31 (1979), no. 5, 576-582, 621. (B. A. Kuperzhmidt) **81f:35078** 35L65 (58F07)
- Riccati equations that are integrable in quadratures. (Russian) *Dokl. Akad. Nauk SSSR* 251 (1980), no. 5, 1072-1077. (D. Bobrowski) **81h:34062** 34A05

- An analogue of the Bäcklund transformation for Riccati ordinary differential equations. (Russian) *Dokl. Akad. Nauk SSSR* 253 (1980), no. 2, 298–301. (J. Chrastina) **81j:34014** 34A25 (58A15)
- Geometric structure and Bäcklund transformation of a system of nonlinear partial differential evolution equations. (Russian) *Ukrain. Mat. Ž.* 32 (1980), no. 1, 124–127, 144. (J. Chrastina) **81h:59007** 58A15 (15A75, 35Q20)
- Prizak, V. G.** (with Garaščuk, I. N.) A three-layer iteration scheme for computing the minimal eigenvalue. (Russian) *pp. 49–59, Akad. Nauk Ukrain. SSR, Inst. Kibernet., Kiev, 1978.* (J. B. Butler, Jr.) **81g:65072** 65J10 (49G20, 65L15)
- The modified method of steepest descent for calculation of eigenvalues. (Russian) *Theoretical and applied questions of differential equations and algebra (Russian)*, pp. 213–215, 270, "Naukova Dumka", Kiev, 1978. (Author's summary) **81h:65053** 65J10 (49D10)
- Prilukhii, V. I.** (with Kravcov, V. V.) Solution of a three-dimensional problem of diffraction of electromagnetic waves using antenna potentials. (Russian) *Ž. Vyšisl. Mat. i Mat. Fiz.* 19 (1979), no. 6, 1506–1512, 1629. (Authors' summary) **81a:78020** 78A50
- Prilukhii, V. I.** (with Richards, Ian) Uniform approximation in the semiring of positive continuous functions. *Adv. in Math.* 37 (1980), no. 1, 66–73. (W. J. Kotzé) **81m:41043** 41A65 (46J10)
- (with Jech, Thomas J.; Magidor, Menachem; Mitchell, W.) Precipitous ideals. *J. Symbolic Logic* 45 (1980), no. 1, 1–8. (James Baumgartner) **81h:03097** 03E35 (03E55)
- (with Armstrong, Thomas E.) κ -finiteness and κ -additivity of measures on sets and left invariant measures on discrete groups. *Proc. Amer. Math. Soc.* 80 (1980), no. 1, 105–112. (Richard D. Mauldin) **81h:28014** 28C10 (03E55, 28A12)
- de Prill, Nelson** See De Prill, Nelson
- Primačuk, L. P.** The Hilbert problem for the exterior of sections along a line with permutation matrices. (Russian. English summary) *Dokl. Akad. Nauk BSSR* 22 (1978), no. 2, 115–118, 187–188. (V. Mičić) **81k:30061** 30E25
- A nonlinear conjugation problem for a holomorphic vector on pairwise separated arcs. (Russian. English summary) *Dokl. Akad. Nauk BSSR* 24 (1980), no. 2, 101–104, 188. (V. Mičić) **81h:30046** 30E25
- Primicerio, M.** (with Fasano, A.) Cauchy-type free boundary problems for nonlinear parabolic equations. *Riv. Mat. Univ. Parma* (4) 5 (1979), part 2, 615–634 (1980). (A. Friedman) **81h:35026** 35K60 (35R35, 80A20)
- Primont, Daniel** (with Blackorby, Charles) Index numbers and consistency in aggregation. *J. Econom. Theory* 22 (1980), no. 1, 87–98. (Authors' summary) **81a:90070** 90A99
- Prince, G. E.** (with Leach, P. G. L.; Kalotas, T. M.; Eliezer, C. J.; Santilli, Ruggero Maria) The Lie and Lie-admissible symmetries of dynamical systems. Proceedings of the Second Workshop on Lie-Admissible Formulations (Sci. Center, Harvard Univ., Cambridge, Mass., 1979), Part B. *Hadronic J.* 3 (1979/80), no. 1, 390–439. (Richard C. Churchill) **81f:81030** 81D20 (22E70, 58F35, 70H99)
- (with Leach, P. G. L.) The Lie theory of extended groups in Hamiltonian mechanics. *Hadronic J.* 3 (1979/80), no. 3, 941–961. (C. J. Eliezer) **81e:70021** 70H99 (58F35)
- (with Eliezer, C. J.) Symmetries of the time-dependent N -dimensional oscillator. *J. Phys. A* 13 (1980), no. 3, 815–823. (Håkan Snellman) **81g:81035** 81C99 (22E70, 58F35)
- Prince, P. J.** (with Dormand, J. R.) A family of embedded Runge-Kutta formulae. *J. Comput. Appl. Math.* 6 (1980), no. 1, 19–26. (Joseph Olinger) **81g:65096** 65L05
- Pris, Gianfranco** Stack implementation of shallow binding in languages with mixed scoping. *Inform. Process. Lett.* 9 (1979), no. 3, 143–154. (From the introduction) **81h:68033** 68C01
- Primož, Rainer** ★Starke Färbbarkeit in Petri-Netzen. (German) [Strong colorability of Petri nets] *Berichte der Gesellschaft für Mathematik und Datenverarbeitung* [Reports of the Society for Mathematics and Data Processing], 117. R. Oldenbourg Verlag, Munich, 1978. 85 pp. ISBN 3-486-22351-8 (Jan Grabowski) **81h:68044** 68D90 (68B20)
- Prisak, O. S.** (with Pisarenko, V. G.) Estimation of the approximation of functions in integral equations by cubic splines with application to the problem of approximation of a three-dimensional curve. (Russian) *Physics and mechanics of nonlinear phenomena (Russian)*, pp. 167–179, 211, "Naukova Dumka", Kiev, 1979. (Yury Girshovich) **81h:41019** 41A15
- Piecewise-polynomial linearly cubic Hermite interpolation of functions of two variables. (Russian) *Physics and mechanics of nonlinear phenomena (Russian)*, pp. 179–187, 211, "Naukova Dumka", Kiev, 1979. (P. Vértési) **81h:41020** 41A15
- Pritchard, H. O.** (with Singh, S. R.) A new unimolecular rate expression. *Chem. Phys. Lett.* 73 (1980), no. 1, 191–193. (Authors' summary) **81e:80014** 80A30
- Prisner, A. Alan B.** (with Sigal, C. Elliott; Solberg, James J.) The use of cutsets in Monte Carlo analysis of stochastic networks. *Math. Comput. Simulation* 21 (1979), no. 4, 376–384. (From the summary) **81a:90150** 90C35 (90C15)
- (with Sigal, C. Elliott; Solberg, James J.) The stochastic shortest route problem. *Oper. Res.* 28 (1980), no. 5, 1122–1129. (Authors' summary) **81h:90078** 90B15 (05C99)
- Prisna, Ja. G.** Absolute convergence of Fourier series and particular moduli of smoothness. (Ukrainian. Russian summary) *Visnik L'viv. Derž. Univ. Ser. Meh.-Mat.* No. 13 (1978), 41–44, 124. (Author's summary) **81j:42018** 42A28
- Privatov, Al. A.** Convergence of Lagrange interpolation processes. (Russian) *The theory of the approximation of functions (Proc. Internat. Conf., Kaluga, 1975)* (Russian), pp. 296–302, "Nauka", Moscow, 1977. (P. Vértési) **81a:41008** 41A05
- Approximation of functions by interpolation polynomials. *Fourier analysis and approximation theory (Proc. Colloq., Budapest, 1976)*, Vol. II, pp. 659–670, *Colloq. Math. Soc. János Bolyai*, 19, North-Holland, Amsterdam, 1978. (From the introduction) **81g:41007** 41A05
- Convergence of cubic interpolation splines to a continuous function. (Russian) *Mat. Zametki* 25 (1979), no. 5, 681–700, 799. (E. Neuman) **81c:41025** 41A15
- Privanov, V.** (with Avron, Yossi) Discreteness of the ground state for nonrelativistic bosons in one and two dimensions. *Ann. Inst. H. Poincaré Sect. A (N.S.)* 31 (1979/80), no. 2, 169–172. (Jean-Paul Marchand) **81f:81069** 81F10
- Probert, Robert L.** (with Cheston, Grant A.; Saxton, Lawrence V.) Computing minimum path covers for flow graphs of well-structured programs. *Proceedings of the Second Manitoba Conference on Numerical Mathematics and Computing (Univ. Manitoba, Winnipeg, Man., 1977)*, pp. 503–523, *Congress. Numer., XX, Utilitas Math., Winnipeg, Man., 1978.* (Kurt Mehlhorn) **81c:68086** 68E10 (68B05)
- Probst, David K.** (with Alagar, Vangalur S.) A family of algorithms for powering sparse polynomials. *SIAM J. Comput.* 8 (1979), no. 4, 626–644. (Daniel Lazard) **81f:68057a** 68C25
- (with Alagar, Vangalur S.) Corrigendum: "A family of algorithms for powering sparse polynomials". *SIAM J. Comput.* 9 (1980), no. 2, 439. (Daniel Lazard) **81f:68057b** 68C25
- Procesi, A. M.** Wave propagation over a cylindrical shell. *Izv. Akad. Nauk SSSR Mat. Teor. Tela* 14 (1979), no. 6, 114–119. (Russian); translated as *Mech. Solids* 14 (1979), no. 6, 96–104. (Author's summary) **81g:73029** 73D20 (73L20)
- Procesi, V. S.** Bending of a system of strip plates lying on an elastic half-space. *Prikl. Mat. Meh.* 41 (1977), no. 4, 711–715. (Russian); translated as *J. Appl. Math. Mech.* 41 (1977), no. 4, 728–733 (1978). (R. Subramanian) **81h:73053** 73T05 (73C35)
- Procesi, Claudio** (with Kraft, H.) Conjugacy classes in $GL(n, C)$. (Italian) *Rend. Sem. Mat. Univ. Padova* 59 (1978), 209–222 (1979). (Wim H. Hesselink) **81i:14033** 14L30 (15A30, 20G20)
- Trace identities and standard diagrams. *Ring theory (Proc. Antwerp Conf. (NATO Adv. Study Inst.), Univ. Antwerp, Antwerp, 1978)*, pp. 191–218, *Lecture Notes in Pure and Appl. Math.*, 51, Dekker, New York, 1979. (V. L. Popov) **81m:15012** 15A24 (14L30, 14N10)
- Young diagrams, standard monomials and invariant theory. *Proceedings of the International Congress of Mathematicians (Helsinki, 1978)*, pp. 537–542, *Acad. Sci. Fennica, Helsinki*, 1980. (V. L. Popov) **81e:14032** 14M15 (15A72)
- (with de Concini, C.; Eisenbud, David) Young diagrams and determinantal varieties. *Invent. Math.* 56 (1980), no. 2, 129–165. (V. L. Popov) **81m:14034** 14M12 (14L30, 15A72, 20C30)
- Procházka, Ladislav** Tensor product and quasipitting of abelian groups. *Comment. Math. Univ. Carol.* 21 (1980), no. 1, 55–69. (P. Grabe) **81g:20101** 20K20 (20K21)
- Prochownik, D.** Galerkin-Differenzmethode zur Lösung zweidimensionaler Boussinesq-Gleichungen. (English and Russian summaries) *Z. Angew. Math. Mech.* 59 (1979), no. 12, 697–708. (Reinhard Scholz) **81j:65130** 65P05 (65N30)
- Procopciuk, Gh.** Classification of invariant solutions of RMHD with planar symmetry. (Romanian summary) *Bul. Inst. Politehn. Iași Sect. I* 25(29) (1979), no. 1–2, 81–83. (From the text) **81h:22013** 22E70 (35A30, 76W05)
- Proctor, Robert A.** (with Saks, Michael E.; Sturtevant, Dean G.) Product partial orders with the Sperner property. *Discrete Math.* 30 (1980), no. 2, 173–180. (Derek C. J. Burgess) **81f:06005** 06A10 (05A05)
- Prodanov, Ivan** (with Dikranjan, Dikran) Totally minimal topological groups. (Bulgarian summary) *Annuaire Univ. Sofia Fac. Math. Méc.* 69 (1974/75), 5–11 (1979). (M. I. Kabanjuk) **81c:22003** 22A05
- Proximity algebras and their compact representations. (Bulgarian summary) *Annuaire Univ. Sofia Fac. Math. Méc.* 69 (1974/75), 149–156 (1979). (William Lindgren) **81d:54020** 54E05 (08A99, 54H10)
- Precompact minimal topologies on some torsion free modules. (Bulgarian summary) *Annuaire Univ. Sofia Fac. Math. Méc.* 69 (1974/75), 157–163 (1979). (Jean Guérindon) **81f:16056** 16A80 (13F05, 13J10)
- Prodinger, Helmut** (with Urbanek, Friedrich J.) Infinite 0-1 sequences without long adjacent identical blocks. *Discrete Math.* 28 (1979), no. 3, 277–289. (R. C. Entringer) **81a:05032** 05B99 (10L10)
- Congruences defined by languages and filters. *Inform. and Control* 44 (1980), no. 1, 36–46. (Heinrich Seidel) **81h:68074** 68F05 (20M35)
- Topologies on free monoids induced by closure operators of a special type. (French summary) *RAIRO Inform. Théor.* 14 (1980), no. 2, 225–237. (Ernst-Erich Doberkat) **81h:68112** 68F05 (54A05)
- van Proeyen, A.** (with de Wit, B.; van Holten, J. W.) Transformation rules of $N=2$ supergravity multiplets. *Nuclear Phys. B* 167 (1980), no. 1–2, 186–204. (H. S. Green) **81g:81076** 81E99 (81G25)
- (with de Roo, M.; van Holten, J. W.; de Wit, B.) Chiral superfields in $N=2$ supergravity. *Nuclear Phys. B* 173 (1980), no. 1, 175–188. (Authors' summary) **81j:83046** 83E99
- (with de Wit, B.; van Holten, J. W.) Central charges and conformal supergravity. *Phys. Lett. B* 95 (1980), no. 1, 51–55. (Authors' summary) **81g:83063** 83E99
- Profera, Luigi** Simple Artinian Hestenes ternary rings. (Italian. English summary) *Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur.* (8) 62 (1977), no. 3, 292–299. (Author's summary) **81h:08002** 08A05
- Prohorov, N. S.** On the problem of the basis of a free alternative Φ -algebra. (Russian) *Sibirsk. Mat. Ž.* 21 (1980), no. 4, 130–135, 238. (A. A. Iskander) **81j:17017** 17D05
- Prokhorov, V. I.** Absolute convergence of double Fourier series of functions even or oddly extended. (Russian) *Trudy Moskov. Orden. Lenin. Energet. Inst. No. 357* (1978), 88–91. (L. Gogoladze) **81h:42059** 42B05
- Prokhorov, D. V.** Linearly invariant extensions of families of analytic functions. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1979, no. 9, 41–47. (V. Liniš) **81h:30030** 30C45
- Prokhorov, Ju. V.** See *Mathematical encyclopedia*, **81c:00086a**; *Mathematical encyclopedia*, **81c:00086b** and *Lehmann, Erich*, **81h:62004**
- Prokhorov, L. V.** (with Sazonov, E. A.) Classical dynamics and quasiclassical approximation in theories with anticommuting variables. (Russian. English summary) *Vestnik Leningrad. Univ. Fiz. Him.* 1980, vyp. 2, 12–18, 122. (Authors' summary) **81h:81183** 81E99 (22E65, 58F06)
- Prokhorova, A. V.** The Noether property of certain Šilov-Lopatinskii boundary value problems. (Russian) *Boundary value problems for partial differential equations (Russian)*, pp. 92–96, 165, "Naukova Dumka", Kiev, 1978. (M. O. Bašelevič) **81a:35027** 35J25
- Prokhorova, R. A.** Linear systems with concentrated perturbations. II. (Russian) *Vestnik Belorus. Gos. Univ. Ser. I* 1979, no. 1, 37–42, 86. (Author's summary) **81g:34066** 34D10
- Prokhorov, E. V.** Calculation of anomalies in gauge theories by the "proper time" method. (Russian. English summary) *Vestnik Leningrad. Univ. Fiz. Him.* 1979, vyp. 3, 12–17.

114. (Author's summary) **81a:81056** 81E10
- Prokopov, B. I.** (with Kopysov, O. Ju.) On modal control of linear stationary plants with unknown parameters. With an English translation. *Problems Control Inform. Theory/Problemy Upravlen. Teor. Inform.* 9 (1980), no. 3, 195–202. (Authors' summary) **81f:93038** 93C05 (93C45)
- Prokopović, G. S.** (with Prokopović, R. N.) On the stability and accuracy of the solutions of systems of linear equations. (Russian) *Vestnik L'vov. Politehn. Inst. No. 141 Differentsial'nye Uravneniya i ih Prilozhen.* (1980), 75–76, 122. (Authors' summary) **81i:65028** 65F10 (15A06)
- Prokopović, R. N.** (with Prokopović, G. S.) On the stability and accuracy of the solutions of systems of linear equations. (Russian) *Vestnik L'vov. Politehn. Inst. No. 141 Differentsial'nye Uravneniya i ih Prilozhen.* (1980), 75–76, 122. (Authors' summary) **81i:65028** 65F10 (15A06)
- Prolla, João Bosco** Differential functions on Banach spaces and the approximation property. (Portuguese) *Proceedings of the Tenth Brazilian Mathematical Colloquium (Poços de Caldas, 1975), Vol. 1 (Portuguese), pp. 249–255, Cons. Nac. Desenvolvimento Ci. Tec., Inst. Mat. Pura Apl., Rio de Janeiro, 1978.* (E. Dubinsky) **81b:46023** 46B20 (with Machado, S.) The general complex case of the Bernstein-Nachbin approximation problem. (French summary) *Ann. Inst. Fourier (Grenoble)* 28 (1978), no. 1, vii, 193–206. (From the introduction) **81g:46069** 46J10 (41A65)
- The approximation property for Nachbin spaces. *Approximation theory and functional analysis (Proc. Internat. Symp. Approximation Theory, Univ. Estadual de Campinas, Campinas, 1977), pp. 371–382, North-Holland Math. Studies, 35, North-Holland, Amsterdam, 1979.* (Klaus-Dieter Bierstedt) **81j:46030** 46E10 (41A65, 46A32, 46M05)
- (with Aron, Richard M.) Polynomial approximation of differentiable functions on Banach spaces. *J. Reine Angew. Math.* 313 (1980), 195–216. (Ph. Noverraz) **81c:41078** 41A65 (46B99)
- Proschan, Frank** (with Sethuraman, Jayaram) Two generalizations of Muirhead's theorem. *Bull. Calcutta Math. Soc.* 69 (1977), no. 6, 341–344. (J. V. Ryff) **81c:26015** 26D15 (with Singpurwalla, Nozer D.) Accelerated life testing—a pragmatic Bayesian approach. *Optimizing methods in statistics (Proc. Internat. Conf., Indian Inst. Tech., Bombay, 1977), pp. 385–401, Academic Press, New York, 1979.* (Moshe Shaked) **81b:62111** 62N05
- (with Langberg, N. A.) A reliability growth model involving dependent components. *Ann. Probab.* 7 (1979), no. 6, 1082–1087. (Henry W. Block) **81f:62146** 62N05 (60K10)
- (with Hollander, Myles) Testing to determine the underlying distribution using randomly censored data. (French summary) *Biometrics* 35 (1979), no. 2, 393–401. (Bruce W. Turnbull) **81a:62034** 62G10 (62N05)
- (with Hollander, Myles) Amendments and corrections: "Tests for the mean residual life" [Biometrika 62 (1975), no. 3, 585–593; MR 52 #15917]. *Biometrika* 67 (1980), no. 1, 259. (Editors) **81c:62109** 62N05
- Proskurin, A. V.** Positive rudimentaryity of the graphs of Ackermann and Grzegorzczk functions. (Russian. English summary) *Studies in constructive mathematics and mathematical logic, VIII. Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 88 (1979), 186–191, 244–245. (S. A. Berezin) **81b:03044** 03D20
- Proskurin, N. V.** The summation formulas for general Kloosterman sums. (Russian) *Studies in number theory, 5. Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 82 (1979), 103–135, 167. (Larry J. Goldstein) **81f:10042** 10D40 (10D24)
- On the Ju. V. Linnik conjecture. (Russian. English summary) *Analytic number theory and the theory of functions, 2. Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 91 (1979), 94–118, 181. (Larry J. Goldstein) **81m:10073** 10G10
- Convolutions of Dirichlet series with Fourier coefficients of cusp form of weight 0. (Russian) *Studies in number theory, 6. Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 93 (1980), 204–217, 228. (O. M. Fomenko) **81m:10059** 10D40 (10D15, 22E45, 30B50)
- Proskurovskii, Andrej** (with Overtun, Michael L.) Canonical incidence matrices of graphs. *BIT* 19 (1979), no. 2, 271–273. (Armin Cremers) **81c:08085** 68E10 (05C50, 68B15)
- Centers of 2-trees. *Combinatorics 79 (Proc. Colloq., Univ. Montréal, Montréal, Que., 1979), Part II. Ann. Discrete Math.* 9 (1980), 1–5. (James R. Evans) **81m:05062** 05C05
- (with Farley, Arthur M.) Computation of the center and diameter of outerplanar graphs. *Discrete Appl. Math.* 2 (1980), no. 3, 185–191. (Authors' summary) **81j:05094** 05C99 (05-04)
- Centers of maximal outerplanar graphs. *J. Graph Theory* 4 (1980), no. 1, 75–79. (Zevi Miller) **81a:05071** 05C30
- Prosmak, Włodzimierz J.** The theory of the design problem for multiplanes. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Tech.* 26 (1978), no. 6, 601–609. (From the summary) **81b:76006** 76B05
- (with Klonowska, Maria E.) Unsteady potential flow around an arbitrary system of profiles. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Tech.* 27 (1979), no. 2, 231–242. (E. Meister) **81a:76007** 76B05 (73J10)
- Prospert, André** Normal-mode analysis for the oscillations of a viscous liquid drop in an immiscible liquid. (French summary) *J. Mécanique* 19 (1980), no. 1, 149–182. (Author's summary) **81g:76047** 76D99 (76E99)
- The motion of a charged particle in a uniform magnetic field. (Italian and Russian summaries) *Nuovo Cimento B* (11) 57 (1980), no. 2, 253–268. (Author's summary) **81g:78017** 78A35 (76X05)
- Prüßler, Siegfried** Über die näherungsweise Lösung von singulären Integralgleichungen. *Komplexe Analysis und ihre Anwendung auf partielle Differentialgleichungen (Tagung, Martin-Luther-Universität, Halle, 1976). Wiss. Beitr. Martin-Luther-Univ. Halle-Wittenberg M 27* (1977), 40–44. (Author's introduction) **81m:45018** 45L05 (45E05)
- ★ Некоторые классы сингулярных уравнений. (Russian) [Some classes of singular equations] Translated from the German by E. D. Solomencov. "Mir", Moscow, 1979. 493 pp. (Editors) **81j:45005** 45Exx
- Prosser, M. F.** (with Cornwell, L. W.; Koeman, M. G.) Computational experience with Davidson's least-square algorithm. *J. Optim. Theory Appl.* 31 (1980), no. 1, 27–39. (Authors' summary) **81k:90086** 90C30
- Prosser, Reese T.** Formal solutions of inverse scattering problems. III. *J. Math. Phys.* 21 (1980), no. 11, 2648–2653. (Harry E. Moses) **81m:81058** 81F05 (35A25, 35P25)
- Protas, David** (with Chow, Kwang Nan) The bounded, analytic, Dirichlet finite functions and their fibers. *Arch. Math. (Basel)* 33 (1979/80), no. 6, 575–582. (J. A. Cima) **81d:30057** 30D55
- Protati, M.** (with Ausiello, Giorgio; Marchetti-Spaccamela, A.) Toward a unified approach for the classification of NP-complete optimization problems. *Theoret. Comput. Sci.* 12 (1980), no. 1, 83–96. (Selim G. Akl) **81k:68027** 68C25 (03D15)
- Protasov, A. V.** (with Marčuk, G. I.; Penenko, V. V.) The variational principle in a small parameter model of atmospheric dynamics. (Russian) *Variational-difference methods in mathematical physics (Proc. All-Union Conf., Novosibirsk, 1977)* (Russian), pp. 213–229, Akad. Nauk SSSR Sibirsk. Otdel., Vyčisl. Centr., Novosibirsk, 1978. (A. K. Guc) **81g:66006** 86A35 (49H05)
- Protasov, I. V.** (with Čarin, V. S.) Projections of topological groups. (Russian) *Ural. Gos. Univ. Mat. Zap.* 11 (1978), no. 1, 145–156, iv. (Helmut Bock) **81c:22012** 22D05
- (with Tretjak, V. P.; Čarin, V. S.) On the covering problem. (Russian. English summary) *Issled. Operacii i ASU No. 14* (1979), 61–65, 134. (Authors' summary) **81d:90072** 90C08 (05A15, 90B05)
- Local theorems for topological groups. (Russian) *Izv. Akad. Nauk SSSR Ser. Mat.* 43 (1979), no. 6, 1430–1440. (K. A. Ross) **81c:22013** 22D05 (54B20)
- On the theory of topological algebraic systems. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A No. 1* (1980), 15–17, 92. (Jan Chivalina) **81c:08002** 08A05 (54H13)
- Prothero, A.** See Survey of numerical methods for partial differential equations, **81b:65002**
- Protsenko, A. M.** See Protsenko, A. M.
- Protsenko, V. S.** See Protsenko, V. S.
- Protter, Philip** Stochastic differential equations with jump reflection at the boundary. *Stochastics* 3, no. 3, 193–201 (1980). (Halim Doss) **81c:60087** 60H10
- Prouse, G.** Analysis of Navier-Stokes type equations associated to mathematical models in fluid dynamics. *Approximation methods for Navier-Stokes problems (Proc. Symp., Univ. Paderborn, Paderborn, 1979), pp. 399–407, Lecture Notes in Math., 771, Springer, Berlin, 1980.* (Michael Wiegner) **81f:35096** 35Q10 (76D05)
- Provan, J. Scott** (with Billera, Louis J.) A decomposition property for simplicial complexes and its relation to diameters and shellings. *Second International Conference on Combinatorial Mathematics (New York, 1978), pp. 82–85, Ann. New York Acad. Sci., 319, New York Acad. Sci., New York, 1979.* (H. E. Debrunner) **81f:52010** 52A25 (90C10)
- Provat, J. P.** (with Vallee, G.) Riemannian structure on manifolds of quantum states. *Comm. Math. Phys.* 76 (1980), no. 3, 289–301. (Evangelos Ifantidis) **81k:81039** 81C99 (58B20, 58F00)
- Prucnal, Paul R.** (with Teich, Malvin Carl) An increment threshold law for stimuli of arbitrary statistics. *J. Math. Psych.* 21 (1980), no. 2, 168–177. (Authors' summary) **81d:54020** 94A34 (92A27)
- Prucnal, Tadeusz** On two problems of Harvey Friedman. *Studia Logica* 38 (1979), no. 3, 247–262. (L. L. Maksimova) **81b:03040** 03B45 (03B55)
- (with Dyda, Kazimiera) On finitely based consequence determined by a distributive lattice. *Polish Acad. Sci. Inst. Philos. Sociol. Bull. Sect. Logic* 9 (1980), no. 2, 60–66. (A. Rose) **81m:03037** 03B99
- Prudnikov, V. V.** Instability of a layer of a conducting viscous fluid surrounding a solid rod. *Magnit. Gidrodinamika No. 4* (1979), 24–28 (Russian); translated as *Magnetohydrodynamics* 15 (1979), no. 4, 376–380 (1980). (From the text) **81g:76054** 76E25
- Prusken, A. M. M.** (with Houghton, A.; Jevicki, A.; Kenway, R. D.) Noncompact α -models and the existence of a mobility edge in disordered electronic systems near two dimensions. *Phys. Rev. Lett.* 45 (1980), no. 5, 394–397. (Authors' summary) **81j:82020** 82A42
- Prum, Bernard** (with Guyon, Xavier) Formule de Itô pour des martingales faibles sur \mathbb{R}^2 . Fonctions harmoniques faibles. Applications. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 296 (1978), no. 5, A281–A284. (Authors' summary) **81c:60050** 60C44 (60G48, 60H05)
- (with Guyon, Xavier) Différents types de variations-produit pour une semi-martingale représentable à deux paramètres. (English summary) *Ann. Inst. Fourier (Grenoble)* 29 (1979), no. 3, 295–317. (J. Walsh) **81c:60054** 60C48 (60H05)
- (with Guyon, Xavier) Identification et estimation d'un modèle de semi-martingale à indice dans \mathbb{R}^2 . (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 10, A487–A490. (Authors' summary) **81f:60066** 60G44 (60G30, 94A12)
- Pruscha, Helmut** (with Theodorescu, Radu) Recurrence and transience for discrete parameter stochastic processes. *Transactions of the Eighth Prague Conference on Information Theory, Statistical Decision Functions, Random Processes (Prague, 1978), Vol. B, pp. 97–105, Reidel, Dordrecht, 1978.* (Richard Isaac) **81a:60068** 60G99 (60J10)
- Prusakiewicz, Przemysław** Recognizing of Chomsky classes of formal languages by two-dimensional iterative arrays. *Fundamentals of computation theory (Proc. Conf. Algebraic, Arith. and Categorical Methods in Comput. Theory, Berlin/Wendisch-Rietz, 1979), pp. 355–361, Math. Research, 2, Akademie-Verlag, Berlin, 1979.* (Author's introduction) **81d:68113** 68F10
- (with Stepigó, Cezary) A digital method of computing the inverse function. (Polish. Russian and English summaries) *Arch. Automat. Telemekh.* 24 (1979), no. 4, 443–452. (Authors' summary) **81a:65129** 65V05 (68C05)
- Prusov, A. V.** (with Nelepo, B. A.; Dvorjaninov, G. S.) Generation of stationary temperature boundary layers by surface waves. *Izv. Akad. Nauk SSSR Ser. Fiz. Atmosf. i Okeana* 15 (1979), no. 3 (Russian); translated as *Izv. Acad. Sci. USSR Atmosf. Ocean. Phys.* 15 (1979), no. 3, 214–220 (1980). (Authors' summary) **81f:76019** 76D10 (76R10, 86A05)
- Prüss, Jan** Periodic solutions of semilinear evolution equations. *Nonlinear Anal.* 3 (1979), no. 5, 601–612. (H. O. Fattorini) **81a:34061** 34G20
- A note on strict solutions to semilinear evolution equations. *Math. Z.* 171 (1980), no. 3, 285–288. (K. Goebel) **81k:34060** 34G20
- Pruska, Tadeusz** Operational equations in linear normed spaces and boundary value problems. *Demonstratio Math.* 12 (1979), no. 1, 37–62. (I. Fenýő) **81k:47018** 47A50 (44A99)
- Pruzaneky, Sandra** (with Carroll, J. Douglas; Kruskal, Joseph B.) CANDELINC: a

- general approach to multidimensional analysis of many-way arrays with linear constraints on parameters. *Psychometrika* 45 (1980), no. 1, 3-24. (Authors' summary) 81d:62051 62H25 (62-07, 62J05)
- Prvanović, Milica** Product semimetric connections of the locally decomposable Riemannian spaces. *Bull. Acad. Serbe Sci. Arts Cl. Sci. Math. Natur. (N.S.)* No. 10 (1979), 17-27. (E. M. Patterson) 81m:53028 53B20
- Pryde, A. J.** Spaces with homogeneous norms. *Bull. Austral. Math. Soc.* 21 (1980), no. 2, 189-205. (Moshe Marcus) 81k:46036 46E35 (31C15)
- Second order elliptic boundary value problems in spaces with homogeneous norms. *J. Austral. Math. Soc. Ser. A* 29 (1980), no. 1, 1-13. (D. E. Edmunds) 81f:35037 35J25
- Przylik, A. S.** See **Priglik, O. S.**
- Przanowski, M.** Remarks concerning the geometry of null strings. *Acta Phys. Polon. B* 10 (1979), no. 11, 945-950. (J. D. Finley, III) 81f:83013 83C20 (53B35)
- Przeworska-Rolewicz, Danuta** ★ Wstęp do analizy algebraicznej i jej zastosowań. (Polish) [Introduction to algebraic analysis and its applications] *Wydawnictwa Naukowo-Techniczne (WNT), Warsaw, 1979. 244 pp. ISBN 83-204-0133-X (R. Bittner) 81d:44007 44A40 (35A25, 47A50)*
- New approach to systems with transformed argument. *Game theory and related topics (Proc. Sem., Bonn and Hagen, 1978), pp. 243-246, North-Holland, Amsterdam, 1979. (N. K. Karapetjan) 81d:47006 47A50*
- Some remarks on shifts for right invertible operators. *Functional differential systems and related topics (Proc. First Internat. Conf., Białeżyko, 1979), pp. 274-279, Higher College Engrg., Zielona Góra, 1980. (I. Fenyő) 81m:47007 47A05*
- Picone's identity for right invertible operators. *Special topics of applied mathematics (Proc. Sem., Ges. Math. Datenverarbeitung, Bonn, 1979), pp. 27-31, North-Holland, Amsterdam, 1980. (I. Fenyő) 81m:47008 47A05*
- Right inverses and Volterra operators. *J. Integral Equations* 2 (1980), no. 1, 45-56. (C. Corduneanu) 81h:47001 47A05
- Przytylak, Franciszek** Generalized one-dimensional knapsack function. (Polish. Russian and English summaries) *Zeszyty Nauk. Politech. Śląsk. Mat.-Fiz. No. 35* (1979), 147-154. (Author's summary) 81h:90083 90B25
- Calculation of a one-dimensional knapsack function. (Polish. Russian and English summaries) *Zeszyty Nauk. Politech. Śląsk. Mat.-Fiz. No. 35* (1979), 155-164. (Author's summary) 81g:90066 90C10 (90C30)
- Przytyło, Wacław** (with Pabisek, Ewa; Radwańska, Maria; Waszczyszyn, Zenon) A program for computing ribbed plates described on a rectangular grid. (Polish. English and Russian summaries) *Mechanics and computers, Vol. 2 (Polish), pp. 177-186, PWN, Warsaw, 1980. (See 81m:73008) 73K30*
- Przytycki, Teodor C.** Product spaces. *Surveys in general topology, pp. 399-429, Academic Press, New York, 1980. (Jerry F. Williams) 81b:54009 54B10 (54-03)*
- On the equivalence of certain set-theoretic and topological statements. *Topology (Proc. Fourth Colloq., Budapest, 1978), Vol. II, pp. 999-1003, Colloq. Math. Soc. János Bolyai, 23, North-Holland, Amsterdam, 1980. (Editors) 81b:53049 03E35 (54A99)*
- Products of perfectly normal spaces. *Fund. Math.* 106 (1980), no. 2, 129-136. (Thomas W. Rishel) 81m:54030 54D15 (54B10)
- The existence of Q -sets is equivalent to the existence of strong Q -sets. *Proc. Amer. Math. Soc.* 79 (1980), no. 4, 626-628. (William G. Fleissner) 81k:54046 54E35
- Przytycki, Teodor** See **Rybka, Eugeniusz**, 81m:01073
- Przytycki, Jerzy A.** See **Modern trends in the theory of condensed matter**, 81h:82002
- Przytycki, Józef H.** Free actions of Z_n on handlebodies and surfaces. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math. Astron. Phys.* 26 (1978), no. 7, 617-624. (S. Y. Hussein) 81h:57025 57S17 (57M99)
- Some remarks on actions of Z_n -groups on 3-manifolds. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math. Astron. Phys.* 26 (1978), no. 7, 625-633. (S. Y. Hussein) 81h:57026 57S17 (57M99)
- Psenčikov, V. I.** Finite dimensionality of locally bicomact lattice-ordered groups with a relatively closed n -continuous order. (Russian) *Taškent. Gos. Univ. Sb. Naučn. Trudov No. 573 Funkcional. Anal. (1978), 72-74, 111. (J. Jakubík) 81d:06027 06F15*
- The construction of certain lattice-ordered groups with a topology. (Russian) *Taškent. Gos. Univ. Sb. Naučn. Trudov No. 573 Funkcional. Anal. (1978), 74-76, 111. (J. Jakubík) 81d:06028 06F15*
- Psenčikov, B. N.** (with Rappoport, I. S.) On solving a problem of simple pursuit of several control objects. (Russian) The group pursuit problem in linear differential n -person games. *Akad. Nauk Ukrain. SSR Inst. Kibernet. Preprint No. 47* (1979), 3-6, 47. (Editors) 81d:90122 90D26
- (with Jakovleva, A. P.) Necessary conditions for an extremum in application to systems with aftereffect. *Kibernetika (Kiev)* 1979, no. 3, 108-109, 124 (Russian); translated as *Cybernetics* 15 (1979), no. 3, 427-429 (1980). (From the text) 81a:93044 93C30
- (with Mahmudov, E. N.) Polyhedral mappings. (Russian. Azerbaijani and English summaries) *Izv. Akad. Nauk Azerbaidžan. SSR Ser. Fiz.-Tehn. Mat. Nauk* 1979, no. 2, 10-15. (Joachim Hirche) 81g:52007 52A25 (90C99)
- (with Redkovskij, N. N.) Some methods of unconditional minimization. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 19 (1979), no. 5, 1127-1133, 1355. (B. T. Poljak) 81a:65063 65K10
- ★ Выпуклый анализ и экстремальные задачи. (Russian) [Convex analysis and extremal problems] Серия "Недифференциальный Анализ и его Приложения". [Series in Nonlinear Analysis and its Applications] "Nauka", Moscow, 1980. 320 pp. (J. Abraham) 81k:90000 90C25
- (with Sobolenko, L. A.) Acceleration of the convergence of the linearization method for a problem of conditional minimization. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 20 (1980), no. 3, 605-614, 811. (Gerhard Teschow) 81g:65085 65K10 (49D30, 90C30)
- Prisk, Vladimir** Stability of exactness. Special issue dedicated to Władysław Orlicz on the occasion of his seventy-fifth birthday. *Comment. Math. Special Issue* 2 (1979), 283-288. (Boro Döring) 81e:47016 47A55
- A rate of convergence. *Numer. Funct. Anal. Optim.* 1 (1979), no. 3, 255-271. (M. Z. Nashed) 81f:65045 65J15 (58C15)
- Commutators in Banach algebras. *Proc. Edinburgh Math. Soc. (2)* 22 (1979), no. 3, 207-211. (T. W. Palmer) 81a:46055 46H20
- Factorization in Banach algebras. *Studia Math.* 65 (1979), no. 3, 279-285. (Marianne Freudenthal Smith) 81k:46057 46H25
- (with Potra, Florian Alexandru) On a class of modified Newton processes. *Numer. Funct. Anal. Optim.* 2 (1980), no. 1, 107-120. (Marian Fabian) 81m:65096 65J15 (58C15)
- (with Potra, Florian Alexandru) Sharp error bounds for Newton's process. *Numer. Math.* 34 (1980), no. 1, 63-72. (Marian Fabian) 81f:65027 65J05 (58C15, 65H10)
- A lower bound for the spectral radius. *Proc. Amer. Math. Soc.* 80 (1980), no. 3, 435-440. (Zdeněk Doštal) 81k:15027 15A60 (30D50)
- Psainik, B. I.** (with Bernik, V. I.) A boundary value problem for a system of partial differential equations with constant coefficients. (Russian) *Differentsial'nye Uravnenija* 16 (1980), no. 2, 273-279, 381. (Stefan Balint) 81c:35068 35K50
- (with Poliščuk, V. N.) Periodic solutions of a system of partial differential equations with constant coefficients. (Russian) *Ukrain. Mat. Ž. 32* (1980), no. 2, 239-243, 286. (D. Bainov) 81c:35015 35B10
- Ptolemaeus, Claudius** See **Riddell, R. C.**, 81a:01006
- Pu, Fu Ke** (with Tao, Rui Bao) The spin wave theory of a Heisenberg ferromagnetic system with biquadratic exchange interaction at low temperatures. (Chinese. English summary) *Acta Phys. Sinica* 29 (1980), no. 5, 635-643. (Authors' summary) 81f:82035 82A67
- Pu, Huan Wén** (with Pu, Huo Hui Min) Measurability of approximate derivatives. *Soochow J. Math.* 4 (1978), 51-54. (K. M. Garg) 81l:28008 28A20 (26A24)
- (with Pu, Huo Hui Min; Teng, Ching Hua) Symmetric and approximate symmetric derivatives for symmetric functions. *Soochow J. Math.* 5 (1979), 1-7. (William Eames) 81h:26004 26A24
- (with Pu, Huo Hui Min) On approximate Schwarz derivatives. *Rev. Roumaine Math. Pures Appl.* 25 (1980), no. 2, 257-264. (S. N. Mukhopadhyay) 81g:26003 26A24
- (with Pu, Huo Hui Min; Teng, T. H.) Conditions for the uniform continuity of a real function. *Rev. Roumaine Math. Pures Appl.* 25 (1980), no. 3, 441-444. (F. Brooks) 81e:26001 26A15
- Pu, Huo Hui Min** (with Pu, Huan Wén) Measurability of approximate derivatives. *Soochow J. Math.* 4 (1978), 51-54. (K. M. Garg) 81l:28008 28A20 (26A24)
- (with Pu, Huan Wén; Teng, Ching Hua) Symmetric and approximate symmetric derivatives for symmetric functions. *Soochow J. Math.* 5 (1979), 1-7. (William Eames) 81h:26004 26A24
- (with Pu, Huan Wén) On approximate Schwarz derivatives. *Rev. Roumaine Math. Pures Appl.* 25 (1980), no. 2, 257-264. (S. N. Mukhopadhyay) 81g:26003 26A24
- (with Pu, Huan Wén; Teng, T. H.) Conditions for the uniform continuity of a real function. *Rev. Roumaine Math. Pures Appl.* 25 (1980), no. 3, 441-444. (F. Brooks) 81e:26001 26A15
- Pu, S. L.** (with Hussain, M. A.) Exact solution of coupled pairs of dual trigonometric series. *Rocky Mountain J. Math.* 9 (1979), no. 4, 641-651. (R. B. Kelman) 81b:45007 45F10 (73C35, 73T05)
- (with Hussain, M. A.; Noble, B.) Stress singularity at the vertex of a flat wedge-shaped crack by variational method. *Transactions of the Twenty-Fifth Conference of Army Mathematicians (Johns Hopkins Univ., Baltimore, Md., 1979), pp. 483-502, ARO Rep. 80, 1, U. S. Army Res. Office, Research Triangle Park, N.C., 1980. (Authors' summary) 81a:73043 73M05 (49G05)*
- Puca, Antimo** Criteria for divisibility by 7 and by 13. (Italian) *Archimede* 30 (1978), no. 3, 126-129. (Editors) 81a:10012 10A25
- Pucci, Edvige** A class of ∞^2 nonregular precessions of the gyrostator subject to a Newtonian influence. (Italian. English summary) *Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur.* (8) 62 (1977), no. 3, 348-352. (Author's summary) 81j:70005 70E05
- On a class of semiregular precessions of a gyrostatic satellite in circular orbit. *Rend. Sem. Mat. Univ. Padova* 62 (1980), 245-250. (Z. Janković) 81j:70024 70M05
- Pudlak, Pavel** (with Springsteel, F. N.) Complexity in mechanized hypothesis formation. *Theoret. Comput. Sci.* 8 (1979), no. 2, 203-225. (From the summary) 81h:68054 68C25 (68G15)
- (with Tuma, Jiří) Every finite lattice can be embedded in a finite partition lattice. *Algebra Universalis* 10 (1980), no. 1, 74-95. (James W. Lea, Jr.) 81e:06013 06B15 (05C99)
- Pudovkin, M. A.** (with Salamatina, A. N.; Fomin, S. A.; Čistjakov, V. K.) The effect of the form of the working surface of a hot point drill on the boring factor for ice by melting. (Russian) *Issled. Prikl. Mat. No. 7* (1979), 117-130. (Jiří Nedoma) 81j:86005 86A99 (76R99, 80A20)
- Puech-Roulet, A.** (with Godlewski, E.) Équations d'évolution linéaires du second ordre et méthodes multiples. (English summary) *RAIRO Anal. Numér.* 13 (1979), no. 4, 329-353. (Authors' summary) 81d:65035 65L05 (34G10, 65J10)
- Puel, François** Numerical study of the rectilinear isosceles restricted problem. *Celestial Mech.* 20 (1979), no. 2, 105-123. (Author's summary) 81k:70007 70F07 (58F05, 65L07)
- Puel, Jean-Pierre** Un problème de valeur propre non linéaire et de frontière libre. *Journées d'Analyse Non Linéaire (Proc. Conf., Besançon, 1977), pp. 188-204, Lecture Notes in Math.* 665, Springer, Berlin, 1978. (Jesús Hernández) 81k:35166 35R35 (35P30, 58F07)
- (with Mignot, Fulbert; Murat, François) Variation d'un point de retournement par rapport au domaine. (English summary) *Bifurcation and nonlinear eigenvalue problems (Proc., Session, Univ. Paris XIII, Villetaneuse, 1978), pp. 222-254, Lecture Notes in Math.* 782, Springer, Berlin, 1980. (Z. C. Motteler) 81m:35060 35J65 (35B32)
- (with Mignot, Fulbert) Sur un modèle de flambage pour une plaque mince élastoplastique. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 11, A519-A521. (Authors' summary) 81g:73074 73K10 (73E99)
- Pugačev, B. P.** Application of the continuation method to the solution of nonlinear boundary value problems. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 19 (1979), no. 6, 1596-1598, 1631. (C. Avramescu) 81f:34024 34B15 (34A10, 34A45)
- Cases of divergence of the least squares method in the solution of nonlinear systems. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 20 (1980), no. 3, 763-765, 814. (G. D. Mal'istrov) 81h:65052 65H10
- Pugačev, V. S.** Estimation of variables and parameters in discrete-time nonlinear systems. *Automat. i Telemekh.* 1979, no. 4, 39-50. (Russian. English summary); translated as

- Automat. Remote Control* 40 (1979), no. 4, part 1, 512-521. (O. G. Nakonečnij) 81c:93081 93E10
- Pugh, D.** (with Rai, S. N.) On the eigenfunctions of the Smoluchowski diffusion equation in a double-well potential and their relation to polymer dynamics. *Chem. Phys. Lett.* 75 (1980), no. 3, 497-499. (Authors' summary) 81j:82005 82A05 (82A42, 82A70)
- Puhareva, N. V.** An approximate method for solving integro-differential equations. (Russian) *Voprosy Vyčisl. i Prikl. Mat. (Tashkent)* No. 58 (1979), 20-29, 119-120. (Gheorghe Micula) 81g:65181 65R20
- (with Karimov, A. U.; Koltunov, S. A.) Generalization of Poincaré's method to some classes of integro-differential equations. (Russian) *Dokl. Akad. Nauk UzSSR* 1980, no. 4, 10-14. (C. Avramescu) 81h:45019 45J05 (45M05)
- Puhl, J.** The trace of finite and nuclear elements in Banach algebras. *Czechoslovak Math. J.* 28(103) (1978), no. 4, 656-676. (T. T. West) 81a:47024 47B10 (46H05, 47C05)
- Selfadjoint and completely symmetric operator ideals. *Math. Nachr.* 93 (1979), 331-335. (Bernd Rosenberger) 81m:47061 47D30
- (with Gluskin, E. D.; Pietsch, Albrecht) A generalization of Khintchine's inequality and its application in the theory of operator ideals. *Studia Math.* 67 (1980), no. 2, 149-155. (Bernd Rosenberger) 81m:47031 47B10 (47D30)
- Puhachev, V. V.** Generation of a singularity in the solution of a Stefan-type problem. (Russian) *Differentsial'nye Uravneniya* 16 (1980), no. 3, 492-500, 574. (L. I. Rubinstein) 81f:35049 35K05 (35K20, 80A20)
- Puhov, G. E.** (with Beregovenko, G. Ja.) Operator methods for studying parametric and nonlinear systems. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* No. 8 (1979), 669-672, 689. (Vadim Komkov) 81b:44007 44A15 (93C10)
- (with Ronto, N. I.) An implicit method of high accuracy for the integration of differential equations. (Russian) *Dokl. Akad. Nauk SSSR* 251 (1980), no. 3, 554-557. (K. Vissak) 81k:65083 65L05
- Puhov, S. V.** Approximation of weighted classes of S. L. Sobolev type. (Russian) *Uspehi Mat. Nauk* 34 (1979), no. 3(207), 211-212. (T. Bojanov) 81e:41053 41A46
- Kolmogorov widths of a regular simplex. (Russian. English summary) *Vestnik Moskov. Univ. Ser. I Mat. Meh.* 1980, no. 4, 34-37, 99. (B. Bojanov) 81k:41014 41A46 (41A63, 46C05)
- Puhov, V. V.** (with Drobyšev, Ju. P.) Approximation of fuzzy relations. (Russian) *Vychisl. Sistemy* No. 76 (1978), 75-82, 155. (Authors' summary) 81b:94083 94D05 (03E72, 68G10)
- Puig, Lluís** (with Broué, Michel) A Frobenius theorem for blocks. *Invent. Math.* 56 (1980), no. 2, 117-128. (Harold N. Ward) 81d:20011 20C20
- (with Broué, Michel) Characters and local structure in G-algebras. *J. Algebra* 63 (1980), no. 2, 306-317. (P. Donovan) 81j:20021 20C20
- Puin, Gabriel** Cells of open surfaces. (Romanian. French summary) *Stud. Cerc. Mat.* 31 (1979), no. 2, 245-247. (M. Decuypere) 81e:57007 57N05 (53A05)
- Pujar, S. S.** (with Amur, Krishna) Conformality and isometry of Riemannian manifolds to spheres. II. *J. Differential Geom.* 13 (1978), no. 2, 243-250. (K. Yano) 81b:53033 53C20
- Pujalte, Guy** (with Kurinckx, A.) Analytic methods for multiprocessor system modelling. *Performance of computer systems (Proc. Fourth Internat. Sympos. Modelling Performance Evaluation Comput. Systems, Vienna, 1979)*, pp. 305-318, North-Holland, Amsterdam, 1979. (B. W. Stuck) 81d:68052 68C15 (68B20, 68J05)
- (with Soula, C.) A study of flows in queueing networks and an approximate method for solution. *Performance of computer systems (Proc. Fourth Internat. Sympos. Modelling Performance Evaluation Comput. Systems, Vienna, 1979)*, pp. 375-389, North-Holland, Amsterdam, 1979. (Authors' summary) 81d:60106 60K25 (68C15, 90B22)
- (with Caseau, Paul) Throughput capacity of a sequence of queues with blocking due to finite waiting room. *IEEE Trans. Software Eng.* 5 (1979), no. 6, 631-642. (M. A. Fainberg) 81d:68099 60K25 (68A05, 68C15)
- Pukacz, L.** On Kirillov's character formula. *J. Reine Angew. Math.* 311/312 (1979), 408-440. (A. Kleppner) 81b:22014 22E25 (22E27)
- Pukhlik, Tarso** On the identification of transfer function noise models with several correlated input processes using frequency domain tools. *Acta Univ. Tampere. Ser. A* 110 (1979), 136 pp. (G. Tintner) 81d:62103 62M15 (62P20, 93E12)
- The bias in periodogram ordinates and the estimation of ARMA models in the frequency domain. *Austral. J. Statist.* 21 (1979), no. 2, 121-128. (Peter M. Robinson) 81a:62095 62M15
- Puk, Joe V.** (with Verbeure, A.) Dissipative operators for infinite classical systems and equilibrium. *J. Math. Phys.* 20 (1979), no. 11, 2286-2290. (Fritz Schwarz) 81e:82009 82A05
- (with Frigerio, Alberto; Gorini, Vittorio) Open quasifree systems. *J. Statist. Phys.* 22 (1980), no. 4, 409-433. (Authors' summary) 81j:82016 82A35 (46L60)
- Pulido, Javier** (with Banyaga, Augustin) On the group of contact diffeomorphisms of \mathbb{R}^{2n+1} . *Bol. Soc. Mat. Mexicana (2)* 23 (1978), no. 2, 43-47. (Felice Ronga) 81m:58024 58D05 (57R30)
- Pulleyblank, William R.** Polyhedral optimization and the travelling salesman problem. *Proceedings of the Eighth Manitoba Conference on Numerical Mathematics and Computing (Univ. Manitoba, Winnipeg, Man., 1978)*, pp. 51-64, Congress. Numer., XXII, Utilities Math., Winnipeg, Man., 1979. (Uwe Zimmermann) 81c:90060 90C10 (05C38, 68C25)
- Minimum node covers and 2-bicritical graphs. *Math. Programming* 17 (1979), no. 1, 91-103. (E. Ja. Gabovici) 81e:05088 05C35 (05C70, 90C10)
- Dual integrality in b-matching problems. *Combinatorial optimization. Math. Programming Stud.* No. 12 (1980), 176-196. (Edward Minieka) 81e:90070 90C10 (68E10)
- (with Cornuejols, Gerard) Perfect triangle-free 2-matchings. *Combinatorial optimization. II (Proc. Conf., Univ. East Anglia, Norwich, 1979)*, *Math. Programming Stud.* No. 13 (1980), 1-7. (Authors' summary) 81m:05110 05C70 (68E10)
- Pulliam, H. Ronald** (with Vincent, Thomas L.) Evolution of life history strategies for an asexual annual plant model. *Theoret. Population Biol.* 17 (1980), no. 2, 215-231. (Authors' summary) 81e:92022 92A17 (90C39)
- Pulmanova, Sylvia** Superposition principle and sectors in quantum logics. *Internat. J. Theoret. Phys.* 18 (1979), no. 12, 915-922 (1980). (S. Gudder) 81f:81011 81B10
- Superpositions of states and a representation theorem. *Ann. Inst. H. Poincaré Sect. A (N.S.)* 32 (1980), no. 4, 351-360. (S. Gudder) 81k:81009 81B10 (06C15)
- Pulmano, V. A.** See *Finite element methods in engineering*, 81a:65007
- Pultr, Aleš** (with Břicháček, Václav; Kašitov, Miroslav) A model of seemingly irrational solutions of a task to identify a critical set. *J. Math. Psych.* 18 (1978), no. 3, 220-248. (Authors' summary) 81h:92025 92A25
- On linear representations of graphs. *Fundamentals of computation theory (Proc. Conf. Algebraic, Arith. and Categorical Methods in Comput. Theory, Berlin/Lэндсх-Риет, 1979)*, pp. 362-369, Math. Research, 2, Akademie-Verlag, Berlin, 1979. (László Lovász) 81g:05079 05C50 (05C20)
- (with Břicháček, Václav; Kašitov, Miroslav) Erratum: "A model of seemingly irrational solutions of a task to identify a critical set". *J. Math. Psych.* 20 (1979), no. 1, 89. (Editors) 81h:92025 92A25
- (with Sedivá-Trnková, Věra) ★ Combinatorial, algebraic and topological representations of groups, semigroups and categories. *North-Holland Mathematical Library*, 22. North-Holland Publishing Co., Amsterdam-New York, 1980. x+372 pp. ISBN 0-444-85083-X (J. R. Isbell) 81d:18001 18-02 (18B15)
- Pulvirent, M.** Stability, KMS, and selfadjointness of the Liouville operator in classical systems. (French summary) *Algèbres d'opérateurs et leurs applications en physique mathématique (Proc. Colloq., Marseille, 1977)*, pp. 301-306, Colloques Internat. CNRS, 274, CNRS, Paris, 1979. (Ola Bratteli) 81k:82007 82A05
- (with Esposito, R.) Hierarchical equations of evolution of an anharmonic system. *J. Math. Phys.* 21 (1980), no. 5, 1194-1200. (Authors' summary) 81e:82005 82A05 (60K35)
- (with Benfatto, G.; Marchioro, C.; Presutti, E.) Superstability estimates for anharmonic systems. *J. Statist. Phys.* 22 (1980), no. 3, 349-362. (Richard S. Ellis) 81c:82028 82A67 (82A25)
- (with Marchioro, C.; Pellegrinotti, A.; Triolo, L.) Erratum: "Velocity of a perturbation in infinite lattice systems" [*J. Statist. Phys.* 19 (1978), no. 5, 499-510; MR 80b:82053]. *J. Statist. Phys.* 22 (1980), no. 6, 743. (From the text) 81f:82042 82A67
- Puntambekar, M. N.** Fibonacci related differentials. *J. Indian Acad. Math.* 1 (1979), no. 2, 33-34. (Stanley J. Benkoski) 81j:10023 10A35
- Pupello, A. T.** (with Adamenko, G. M.) The e-approximation gradient for a convex function and some of its properties. (Russian. English summary) *Vestnik Akad. Nauk BSSR Ser. Fiz.-Mat. Nauk* 1980, no. 1, 5-10, 139. (Vadim Komkov) 81b:90125 90C30 (49D07)
- Pupin, A. A.** (with Korol'kov, B. P.) Representation of solutions of dynamics problems of highly intensive heat transfer. *Inž.-Fiz.* 2 (1979), no. 1, 157-165 (Russian); translated as *J. Engng. Phys.* 37 (1979), no. 1, 871-877 (1980). (M. Fabrizio) 81j:80003 80A20
- Puppe, Volker** Deformations of algebras and cohomology of fixed point sets. *Manuscripta Math.* 30 (1979/80), no. 2, 119-136. (J. C. Thomas) 81e:57038 57S15 (55P60)
- Pupyr, V. A.** Relative effectiveness of variational principles in the Ritz method. *Izv. Akad. Nauk SSSR Meh. Teor. Tela* 14 (1979), no. 2, 35-41 (Russian); translated as *Mech. Solids* 14 (1979), no. 2, 36-41. (S. Dost) 81h:49023 49D15 (73D99)
- Pzank, S. S.** (with Bhargava, R. D.) Torsion problem for elastic cylinder with holes. *Comput. Methods Appl. Mech. Engrg.* 21 (1980), no. 1, 63-74. (H. J. Weinitschke) 81e:73014 73C99
- (with Bhargava, R. D.) Torsion problem for elastic cylinder with inserts and holes. *Comput. Methods Appl. Mech. Engrg.* 23 (1980), no. 3, 281-291. (Authors' summary) 81j:73012 73C40
- Purcaru, Ion** On some entropic measures of dependence between random vectors. *Bull. Math. Soc. Sci. Math. R. S. Roumanie (N.S.)* 23(71) (1979), no. 4, 405-409. (I. Vajda) 81e:94009 94A17 (62H20)
- On J-divergence and its connections with measures of dependence. *Rev. Roumaine Math. Pures Appl.* 24 (1979), no. 8, 1237-1250. (Gur Dial) 81e:94013 94A17 (62H20)
- On some information-theoretic problems in systems theory. (Romanian. English summary) *Stud. Cerc. Mat.* 32 (1980), no. 1, 91-102. (Author's summary) 81j:93013 93A99 (94A17)
- Parcell, Noel J.** (with Kish, Leslie) Estimation for small domains. (French summary) *Biometrics* 35 (1979), no. 2, 365-384. (Authors' summary) 81h:62016 62D05
- Parcell, S.** (with Holton, D. A.) The four-colour theorem—some ideas used in the proof. *Austral. Math. Soc. Gaz.* 6 (1979), no. 2, 35-45. (F. Bernhart) 81i:05067 05C15
- Pardun, Paul Walton, Jr.** (with Brown, Cynthia A.) Semantic routines and LR(k) parsers. *Acta Inform.* 14 (1980), no. 4, 299-315. (Authors' summary) 81m:68064 68F25
- (with Brown, Cynthia A.) Exact formulas for the buddy system. *Inform. Sci.* 22 (1980), no. 1, 1-18. (Authors' summary) 81d:68034 68B15
- (with Brown, Cynthia A.; Robertson, Edward L.) Backtracking with multilevel dynamic search rearrangement. *Acta Inform.* 15 (1981), no. 2, 99-113. (Authors' summary) 81m:68049 68E05
- (with Brown, Cynthia A.) Parsing extended LR(k) grammars. *Acta Inform.* 15 (1981), no. 2, 115-127. (Authors' summary) 81m:68065 68F25
- Pardue, P.** (with Linton, D.) An M/G/∞ queue with m customer types subject to periodic clearing. *Opersearch* 16 (1979), no. 2-3, 80-87. (Shaler Stidham, Jr.) 81e:60101 60K25 (90B22)
- Pardy, George B.** (with Burton, G. R.) The directions determined by n points in the plane. *J. London Math. Soc. (2)* 20 (1979), no. 1, 109-114. (E. Morgantini) 81d:52006 52A40 (05A15)
- On the number of regions determined by n lines in the projective plane. *Geom. Dedicata* 9 (1980), no. 1, 107-109. (Libuše Marková) 81e:51002 51A20
- Triangles in arrangements of lines. II. *Proc. Amer. Math. Soc.* 79 (1980), no. 1, 77-81. (J. W. Freeman) 81f:05059 05B35 (52A40)
- (with Neaderhouser, Carla C.) Threshold functions for random hypergraphs. *Utilities Math.* 17 (1980), 179-187. (Claude Benzaken) 81k:05079 05C65 (05C99)
- Pari, M. C.** (with Bakhshi, H. C.) An efficient technique for extreme point mathematical programming problems. *Cahiers Centre Études Rech. Opér.* 21 (1979), no. 3, 257-268. (John J. Dinkel) 81e:90053 90C08 (90C32)
- (with Bakhshi, H. C.; Bhatia, H. L.) Trade-off relations in assignment problems. *Cahiers Centre Études Rech. Opér.* 21 (1979), no. 4, 367-374. (Authors' summary) 81b:90009 90B35 (90B10)
- (with Bansal, Sushma) A note on the min max problem in geometric programming. *Opersearch* 16 (1979), no. 4, 143-146. (Authors' summary) 81j:90171 90C30

- (with Bakshi, H. C.) A study of cost variations in extreme point mathematical programming problems. *Indian J. Pure Appl. Math.* 11 (1980), no. 7, 829-837. (M. C. Cheng) **81g:90087** 90C31
- (with Bansal, Sushma) Trade-off relations in a min max problem. *New Zealand Oper. Res.* 8 (1980), no. 1, 73-81. (Authors' summary) **81a:90130** 90C30
- (with Bansal, Sushma) A min max problem. (German summary) *Z. Oper. Res. Ser. A-B* 24 (1980), no. 5, 191-200. (From the summary and text) **81h:90092** 90C08
- Puri, Madan Lal (with Hsu, Shih Hsiung) Realization of L_2 by spaces of random variables. *Applicable Anal.* 8 (1978/79), no. 4, 337-347. (Gilles Pisier) **81h:60011** 60B11
- (with Tran, Lanh Tat) Local maxima of the sample functions of the N -parameter Besel process. *Stochastic Process. Appl.* 9 (1979), no. 2, 137-145. (S. J. Taylor) **81g:60037** 60G17
- Puri, Narindra Nath (with Sannuti, Peddappaiah) Symbolic network analysis—an algebraic formulation. *IEEE Trans. Circuits and Systems* 27 (1980), no. 8, 679-687. (Guy Jumarie) **81j:94052** 94C99 (15A99, 90B40)
- Puri, R. R. (with Lawande, S. V.) A master equation for spontaneous emission from a system of harmonic oscillators. *Phys. Lett. A* 69 (1978/79), no. 3, 161-163. (Authors' summary) **81h:82030** 82A35 (81K05)
- (with Lawande, S. V.) Time-dependent invariants and stable coherent states. *Phys. Lett. A* 70 (1979), no. 2, 69-70. (Authors' summary) **81h:81049** 81C99
- (with Lawande, S. V.) Exact steady-state density operator for a collective atomic system in an external field. *Phys. Lett. A* 72 (1979), no. 3, 200-202. (Authors' summary) **81h:81132** 81K05
- (with Lawande, S. V.) Exact thermodynamic behaviour of a collective atomic system in an external field. *Phys. A* 101 (1980), no. 2-3, 599-612. (Authors' summary) **81d:82016** 82A15 (81K05)
- (with Hassan, S. S.; Bullough, R. K.; Lawande, S. V.) Intensity fluctuations in a driven Dicke model. *Phys. A* 103 (1980), no. 1-2, 213-225. (Authors' summary) **81h:81129** 81K05
- Purkert, Walter (with vom Scheidt, Jürgen) Zur approximativen Lösung des Mittelungsproblems für die Eigenwerte stochastischer Differentialoperatoren. (English and Russian summaries) *Z. Angew. Math. Mech.* 57 (1977), no. 9, 515-525. (Authors' summary) **81h:60083** 60H10 (34F05, 70L05, 82A42)
- (with vom Scheidt, Jürgen) Ein Grenzwertsatz für stochastische Eigenwertprobleme. (English and Russian summaries) *Z. Angew. Math. Mech.* 59 (1979), no. 11, 611-623. (D. Bobrowski) **81e:60069** 60H10 (34F05)
- Purmonen, Veikko T. On generalized a priori estimates for quasi-elliptic differential operators. *Ann. Acad. Sci. Fenn. Ser. A I Math.* 4 (1979), no. 2, 227-252. (Manfred W. Kracht) **81h:35021** 35B45 (35J40, 47F05)
- Pursiello, U. Conjugate duality in the optimization of the search for a target with generalized conditionally deterministic motion. *J. Optim. Theory Appl.* 31 (1980), no. 2, 261-275. (Authors' summary) **81m:90118** 90D26
- Pursey, Michael B. (with Mackenthun, Kenneth M., Jr.) Variable-rate universal block source coding subject to a fidelity constraint. *IEEE Trans. Inform. Theory* 24 (1978), no. 3, 349-360. (From the introduction) **81f:94014** 94A29
- Purushotham, G. (with Aswarthnarayana, C.) On vortex-line geometry in pseudostationary spatial gas flows. *Tensor (N.S.)* 33 (1979), no. 1, 11-20. (J. F. Clarke) **81h:76026** 76N15 (53A25)
- Purushothaman, R. (with Chawla, S. S.) Spin-up in the Bödewadt flow. *J. Math. Anal. Appl.* 71 (1979), no. 2, 463-481. (Howard Swann) **81d:76095** 76U05 (76D05)
- Purzitsky, N. On Tsuji's and Pommerenke's examples for Fuchsian groups of convergence type. *Comment. Math. Helv.* 55 (1980), no. 2, 193-198. (A. M. Macbeath) **81j:20065** 20H10 (30F35)
- Puycay, Elena N. On the connection objects of second order. *An. Ştiinţ. Univ. "Al. I. Cuza" Iaşi Sec. I a Mat. (N.S.)* 25 (1979), suppl., 27-32. (L. Tamásy) **81m:53022** 53B15
- Puskas, Csaba Notes on generalized endomorphism semigroups of automata without outputs. *Selected papers on mathematics*, pp. 35-44, *DM* 80, 1, Karl Marx Univ. Econom., Budapest, 1980. (Dominique Perrin) **81m:68044** 68D30 (20M35)
- Pulkarov, S. K. Estimates of the probability of failure of a Poisson-exponential queueing system with servers of differing efficiency. (Russian. English summary) *Issled. Operacii i ASU* No. 14 (1979), 93-99, 135. (Authors' summary) **81a:60112** 60K25 (90B22)
- Pusteris, M. (with Minelli, T. A.; Roberty, N. C.) Analytical approximate solutions of the nonlinear basic equations in classical physics. *Lett. Nuovo Cimento* (2) 27 (1980), no. 11, 331-335. (B. Buti) **81h:34011** 34A45 (76X05, 78A55)
- Pustovoi, I. P. (with Marko, V. F.; Maksymiv, E. M.) Nonlinear Taylor-Aitken formulas. (Russian) *Vestnik L'vov. Politehn. Inst. No. 141 Differentsial'nye Uravneniya i ih Prilozhen.* (1980), 60-62, 120. (Authors' summary) **81h:65017** 65D15
- Pustovoi, N. L. (with Frolova, P. V.) The nonlinear formula of Darboux-Aitken. (Russian) *Vestnik L'vov. Politehn. Inst. No. 141 Differentsial'nye Uravneniya i ih Prilozhen.* (1980), 94-95, 126. (Authors' summary) **81h:65015** 65D15
- Pustovoi, M. O. Construction of a Ljapunov function by the perturbation method. (Russian) *Asymptotic methods in the theory of nonlinear oscillations (Proc. All-Union Conf. Asymptotic Methods in Nonlinear Mech., Katsiveli, 1977)* (Russian), pp. 171-178, 276, "Naukova Dumka", Kiev, 1979. (G. S. Ladde) **81h:34061** 34D20
- Pustynnik, E. I. Some inequalities in the theory of selfadjoint operators. (Russian) *Izv. Vysš. Uchebn. Zaved. Matematika* 1979, no. 6, 52-57. (J. Peetre) **81h:46084** 46M35 (26A51, 47B25)
- Pustynnik, L. D. The algebraic structure of spaces of Toeplitz and Hankel matrices. (Russian) *Dokl. Akad. Nauk SSSR* 250 (1980), no. 3, 556-559. (S. Kurepa) **81g:15027** 15A57
- Pustynnik, L. M. Integral equations of optimal moving control in distributed parameter systems. *Avtomat. i Telemekh.* 1979, no. 12, 42-50. (Russian. English summary); translated as *Automat. Remote Control* 40 (1979), no. 12, part 1, 1743-1749 (1980). (S. E. Aidarous) **81k:93031** 93C22
- van der Put, M. Discontinuous groups. *Proceedings of the Conference on p-adic Analysis (Nijmegen, 1978)*, pp. 161-171, Report, 7806, Katholieke Univ., Nijmegen, 1978. (Yasuo Morita) **81d:10023** 10D30 (14D15, 14G20)
- Putra, Mirocea (with Craioveanu, M.) On the cohomology with currents of a compact Kähler manifold. *An. Univ. Timişoara Ser. Ştiinţ. Mat.* 16 (1978), no. 2, 139-147 (1979).
- (M. Herrera) **81e:58007** 58A25 (58A14)
- de Rham currents and electromagnetic field. *An. Univ. Timişoara Ser. Ştiinţ. Mat.* 17 (1979), no. 1, 73-80. (J. Lawrynowicz) **81j:78008** 78A25 (58A25, 83C50)
- Sur la cohomologie relative des courants. *Bull. Math. Soc. Sci. Math. R. S. Roumanie (N.S.)* 23(71) (1979), no. 4, 411-418. (K.-T. Chen) **81h:58007** 58A20
- Putcha, Mohan S. (with Yaqub, Adil) Rings with constraints on nilpotent elements and commutators. *Studia Sci. Math. Hungar.* 12 (1977), no. 1-2, 193-197 (1980). (B. Felzenszwalb) **81h:16058** 16A70 (16A48)
- Local unique factorization in the semigroup of paths in R^n . *Canad. Math. Bull.* 21 (1979), no. 4, 471-475. (M. Friedberg) **81g:20107** 20M05 (20M20)
- Word equations of paths. *J. Algebra* 60 (1979), no. 1, 229-237. (Authors' introduction) **81c:20044** 20M05
- (with Yaqub, Adil) Rings which are multiplicatively generated by idempotents. *Comm. Algebra* 8 (1980), no. 2, 153-159. (T. S. Ravisankar) **81g:16019** 16A32 (06E20)
- Cancellative subsemigroups of Archimedean semigroups. *Semigroup Forum* 21 (1980), no. 2-3, 187-193. (V. S. Krishnan) **81k:20091** 20M10
- On linear algebraic semigroups, I, II. *Trans. Amer. Math. Soc.* 259 (1980), no. 2, 457-469, 471-491. (Authors' summary) **81k:20087** 20M10
- Putinar, Mihai Sur les courbes et hypersurfaces de Tzitzéica. *Bull. Math. Soc. Sci. Math. R. S. Roumanie (N.S.)* 23(71) (1979), no. 4, 419-426. (H. W. Guggenheimer) **81c:53008** 53A15
- Putjatin, B. V. On the initial stage of a point explosion in a radiating gas. *Izv. Akad. Nauk SSSR Meh. Židk. Gaza* 1980, no. 3, 75-82. (Russian); translated as *Fluid Dynamics* 15 (1980), no. 3, 383-389. (Authors' summary) **81h:76045** 76L05 (80A20)
- Putko, B. A. (with Golo, V. L.) Reduction of two-dimensional G -invariant σ -models. *Lett. Math. Phys.* 4 (1980), no. 3, 195-200. (Authors' summary) **81h:81068** 81E10 (58E20, 58F07, 82A67)
- Putnam, C. R. Invariant subspaces of operators having nearly disconnected spectra. *Operator theory and functional analysis (Papers, Summer Meeting, Amer. Math. Soc., Providence, R.I., 1978)*, pp. 8-15, *Res. Notes in Math.*, 38, Pitman, San Francisco, Calif., 1979. (Mehdi Radjabipour) **81h:47026** 47B20 (47A15)
- Operators satisfying a G_1 condition. *Pacific J. Math.* 84 (1979), no. 2, 413-426. (Glenn R. Luecke) **81h:47042** 47B99 (47A10)
- Hypornormal operators with minimal spectral area. *Houston J. Math.* 6 (1980), no. 1, 135-139. (Kevin Clancey) **81g:47029** 47B20
- A polar area inequality for hyponormal spectra. *J. Operator Theory* 4 (1980), no. 2, 191-200. (Kevin Clancey) **81m:47037** 47B20
- Putnam, Hilary Models and reality. *J. Symbolic Logic* 45 (1980), no. 3, 464-482. (E. Mendelson) **81h:03016** 03A05
- Putnick, Leonard J. (with Matkowsky, Bernard J.; Reiss, Edward L.) Secondary states of rectangular plates. *SIAM J. Appl. Math.* 38 (1980), no. 1, 38-51. (T. J. Mahar) **81h:73026** 73H05 (35B32)
- Putnam, C. (with Unni, K. R.) On numerical ranges and spectrum of linear operators on s.i.p. spaces. *Math. Rep. Toyama Univ.* 3 (1980), 7-17. (Adolf Rhodius) **81h:47006** 47A12 (47A25)
- van der Putten, Niek (with Schenk, Henk; Hauptman, Herbert) On the identity of the enantiomorph-sensitive three-phase structure seminvariants and variants in P_2 , and their use in procedures for phase determination. *Acta Cryst. Sect. A* 36 (1980), no. 6, 891-897. (Authors' summary) **81h:82057** 82A60 (20H15)
- (with Schenk, Henk; Hauptman, Herbert) Application of the three-phase seminvariants to phase determination in P_2 . *Acta Cryst. Sect. A* 36 (1980), no. 6, 897-903. (Authors' summary) **81h:82058** 82A60 (20H15)
- Putter, P. S. (with Yood, Bertram) Banach Jordan \ast -algebras. *Proc. London Math. Soc.* (3) 41 (1980), no. 1, 21-44. (Horst Behnke) **81h:46066** 46K05 (17C65)
- Putyatin, B. V. See Putjatin, B. V.
- Putzolu, G. R. (with Blasen, M. W.; Astrahan, M. M.; Chamberlin, D. D.; Gray, James N.; King, W. F.; Lindsay, B. G.; Lorie, R. A.; Mehl, J. W.; Price, T. G.; Schkolnik, M.; Selinger, P. G.; Slutz, D. R.; Strong, H. R.; Traiger, I. L.; Wade, B. W.; Yot, R. A.) System R: an architectural overview. *IBM Systems J.* 20 (1981), no. 1, 41-62. (Authors' summary) **81m:68079** 68H05
- Puystjens, R. (with de Smet, H.) The Moore-Penrose inverse for matrices over skew polynomial rings. *Ring theory, Antwerp 1980 (Proc. Conf., Univ. Antwerp, Antwerp, 1980)*, pp. 94-103, *Lecture Notes in Math.*, 825, Springer, Berlin, 1980. (Susan Montgomery) **81m:15005** 15A09 (15A54, 16A08, 16A28)
- Puzalowski, R. (with Deser, Stanley) Supersymmetric nonpolynomial vector multiplets and causal propagation. *J. Phys. A* 13 (1980), no. 7, 2501-2507. (Authors' summary) **81e:81138** 81G25
- Pystakor, P. A. See Pjatakow, P. A.
- Pye, Wallace C. Nonnegative Drazin inverses. *Linear Algebra Appl.* 30 (1980), 149-153. (J. Buoni) **81g:15002** 15A09 (15A48)
- Pylhner, G. N. A case of convergence of the iteration method and its applications in the theory of jets. (Russian. Tajiki summary) *Dokl. Akad. Nauk Tadzhik. SSR* 23 (1980), no. 1, 15-17. (A. G. Ramm) **81h:65069** 65J15 (47H10)
- Pyke, Ronald (with Prentice, Ross L.) Logistic disease incidence models and case-control studies. *Biometrika* 66 (1979), no. 3, 403-411. (George W. Williams) **81c:62042** 62F99 (62P10)
- The asymptotic behavior of spacings under Kakutani's model for interval subdivision. *Ann. Probab.* 8 (1980), no. 1, 157-163. (Eric V. Slud) **81c:60038** 60F15 (60K99)
- van der Pyl, Thierry See Van der Pyl, Thierry
- Pym, J. S. (with Hutson, V. C. L.) ★Applications of functional analysis and operator theory. *Mathematics in Science and Engineering*, 146, Academic Press [Harcourt Brace Jovanovich, Publishers], London-New York-Toronto, Ont., 1980. xi + 389 pp. ISBN 0-12-363260-9 (M. Z. Nashed) **81h:46001** 46-01 (46N05)
- (with Milnes, Paul) Function spaces on semitopological semigroups. *Semigroup Forum* 19 (1980), no. 4, 347-354. (John F. Berglund) **81h:43014** 43A60 (22A20, 46E99)
- Pyne, David A. Single-variable Poisson regression: a goodness-of-fit test and the comparison of regression coefficients. *J. Amer. Statist. Assoc.* 74 (1979), no. 366, part 1,

- 489-493. (Ram Dahiya) **81b:62029** 62F03
- Py'ev, Ju. A. See *Py'ev, Ju. O.*
- Pysh, I. A. (with Gaiduk, S. I.) A mixed problem for a hyperbolic system of second-order equations with discontinuities in the initial conditions. (Russian.) *Differentsial'nye Uravneniya* 16 (1980), no. 4, 645-659, 764. (A. Džuraev) **81i:35095** 35L20
- On the existence and properties of a solution of a boundary value problem for a hyperbolic system of equations with piecewise-constant coefficients. (Russian. English summary) *Dokl. Akad. Nauk BSSR* 24 (1980), no. 4, 297-300, 380. (Author's summary) **81f:35081** 35L70
- Existence and properties of the solution to a boundary value problem on conjugation of hyperbolic and parabolic systems of equations. (Russian. English summary) *Dokl. Akad. Nauk BSSR* 24 (1980), no. 6, 500-502, 572. (L. I. Rubinstein) **81f:35089** 35M05
- Pyter, Arthur B. (with Krishnaswamy, Ramachandran) On the correctness of semantic-syntax-directed translations. *J. Assoc. Comput. Mach.* 27 (1980), no. 2, 338-355. (Authors' summary) **81b:68103** 68F25 (68B10)
- Py'ev, Ju. P. Problems of image restoration. (Russian.) *Dokl. Akad. Nauk SSSR* 245 (1979), no. 1, 42-46. (V. Ju. Trahtman) **81a:94029** 94A34 (47D99, 93E03)
- Pythagoras See *Morganstern, Edmond*, **81a:51011**
- Pytkin, Taduev A Plancherel measure for the discrete Heisenberg group. *Colloq. Math.* 42 (1979), 355-359. (Jonathan M. Rosenberg) **81e:22004** 22D10 (43A30)
- Pytte, E. (with Aharoni, Amnon) First- and second-order transitions in the Potts model near four dimensions. *Phys. Rev. B* (3) 23 (1981), no. 1, 362-367. (Authors' summary) **81k:82014** 82A25
- Pytkova, N. V. A case of equichronous systems. (Russian. English summary) *Dokl. Akad. Nauk BSSR* 24 (1980), no. 5, 397-399, 475. (A. Halanay) **81g:34032** 34C05
- Qadri, Asghar Field equations in twistors. *J. Math. Phys.* 21 (1980), no. 3, 514-520. (From the introduction) **81a:83018** 83C45 (32A99, 53C80)
- Qi, Dong Xu (with Liang, Zhen Shan) The smoothing method for multiple knot spline functions. I. (Chinese. English summary) *Numer. Math. J. Chinese Univ.* 1 (1979), no. 2, 196-209. (Authors' summary) **81b:41010** 41A15
- Qi, Li Qun (with Chi, Zong Tao) Convex functionals of λ -order. (Chinese. English summary) *Numer. Math. J. Chinese Univ.* 1 (1979), no. 1, 112-119. (Chung Lie Wang) **81f:26003** 26A51
- Qian, Min (with Qian, Min Ping; Gong, Guang Lu) Reversibility of the minimal Markov process generated by a second-order differential operator. (Chinese. English summary) *Beijing Daxue Xuebao* No. 2 (1979), 19-45. (From the summary) **81m:60141** 60J35
- Qian, Min Ping The reversibility of Markov chains. (Chinese. English summary) *Beijing Daxue Xuebao* No. 4 (1978), 1-9. (Author's summary) **81m:60094** 60J10
- (with Gong, Guang Lu; Qian, Min) Reversibility of the minimal Markov process generated by a second-order differential operator. (Chinese. English summary) *Beijing Daxue Xuebao* No. 2 (1979), 19-45. (From the summary) **81m:60141** 60J35
- Qin, Dan Hua (with Gao, Chong Shou) Intermediate vector particle model of the processes forbidden by Zweig rule. A translation of *Kexue Tongbao* (Chinese) 25 (1980), no. 4, 160-163. *Kexue Tongbao* (English) 25 (1980), no. 2, 122-126. (From the text) **81k:81102** 81G25
- Qin, Shi Yuan (with Hu, Yu Da; Weng, Shi Lie) A method for solving the nonlinear programming problem and its applications. (Chinese. English summary) *Numer. Math. J. Chinese Univ.* 1 (1979), no. 2, 150-157. (Authors' summary) **81d:90091** 90C30 (73K40)
- Qing, Cheng Rui (with Zhou, Yu Mei) The free boundary solution to the equation of plasma magnetohydrodynamic equilibrium with axisymmetry and noncircular cross section. (Chinese. English summary) *Acta Phys. Sinica* 29 (1980), no. 1, 106-110. (Authors' summary) **81f:76049** 76W05
- Quach thi Cam Van (with Weber, Claude) Une famille infinie de noeuds fibrés cobordants à zéro et ayant même polynôme d'Alexander. *Comment. Math. Helv.* 54 (1979), no. 4, 562-566. (G. Burde) **81a:57012** 57M25
- Quackenbush, Robert W. Algebras with minimal spectrum. *Algebra Universalis* 10 (1980), no. 1, 117-129. (David M. Clark) **81i:08007** 08A40
- (with Fried, E.; Grätzer, George) Uniform congruence schemes. *Algebra Universalis* 10 (1980), no. 2, 176-188. (S. Comer) **81i:08013** 08B05 (03C05)
- Quade, Dana Using weighted rankings in the analysis of complete blocks with additive block effects. *J. Amer. Statist. Assoc.* 74 (1979), no. 367, 680-683. (A. N. Pettitt) **81j:62138** 62J10 (62G10)
- Quade, Wilhelm See *Schottlaender, Stefan*, **81f:01036** and *Schottlaender, Stefan*, **81i:01014**
- Quadling, Douglas (with Morris, D. M.) Correspondence with a chemist. *Math. Gaz.* 63 (1979), no. 426, 233-241. (H. Gupta) **81c:05005** 05A10
- Quadrat, J. P. (with Delebecque, François) Application of stochastic control methods in the management of hydro power production. *Proceedings of the First International Conference on Mathematical Modeling* (St. Louis, Mo., 1977), Vol. IV, pp. 1815-1827. Univ. Missouri-Rolla, Rolla, Mo., 1977. (See **81f:90005**) 93E20 (90A30)
- (with Collet, P.; Delebecque, François; Falgarone, F.) Application du contrôle stochastique à la gestion des moyens de production d'énergie en Nouvelle Calédonie. *Proceedings of the International Meeting on Recent Methods in Nonlinear Analysis* (Rome, 1978), pp. 465-492. Pitagora, Bologna, 1979. (See **80c:49001**) 93E20
- Quadr, Murtaza A. (with Irfan, Mohd.) A characterization of Dedekind domains. *Tamkang J. Math.* 10 (1979), no. 2, 165-167. (Johnny A. Johnson) **81j:13018** 13F05 (13G05)
- Quasner, Erhard Zu metrischen affinen Ebenen der Charakteristik 2. Beiträge zur Algebra und Geometrie [Contributions to Algebra and Geometry], 8. Wiss. Beir. Martin-Luther-Univ. Halle-Wittenberg M 12 (1979), 107-113. (Frieder Knüppel) **81k:51015** 51F20
- Pham Mau Quan See *Pham Mau Quan*
- Quandt, Richard E. A note on the Tobit likelihood function. *Econom. Lett.* 4 (1979/80), no. 4, 361-362. (Author's summary) **81i:62187** 62P20 (90A19)
- (with Goldfeld, Stephen M.; Jaffee, Dwight M.) A model of FHLBB advances: rationing or market clearing? *Rev. Econom. Statist.* 62 (1980), no. 3, 339-347. (From the conclusion) **81e:90032** 90A20 (62P20)
- Nguyen-Quang-Do Thong See *Nguyen-Quang-Do Thong*
- Quarteroni, Alfio Primal hybrid finite element methods for 4th order elliptic equations. *Calcolo* 16 (1979), no. 1, 21-59. (C. Dierieck) **81f:65087** 65N30
- Hybrid finite element methods for the von Kármán equations. *Calcolo* 16 (1979), no. 3, 271-288 (1980). (Hans-Peter Helfrich) **81j:65124** 65N30 (73K25)
- (with Visintin, A.) On the numerical solution of a nonlinear variational equation related to a filtration problem. (Italian summary) *Boll. Un. Mat. Ital. B* (5) 17 (1980), no. 1, 204-231. (N. Gass) **81h:76052** 76S05 (49D15, 65N30)
- (with Canuto, Claudio) Propriétés d'approximation dans les espaces de Sobolev de systèmes de polynômes orthogonaux. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 19, A925-A928. (Authors' summary) **81f:46039** 46E35 (65N15)
- On mixed methods for fourth-order problems. *Comput. Methods Appl. Mech. Engrg.* 24 (1980), no. 1, 13-34. (Author's summary) **81f:65096** 65N30
- Mixed approximations of evolution problems. *Comput. Methods Appl. Mech. Engrg.* 24 (1980), no. 2, 137-163. (N. Gass) **81m:65176** 65N30 (73K25, 81C05)
- Quintrotchi, Gaetano (with Frasca, Michele) Some properties of the ordinary integral of the calculus of variations taken in the sense of Weierstrass. (Italian) *Atti Sem. Mat. Fis. Univ. Modena* 27 (1978), no. 2, 225-246 (1979). (U. D'Ambrosio) **81f:49041** 49F25 (26A99)
- Quintrotchi, Pasquale (with Heise, Werner) A punctualization on Laguerre planes. (Italian. English summary) *Atti Sem. Mat. Fis. Univ. Modena* 27 (1978), no. 2, 222-224 (1979). (Armin Herzer) **81e:51016** 51E25 (51B15)
- On a theorem of Pedrini concerning the nonexistence of certain finite Minkowski-m-structures. *J. Geom.* 13 (1979), no. 2, 108-112. (Armin Herzer) **81e:51017** 51E25 (51B20)
- Quebbemann, Heinz-Georg Ein Endlichkeitsatz für Klassenzahlen invarianter Formen. *Comment. Math. Helv.* 55 (1980), no. 2, 294-301. (S. Böge) **81i:10070** 10L05
- Queffelec, Martine Application de la théorie des algèbres de mesures à l'étude des mesures spectrales. *Séminaire de Théorie des Nombres*, 1978-1979, Exp. No. 20, 9 pp., CNRS, Talence, 1979. (J. A. Haight) **81f:10065** 10K25
- Mesures spectrales associées à certaines suites arithmétiques. (English summary) *Bull. Soc. Math. France* 107 (1979), no. 4, 385-421. (M. Mendès France) **81c:10071** 10L10 (10H45, 42A55)
- Sur la singularité des produits de Riesz et des mesures spectrales associées à la somme des chiffres. (English summary) *Israel J. Math.* 34 (1979), no. 4, 337-342 (1980). (M. Mendès France) **81g:10073** 10K35 (42A55)
- de Queiroz, J. F. A two-stage adaptive estimator for load demand prediction. *Simulation of distributed-parameter and large-scale systems* (Proc. IMACS European Simulation Meeting, Univ. Patras, Patras, 1979), pp. 217-223, North-Holland, Amsterdam, 1980. (Author's summary) **81e:93080** 93E10 (90A20)
- de Queiroz, S. L. A. (with Oliveira, P. Murilo; Riera, Rosane; Chaves, C. M.) Bond percolation in a square lattice in presence of a "magnetic field". *J. Phys. A* 13 (1980), no. 7, 2457-2463. (Authors' summary) **81e:82039** 82A42 (81E15, 82A67)
- Quek, T. S. (with Yap, Leonard Y. H.) Some recent results on Young's inequality for convolution. *Southeast Asian Bull. Math.* 3 (1979), no. 2, 235-239. (Harald E. Krogstad) **81c:43008** 43A15 (43A22)
- (with Yap, Leonard Y. H.) Absolute convergence of Vilenkin-Fourier series. *J. Math. Anal. Appl.* 74 (1980), no. 1, 1-14. (C. W. Onneweer) **81d:43009** 43A75
- Quéré, A. (with Bellegarde, F.; Rémy, J. L.) Construction et transformation systématiques de programmes. (English summary) *RAIRO Inform.* 14 (1980), no. 3, 219-252. (Authors' summary) **81k:68008** 68B05
- Quesada, Antonio (with Teply, Mark L.; Turman, E. Geis) On semisimple semigroup rings. *Proc. Amer. Math. Soc.* 79 (1980), no. 2, 157-163. (J. K. Luedeman) **81f:20094** 20M25 (16A12)
- Queyranne, Maurice Theoretical efficiency of the algorithm "capacity" for the maximum flow problem. *Math. Oper. Res.* 5 (1980), no. 2, 258-266. (Author's summary) **81f:90092** 90C35
- Bui Huy Qui See *Bui Huy Qui*
- Quidel, Patrick Sur la convergence des splines comme estimateurs de la courbe de régression. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 286 (1978), no. 14, A647-A649. (Author's summary) **81i:62071** 62J02 (62F12)
- Quillen, Daniel See *Kervaire, M.*, **81f:01035** and *Nishida, Goro*, **81m:01070**
- Quimpo, N. F. (with Chen, C. C.) On some classes of Hamiltonian graphs. *Proceedings of the First Franco-Southeast Asian Mathematical Conference* (Singapore, 1979), Vol. II. *Southeast Asian Bull. Math.* 1979, Special Issue b, 252-258. (C. St. J. A. Nash-Williams) **81h:05093** 05C25 (05C45)
- Quine, J. R. Plücker relations for $p(e^*)$. *Math. Scand.* 44 (1979), no. 2, 289-294. (Ciro Ciliberto) **81a:14009** 14H45
- (with Yang, Paul C.) A noncompact version of Plücker's second equation. *Duke Math. J.* 47 (1980), no. 1, 127-134. (A. Hirschowitz) **81h:14006** 14C30 (14N10, 32H99)
- Quine, M. P. (with Erickson, R. V.; Weber, N. C.) Explicit bounds for the departure from normality of sums of dependent random variables. *Acta Math. Acad. Sci. Hungar.* 34 (1979), no. 1-2, 27-32. (Adhir K. Basu) **81a:60030** 60F05
- Three limit theorems for scores based on occupancy numbers. *Ann. Probab.* 8 (1980), no. 1, 148-156. (C. J. Park) **81i:60034** 60F05 (60C05)
- Quinkert, R. Über Schreiersche Gruppenerweiterungen und ihre Kommutatorgruppen. *Acta Sci. Math. (Szeged)* 40 (1978), no. 3-4, 327-345. (From the summary and text) **81d:20051** 20F12
- Quinlan, P. M. (with Grannell, J. J.) The edge-function method for thin anisotropic plate bending. *Proc. Roy. Irish Acad. Sect. A* 80 (1980), no. 1, 1-22. (R. Muki) **81m:73050** 73K10
- Quinn, B. G. Limiting behaviour of autocorrelation function of ARMA process as several roots of characteristic equation approach unit circle. *Comm. Statist. B—Simulation Comput.* 9 (1980), no. 2, 195-198. (G. Banon) **81i:62163** 62M10
- Order determination for a multivariate autoregression. *J. Roy. Statist. Soc. Ser. B* 42 (1980), no. 2, 182-185. (G. Tusnidy) **81m:62173** 62M10
- Quinn, Frank Ends of maps and applications. *Bull. Amer. Math. Soc. (N.S.)* 1 (1979), no. 1, 270-272. (Author's summary) **81h:57083** 57N15
- Open book decompositions, and the bordism of automorphisms. *Topology* 18 (1979), no. 1, 55-73. (Louis H. Kauffman) **81e:57027** 57Q45

- Quinn, Helen R. (with Svetitsky, Benjamin; Drell, Sidney D.; Weinstein, Marvin) Dynamical breaking of chiral symmetry in lattice gauge theories. *Phys. Rev. D* 3 (1980), no. 2, 490-504. (Authors' summary) **81c:81127** 81G05
- Quinn, John P. Stabilization of bilinear systems by quadratic feedback controls. *J. Math. Anal. Appl.* 75 (1980), no. 1, 66-80. (Marshall Slemrod) **81m:93062** 93D20
- Quinn, Joseph E. (with Nadler, Sam B., Jr.; Stavrakas, Nick M.) Hyperspaces of compact convex sets. *Pacific J. Math.* 83 (1979), no. 2, 441-462. (R. R. Summerhill) **81c:57019** 57N20 (46A55)
- Quinn, Philip L. Existence throughout an interval of time and existence at an instant of time. *Ratio* 21 (1979), no. 1, 1-12. (W. S. Hatcher) **81d:03007** 03A05 (00A25, 03B45)
- Quinn, Stephen J. Factorisation of complete bipartite graphs into two isomorphic subgraphs. *Combinatorial mathematics, VI* (Proc. Sixth Austral. Conf., Univ. New England, Armidale, 1978), pp. 98-111. *Lecture Notes in Math.*, 748, Springer, Berlin, 1979. (Nicholas Wormald) **81j:05072** 05C30
- Quintanilla, Miguel A. Teorema interviews Mario Bunge. (Spanish) *Teorema* 9 (1979), no. 3-4, 353-386. (E. Mendelson) **81c:03006** 03A05 (01A70)
- Quintanilla, Louis V. (with Stehlik, Mark; Yarmish, Joshua) Degree partition classes for 4-trees having specified properties. *Proceedings of the Tenth Southeastern Conference on Combinatorics, Graph Theory and Computing* (Florida Atlantic Univ., Boca Raton, Fla., 1979), pp. 795-821. *Congress. Numer., XXIII-XXIV, Utilitas Math., Winnipeg, Man., 1979*. (E. M. Palmer) **81c:05030** 05C05
- (with McCarthy, Donald J.) The construction of minimal-line graphs with given automorphism group. *Topics in graph theory* (New York, 1977), pp. 144-156. *Ann. New York Acad. Sci.*, 328, New York Acad. Sci., New York, 1979. (E. M. Palmer) **81c:05050** 05C25
- (with Hell, Pavol) An intermediate value theorem for graphs with given automorphism group. *J. Graph Theory* 3 (1979), no. 1, 35-41. (Authors' summary) **81m:05067** 05C25
- Quinto, Eric Todd The dependence of the generalized Radon transform on defining measures. *Trans. Amer. Math. Soc.* 257 (1980), no. 2, 331-346. (Ju. V. Egorov) **81a:58048** 58G15 (44A99)
- (with Cormack, A. M.) A Radon transform on spheres through the origin in \mathbb{R}^n and applications to the Darboux equation. *Trans. Amer. Math. Soc.* 260 (1980), no. 2, 575-581. (R. C. Varma) **81i:44001** 44A05 (33A45, 35Q05, 43A55, 58G15)
- Quinzil, Martine (with Fogelman, Françoise; Guenerie, Roger) Dynamic processes for tax reform theory. *J. Econom. Theory* 17 (1978), no. 2, 200-226. (Wolfgang Mayer) **81i:90043** 90A16
- (with Fogelman, Françoise) Asymptotic value of mixed games. *Math. Oper. Res.* 5 (1980), no. 1, 86-93. (E. Vilkas) **81d:90115** 90D13 (90D12)
- Quiring, Donald A construction of disjoint Steiner triple systems. *J. Combin. Theory Ser. A* 27 (1979), no. 3, 407-408. (Jane W. Di Paola) **81j:05026** 05B05
- Quiring, S. B. (with Fischer, C. N.; Milton, D. R.) Efficient LL(1) error correction and recovery using only insertions. *Acta Inform.* 13 (1980), no. 2, 141-154. (Author's summary) **81d:68116** 68F25 (68B99)
- Quirós, J. M. See Solana Quirós, J. M.
- Quirós, M. (with León, J.; Ramírez Mittelbrunn, J.) Gauge invariance, Lorentz covariance and the electromagnetic properties of elementary systems. (Italian and Russian summaries) *Nuovo Cimento B* (11) 54 (1979), no. 1, 153-170. (K. S. Viswanathan) **81i:81041** 81D25 (81F15)
- nguyen Quoc Son See Nguyen Quoc Son
- Qureshi, Gulzar Ahmed On $M/E_{k,k,k,k}$ 3 serial queueing system with phase type service. *Pure Appl. Math. Sci.* 10 (1979), no. 1-2, 95-100. (Martin J. Fischer) **81a:60113** 60K25
- Qureshi, Z. I. (with Ng, T. S.; Goodwin, Graham C.) Optimum experimental design for identification of distributed parameter systems. *Internat. J. Control* 31 (1980), no. 1, 21-29. (E. P. Gil'bo) **81d:93069** 93E12 (62F12, 62K05)
- raggio R., Rafael See Boggio R., Rafael
- Raaijmakers, F. J. M. The lifetime of a standby system of units having the Birnbaum and Saunders distribution. *J. Appl. Probab.* 17 (1980), no. 2, 490-497. (W. Dziubdzela) **81g:62166** 62N05 (90B25)
- Ráb, Miloš Linear integral inequalities. *Arch. Math. (Brno)* 15 (1979), no. 1, 37-46. (B. G. Pachpatte) **81c:26016** 26D15
- Rabah, R. (with Korobov, V. I.) Exact controllability in a Banach space. (Russian) *Differentsial'nye Uravneniya* 15 (1979), no. 12, 2142-2150, 2298-2299. (V. V. Udilov) **81h:93007** 93B05 (34H05, 93C25)
- Rabin, Michael O. Probabilistic algorithm for testing primality. *J. Number Theory* 12 (1980), no. 1, 128-138. (D. H. Lehmer) **81f:10003** 10-04 (10A25)
- Probabilistic algorithms in finite fields. *SIAM J. Comput.* 9 (1980), no. 2, 273-280. (Duncan A. Buehl) **81g:12002** 12-04 (12C05, 68C25)
- Rabinovitch, S. I. (with Kefman, I. A.; Krupnikov, G. P.; Markov, I. A.) A model approach to the study of scanning systems of image processing in a real time scale. (Russian) *Automation, analysis and pattern recognition, 1* (Russian), pp. 5-19, 261, "Zinatne", Riga, 1979. (Authors' summary) **81f:68105** 68G10
- A mathematical model of the problem of distinguishing the objects of analysis in the course of scanning by discrete images. (Russian) *Automation, analysis and pattern recognition, 1* (Russian), pp. 19-53, 261, "Zinatne", Riga, 1979. (Author's summary) **81f:68110** 68G10
- (with Pavarnieko, I. A.) On an algorithm for distinguishing the contour of a simply connected domain or a binary discrete picture. (Russian) *Automation, analysis and pattern recognition, 1* (Russian), pp. 69-102, 262, "Zinatne", Riga, 1979. (Authors' summary) **81f:68109** 68G10
- Rabinovitch, V. S. (with Levendorskii, S. Z.) Exponential decrease at infinity of the solutions of multidimensional equations of convection type in cones. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1979, no. 3, 38-44. (Nicolae Luca) **81e:45010** 45E10
- Rabinowicz, Włodzisław Reasonable beliefs. Methodological developments in social sciences. *Theory and Decision* 10 (1979), no. 1-4, 61-81. (Jaakko Hintikka) **81c:03026** 03B60 (60A05)
- Some remarks about the family K of modal systems. *Notre Dame J. Formal Logic* 21 (1980), no. 2, 429-448. (Steve Kuhn) **81i:03025** 03B45
- Rabinowitz, Paul H. Free vibrations for a semilinear wave equation. *Comm. Pure Appl. Math.* 31 (1978), no. 1, 31-68. (Mitsuhiko Nakao) **81i:35109** 35L65 (35B10, 49A01, 58E05)
- A priori bounds for a semilinear wave equation. *Equadiff IV* (Proc. Czechoslovak Conf. Differential Equations and their Applications, Prague, 1977), pp. 340-347. *Lecture Notes in Math.*, 703, Springer, Berlin, 1979. (See **80c:34002**) 35L05
- Periodic solutions of a Hamiltonian system on a prescribed energy surface. *J. Differential Equations* 33 (1979), no. 3, 336-352. (A. Vanderbauwhede) **81a:58030** 58F05 (34C25, 70H05)
- (with Crandall, Michael G.) Mathematical theory of bifurcation. *Bifurcation phenomena in mathematical physics and related topics* (Proc. NATO Advanced Study Inst., Cargèse, 1979), pp. 3-46. *NATO Adv. Study Inst. Ser. C: Math. and Phys. Sci.*, 54, Reidel, Dordrecht, 1980. (A. Vanderbauwhede) **81j:58028** 58E07 (47H15)
- On subharmonic solutions of Hamiltonian systems. *Comm. Pure Appl. Math.* 33 (1980), no. 5, 609-633. (Frans Crantjij) **81k:34032** 34C25 (49A40, 58F05, 58F22)
- Rabinowitz, Philip The exact degree of precision of generalized Gauss-Kronrod integration rules. *Math. Comp.* 35 (1980), no. 152, 1275-1283. (David K. Kahaner) **81j:65007** 65D30
- Rabitz, Herschel (with Augustin, Stuart D.) Action-angle variables in quantum mechanics. *J. Chem. Phys.* 71 (1979), no. 12, 4956-4968. (Marcel Coz) **81a:81042** 81D99
- (with Augustin, Stuart D.; Demiralp, Metin; Askar, Atilla) Action-angle variables for the quantum three-particle system. *J. Chem. Phys.* 73 (1980), no. 1, 268-280. (Authors' summary) **81d:81010** 81C05 (34E20, 81G55)
- (with Chang, B.; Eno, L.) An improved phase shift approach to the energy correction of the infinite order sudden approximation. *J. Chem. Phys.* 73 (1980), no. 2, 820-828. (Authors' summary) **81e:81169** 81G55
- Rabotnov, Ju. N. ★Elements of hereditary solid mechanics. Translated from the Russian by M. Konyayeva [M. Konjaeva]. "Mir", Moscow, 1980. 388 pp. (Editors) **81a:73007** 73B99
- Rabung, John R. Some progression-free partitions constructed using Folkman's method. *Canad. Math. Bull.* 22 (1979), no. 1, 87-91. (J. Spencer) **81a:05024** 05B30 (10-04, 10A45)
- Raby, Stuart (with Dimopoulos, Savas; Susskind, Leonard) Tumbling gauge theories. *Nuclear Phys. B* 169 (1980), no. 5-6, 373-383. (Authors' summary) **81f:81064** 81B99 (81G05)
- Rachunsky, V. Calculation of recursive programs. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* No. 10 (1979), 853-855, 881. (Author's summary) **81d:68024** 68B10
- Race, David On the location of the essential spectra and regularity fields of complex Sturm-Liouville operators. *Proc. Roy. Soc. Edinburgh Sect. A* 85 (1980), no. 1-2, 1-14. (William N. Everitt) **81b:34017** 34B25 (47E05)
- (with Knowles, Ian) On the point spectra of complex Sturm-Liouville operators. *Proc. Roy. Soc. Edinburgh Sect. A* 85 (1980), no. 3-4, 263-289. (Walter Eberhard) **81f:34028** 34B25 (47E05)
- Račev, S. The Hausdorff metric structure in the space of probability measures. (Russian. English summary) Studies in mathematical statistics, 3. *Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 87 (1979), 87-103, 208, 213. (V. J. Paulauskas) **81a:60007** 60B05 (60B10)
- Racey, T. J. (with Battey-Pratt, E. P.) Geometric model for fundamental particles. *Internat. J. Theoret. Phys.* 19 (1980), no. 6, 437-475. (S. Gudder) **81h:81003** 81B05
- Racher, Gerhard Über c_0 -modulensensorprodukte. (English summary) *Studia Math.* 66 (1979/80), no. 3, 201-211. (A. Peitsch) **81m:46096** 46M05 (47D30)
- Rachunek, Jiří Quasi-orders of algebras. (Czech summary) *Časopis Pěst. Mat.* 104 (1979), no. 4, 327-337, 412. (Werner Poguntke) **81c:08008** 08A55 (06F15)
- Z-subgroups of ordered groups. (Russian summary) *Math. Slovaca* 29 (1979), no. 1, 39-41. (A. M. W. Glass) **81c:06021** 06F15
- Semi-ordered groups. (Czech and Russian summaries) *Sb. Práci Přírodověd. Fak. Univ. Palackého v Olomouci Mat.* 18 (1979), 5-20. (F. D. Pedersen) **81h:06037** 06F15
- Categories of systems of X -relations. *Arch. Math. (Brno)* 16 (1980), no. 3, 175-184. (From the text) **81k:18003** 18B10 (08A02)
- Rachůnková, Irena Algebraic properties of phases of the differential equation $y'' = q(t)y$. (Czech and Russian summaries) *Sb. Práci Přírodověd. Fak. Univ. Palackého v Olomouci Mat.* 57 (1978), 69-76. (E. Barvinek) **81f:34013** 34A30 (34C20)
- Racine, Michel (with Osborn, J. Marshall) Jordan rings with nonzero socle. *Trans. Amer. Math. Soc.* 251 (1979), 375-387. (I. P. Šestakov) **81a:17009** 17C10
- (with Osborn, J. Marshall) Prime Jordan P.I. algebras with nonzero socle and Jordan division algebras. *J. Algebra* 62 (1980), no. 2, 249-261. (I. P. Šestakov) **81h:17021** 17C10
- Rack, Heinz-Joachim Ein Existenzsatz für kubische Splinesfunktionen. *Beiträge Numer. Math.* 8 (1980), 131-137. (From the summary) **81a:65020** 65D07
- Rackauskas, A. A remark on stable measures on Banach spaces. (Russian. Lithuanian and English summaries) *Lietuv. Mat. Sb.* 19 (1979), no. 2, 161-165, 213. (S. A. Čobanjan) **81b:60006** 60B11
- (with Borovskih, Ju. V.) Asymptotic behavior of distributions in Banach spaces. (Russian. Lithuanian and English summaries) *Lietuv. Mat. Sb.* 19 (1979), no. 4, 39-54, 209. (Jerzy Szulga) **81c:60007** 60B12
- Rackoff, Charles W. The covering and boundedness problems for vector addition systems. *Theoret. Comput. Sci.* 6 (1978), no. 2, 223-231. (Author's summary) **81c:68024** 68B20 (68C25)
- (with Ferrante, Jeanne) ★The computational complexity of logical theories. *Lecture Notes in Mathematics*, 718. Springer-Verlag, Berlin-New York, 1979. x+243 pp. ISBN 3-540-09501-2 (M. I. Dehjar) **81d:03013** 03B25 (03D15, 68C25)
- (with Cook, Stephen A.) Space lower bounds for maze threadability on restricted machines. *SIAM J. Comput.* 9 (1980), no. 3, 636-652. (László Lovász) **81k:68023** 68C25 (68D99)
- cehan-Racoviță, M. See Cehan-Racoviță, M.
- Raczka, R. (with Anderson, Robert Leonard; Barut, Asim Orhan) Backlund transformations and new solutions of nonlinear wave equations in four-dimensional space-time. *Lett. Math. Phys.* 3 (1979), no. 5, 351-358. (G. L. Lamb, Jr.) **81c:35108**

- 35Q20 (35A30, 58A15, 58F07, 81C99)
- Radatz, P.** (with Wood, B.) Approximating derivatives of functions unbounded on the positive axis with linear operators. *Rev. Roumaine Math. Pures Appl.* 23 (1978), no. 5, 771-781. (Pierre Eymard) **81a:41036** 41A36
- Radetsko, T. N.** (with Rogozin, V. S.) An equation of convolution type and singular integral equations in the exceptional case. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1979, no. 8, 87-93. (William L. Perry) **81f:45008** 45E05 (45E10)
- Radetsko, Wolfgang** Über eine spezielle Klasse abgegrenzter Verschiebungen Poissonscher Punktprozesse. *Math. Nachr.* 92 (1979), 129-138. (O. K. Zakusilo) **81i:60055** 60G55
- Radicki, T.** A model of a document retrieval system based on the concept of a semantic disjunctive normal form. *Kybernetes* 10 (1981), no. 1, 35-42. (Author's summary) **81k:68077** 68H05
- Radner, Trout** Nice demand functions. II. *J. Math. Econom.* 6 (1979), no. 3, 253-262. (From the introduction) **81i:90024** 90A10 (26B05)
- Rademacher, F. J.** (with Kaerkes, R.) Profiles, network functions and factorization. *First Symposium on Operations Research (Unio. Heidelberg, Heidelberg, 1976), Teil 3*, pp. 66-87, *Operations Research Verfahren, XXVII, Hain, Meisenheim, 1977*. (From the introduction) **81a:90082** 90B10
- Floats in project networks. *First Symposium on Operations Research (Unio. Heidelberg, Heidelberg, 1976), Teil 3*, pp. 163-224, *Operations Research Verfahren, XXVII, Hain, Meisenheim, 1977*. (Author's introduction) **81i:90076** 90B10 (06A10)
- Radescu, E. E.** (with Guisgu, I.; Rasziliu, I.) Optimal sum-rule inequalities for spin- $\frac{1}{2}$ Compton scattering. *Ann. Physics* 127 (1980), no. 2, 436-457. (Authors' summary) **81i:81125** 81F20 (81G25)
- Radewan, C. H.** See Woods, John W., **81b:93074**
- Radford, C.** A note on irreducibility and existence of integer spin zero-rest-mass fields. *Gen. Relativity Gravitation* 11 (1979), no. 5, 329-332. (Author's summary) **81d:83050** 83D05 (81D25)
- Radford, David E.** On an analog of Lagrange's theorem for commutative Hopf algebras. *Proc. Amer. Math. Soc.* 79 (1980), no. 2, 164-166. (Mitsuhiko Takeuchi) **81c:16011** 16A24 (14L17)
- On bialgebras which are simple Hopf modules. *Proc. Amer. Math. Soc.* 80 (1980), no. 4, 563-568. (Mitsuhiko Takeuchi) **81i:16013** 16A24
- Radhakrishnan, V.** A possible universal theory for phase transitions. *Proceedings of the Conference on Mathematical Methods in Physics (Mysore, 1978), Part A*, pp. 159-166, *Maiscience Rep.*, 96, Inst. Math. Sci., Madras, 1979. (From the text) **81g:82024** 82A25
- Radian, Eugen** The Markovian character of some multiserver queueing systems. *An. Univ. București Mat.* 29 (1980), 69-79. (Jos H. A. de Smit) **81m:60169** 60K25
- Radicati di Brozolo, Luigi** (with Pegoraro, F.) Dielectric tensor and magnetic permeability in the weak field approximation of general relativity. *J. Phys. A* 13 (1980), no. 7, 2411-2421. (Authors' summary) **81e:83034** 83C50
- Radice, Lucio Lombardo** See Lombardo-Radice, Lucio
- Radlinski, A. E.** An optimal control algorithm of a certain class. (Russian) *Adapt. Sistemy Avtomat. Upravleniya No. 8* (1980), 92-94. 4. (Author's summary) **81i:49030** 49E05
- Radu, Charles** (with Hamrick, Gary C.) The symmetry of ground states under perturbation. *J. Statist. Phys.* 21 (1979), no. 5, 601-607. (Authors' summary) **81d:82014** 82A15
- (with Heitmann, Raymond C.) The ground state for sticky disks. *J. Statist. Phys.* 22 (1980), no. 3, 281-287. (T. Janssen) **81k:82046** 82A60
- Radi Saleh, Ahmed Salavat Abdel** See Saleh, Ahmed Salavat Abdel et al.-Radi
- Radjabalipour, Mehdi** Operators commuting with positive operators. *Proc. Amer. Math. Soc.* 77 (1979), no. 1, 107-110. (E. Gerlach) **81d:47013** 47A67
- (with Nordgren, E. A.; Radjavi, Heydar; Rosenthal, Peter) On invariant operator ranges. *Trans. Amer. Math. Soc.* 251 (1979), 389-398. (E. Gerlach) **81c:47010** 47A15 (47A05, 47D25)
- Radjaki, N. K.** Determination of the frequencies of the oscillations of a low-viscosity liquid rotating in an axisymmetric vessel. *Izv. Akad. Nauk SSSR Meh. Židk. Gaza* 1980, no. 2, 128-133 (Russian); translated as *Fluid Dynamics* 15 (1980), no. 2, 278-282. (Author's summary) **81i:76019** 76D10 (76U05)
- Radjavi, Heydar** (with Jafarian, A. A.) Compact operator ranges and reductive algebras. *Acta Sci. Math. (Szeged)* 40 (1978), no. 1-2, 73-79. (Eric Nordgren) **81a:47044** 47D25 (47A15)
- (with Nordgren, E. A.; Radjabalipour, Mehdi; Rosenthal, Peter) On invariant operator ranges. *Trans. Amer. Math. Soc.* 251 (1979), 389-398. (E. Gerlach) **81c:47010** 47A15 (47A05, 47D25)
- (with Laurie, Cecelia) On the West decomposition of Riesz operators. *Bull. London Math. Soc.* 12 (1980), no. 2, 130-132. (G. F. C. de Bruyn) **81i:47020** 47B05
- (with Hadwin, Donald W.; Nordgren, E. A.; Rosenthal, Peter) An operator not satisfying Lomonosov's hypothesis. *J. Funct. Anal.* 38 (1980), no. 3, 410-415. (Hong W. Kim) **81m:47013** 47A15
- Radjajkin, A. V.** (with Efremov, A. V.) Hard processes, parton model and QCD. *Riv. Nuovo Cimento* (3) 3 (1980), no. 2, 87 pp. (From the preface) **81e:81124** 81G05
- (with Efremov, A. V.) Field-theoretic approach to high momentum transfer processes. II. Massive lepton-pair production. (Russian. English summary) *Teoret. Mat. Fiz.* 44 (1980), no. 2, 157-171. (Authors' summary) **81i:81132** 81G05
- Radnević, E. V.** Analyticity and uniformization of solutions of a certain class of partial differential equations. (Russian) *Proceedings of an All-Union Conference on Partial Differential Equations (Moscow State Univ., Moscow, 1976)* (Russian), pp. 203-205, *Moskov. Gos. Univ., Meh.-Mat. Fakul'tet, Moscow, 1978*. (See **80f:35002**) 35G05
- An approach to the solution of filtration theory problems. (Russian) *Dokl. Akad. Nauk SSSR* 249 (1979), no. 6, 1321-1324. (V. V. Kovrizkin) **81e:35035** 35J25 (76S05)
- A method of boundary variation in nonstationary filtration. (Russian) *Dokl. Akad. Nauk SSSR* 250 (1980), no. 6, 1359-1363. (Jakub Siemek) **81i:76032** 76S05 (35R35)
- A problem of filtration in a porous inhomogeneous nonisotropic medium. (Russian) *Uspehi Mat. Nauk* 35 (1980), no. 1(21), 213-214. (Jaroslav Jelen) **81i:76044** 76S05 (35J99)
- Radler, K.-H.** Mean-field approach to spherical dynamo models. (German summary) *Astronom. Nachr.* 301 (1980), no. 3, 101-129. (From the summary) **81g:76115** 76W05
- Radnev, P.** Universal polygons over distributive lattices. (Russian) *Ordered sets and lattices, No. 5* (Russian), pp. 82-90, 118, *Saratov. Gos. Univ., Saratov, 1978*. (L. Beran) **81f:06013** 06D05
- Radó, F.** On the characterization of affine isometries. *Resuliate Math.* 2 (1979), no. 2, 171-185. (W. Benz) **81e:51007** 51F99 (51B20, 83A05)
- Rado, Richard** Sequential partition relations. (French summary) *Problèmes combinatoires et théorie des graphes (Colloq. Internat. CNRS, Univ. Orsay, Orsay, 1976)*, pp. 339-341, *Colloques Internat. CNRS, 260, CNRS, Paris, 1978*. (Author's summary) **81k:05003** 05A05 (04A20, 05C55)
- (with Erdős, Paul; Galvin, Fred) Transversals and multitransversals. *J. London Math. Soc.* (2) 20 (1979), no. 3, 387-395. (Karsten Steffens) **81c:04001** 04A20 (05A05)
- See also Hardy, Godfrey Harold, **81e:01028**
- Radochová, Drahošlava** (with Tryhuk, Václav) Asymptotic and oscillation properties of third order linear differential equations. *Arch. Math. (Brno)* 16 (1980), no. 3, 167-173. (W. J. Kim) **81m:34046** 34C10
- Rădu, Marin** (with Munteanu, Marius) The dynamics of noncentered vibration machines driven by vibration generators with unbalanced mass. (Romanian. English summary) *Bul. Inst. Politehn. București Ser. Mec.* 41 (1979), no. 4, 15-26. (Authors' summary) **81f:70024** 70K99
- Radojević, Dragi** Eigenvalues and principal directions of the energy momentum tensor of a perfect charged fluid. (French and Serbo-Croatian summaries) *Teor. Primn. Meh.* No. 5 (1979), 151-156. (Author's summary) **81i:83034** 83C55
- Radojević, Predrag** Fermat's great theorem. (Serbo-Croatian) *Matematika (Belgrade)* 5 (1976), no. 1, 51-57. (Editors) **81m:10002** 10-03 (01A55, 10B15, 12-03, 12A55)
- Radoš, R.** See Lamb, Horace, **81f:01017**
- Radoš, S.** See Lamb, Horace, **81f:01017**
- Radoslavova, T. V.** Approximation of continuous functions by trigonometric polynomials almost everywhere. (Russian) *The theory of the approximation of functions (Proc. Internat. Conf., Kaluga, 1975)* (Russian), pp. 302-304, "Nauka", Moscow, 1977. (J. Szabados) **81b:42013** 42A10
- Decrease orders of the L^p -moduli of continuity ($0 < p < \infty$). (Russian summary) *Anal. Math.* 5 (1979), no. 3, 219-234. (L. Leindler) **81g:26001** 26A15 (46E30)
- Radvinskii, A. L.** Classification of free vibrations of shells containing a fluid. *Izv. Akad. Nauk SSSR Meh. Teord. Tela* 14 (1979), no. 6, 124-135 (Russian); translated as *Mech. Solids* 14 (1979), no. 6, 105-114. (Author's summary) **81i:73045** 73L20
- Radu, Alexandru Gh.** Quelques catégories cartésiennes remarquables. *An. Ştiinţ. Univ. "Al. I. Cuza" Iaşi Sect. I a Mat. (N.S.)* 25 (1979), no. 1, 5-36. (J. Sonner) **81g:18014** 18D15 (18F20)
- Grothendieck topologies over regular categories and Boolean categories. (Romanian. French summary) *Stud. Cerc. Mat.* 31 (1979), no. 4, 463-478. (C. Niţă) **81c:18015** 18F10 (18B99)
- Radu, E.** (with Mice, V.) Perturbations in the anomalous period of artificial satellites caused by the direct solar radiation pressure. (French summary) *Astronom. Nachr.* 300 (1979), no. 6, 313-315. (Authors' summary) **81i:70028** 70M05
- Radu, Eugen** L'œuvre de Grigore C. Moisil en logique mathématique. II. *Rev. Roumaine Math. Pures Appl.* 23 (1978), no. 4, 605-610. (Editors) **81h:01013** 01A70
- Răduică, Mihaela** Un modèle stochastique d'apprentissage basé sur la méthode Skinner du conditionnement opérant. *Systems theory (Proc. Nat. Conf., Univ. Braşov, Braşov, 1977)* (Romanian), pp. 84-87, *Univ. Braşov, Braşov, 1978*. (Opriş Gheorghe) **81e:92018** 92A25 (60J20)
- Programmation et degrés de liberté dans les systèmes instruisibles. *Proceedings of the International Symposium on Applications of Mathematics in System Theory (Univ. Braşov, Braşov, 1978), II*, pp. 173-178, *Univ. Braşov, Braşov, 1979*. (Author's summary) **81m:92063** 92A25 (68G05)
- Rădulescu, Elena Liliana** Une généralisation du modèle de la maximisation du gain pour les jeux aléatoires avec information complète. *An. Univ. Bucureşti Mat.* 28 (1979), 95-100. (Author's summary) **81f:90121** 90D05 (93E05)
- Rădulescu, Marcel** (with Frişilă-Oancea, Elena) On a method of statistical estimation. (Romanian. French summary) *Studia Univ. Babeş-Bolyai Math.* 24 (1979), no. 1, 41-45. (Authors' summary) **81i:62060** 62F25
- Rădulescu, Marius** (with Rădulescu, Sorin) Irreducible polynomials. *An. Univ. Bucureşti Mat.* 27 (1978), 65-78. (J.-P. Lafon) **81i:13005** 13B25
- (with Rădulescu, Sorin) Global inversion theorems and applications to differential equations. *Nonlinear Anal.* 4 (1980), no. 5, 951-965. (R. A. Plastock) **81m:58018** 58C15 (34G20, 58E07)
- Rădulescu, Sorin** (with Rădulescu, Marius) Irreducible polynomials. *An. Univ. Bucureşti Mat.* 27 (1978), 65-78. (J.-P. Lafon) **81i:13005** 13B25
- (with Rădulescu, Marius) Global inversion theorems and applications to differential equations. *Nonlinear Anal.* 4 (1980), no. 5, 951-965. (R. A. Plastock) **81m:58018** 58C15 (34G20, 58E07)
- Radvanska, Maria** (with Pabisek, Ewa; Przybyło, Wacław; Waszczyński, Zenon) A program for computing ribbed plates described on a rectangular grid. (Polish. English and Russian summaries) *Mechanics and computers, Vol. 2* (Polish), pp. 177-186, PWN, Warsaw, 1980. (See **81m:73008**) 73K30
- Radyakin, N. K.** See Radjakin, N. K.
- Radyushkin, A. V.** See Radjajkin, A. V.
- Radjabov, E. L.** Some properties of hypersingular integrals with singularity of arbitrary order. (Russian. Tajiki summary) *Izv. Akad. Nauk Tadžik. SSR Otdel. Fiz.-Mat. i Geol.-Him. Nauk* 1980, no. 1(75), 3-12. (J. Marshall Ash) **81m:42018** 42B25
- Radjabov, G. A.** Three-dimensional spaces of supporting vector densities, admitting a homothety group P_3 with an abelian subgroup P_2 . (Russian. Tajiki summary) *Izv. Akad. Nauk Tadžik. SSR Otdel. Fiz.-Mat. i Geol.-Him. Nauk* 1979, no. 2(72), 87-91. (I. P. Egorov) **81b:53018** 53A99
- Three-dimensional spaces of support vector densities with a group of homometries P_3 and motions G_4 ($r < 4$). (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1979, no. 9, 88-91. (I. P. Egorov) **81c:53034** 53C05 (51N99)
- Radjabov, N.** Analogues of the Poisson formula for a class of second-order equations with two and three singular planes. (Russian) *Differential and integral equations, No. 1* (Russian), pp. 25-34, *Tadžik. Gos. Univ., Dushanbe, 1977*. (G. Albinus) **81e:35015** 35C15 (35J25)

- Elementary solutions and integral representations for a second-order equation with two and three singular planes. (Russian) *Differential and integral equations*, No. 1 (Russian), pp. 35–44, *Tadlik. Gos. Univ., Dushanbe*, 1977. (G. Wildenhain) **81c:35016** 35C15
- Representation of a manifold of solutions and investigation of boundary value problems for certain systems of higher-order differential equations with singular hyperplanes. (Russian) *Differential and integral equations*, No. 1 (Russian), pp. 45–52, *Tadlik. Gos. Univ., Dushanbe*, 1977. (A. Dzuraev) **81c:35012** 35C15
- (with Boltaev, K. S.) Representation of a manifold of solutions in the form of series for a class of differential equations of elliptic type with a singular line. (Russian) *Differential and integral equations*, No. 1 (Russian), pp. 53–59, *Tadlik. Gos. Univ., Dushanbe*, 1977. (A. Dzuraev) **81b:35038** 35J70
- (with Boltaev, K. S.) A representation of a manifold of solutions of a generalized Cauchy-Riemann system with a singular line. (Russian) *Differential and integral equations*, No. 1 (Russian), pp. 60–72, *Tadlik. Gos. Univ., Dushanbe*, 1977. (G. Wildenhain) **81c:30008** 30G20 (35C10)
- Radziewski, G. V.** The completeness of derived chains corresponding to boundary value problems on a finite segment. (Russian) *Ukrain. Mat. Z.* **31** (1979), no. 3, 279–288, 335. (Heinz Langer) **81c:34015a** 34B25 (47A65, 47E05)
- Completeness of derivative chains corresponding to boundary value problems on the semiaxis. (Russian) *Ukrain. Mat. Z.* **31** (1979), no. 4, 407–416, 477. (Heinz Langer) **81c:34015b** 34B25 (47A65, 47E05)
- Asymptotic behavior of distributions of characteristic numbers of operator-functions that are analytic in a corner. (Russian) *Mat. Sb. (N.S.)* **112**(154) (1980), no. 3(7), 396–420, 476. (A. A. Laptev) **81c:47007** 47A10
- Radzikowska, Eugenia** Electromagnetic interactions and small elastic deformations of thin dielectric shells. I. General case. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Tech.* **27** (1979), no. 4, 343–351. (Author's summary) **81c:73009a** 73R05 (73L99, 78A99)
- Electromagnetic interactions and small elastic deformations of thin dielectric shells. II. Approximate theories. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Tech.* **27** (1979), no. 4, 353–360. (Author's summary) **81c:73009b** 73R05 (73L99, 78A99)
- Radzikowski, Jerzy** Untersuchung der Beschränkung der Lösungen eines unhomogenen hyperbolischen Systems. *Demonstratio Math.* **12** (1979), no. 4, 981–994. (P. Ungar) **81c:35103** 35L50
- Radziewski, Zdzisław** On a certain interpretation of linear connection on a differentiable manifold M . (Polish and Russian summaries) *Ann. Univ. Mariae Curie-Skłodowska. Sect. A* **31** (1977), 97–109 (1979). (Kam Ping Mok) **81c:53019** 53C05
- Rachun, Iain** (with Phillips, John) On extensions of AF-algebras. *Amer. J. Math.* **101** (1979), no. 5, 957–968. (David Handelman) **81c:46042b** 46L05
- (with Phillips, John) Perturbations of AF-algebras. *Canad. J. Math.* **31** (1979), no. 5, 1012–1016. (David Handelman) **81c:46042a** 46L05
- de Raedt, Bart** See De Raedt, Bart
- de Raedt, Hans** See De Raedt, Hans
- Raeva, M. B.** (with Manolov, Spas M.; Karandzov, L. I.) Nonglobal internal resonances of autonomous systems with an arbitrary set of initial velocities of the eigenvectors of the matrix of the linear part. (Bulgarian, Russian and English summaries) *Godišnik Vis. Učebn. Zaved. Priložna Mat.* **14** (1978), no. 2, 43–58 (1979). (G. V. Hmelevskaja-Plotnikova) **81c:34036** 34C25
- (with Manolov, Spas M.) A condition for existence of periodic trajectories of autonomous systems. (Bulgarian, Russian and French summaries) *Godišnik Vis. Učebn. Zaved. Priložna Mat.* **14** (1978), no. 2, 59–67 (1979). (G. V. Hmelevskaja-Plotnikova) **81c:34037** 34C25
- Raevskii, M. A.** Nonlinear interaction of spiral density waves in flat galaxies. *Astronom. Zh.* **57** (1980), no. 3, 505–510 (Russian); translated as *Soviet Astronom.* **24** (1980), no. 3, 291–294. (Author's summary) **81c:85003** 85A05
- Rafalson, S. Z.** The analogue of a theorem of A. Zygmund for Legendre polynomials. (Russian) *Izv. Vys. Učebn. Zaved. Matematika* **1979**, no. 8, 54–59. (B. A. Bondarenko) **81c:33016** 33A65 (42C10)
- Rafelski, J.** (with Hagedorn, R.; Montvay, I.) Thermodynamics of nuclear matter from the statistical bootstrap model. *Hadronic matter at extreme energy density (Proc. Workshop, Ettore Majorana Center, Erice, 1978)*, pp. 49–148, *Ettore Majorana Internat. Sci. Ser.: Phys. Sec., 2, Plenum*, New York, 1980. (Virendra Singh) **81g:81109** 81G35
- Raftery, Adrian E.** Estimation efficace pour un processus autorégressif exponentiel à densité discontinue. (English summary) *Publ. Inst. Statist. Univ. Paris* **25** (1980), no. 1–2, 65–91. (M. P. Quine) **81c:62157** 62M05
- Ragab, S. A.** (with Nayfeh, Ali Hasan) Second-order asymptotic solution for laminar separation. *Phys. Fluids* **23** (1980), no. 6, 1091–1100. (Authors' summary) **81d:76041** 76D15
- Ragade, Rammohan K.** (with Gupta, Madan M.) Fuzzy set theory and applications: a synthesis. *Advances in fuzzy set theory and applications*, pp. 19–25, *North-Holland, Amsterdam*, 1979. (A. K. Vajtkin) **81c:03006** 03E72 (94D05)
- Raghavachari, M.** Some properties of the width of the incidence matrices of balanced incomplete block designs and Steiner triple systems. *Sankhyā Ser. B* **39** (1977), no. 2, 181–188. (Jane W. Di Paola) **81c:05025** 05B30
- Raghavan, S.** Singular modular forms of degree s . *C. P. Ramanujam—a tribute*, pp. 263–272, *Tata Inst. Fund. Res. Studies in Math.*, **8**, Springer, Berlin, 1978. (H. Klingen) **81c:10028** 10D20 (32N05)
- Raghavan, T. E. S.** (with Hyatt, G. W.; Smith, Stephen D.) Game theory models of internale combat in fiddler crabs (*Genus Uca*). *Applied game theory (Proc. Conf., Inst. Adv. Stud., Vienna, 1978)*, pp. 414–429, *IHS—Studies*, **1**, Physica, Würzburg, 1979. (Authors' summary) **81d:90133** 90D45 (92A15)
- (with Bapat, R. B.) On diagonal products of doubly stochastic matrices. *Linear Algebra Appl.* **31** (1980), 71–75. (Authors' summary) **81c:15010** 15A51
- Raghavan, T. G.** (with Reilly, Ivan) On projective and injective objects in some topological categories. *Categorical topology (Proc. Internat. Conf., Free Univ. Berlin, Berlin, 1978)*, pp. 308–315, *Lecture Notes in Math.*, **719**, Springer, Berlin, 1979. (From the introduction) **81i:18004** 18B30 (54B30)
- (with Reilly, Ivan) On nonsymmetric topological structures. *Topology (Proc. Fourth Colloq., Budapest, 1978)*, Vol. II, pp. 1005–1014, *Colloq. Math. Soc. János Bolyai*, **23**, North-Holland, Amsterdam, 1980. (Jacob Kofner) **81k:54037** 54E15 (54D30)
- Raghava Rao, C. V.** Numerical studies of Stokes flow past a sphere. *Boundary and interior layers—computational and asymptotic methods (Proc. Conf., Trinity College, Dublin, 1980)*, pp. 403–406, *Boole, Dún Laoghaire*, 1980. (See **81j:76001**) 76D99
- Raghavaram, D.** (with Shrikhande, Mohan) A generalization of special partially balanced designs to higher associate class designs. *Ars Combin.* **6** (1978), 97–111. (Authors' summary) **81g:05029** 05B05
- (with Nageswararao, G.) Analysis of covariance as an alternative approach to the analysis of non-orthogonal lay-outs. Special issue on covariance. *Comm. Statist. A—Theory Methods* **8** (1979), no. 8, 843–854. (See **81c:62081**) 62J10
- (with Shah, K. R.) A class of D_0 designs for two-way elimination of heterogeneity. *Comm. Statist. A—Theory Methods* **9** (1980), no. 1, 75–80. (K. G. Russell) **81k:62141** 62K99 (62K05)
- Raghuandanan, K.** On pooling data to estimate variance. *Sankhyā Ser. B* **40** (1978), no. 1–2, 94–104. (Authors' summary) **81j:62066** 62F10
- Raghuathan, M. S.** The work of G. A. Margulis. *Jahrbuch Überblicke Mathematik*, 1979, pp. 153–155, *Bibliographisches Inst., Mannheim*, 1979. (Editors) **81f:01035a** 01A70 (22–03)
- A proof of Oseledec's multiplicative ergodic theorem. *Israel J. Math.* **32** (1979), no. 4, 356–362. (Yves Guivarch) **81f:60016** 60B15 (22D40, 28D99, 58F11)
- (with Millson, John J.) Geometric construction of cohomology for arithmetic groups. I. *Geometry and analysis*, pp. 103–123, *Indian Acad. Sci., Bangalore*, 1980. (Avner Ash) **81m:22020** 22E40 (22E41)
- Raghuvaran, G.** (with Ramani, K. V.) Utilization of transportation units: an optimal allocation study. *Opsearch* **17** (1980), no. 1, 33–40. (Authors' summary) **81i:90114** 90B35 (90B05)
- Ragladakos, Ch.** (with Viswanathan, K. S.) Contribution of meron-like configurations to the Hooft's disorder parameter. *Phys. Lett. B* **93** (1980), no. 3, 262–264. (Authors' summary) **81c:81103** 81E99 (81C35)
- Raglinshov, R. K.** (with Gaidarov, D. R.) A Hammerstein integral inclusion. (Russian) *Sibirsk. Mat. Z.* **21** (1980), no. 2, 19–24, 236. (T. A. Ebanoidze) **81c:45016** 45G10 (34A60, 47H10)
- Ragimov, A. M.** On the convergence of an averaged gradient algorithm. (Russian, Azerbaijani and English summaries) *Akad. Nauk Azerbaidžan. SSR Dokl.* **36** (1980), no. 3, 10–13. (Authors' summary) **81c:90130** 90C30 (65H10)
- Ragimov, M. B.** (with Alizade, M. I.) A method of N. H. Abel for solving functional equations. (Russian) *Azerbaidžan. Gos. Univ. Učen. Zap.* **1978**, no. 4, 25–32. (Karol Baron) **81a:39007** 39B60 (35A99)
- Some questions of functional and overdetermined systems of partial differential equations. II. (Russian) *Azerbaidžan. Gos. Univ. Učen. Zap.* **1978**, no. 6, 61–65. (A. Dzuraev) **81c:35112** 35R10 (35N99)
- Ragnedda, F.** (with Grimaldi, A.) A Cauchy problem for a certain equation, 2b-parabolic in the sense of Petrovskii, with data in suitable spaces. (Italian, English summary) *Boll. Un. Mat. Ital. A* (5) **17** (1980), no. 1, 91–97. (V.-V. Olariu) **81c:35065** 35K30
- Ragni, Marcello** Interval functions and a generalized variation. (Italian) *Rend. Circ. Mat. Palermo* (2) **26** (1977), no. 1–3, 229–250 (1978). (Carl G. Looney) **81d:26007** 26B30 (26B15, 49F25)
- On the Fubini-Tonelli integral of Weierstrass type. (Italian, English summary) *Intit. Lombardo Accad. Sci. Lett. Rend. A* **112** (1978), no. 2, 367–372 (1979). (E. Baidà) **81k:26012** 26B15
- On the approximation and representation of the classical and generalized Burkil integral. (Italian) *Atti Sem. Mat. Fis. Univ. Modena* **28** (1979), no. 1, 112–125. (U. D'Ambrosio) **81m:49046** 49F25 (26B15, 28A75)
- Ragnisco, O.** (with Levi, D.) Nonlinear differential-difference equations with N -dependent coefficients. I. *J. Phys. A* **12** (1979), no. 7, L157–L162. (G. L. Lamb, Jr.) **81j:35098** 35Q20 (35A25)
- (with Levi, D.) Nonlinear differential-difference equations with N -dependent coefficients. II. *J. Phys. A* **12** (1979), no. 7, L163–L167. (G. L. Lamb, Jr.) **81k:35156** 35R10 (35A25)
- (with Bruschi, Massimo; Levi, D.) Toda lattice and generalised Wronskian technique. *J. Phys. A* **13** (1980), no. 7, 2531–2533. (Authors' summary) **81c:35007** 35A25 (35Q20, 58F07, 81F99)
- Ragoin, David L.** Curvatures and curves in Hilbert space. *Math. Z.* **173** (1980), no. 1, 51–67. (M. P. Heble) **81c:58015** 58B99 (53B21)
- Ragulin, V. V.** (with Kažihov, A. V.) A problem of convection of a viscous fluid. (Russian) *Dinamika Splošn. Sredy No. 40 Dinamika Židkosti so Svobod. Granic.* (1979), 127–133, 142. (Authors' summary) **81k:76061** 76R10
- (with Kažihov, A. V.) Nonstationary problems of the flow of an ideal fluid through a bounded region. (Russian) *Dokl. Akad. Nauk SSSR* **250** (1980), no. 6, 1344–1347. (V. P. Kalashnikov) **81j:76029** 76D10 (76C05, 76C99)
- Ragnusa, Alfio** (with Maggioni, Renato) Algebras for which the generalized Hilbert nullstellensatz holds. (Italian, English summary) *Ann. Univ. Ferrara Sez. VII (N.S.)* **25** (1979), 205–218. (Gerhard Pfister) **81f:13002** 13B99 (14A25)
- Rahbar-Rochandel, Hamid** Relations entre la série de Betti d'un anneau local de Gorenstein R et celle de l'anneau $R/\text{Socle } R$. *Séminaire d'Algèbre Paul Dubreil, 30ème année (Paris, 1976–1977)*, pp. 339–357, *Lecture Notes in Math.*, **641**, Springer, Berlin, 1978. (P. Schenzel) **81k:13003** 13D03 (13H10, 14B99)
- La cinquième déflexion d'un anneau local noethérien. *Séminaire d'Algèbre Paul Dubreil 31ème année (Paris, 1977–1978)*, pp. 205–212, *Lecture Notes in Math.*, **740**, Springer, Berlin, 1979. (R. B. Treger) **81c:13013** 13D03
- Rabe, M.** Relatively finitely determined implies relatively very weak Bernoulli. *Canad. J. Math.* **30** (1978), no. 3, 531–548. (Douglas Lind) **81j:28029** 28D05
- Finite coding factors of Markov generators. *Israel J. Math.* **32** (1979), no. 4, 349–355. (Laif Swanson) **81f:28017** 28D05 (60J05)
- (with del Junco, Andrés; Swanson, Laif) Chacon's automorphism has minimal self-joinings. *J. Analyse Math.* **32** (1980), 276–284. (B. Kamiński) **81j:28027** 28D05
- Rahman, P. M. Abdul** (with Ahmad, Z. U.) On $[j, p, \lambda]$ -summability of Fourier series. *I. Aligarh Bull. Math.* **5/6** (1975/76), 25–36 (1977). (Editors) **81a:42012** 42A24
- Rahimberdiyev, M. I.** (with Rozov, N. H.) Localization of a spectrum of a linear system of ordinary differential equations. (Russian, Kazakh summary) *Izv. Akad. Nauk Kazakh*

- SSR Ser. Fiz.-Mat. 1980, no. 1, 73-76, 94. (R. C. Gilbert) **81h:34055** 34D05
- Rabinov, A. A. One class of magnetohydrodynamic flow. *Magnit. Gidrodinamika* No. 1 (1980), 67-71. (Russian); translated as *Magnetohydrodynamics* 16 (1980), no. 1, 54-58. (From the text) **81m:76058** 76W05
- Rabinov, A. M. An approach to resource allocation in systems of network planning and control. (Russian) *Voprosy Kibernet. (Tashkent)* No. 107 (1979), 3-11, 167. (Author's summary) **81d:90020** 90A11 (90A17, 90B35)
- Rabinov, D. G. (with Loginov, B. V.) The method of false perturbations in the presence of generalized Jordan chains. (Russian) *Differential equations and their applications* (Russian), pp. 113-125, 168, "Fan", Tashkent, 1979. (E. G. Djakonov) **81g:65071** 65J10 (47A55, 65N25)
- Determination of generalized Jordan chains by a combination of the false perturbation and Steffensen methods. (Russian) *Differential equations and their applications* (Russian), pp. 125-130, 168, "Fan", Tashkent, 1979. (Ja. I. Al'ber) **81g:65070** 65J99 (47H12)
- The method of false perturbations for the approximating operator-function in eigenvalue problems for ordinary differential equations. (Russian) *Izv. Akad. Nauk UzSSR Ser. Fiz.-Mat. Nauk* 1979, no. 2, 93-94. (M. Svec) **81a:34028** 34B25 (65L15)
- Rabinov, I. Some properties of supercritical branching processes with immigration. (Russian) *Random processes and mathematical statistics* (Russian), pp. 138-143, 189, "Fan", Tashkent, 1978. (Walter Warmuth) **81f:60116** 60J80
- (with Ibragimov, R.) Limit theorems for supercritical multitype Galton-Watson processes. (Russian) *Izv. Akad. Nauk UzSSR Ser. Fiz.-Mat. Nauk* 1979, no. 1, 9-15, 93. (P. Jagers) **81c:60091** 60J80
- Rabinov, R. M. Behavior of an integral of Cauchy type "near" the line of integration. (Russian) *Azerbaijan. Gos. Univ. Učen. Zap.* 1979, no. 1, 51-59. (R. P. Boas, Jr.) **81g:30053** 30E20
- Rahn, Lars (with Walin, Gösta) On thermally forced stratified rotating fluids. *J. Fluid Mech.* 97 (1980), no. 4, 807-828. (Authors' summary) **81h:76098** 76W05 (76U05)
- Rahman, M. Perturbation solutions arising in heat and mass transfer within a stream in a chemical flow reactor. *Tensor (N.S.)* 33 (1979), no. 1, 55-62. (Mario Primicerio) **81h:80007** 80A20 (35K55, 80A30)
- Rahman, Q. I. Inequalities of Markoff and Bernstein. *Polynomial and spline approximation* (Proc. NATO Ado. Study Inst., Univ. Calgary, Calgary, Alta., 1978), pp. 191-201, NATO Ado. Study Inst. Ser., Ser. C: Math. and Phys. Sci., 49, Reidel, Dordrecht, 1979. (Wiesław Pleśniak) **81a:41021** 41A17 (26C05, 30C10)
- (with Gervais, R.; Schmeisser, Gerhard) Simultaneous interpolation and approximation. *Polynomial and spline approximation* (Proc. NATO Ado. Study Inst., Univ. Calgary, Calgary, Alta., 1978), pp. 203-223, NATO Ado. Study Inst. Ser., Ser. C: Math. and Phys. Sci., 49, Reidel, Dordrecht, 1979. (David W. Kammler) **81c:41005** 41A05 (41A30)
- (with Giroux, André; Schmeisser, Gerhard) On Bernstein's inequality. *Canad. J. Math.* 31 (1979), no. 2, 347-353. (T. T. Tonkovic) **81c:30009** 30C10 (41A10)
- (with Govil, N. K.; Schmeisser, Gerhard) On the derivative of a polynomial. *Illinois J. Math.* 23 (1979), no. 2, 319-329. (T. T. Tonkovic) **81c:30010** 30C10
- (with Schmeisser, Gerhard) An extremal problem for polynomials with a prescribed zero. II. *Proc. Amer. Math. Soc.* 73 (1979), no. 3, 375-378. (P. Lappan) **81j:30003** 30A10 (26D05)
- (with Waniurski, J.) Coefficient regions for univalent trinomials. *Canad. J. Math.* 32 (1980), no. 1, 1-20. (W. C. Royster) **81b:30027** 30C50
- Rahmanov, E. A. Steklov's conjecture in the theory of orthogonal polynomials. (Russian) *Mat. Sb. (N.S.)* 108(150) (1979), no. 4, 581-608, 640. (Author's summary) **81j:42042** 42C05
- Rahmatov, A. S. (with Abdullaev, F. H.) The theory of propagation of nonlinear waves in random media with large-scale inhomogeneities. (Russian) *Izv. Akad. Nauk UzSSR Ser. Fiz.-Mat. Nauk* 1980, no. 2, 58-62, 92. (Nina B. Maslova) **81h:78006** 78A40 (82A42)
- (with Abdullaev, F. H.; Abdumalikov, A. A.) Solution of a nonlinear parabolic equation with random coefficients. (Russian) *Izv. Akad. Nauk UzSSR Ser. Fiz.-Mat. Nauk* 1980, no. 3, 88-90. (Z. Schuss) **81m:35141** 35R60 (35B40, 60H15, 81C20)
- Rahmatulin, H. A. See Zubov, N. Z., **81f:73014**
- Rahma, M. O. (with Kuzakon, V. M.) Invariants of a fibration of a locally Euclidean surface. (Russian) *Ukrain. Geom. Sb.* No. 21 (1978), 44-50, 2. (W. Rona) **81a:53016** 53A55
- Rai, Arindam (with Gaur, Madhukar) Growth and decay of weak MHD waves in gases at very high temperature. *Acta Phys. Polon. A* 57 (1980), no. 5, 653-660. (Authors' summary) **81j:76098** 76W05
- Rai, L. N. (with Singh, T.) Stationary axially symmetric Brans-Dicke-Maxwell fields. *Gen. Relativity Gravitation* 11 (1979), no. 1, 37-43. (B. K. Nayak) **81a:83030** 83D05
- Rai, S. N. (with Pugh, D.) On the eigenfunctions of the Smoluchowski diffusion equation in a double-well potential and their relation to polymer dynamics. *Chem. Phys. Lett.* 75 (1980), no. 3, 497-499. (Authors' summary) **81d:82065** 82A05 (82A42, 82A70)
- Rai, S. P. (with Sinha, B. B.) Infinitesimal affine transformations of the cotangent bundles with Sasaki metric. *Ann. Fac. Sci. Univ. Nat. Zaire (Kinshasa) Ser. Math.-Phys.* 4 (1978), no. 1, 121-129. (Jean-Marie Morvan) **81h:53017** 53B20
- Rahmanov, N. S. (with Kapitonenko, V. V.) Variance characteristics of nonlinear transformations of random processes. *Automat. i Telemekh.* 1977, no. 3, 65-68. (Russian. English summary); translated as *Automat. Remote Control* 38 (1977), no. 3, part 1, 355-358. (Authors' summary) **81h:93092** 93E03
- (with Varlaky, P.) On subjective dispersion functions. *Transactions of the Eighth Prague Conference on Information Theory, Statistical Decision Functions, Random Processes* (Prague, 1978), Vol. C, pp. 279-293, Reidel, Dordrecht, 1979. (Authors' summary) **81a:60006** 60A05 (93E03)
- (with Kapitonenko, V. V.) Using the duality principle in minimax identification. *Automat. i Telemekh.* 1979, no. 11, 98-105. (Russian. English summary); translated as *Automat. Remote Control* 40 (1979), no. 11, part 2, 1635-1641 (1980). (Authors' summary) **81d:90055** 90B30
- (with Čadež, V. M.) Identification of industrial processes. The application of computers in research and production control. Translated from the Russian by F. W. Gerretsen. Edited by P. Eykhoff. North-Holland Publishing Co., Amsterdam-New York, 1980. xiv + 435 pp. ISBN 0-444-85181-X (From the preface) **81f:93030** 93B30
- Raich, R. A. Asymptotic properties of uniform approximations of functions with algebraic singularities by partial sums of a Fourier-Chebyshev series. (Russian) *Izv. Vysl. Učebn. Zaved. Matematika* 1980, no. 3, 45-49. (R. P. Boas, Jr.) **81h:42023** 42C10 (41A50)
- Račnov, Ivan Commutation properties of the algebra of linear operators in polynomial space. *C. R. Acad. Bulgare Sci.* 33 (1979), no. 8, 1011-1014. (D. Przeworska-Rolewicz) **81c:47037** 47B47
- Raisoni, Giancarlo (with Carotenuto, Luciano) Error analysis of a finite element approximate filter for a class of DPS. *Simulation of distributed-parameter and large-scale systems* (Proc. IMACS European Simulation Meeting, Univ. Patras, Patras, 1979), pp. 33-43, North-Holland, Amsterdam, 1980. (Authors' summary) **81f:93071** 93E11 (65N30)
- (with Carotenuto, Luciano) Identifiability and identification of a Galerkin approximation for a class of distributed parameter systems. *Internat. J. Systems Sci.* 11 (1980), no. 9, 1035-1049. (Authors' summary) **81f:93021** 93B30 (93E12)
- Räihä, Kari-Jouko (with Ukkonen, Eero) On the optimal assignment of attributes to passes in multipass attribute evaluators. *Automata, languages and programming* (Proc. Seventh Internat. Colloq., Noordwijkerhout, 1980), pp. 500-511, Lecture Notes in Comput. Sci., 85, Springer, Berlin, 1980. (Authors' summary) **81f:68102** 68F25
- Räilema, Liisana Maxim See Maxim-Räilema, Liisana
- Raimbekov, D. Ž. (with Izmailov, A. L.) The type of the resolvent of the Sturm-Liouville operator with nonseparable potential. (Russian. Kazakh summary) *Izv. Akad. Nauk Kazah. SSR Ser. Fiz.-Mat. Nauk* 1978, no. 5, 52-56, 93. (From the text) **81h:34018** 34B25
- Raimi, Ralph A. Factorization of summability-preserving generalized limits. *J. London Math. Soc.* (2) 22 (1980), no. 3, 398-402. (M. S. Ramanujan) **81m:46027** 46B15 (40C99, 47B37)
- Raimondi, T. (with Aprile, Giuseppe) Search for intermediate eigenvalues, and applications. (Italian) *Atti Accad. Sci. Lett. Arti Palermo Parte I* (4) 36 (1976/77), 29-34 (1978). (Ja. I. Al'ber) **81h:65031** 65F15 (15A18)
- (with Aprile, Giuseppe) Iterative numerical calculation of roots of matrices. (Italian) *Atti Accad. Sci. Lett. Arti Palermo Parte I* (4) 36 (1976/77), 67-71 (1978). (G. C. Barozzi) **81d:65019** 65F30
- Raimondo, Mario (with Marinar, M. G.) Vector bundles over algebraic varieties defined over algebraically nonclosed fields. (Italian. English summary) *Boll. Un. Mat. Ital. A* (5) 16 (1979), no. 1, 128-136. (A. Tognoli) **81a:14005** 14F05 (14G30)
- (with Silva, Alessandro) The cohomology of an open subspace of a Stein space. *J. Reine Angew. Math.* 318 (1980), 32-35. (V. D. Golovin) **81h:32011** 32C35 (32E10)
- Raina, A. K. (with Singh, Virendra) Bounds on form factors and propagators. *Fortschr. Phys.* 27 (1979), no. 11-12, 561-579. (P. Achuthan) **81f:81004** 81G25
- Raina, R. K. (with Koul, C. L.) Fractional derivatives of the H-functions. *Jānanbha* 7 (1977), 97-105. (C. L. Parihar) **81c:33010** 33A35 (26A33)
- (with Koul, C. L.) On Weyl fractional calculus. *Proc. Amer. Math. Soc.* 73 (1979), no. 2, 188-192. (K. M. Saxena) **81h:26003** 26A33 (44A10)
- On the Weyl fractional differentiation. *Pure Appl. Math. Sci.* 10 (1979), no. 1-2, 37-41. (Thomas J. Osler) **81h:26007** 26A33 (33A35)
- On certain expansions involving H-function. *Comment. Math. Univ. St. Paul.* 28 (1980), no. 2, 115-119. (P. Anandani) **81c:33007** 33A35
- Rais, Mustapha Opérateurs différentiels bi-invariants (d'après M. Duflo). *Séminaire Bourbaki, 29e année* (1976/77), Exp. No. 498, pp. 125-137, Lecture Notes in Math., 677, Springer, Berlin, 1978. (J. S. Joel) **81d:22013** 22E30 (35H05, 43A80, 58G35)
- La représentation coadjointe du groupe affine. (English summary) *Ann. Inst. Fourier (Grenoble)* 28 (1978), no. 1, xi, 207-237. (Anthony Joseph) **81f:17017** 17B35
- Raisov, M. M. Periodic solutions of a system. (Russian) *Dokl. Akad. Nauk UzSSR* 1979, no. 12, 6-8. (M. K. Grammatikopoulos) **81h:34038** 34C25
- Raitchikov, I. See Raitchinov, Ivan
- Raitis, K. (with Schönauer, W.; Giotz, G.) Ein selbststeuerndes Lösungsverfahren für große Systeme von gewöhnlichen Differentialgleichungen, wie sie zum Beispiel aus der Linienmethode resultieren. Vorträge der Wissenschaftlichen Jahrestagung der Gesellschaft für Angewandte Mathematik und Mechanik, Teil I (Brussels, 1978). *Z. Angew. Math. Mech.* 59 (1979), no. 3, T79-T81. (From the text) **81g:65112** 65L10
- Raitis, M. Schranken für die Lösung eines Randwertproblems mit einer gewöhnlichen Differentialgleichung 2. Ordnung. Vorträge der Wissenschaftlichen Jahrestagung der Gesellschaft für Angewandte Mathematik und Mechanik, Teil I (Brussels, 1978). *Z. Angew. Math. Mech.* 59 (1979), no. 3, T71-T73. (Author's introduction) **81g:65048** 65L10
- Raitman, F. (with Leonov, G. A.; Abramović, S. M.; Burkina, L. I.; Korjaruk, A. E.; Korjakin, Ju. A.) A method of reduction in the theory of dynamical systems with a cylindrical phase space and its application to the investigation of the stability of power systems. (Russian) *Theory of stability and its applications* (Russian), pp. 55-60, 298, "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. (Piero Bassanini) **81h:34042** 34C35 (78A55)
- Raitman, U. Closure in L_2 of the set of solutions of a family of nonlinear elliptic equations. (Russian) *Differentsial'nye Uravnenija* 16 (1980), no. 3, 501-506, 574. (E. M. Saak) **81c:35049** 35J60 (49A22)
- Raitzin, Carlos A new solution of the problem of partitions. *Bull. Number Theory Related Topics* 3 (1978), no. 3, 1-4. (Stefan A. Burr) **81d:10039** 10J20
- Entire functions with zeros at the prime numbers. *Bull. Number Theory Related Topics* 3 (1978), no. 3, 14-17, 4. (G. L. Cohen) **81h:10054** 10H05 (30D20)
- Raiman, Aleksandr On a modification of Chebyshev's method. (Russian. Lithuanian and English summaries) *Teor. Optimal. Reseni—Trudy Sem. Protsessy Optimal. Upravlenija VI Sekcija* No. 5 (1979), 49-54, 117. (Authors' summary) **81h:65057** 65J15
- Raj, Baldev (with Srivastava, Virender Kumar; Ullah, Aman) Generalized two-stage least squares estimators for a structural equation with both fixed and random coefficients. *Internat. Econom. Rev.* 21 (1980), no. 1, 171-183. (R. W. Farebrother) **81h:62197** 62P20
- (with Srivastava, Virender Kumar; Upadhyaya, Subhama) The efficiency of estimating a random coefficient model. *J. Econometrics* 12 (1980), no. 3, 285-299. (H. T. Amundsen) **81h:62123** 62J05
- Rajagopal, A. K. Linear-response functions in spin-density-functional theory. *Phys. Rev. B*

- (3) 17 (1978), no. 7, 2980-2988. (Author's summary) **81g:82067** 82A65
- Rajagopal, K. R.** (with Wineman, A.) On constitutive equations for branching of response with selectivity. (French and German summaries) *Internat. J. Non-Linear Mech.* **15** (1980), no. 2, 83-91. (Authors' summary) **81g:73006** 73B05
- (with Fosdick, R. L.) Thermodynamics and stability of fluids of third grade. *Proc. Roy. Soc. London Ser. A* **369** (1980), no. 1738, 351-377. (R. R. Huilgol) **81g:76004** 76A10 (80A10)
- (with Mir-Mohammad-Sadeq, A.) A boundary integral approach for determining the pressure error. *Rheol. Acta* **19** (1980), no. 1, 12-18. (Authors' summary) **81g:76006** 76A10
- (with Mir-Mohammad-Sadeq, A.) The flow of a non-Newtonian fluid past projections and depressions. *Trans. ASME Ser. E J. Appl. Mech.* **47** (1980), no. 3, 485-488. (Authors' summary) **81g:76001** 76A05 (65R20)
- Rajamani, V. S.** (with Sinha, M. S. P.; Sinha, A. K.) Identification of nonlinear distributed system using Walsh functions. *Internat. J. Control* **32** (1980), no. 4, 669-676. (Authors' summary) **81g:93023** 93B30 (93C20)
- Rajan, P. K.** (with Swamy, M. N. S.) Symmetry constraints on two-dimensional half-plane digital transfer functions. *IEEE Trans. Acoust. Speech Signal Process.* **27** (1979), no. 5, 506-511. (Authors' summary) **81a:94018** 94A12
- Rajappa, N. R.** (with Arunachalam, M.) Transient free convection flow around two-dimensional or axisymmetric bodies. (German summary) *Acta Mech.* **35** (1980), no. 3-4, 231-243. (F. Feuillebois) **81g:76009** 76R10
- Rajbhandari, N. S.** See **Rajbhandari, N. S.**
- Bereiniewicz-Rajca, Olga** See **Bereiniewicz-Rajca, Olga**
- Rajchman, Jan** Early research on computers at RCA. *A history of computing in the twentieth century*, pp. 465-469. Academic Press, New York, 1980. (See **81i:68002**) 68-03 (01A65)
- Rajlich, J.** (with Koubek, Václav) Regular societies without short cycles. *Comment. Math. Univ. Carolin.* **21** (1980), no. 1, 161-169. (H. Sachs) **81d:05062** 05C65 (05C35)
- Rajlich, Václav** Determinism in relational systems. *Graph-grammars and their application to computer science and biology (Internat. Workshop, Bad Honnef, 1978)*, pp. 401-408. *Lecture Notes in Comput. Sci.*, 73, Springer, Berlin, 1979. (Author's summary) **81d:68044** 68C01
- Rajput, S.** $SU(4)_c \times SU(4)_c$ synthesis of strong, weak, and electromagnetic interactions. *Phys. Rev. D* (3) **20** (1979), no. 7, 1688-1697. (Author's summary) **81a:81094** 81G10 (81G15)
- Integer-charged quarks in the $SU(5)$ grand unified theory. *Phys. Rev. D* (3) **21** (1980), no. 7, 1928-1931. (R. Delbourgo) **81c:81067** 81G20
- Rajput, B. S.** (with Joshi, K. N.) Addition of complex angular momentum operators. *J. Math. Phys.* **21** (1980), no. 7, 1579-1582. (N. Mukunda) **81i:81039** 81C40
- Raju, S. Radhakrishneswara** (with Kannan, V.) The nonexistence of invariant universal measures of semigroups. *Proc. Amer. Math. Soc.* **78** (1980), no. 4, 482-484. (Detlef Plachky) **81b:28013** 28C10 (20M99)
- Raka, Madhu** (with Hans-Gill, R. J.) Some inequalities for nonhomogeneous quadratic forms. *Indian J. Pure Appl. Math.* **11** (1980), no. 1, 60-74. (E. S. Barnes) **81h:10047a** 10E20
- (with Hans-Gill, R. J.) Inhomogeneous minimum of indefinite quadratic forms in five variables of type (4, 1) or (1, 4): a conjecture of Watson. *Indian J. Pure Appl. Math.* **11** (1980), no. 1, 75-91. (E. S. Barnes) **81h:10047b** 10E20
- (with Hans-Gill, R. J.) Positive values of inhomogeneous 5-ary quadratic forms of type (3, 2). *J. Austral. Math. Soc. Ser. A* **29** (1980), no. 4, 439-453. (T. H. Jackson) **81h:10051** 10E20 (10C25)
- Rakeckil, V. M.** A direct method for solving problems of quadratic programming. (Russian) *Vestnik Beloruss. Gos. Univ. Ser. I* **1980**, no. 1, 54-56, 79. (V. N. Malozemov) **81h:90117** 90C20 (65K05)
- Boundedness of the set of admissible trajectories in difference approximations of continuous control systems. (Russian) *Vestnik Beloruss. Gos. Univ. Ser. I* **1980**, no. 2, 49-50, 64. (From the text) **81i:93016** 93C15
- Rakhimov, A. A.** See **Rakhimov, A. A.**
- Rakić, M.** (with Petkovski, Dj.) A series solution of feedback gains for output-constrained regulators. *Internat. J. Control* **30** (1979), no. 4, 661-668. (Authors' summary) **81c:93042** 93C05
- Rakin, L. V.** Application of the averaging method in the investigation of a countable system of differential equations. (Russian. Kazakh summary) *Izv. Akad. Nauk Kazah. SSR Ser. Fiz.-Mat. Fiz.*, no. 5, 49-54, 91. (D. Bobrowski) **81a:34013** 34A45 (34C29)
- Rakitin, Ju. V.** (with Eremin, M. V.) On kinetic exchange theory. (Russian summary) *Phys. Status Solidi (B)* **97** (1980), no. 1, 51-62. (From the summary) **81a:82041** 82A60
- Rakitskii, Ju. V.** (with Ustinov, S. M.; Černoruckii, I. G.) ★Численные методы решения жестких систем. (Russian) [Numerical methods for solving stiff systems] "Nauka", Moscow, 1979. 208 pp. (H. Shintani) **81c:65034** 65L05
- Rakov, S. A.** The Banach-Saks property for a Banach space. (Russian) *Mat. Zametki* **26** (1979), no. 6, 823-834, 972. (Alan Shuchat) **81i:46018** 46B15
- Rakovec, Jurež** ★Osnovni pojmi topologije. (Slovenian) [Basic concepts of topology] Knjižnica Sigma [Sigma Library], 31. Državna Založba Slovenije, Ljubljana, 1980. 240 pp. (Editors) **81b:54001** 54-01
- Raković, Branko D.** (with Vasić, Petar M.) Some extremal properties of orthogonal polynomials. *Univ. Beograd. Publ. Elektrotehn. Fak. Ser. Mat. Fiz.* No. 634-677 (1979), 25-32 (1980). (Harold Exton) **81f:33014** 33A65 (94A11)
- (with Popovich, Miodrag V.) Characteristic function of least-mean-square passband filters with finite attenuation poles. *IEEE Trans. Circuits and Systems* **27** (1980), no. 12, 1225-1233. (Authors' summary) **81m:94007** 94A12
- Rakowski, Zbigniew M.** Concerning decompositions of continua. *Fund. Math.* **100** (1978), no. 3, 239-246. (G. R. Gordh, Jr.) **81g:54033** 54F20 (54B15)
- Remarks on weakly contractible Hausdorff curves. *Topology (Proc. Fourth Colloq., Budapest, 1978)*, Vol. II, pp. 1015-1017. *Colloq. Math. Soc. János Bolyai*, 23, North-Holland, Amsterdam, 1980. (G. R. Gordh, Jr.) **81m:54065** 54F20 (54F45)
- On decompositions of Hausdorff continua. *Dissertationes Math. (Rosprawy Mat.)* **170** (1980), 33 pp. (Michel Smith) **81m:54015** 54B15
- Rakviavili, G. G.** Generalization of the Artin theorem for semisimple algebras and inductive theorems for orders and crossed group rings. (Russian. Georgian and English summaries) *Soobšč. Akad. Nauk Gruz. SSR* **96** (1979), no. 1, 25-28. (S. I. Gel'fand) **81j:20019** 20C15 (16A64)
- Ralescu, Dan** A survey of the representation of fuzzy concepts and its applications. *Advances in fuzzy set theory and applications*, pp. 77-91, North-Holland, Amsterdam, 1979. (Author's summary) **81b:90001** 90-02 (03E72)
- Rall, Douglas F.** A class of rings which are algebraic over the integers. *Internat. J. Math. Math. Sci.* **2** (1979), no. 4, 627-650. (Irvin Roy Hentzel) **81c:16034** 16A48 (16A12)
- Rall, L. B.** A comparison of the existence theorems of Kantorovich and Moore. *Proceedings of the 1979 Army Numerical Analysis and Computers Conference (White Sands Missile Range, White Sands, N.M., 1979)*, pp. 335-351, ARO Rep. 79, 3, U. S. Army Res. Office, Research Triangle Park, N.C., 1979. (Author's summary) **81a:65051** 65H10
- Resolvent kernels of Green's function kernels and other finite-rank modifications of Fredholm and Volterra kernels. *Solution methods for integral equations*, pp. 257-286. *Math. Concepts and Methods in Sci. and Engng.*, 18, Plenum, New York, 1979. (Author's summary) **81c:45001** 45A05 (65R20)
- A comparison of the existence theorems of Kantorovich and Moore. *SIAM J. Numer. Anal.* **17** (1980), no. 1, 148-161. (L. Hageman) **81c:65052** 65H10
- Rallis, Stephen** On a relation between SL_2 cusp forms and automorphic forms on orthogonal groups. *Automorphic forms, representations and L-functions (Proc. Sympos. Pure Math., Oregon State Univ., Corvallis, Ore., 1977)*, Part I, pp. 297-314. *Proc. Sympos. Pure Math.*, XXXIII, Amer. Math. Soc., Providence, R.I., 1979. (Martin I. Karel) **81c:10029** 10D20 (10D40, 14K25, 22E45)
- The Eichler commutation relation and the continuous spectrum of the Weil representation. *Noncommutative harmonic analysis (Proc. Third Colloq., Marseille-Luminy, 1978)*, pp. 211-244. *Lecture Notes in Math.*, 728, Springer, Berlin, 1979. (Stephen Gelbart) **81a:10042** 10D40
- (with Schiffmann, Gérard) Weil representation. I. Intertwining distributions and discrete spectrum. *Mem. Amer. Math. Soc.* **25** (1980), no. 231, iii+203 pp. (A. B. Venkov) **81j:22007** 22D10 (10C15, 10D40)
- Rallison, J. M.** Note on the time-dependent deformation of a viscous drop which is almost spherical. *J. Fluid Mech.* **98** (1980), no. 3, 625-633. (Author's summary) **81h:76023** 76D99
- See also **Ryakin, G.**, **81j:76007**
- Ralston, James** Diffraction by convex bodies. *Séminaire Goulaouic-Schwartz (1978/1979)*, Exp. No. 23, 9 pp., École Polytech., Palaiseau, 1979. (G. P. Bava) **81d:35050** 35L20 (58G25, 78A45)
- (with Majda, Andrew) Discrete shock profiles for systems of conservation laws. *Comm. Pure Appl. Math.* **32** (1979), no. 4, 445-482. (Ronald Di Perna) **81i:35108** 35L65 (35L60)
- (with Majda, Andrew) An analogue of Weyl's formula for unbounded domains. III. An epilogue. *Duke Math. J.* **46** (1979), no. 4, 725-731. (V. M. Babić) **81k:35121** 35P20
- (with Bardos, Claude; Guilloit, Jean-Claude) Relation de Poisson pour l'équation des ondes dans un ouvert non borné. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **290** (1980), no. 11, A495-A497. (Authors' summary) **81g:35061** 35L05 (35P25, 58G25)
- Ram, Abhay K.** (with Krapchew, Vladimir B.) Adiabatic theory for a single nonlinear wave in a Vlasov plasma. *Phys. Rev. A* (3) **22** (1980), no. 3, 1229-1242. (Authors' summary) **81g:76124** 76X05
- Ram, Balu** A sufficient condition for the integrability of Rees-Stanojević sum. *Kyungpook Math. J.* **19** (1979), no. 2, 257-260. (Jai Prakash Sharma) **81b:42044** 42A32
- Integrability of Rees-Stanojević sums. *Acta Sci. Math. (Szeged)* **42** (1980), no. 1-2, 153-155. (Masako Izumi) **81i:42012** 42A32 (40A99)
- sri Ram, M. S.** See **Sri Ram, M. S.**
- Ram, R. B.** (with Diaz, J. B.) Uniqueness of Dirichlet, Neumann and mixed boundary value problems for Laplace's and Poisson's equations for a rectangle. *Collect. Math.* **30** (1979), no. 1, 37-54. (Gottfried Anger) **81g:31003** 31A25 (35J25)
- Ram, Rishi** See **Sharma, Rishi Ram**
- Ramachandra, K.** (with Erdős, Paul; Babu, Gutti Jogesh) An asymptotic formula in additive number theory. II. *J. Indian Math. Soc. (N.S.)* **41** (1977), no. 3-4, 281-291 (1978). (Jean-Marc Deshouillers) **81g:10062** 10H25
- (with Balasubramanian, R.) On the zeros of a class of generalized Dirichlet series. IV. *J. Indian Math. Soc. (N.S.)* **42** (1978), no. 1-4, 135-142 (1979). (E. Grosswald) **81c:10046** 10H10 (30B50)
- On the zeros of generalised Dirichlet series. V. *J. Reine Angew. Math.* **303/304** (1978), 295-313. (E. Grosswald) **81c:10047** 10H10 (30B50)
- One more proof of Siegel's theorem. *Hardy-Ramanujan J.* **3** (1980), 25-40. (E. Stankus) **81k:10061** 10H08 (12A70)
- (with Balasubramanian, R.) Effective and non-effective results on certain arithmetical functions. *J. Number Theory* **12** (1980), no. 1, 10-19. (Matti Jutila) **81i:10056** 10H25
- Ramachandran, B.** On the strong Markov property of the exponential laws. *Analytic function methods in probability theory (Proc. Colloq. Methods of Complex Anal. in the Theory of Probab. and Statist., Kossuth L. Univ. Debrecen, Debrecen, 1977)*, pp. 277-292. *Colloq. Math. Soc. János Bolyai*, 21, North-Holland, Amsterdam, 1979. (Lennart Bondesson) **81f:62024** 62E10 (60E05)
- On some fundamental lemmas of Linnik. *Analytic function methods in probability theory (Proc. Colloq. Methods of Complex Anal. in the Theory of Probab. and Statist., Kossuth L. Univ. Debrecen, Debrecen, 1977)*, pp. 293-306. *Colloq. Math. Soc. János Bolyai*, 21, North-Holland, Amsterdam, 1979. (I. V. Ostrovskii) **81f:60025** 60E10
- Ramachandran, D.** ★Perfect measures. Part I. Basic theory. *ISI Lecture Notes*, 5. Macmillan Co. of India, Ltd., New Delhi, 1979. xi+86 pp. *ISBN 0-33390-309-9* (Jan Pachl) **81h:60005a** 60A10 (28A35, 28A50)
- ★Perfect measures. Part II. Special measures. *ISI Lecture Notes*, 7. Macmillan Co. of India, Ltd., New Delhi, 1979. xii+126 pp. *ISBN 0-33390-327-7* (Jan Pachl) **81h:60005b** 60A10 (28A35, 28A50)
- Ramachandran, P. Subhadra** (with Mathur, M. N.) Heat transfer in the stagnation point

- flow of a micropolar fluid. (German summary) *Acta Mech.* 36 (1980), no. 3-4, 247-261. (Authors' summary) **81d:76008** 76A05 (80A20)
- Ramachandran, V. (with Reddy, Harnatha C.; Swamy, M. N. S.) New results in sum separability of multivariable reactance and positive real functions. *Proceedings of the Fourth International Symposium on Network Theory (Ljubljana, 1979)*, pp. 305-310, Georgi, St.-Saphorin, 1979. (See **81b:94003**) 94C99
- Ramacher, U. Faddeev equations in the functional quantum theory of the nonlinear spinorfield. *Z. Naturforsch. A* 35 (1980), no. 9, 964-972. (Author's summary) **81m:81063** 81F20 (45K05)
- Ramadge, Peter J. (with Goodwin, Graham C.; Caines, Peter E.) Discrete-time multivariable adaptive control. *IEEE Trans. Automat. Control* 25 (1980), no. 3, 449-456. (Authors' summary) **81c:93048** 93C35 (93C40)
- Ramadhani, S. (with Patankar, S. V.) Solution of the Poisson equation: comparison of the Galerkin and control-volume methods. *Internat. J. Numer. Methods Engrg.* 15 (1980), no. 9, 1395-1407. (A. B. Stephens) **81m:65177** 65N30
- Ramagge, J. G. (with Hale, C.; Mariano, Roberto S.) Finite sample analysis of misspecification simultaneous equation models. *J. Amer. Statist. Assoc.* 75 (1980), no. 370, 418-427. (V. K. Srivastava) **81j:62201** 62P20 (62F11)
- Ramakrishna, D. (with Rao, G. Koteswara) IFF near-rings. *J. Austral. Math. Soc. Ser. A* 27 (1979), no. 3, 365-370. (R. Gorton) **81c:16053** 16A76
- Ramakrishnan, K. G. Solving two-commodity transportation problems with coupling constraints. *J. Assoc. Comput. Mach.* 27 (1980), no. 4, 736-757. (Author's summary) **81j:90124** 90C35 (90B05)
- Ramakrishnan, P. V. m -extremely left amenable semigroups. *J. Madurai Univ.* 6 (1977), no. 2, 57-61. (M. M. Day) **81k:43005a** 43A07
- Extremely left measurable semigroups. *J. Madurai Univ.* 7 (1978), no. 1, 95-98. (M. M. Day) **81k:43005b** 43A07
- Ramakrishna Rao, B. Interleaved memory bandwidth in a model of a multiprocessor computer system. *IEEE Trans. Comput.* 28 (1979), no. 9, 678-681. (U. M. Maydell) **81f:68010** 68A05
- Rama Mohana Rao, K. (with Krishnamurthy, T. S. G.; Prasad, L. S. R. K.) Quasisymmetry and double point groups. *J. Phys. A* 13 (1980), no. 6, 1947-1956. (Authors' summary) **81d:82056** 82A60 (20C35, 81C40)
- Rama Mohana Rao, M. (with Sree Hari Rao, V.) Uniform asymptotic stability of impulsively perturbed nonlinear differential equations. *Nonlinear Anal.* 4 (1980), no. 3, 599-606. (T. Yoshizawa) **81k:34046** 34D05
- Ramamoorthy, C. V. (with Ho, Gary S.) Performance evaluation of asynchronous concurrent systems using Petri nets. *IEEE Trans. Software Engrg.* 6 (1980), no. 5, 440-449. (Authors' summary) **81g:68045** 68B20
- Ramamoorthy, K. Convergence of age and type distributions in multitype critical Bellman-Harris processes. *J. Appl. Probab.* 17 (1980), no. 4, 948-955. (Søren Asmussen) **81k:60089** 60J80
- (with Athreya, K. B.) Renewal theory—a Markov process approach. *J. Math. Kyoto Univ.* 20 (1980), no. 1, 169-177. (E. Arjas) **81d:60092** 60K05 (60J05, 60J25)
- Ramamurti, V. (with Srinivasan, V.) Stability and vibration of an annular plate with concentrated edge load. *Comput. & Structures* 12 (1980), no. 1, 119-129. (Authors' summary) **81f:73022** 73H05 (73D99, 73K25)
- Raman, P. V. (with Iyengar, K. T. Sundara Raja) Free vibration of rectangular beams of arbitrary depth. (German summary) *Acta Mech.* 32 (1979), no. 4, 249-259. (Authors' summary) **81e:73059** 73K12
- Ramana Murthy, P. V. Prime and implicative semilattices. *Algebra Universalis* 10 (1980), no. 1, 31-35. (W. Nemitz) **81d:06003** 06A12
- Ramasesan, S. (with Narasimhan, M. S.) Geometry of Hecke cycles. I. C. P. *Ramanujam—a tribute*, pp. 291-345, Tata Inst. Fund. Res. Studies in Math., 8, Springer, Berlin, 1978. (Knud Lønsted) **81b:14003** 14D22 (10D99, 14F05)
- Vector bundles over algebraic curves. *Proceedings of the International Congress of Mathematicians (Helsinki, 1978)*, pp. 543-547, Acad. Sci. Fennica, Helsinki, 1980. (A. Babakhanian) **81c:14011** 14F05 (12A67)
- Ramasharanian, R. (with Parthasarathy, P. R.) Number of repairs and total repair time for a 2-unit warm standby system. (German and Russian summaries) *Math. Operationsforsch. Statist. Ser. Optim.* 10 (1979), no. 4, 591-595. (Z. Khalil) **81f:90051** 90B25 (60K10)
- Ramathanan, A. Moduli for principal bundles. *Algebraic geometry (Proc. Summer Meeting, Univ. Copenhagen, Copenhagen, 1978)*, pp. 527-533, Lecture Notes in Math., 732, Springer, Berlin, 1979. (P. E. Newstead) **81c:14006** 14D20 (14F05, 14L35)
- Ramanathan, G. V. Generalized Boltzmann equation for many-body distributions. (Italian and Russian summaries) *Nuovo Cimento B* (11) 49 (1979), no. 1, 31-44. (Author's summary) **81i:82035** 82A40 (45K05, 76P05)
- Ramanathan, Jayashree (with Blattner, Meera) A grammatical model for the top-down design of structured programs. *Fundamentals of computation theory (Proc. Conf. Algebraic, Arith. and Categorical Methods in Comput. Theory, Berlin/Wendisch-Rietz, 1979)*, pp. 71-83, Math. Research, 2, Akademie-Verlag, Berlin, 1979. (From the introduction) **81i:68006** 68B05
- Ramani, Alfred (with Hirota, Ryogo) The Miura transformations of Kaup's equation and of Mikhailov's equation. *Phys. Lett. A* 76 (1980), no. 2, 95-96. (J. S. Joel) **81k:35144** 35Q20 (35A25, 76B25, 78A25, 81F10)
- Ramani, K. V. (with Raghuram, G.) Utilization of transportation units: an optimal allocation study. *Opsearch* 17 (1980), no. 1, 33-40. (Authors' summary) **81i:90114** 90B35 (90B05)
- Ramani, S. (with Arumugam, V.) Evaluation of value time sequencing rules in a real world job shop. *J. Oper. Res. Soc.* 31 (1980), no. 10, 895-904. (Authors' summary) **81k:90073** 90B35 (90A11)
- Ramakrishna, P. Functional dependence and analytic functions. *Canad. Math. Bull.* 22 (1979), no. 3, 367-369. (Ju. E. Hohllov) **81k:32004** 32A10 (26B10)
- Kamke's uniqueness theorem. *J. London Math. Soc.* (2) 22 (1980), no. 1, 110-116. (Ioan I. Vrabie) **81i:34001** 34A10 (47H05)
- Ramanujan, N. (with Srivastava, U. N.) Differential inequalities and singular perturbation problems. *Proceedings of the Conference on Mathematical Methods in Physics (Mysore, 1978)*, Part B, pp. 65-95, Matscience Rep., 96, Inst. Math. Sci., Madras, 1979. (Authors' summary) **81m:34031** 34B99 (34A40)
- (with Srivastava, U. N.) Nonlinear two point boundary value problems. *J. Math. Phys. Sci.* 13 (1979), no. 2, 139-153. (Authors' summary) **81c:34015** 34B15
- (with Srivastava, U. N.) Singularly perturbed initial value problems for nonlinear differential systems. *Indian J. Pure Appl. Math.* 11 (1980), no. 1, 98-113. (R. E. O'Malley, Jr.) **81c:34048** 34E15 (34A34)
- Ramanujan, M. S. (with Terzioğlu, T.) Compact and nuclear maps on power series spaces. *Math. Nachr.* 93 (1979), 159-164. (Manjul Gupta) **81c:46007** 46A45 (47B37)
- Siva Rama Sarma, A. See Siva Rama Sarma, A.
- Ramaswami, V. The $N/G/1$ queue and its detailed analysis. *Adv. in Appl. Probab.* 12 (1980), no. 1, 222-261. (Peter Purdue) **81c:60103** 60K25 (60G55)
- (with Neuts, Marcel F.) A duality theorem for phase type queues. *Ann. Probab.* 8 (1980), no. 5, 974-985. (Peter Purdue) **81m:60170** 60K25 (60K15)
- (with Neuts, Marcel F.) Some explicit formulas and computational methods for infinite-server queues with phase-type arrivals. *J. Appl. Probab.* 17 (1980), no. 2, 498-514. (John P. Lebecky) **81c:60100** 60K25
- Ramaswamy, Krishna (with Litzberger, Robert H.) On distributional restrictions for two fund separation. *Portfolio theory, 25 years after*, pp. 99-107, Studies in the Management Sci., 11, North-Holland, Amsterdam, 1979. (See **80k:90001**) 90A09
- Ramaswamy, R. (with Ganapathisubramanian, N.; Kuriacoe, J. C.) Limit cycle behaviour in the Belousov-Zhabotinskii oscillatory reaction. *Proc. Indian Acad. Sci. Sect. A Chem. Sci.* 89 (1980), no. 3, 235-239. (Authors' summary) **81k:92031** 92A40 (34K15, 80A30, 92A09)
- Ramaswamy, Seshadri (with Bathe, Klaus-Jürgen) An accelerated subspace iteration method. *Comput. Methods Appl. Mech. Engrg.* 23 (1980), no. 3, 313-331. (Authors' summary) **81f:65046** 65F15 (73H05)
- Ramaswamy, Srilam (with Wald, Robert M.) Particle production by white holes. *Phys. Rev. D* (3) 21 (1980), no. 10, 2736-2741. (Authors' summary) **81f:83022** 83C45
- Ramazanov, M. D. Finite-difference approximations of multipliers. (Russian) *Sibirsk. Mat. Ž.* 20 (1979), no. 2, 442-444, 464. (V. V. Salauv) **81i:42019** 42A45 (41A30)
- Ramazanov, S. A. The mathematical treatment of graphical methods by Arabic astronomers. (Russian) *Mathematics in the East in the Middle Ages (Russian)*, pp. 161-169, 197, "Fan", Tashkent, 1978. (E. S. Kennedy) **81f:01005** 01A30
- Ramella, Luciano (with Arezzo, Domenico) Sur les ouverts affines d'un schéma affine. *Enseign. Math.* (2) 25 (1979), no. 3-4, 313-324 (1980). (Marco Fontana) **81k:14002** 14A15 (13A17, 13F15)
- On the Nagata transform of an ideal. *Rend. Sem. Mat. Univ. Politec. Torino* 37 (1979), no. 2, 149-156 (1980). (Robert Gilmer) **81d:13008** 13B99 (13E99, 14A15)
- Ramesh, T. Pseudo-Boolean selection problem. *Opsearch* 17 (1980), no. 1, 41-43. (Author's summary) **81i:90152** 90C10
- Ramey, James T., Jr. (with Alam, Khurshed) A Bayes sequential procedure for selecting the most probable multinomial event. *Comm. Statist. A—Theory Methods* 9 (1980), no. 3, 265-276. (Prem K. Goel) **81c:62024** 62F07 (62F15)
- Ramharter, G. Über das Mordellsche Umkehrproblem für den Minkowskischen Ringformensatz. *Acta Arith.* 36 (1980), no. 1, 27-41. (C. G. Lekkerkerker) **81k:10050** 10E05
- Ramig, Pauline F. (with Nelson, Peter R.) The probability integral for a bivariate generalization of the noncentral t . *Comm. Statist. B—Simulation Comput.* 9 (1980), no. 6, 621-631. (Authors' summary) **81k:62075** 62H10
- Ramirez, A. (with Martinez Naveira, Antonio) A classification of a family of naturally reductive homogeneous spaces. *Proceedings of the IV International Colloquium on Differential Geometry (Univ. Santiago de Compostela, Santiago de Compostela, 1978)*, pp. 216-224, Cursos Congr. Univ. Santiago de Compostela, 15, Univ. Santiago de Compostela, Santiago de Compostela, 1979. (Gordon W. Lukesh) **81g:53037** 53C30
- Ramirez, F. (with Bell, C. B.; Smith, Eric) Wiener-Lévy models, spherically exchangeable time series and simultaneous inference in growth curve analysis. *Asymptotic theory of statistical tests and estimation (Proc. Adv. Internat. Sympos., Univ. North Carolina, Chapel Hill, N.C., 1979)*, pp. 127-145, Academic Press, New York, 1980. (Theo Gasser) **81k:62119** 62M05 (62P10)
- Aguirre-Ramirez, G. See Aguirre-Ramirez, G.
- Ramirez Carvajal, Santiago S. (with Gupta, Bisham Chand; Fabris, Maria Angélica) An infinite series of 2^n factorial designs of resolution III plus one. (Portuguese) *Proceedings of the 3rd National Symposium on Probability and Statistics (Inst. Mat. Estatíst., Univ. São Paulo, São Paulo, 1978) (Portuguese)*, pp. 80-85, Univ. São Paulo, São Paulo, 1979. (From the summary) **81k:62107** 62K15
- Ramirez Mittelbrunn, J. (with León, J.; Quirós, M.) Gauge invariance, Lorentz covariance and the electromagnetic properties of elementary systems. (Italian and Russian summaries) *Nuovo Cimento B* (11) 54 (1979), no. 1, 153-170. (K. S. Viswanathan) **81g:81041** 81D25 (81F15)
- Ramis, E. (with Deschamps, C.; Odoux, J.) ★Cours de mathématiques spéciales. Vol. 2. (French) [Course on special mathematics. Vol. 2] Algèbre et applications à la géométrie. Masson, Paris, 1979. viii + 297 pp. ISBN 2-225-63404-1 (B. Artmann) **81c:15002** 15-01 (51-01)
- Ramiz, J.-P. Dévissage Gevrey. (English summary) *Journées Singulières de Dijon (Univ. Dijon, Dijon, 1978)*, pp. 4, 173-204, *Asiérique*, 59-60, Soc. Math. France, Paris, 1978. (D. A. Lutz) **81g:34010** 34A20 (34D05, 47E05, 58A15)
- Solutions Gevrey des équations différentielles à points singuliers irréguliers. *Proceedings of the IV International Colloquium on Differential Geometry (Univ. Santiago de Compostela, Santiago de Compostela, 1978)*, pp. 234-239, Cursos Congr. Univ. Santiago de Compostela, 15, Univ. Santiago de Compostela, Santiago de Compostela, 1979. (Editors) **81j:58008** 58A15 (14D05, 34C05, 35C99)
- Ramizov, Z. R. (with Sa'dullaev, S. S.) Difference schemes of the fourth order of accuracy for second-order equations of elliptic type. (Russian) *Voprosy Ykist. i Prikl. Mat. (Tashkent) No. 56* (1979), 8-16, 137. (Authors' summary) **81k:65005** 65N05
- Ramkisson, H. Integral representations in couple stress theory of fluids. (German and Russian summaries) *Z. Angew. Math. Mech.* 59 (1979), no. 9, 417-422. (W. Michael Lai) **81c:76004** 76A05
- On the uniqueness and existence of Stokes flows in micropolar fluid theory. (German summary) *Acta Mech.* 35 (1980), no. 3-4, 259-270. (Giovanni P. Galdi) **81k:76002** 76A05 (35Q10)
- (with Devanathan, R.) Drag invariance in microcontinuum fluid mechanics. *Acta*

- Mech.* 37 (1980), no. 1-2, 145-151. (From the introduction) **81e:76005** 76A05
- Ramkrishna, Doraiswami** (with Papoutsakis, Eleftherios; Lim, Henry C.) The extended Graetz problem with Dirichlet wall boundary conditions. *Appl. Sci. Res.* 36 (1980), no. 1, 13-34. (From the summary) **81b:76053** 76R05
- Rama, A. G.** On an integral equation. (Russian) *C. R. Acad. Bulgare Sci.* 32 (1979), no. 6, 715-717. (R. V. Duduchava) **81e:45003** 45E05
- Nonlinear equations with an unbounded operator. (Russian) *Math. Nachr.* 92 (1979), 13-20. (Ulrich Koel) **81j:47043** 47H06 (47H15)
- A class of integral equations. (Russian) *Math. Nachr.* 92 (1979), 21-24. (N. K. Karapetjan) **81e:45026** 45N05
- Stationary regimes in passive nonlinear networks. *Nonlinear electromagnetics*, pp. 263-301, Academic Press, New York, 1980. (See **81j:78001**) 94C05
- (with Milnaevskii, P. A.) Uniqueness theorem for abstract hyperbolic equations with application to the uniqueness of the harmonic coordinate system in general relativity. *J. Math. Anal. Appl.* 75 (1980), no. 1, 58-65. (Tapas Mazumdar) **81h:34068** 34G10 (46N05, 83C35)
- (with Dolph, C. L.) On the quasistatic boundary value problem of electrodynamics. *J. Math. Anal. Appl.* 75 (1980), no. 2, 300-305. (G. S. Agarwal) **81k:78004** 78A30
- Two-sided estimates of the scattering amplitude for low energy. *J. Math. Phys.* 21 (1980), no. 2, 308-310. (Authors' summary) **81e:81076** 81F05
- A variational principle for resonances. *J. Math. Phys.* 21 (1980), no. 8, 2052-2053. (L. G. Chambers) **81i:49033** 49G05 (35J20)
- Ramani, R.** (with Bieche, I.; Maynard, R.; Uhry, Jean-Pierre) On the ground states of the frustration model of a spin glass by a matching method of graph theory. *J. Phys. A* 13 (1980), no. 8, 2553-2576. (Authors' summary) **81g:82037** 82A42
- Ramnath, Rudraprasanna V.** (with Tao, Yee Chee) Nonlinear attitude dynamics of satellites. *New approaches to nonlinear problems in dynamics (Proc. Conf., Pacific Grove, Calif., 1979)*, pp. 107-125, SIAM, Philadelphia, Pa., 1980. (See **81h:00006**) 70M05
- Ramota Ramos, Raymond** See **Ramota Ramos, Raymond**
- Ramos, Zenaida** Elliptic curves with split multiplicative reduction over complete rings. *Bol. Soc. Mat. Mexicana* (2) 23
- Rampal, Anita** (with Singh, Virendra; Biswas, S. N.; Datta, K.) A class of exact solutions for doubly anharmonic oscillators. *Lett. Math. Phys.* 4 (1980), no. 2, 131-134. (Authors' summary) **81e:81036** 81C05 (34A05)
- Ramsey, H.** Localized plastic buckling deformation in axially compressed cylindrical shells. *J. Engng. Math.* 14 (1980), no. 4, 283-300. (Author's summary) **81g:73099** 73L99 (73E99, 73H05)
- Ramsey, John R., Jr.** (with Cordes, Craig M.) Quadratic forms over quadratic extensions of fields with two quaternion algebras. *Canad. J. Math.* 31 (1979), no. 5, 1047-1058. (K. Szymiczek) **81e:10017** 10C01
- Ramsey, L. Thomas** (with Gerver, Joseph L.) On certain sequences of lattice points. *Pacific J. Math.* 83 (1979), no. 2, 357-363. (T. C. Brown) **81c:10039** 10E99 (05B99)
- Ramshaw, Lyle** (with Flajolet, Philippe) A note on Gray code and odd-even merge. *SIAM J. Comput.* 9 (1980), no. 1, 142-158. (Jean Vuillemin) **81h:68025** 68C25 (68E05)
- cotta-Ramunno, P.** See **Cotta-Ramunno, P.**
- Rana, R.** (with Mahalanabis, A. K.) Guaranteed cost solution of optimal control and game problems for uncertain systems. *Optimal Control Appl. Methods* 1 (1980), no. 4, 353-360. (Authors' summary) **81m:90116** 90D25 (49B50)
- Rasinda, Antonio F.** (with Usón, Juan M.) Localized solutions of a charged nonlinear spinor field in a Coulomb-like potential. *J. Math. Phys.* 21 (1980), no. 5, 1205-1209. (Authors' summary) **81e:81158** 81G45
- (with Sierra Rodero, Germán) Causality of wave equation and invariance of its hyperbolicity conditions. *Phys. Rev. D* (3) 22 (1980), no. 2, 385-390. (M. Martinis) **81j:81036** 81D25 (35L05)
- (with Garcia, Luis) A classical model of the nucleon. *Progr. Theoret. Phys.* 64 (1980), no. 2, 671-693. (Authors' summary) **81h:81156** 81G25
- Raschke, D. V.** Hereditarily infinite-dimensional spaces. (Russian) International Topology Conference (Moscow State Univ., Moscow, 1979). *Uspehi Mat. Nauk* 35 (1980), no. 3(213), 213-217. (From the introduction) **81g:54038** 54F45 (03E50, 54A35)
- Rand, David** (with Jonker, Leo) The periodic orbits and entropy of certain maps of the unit interval. *J. London Math. Soc.* (2) 22 (1980), no. 1, 175-181. (J. N. Mather) **81m:58047** 58F11 (28D20, 54C70)
- Randall, Charles H.** (with Frazer, Patricia J.; Foulis, David J.) Weight functions on extensions of the compound manual. *Glasgow Math. J.* 21 (1980), no. 2, 97-101. (R. Piziak) **81g:81004** 81B99
- Randall, Duane** (with Marcum, Howard J.) The homotopy Thom class of a spherical fibration. *Proc. Amer. Math. Soc.* 80 (1980), no. 2, 353-358. (C. S. Hoo) **81k:55026** 55R05 (55Q15, 57R20)
- Randell, B.** The COLOSSUS. *A history of computing in the twentieth century*, pp. 47-92, Academic Press, New York, 1980. (See **81i:68002**) 68-03 (01A65)
- The origins of digital computers: supplementary bibliography. *A history of computing in the twentieth century*, pp. 629-659, Academic Press, New York, 1980. (See **81i:68002**) 68-03 (00A15, 01A65)
- Randell, Richard** Some topology of Zariski surfaces. *Topology Symposium, Siegen 1979 (Proc. Sympos., Univ. Siegen, Siegen, 1979)*, pp. 145-164, *Lecture Notes in Math.*, 788, Springer, Berlin, 1980. (Lee Rudolph) **81k:14028** 14J17 (14H20, 57M99)
- On the fundamental group of the complement of a singular plane curve. *Quart. J. Math. Oxford Ser. (2)* 31 (1980), no. 121, 71-79. (Lee Rudolph) **81k:14017** 14H30 (57M05)
- Randies, Ronald H.** (with Fligner, Michael A.; Policello, George E., II; Wolfe, Douglas A.) An asymptotically distribution-free test for symmetry versus asymmetry. *J. Amer. Statist. Assoc.* 75 (1980), no. 369, 168-172. (R. Ponnappall) **81d:62040** 62G10
- von Randow, Rabe** (with Bachem, Achim) Integer theorems of Farkas lemma type. *Third Symposium on Operations Research (Univ. Mannheim, Mannheim, 1978)*, Section 2, pp. 19-28, *Operations Research Verfahren*, 32, Hain, Meisenheim, 1979. (C. R. Bector) **81e:90066** 90C10
- (with Cottle, Richard W.) A theorem on the partitioning of simplices and its application to a property of Q-matrices. *Numerical solution of highly nonlinear problems (Sympos. Fixed Point Algorithms and Complementarity Problems, Univ. Southampton, Southampton, 1979)*, pp. 331-335, North-Holland, Amsterdam, 1980. (Ethan D. Bolker) **81e:52005** 52A25 (65K05, 90C33)
- Rane, V. V.** On the mean square value of Dirichlet L-series. *J. London Math. Soc.* (2) 21 (1980), no. 2, 203-215. (Jürgen G. Hinze) **81h:10062** 10H08 (10H10)
- Ranfagni, A.** (with Engelman, R.) Nonradiative processes for complex potential surfaces. I. A semiclassical formalism. *Phys. B + C* 98 (1979/80), no. 3, 151-160. (Authors' summary) **81e:81139a** 81G25 (82A55)
- (with Engelman, R.) Nonradiative processes for complex potential surfaces. II. Application to the linear polarization of the A_7 emission on KI:Tl. *Phys. B + C* 98 (1979/80), no. 3, 161-175. (Authors' summary) **81e:81139b** 81G25 (82A55)
- Rangan, A.** (with Kalro, A. H.) Stochastic models for stock price fluctuations. *Cahiers Centre Études Rech. Opér.* 21 (1979), no. 4, 331-336. (Authors' summary) **81b:90025** 90A12
- Ranganathan, J.** (with Kale, B. K.) Tests of hypotheses for reliability functions in two-parameter exponential models. (French summary) *Canad. J. Statist.* 7 (1979), no. 2, 177-184 (1980). (Moshe Shaked) **81e:62021** 62F03 (62N05, 90B25)
- Ranganathan, N. R.** (with Prakash, J. S.) Two algorithms for symmetric groups. *J. Phys. A* 13 (1980), no. 8, 2653-2658. (Authors' summary) **81f:20003** 20B07
- See also *Proceedings: Conference on Probability, Stochastic Processes and Statistical Mechanics*, **81j:60003**
- Rangarajan, M. R.** On the radius of univalence and starlikeness of a class of analytic functions. *Indian J. Pure Appl. Math.* 11 (1980), no. 2, 245-251. (Selden Trimble) **81g:30020** 30C45
- Ranga Rao, Melam P.** (with Yadav, Hira Lal) Some approximate analytical solutions for blast waves in solids. *J. Math. Phys. Sci.* 14 (1980), no. 1, 19-29. (Authors' summary) **81f:73011** 73D05 (76L05)
- Ranga Rao, P.** On the direct product of Boolean and lattice-ordered rings. *Math. Sem. Notes Kobe Univ.* 7 (1979), no. 2, 185-191. (E. Burlacu) **81j:06018** 06E20 (06F25, 08A05)
- Rangaswamy, K. M.** An aspect of purity and its dualisation in abelian groups and modules. *Symposia Mathematica, Vol. XXIII (Conf. Abelian Groups and their Relationship to the Theory of Modules, INDAM, Rome, 1977)*, pp. 307-320, Academic Press, London, 1979. (Frans Loonstra) **81j:20077** 20K40 (16A53)
- Rangaswamy, S. V.** (with Chakrapani, N.; Tikekar, V. G.) A computational algorithm for the verification of tautologies in propositional calculus. *J. Indian Inst. Sci.* 62 (1980), no. 3, 71-81. (Authors' summary) **81e:68131** 68G15 (03B05, 03B35)
- Ränge, R. Michael** The Carathéodory metric and holomorphic maps on a class of weakly pseudoconvex domains. *Pacific J. Math.* 78 (1978), no. 1, 173-189. (John E. Forness) **81j:32022** 32F15 (32H15)
- Ranicki, Andrew** The total surgery obstruction. *Algebraic topology, Aarhus 1978 (Proc. Sympos., Univ. Aarhus, Aarhus, 1978)*, pp. 275-316, *Lecture Notes in Math.*, 763, Springer, Berlin, 1979. (J. P. E. Hodgson) **81e:57034** 57R67
- Localization in quadratic L-theory. *Algebraic topology, Waterloo, 1978 (Proc. Conf., Univ. Waterloo, Waterloo, Ont., 1978)*, pp. 102-157, *Lecture Notes in Math.*, 741, Springer, Berlin, 1979. (Laurence R. Taylor) **81f:57037** 57R67 (10C02, 18F25)
- The surgery obstruction of a disjoint union. *J. London Math. Soc.* (2) 20 (1979), no. 3, 559-566. (J. P. E. Hodgson) **81e:57035** 57R67
- (with Pedersen, Erik Kjaer) Projective surgery theory. *Topology* 19 (1980), no. 3, 239-254. (V. P. Snaith) **81e:57032** 57R67 (18F25, 57P10)
- sri Ranganathan, S.** See **Sri Ranganathan, S.**
- Rankin, R. A.** Subgroups of the unimodular group defined by a congruence. *Math. Proc. Cambridge Philos. Soc.* 86 (1979), no. 3, 451-459. (David Singerman) **81e:20034** 20H05 (10D07)
- See also **Hardy, Godfrey Harold**, **81e:91028**
- Rankin, S. A.** (with Reis, C. M.; Thierin, Gabriel) Right subdirectly irreducible semigroups. *Pacific J. Math.* 85 (1979), no. 2, 403-412. (T. Tamura) **81h:20004** 20M10
- (with Reis, C. M.) Semigroups with quasizeroes. *Canad. J. Math.* 32 (1980), no. 3, 511-530. (Joseph Chacron) **81m:20083** 20M10
- Rankin, Samuel M., III** A remark on cosine families. *Proc. Amer. Math. Soc.* 79 (1980), no. 3, 376-378. (Curtis C. Travis) **81h:47052** 47D05 (34G10)
- Rannacher, Rolf** On the finite element approximation of the nonstationary Navier-Stokes problem. *Approximation methods for Navier-Stokes problems (Proc. Sympos., Univ. Paderborn, Paderborn, 1979)*, pp. 408-424, *Lecture Notes in Math.*, 771, Springer, Berlin, 1980. (William W. Hager) **81g:65160** 65N30 (76D05)
- (with Dobrowolski, Manfred) Finite element methods for nonlinear elliptic systems of second order. *Math. Nachr.* 94 (1980), 155-172. (V. Thomée) **81e:65087** 65N30
- Rant, W. H.** Minimally generated modules. *Canad. Math. Bull.* 23 (1980), no. 1, 103-105. (V. Diab) **81f:16047** 16A64 (16A51)
- Rao, A. N. V.** (with Tsokos, Chris P.) Stability of McShane systems. *Applied nonlinear analysis (Proc. Third Internat. Conf., Univ. Texas, Arlington, Tex., 1978)*, pp. 325-333, Academic Press, New York, 1979. (Ludwig Arnold) **81d:93070** 93E15 (60H10)
- (with Tsokos, Chris P.) Robustness studies for Bayesian developments in reliability. *Decision information*, pp. 239-258, Academic Press, New York, 1979. (Lai K. Chan) **81h:62177** 62N05
- Rao, A. S.** (with Rao, D. R. K. S.; Murty, K. Narasimha) A generalized two-point boundary value problem. *Indian J. Pure Appl. Math.* 11 (1980), no. 10, 1369-1371. (Michal Čverčko) **81k:34013** 34B15
- Rao, Ambar G.** (with Kinberg, Yoram; Sudit, Ephraim F.) Optimal resource allocation between spot and package demands. *Management Sci.* 26 (1980), no. 9, 890-900. (Authors' summary) **81j:90003** 90A05 (90B05)
- satyanarayan Rao, Arbindi** See **Satyanarayan Rao, Arbindi**
- prakash Rao, B. L. S.** See **Prakash Rao, B. L. S.**
- Rao, B. R. P.** (with Shukla, J. B.; Parihar, R. S.; Gupta, S. P.) Effects of peripheral-layer viscosity on peristaltic transport of a bio-fluid. *J. Fluid Mech.* 97 (1980), no. 2, 225-237. (Authors' summary) **81a:76053** 76Z05 (92A09)
- Rao, B. V.** (with Rao, K. P. S. Bhaskara) On the isomorphism problem for analytic sets. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math. Astronom. Phys.* 26 (1978), no. 9-10, 767-769. (Authors' summary) **81g:54043** 54H05 (04A15, 28A05)
- (with Rao, K. P. S. Bhaskara) Mixtures of nonatomic measures. III. *Colloq. Math.*

- 41 (1979), no. 1, 85-88. (B. Kronfeld) **81a:28005** 28A35 (28A12)
- Rao, C. Radhakrishnan Least squares theory for possibly singular models. (French summary) *Canad. J. Statist.* 6 (1978), no. 1, 19-23. (R. Kala) **81a:62064** 62J05 (62H15)
- Estimation of parameters in the singular Gauss-Markoff model. *Comm. Statist. A—Theory Methods* 8 (1979), no. 14, 1353-1358. (Friedrich Pukelsheim) **81a:62063** 62J05
- (with Yanai, Haruo) General definition and decomposition of projectors and some applications to statistical problems. *J. Statist. Plann. Inference* 3 (1979), no. 1, 1-17. (George P. H. Styan) **81b:62124** 62J05 (15A03, 15A09)
- Rao, C. V. (with Saxena, K. P.) A study of power of a test procedure based on two preliminary tests of significance. *Statistica* 33 (1979), no. 121, 201-214. (Vijaya Prakash Gupta) **81c:62081** 62J10 (62F99)
- Raghava Rao, C. V. See Raghava Rao, C. V.
- Rao, D. R. K. S. (with Murty, K. Narasimha; Rao, A. S.) A generalized two-point boundary value problem. *Indian J. Pure Appl. Math.* 11 (1980), no. 10, 1369-1371. (Michal Čerčeko) **81k:34013** 34B15
- (with Murty, K. Narasimha) Transformation of a class of nonselfadjoint eigenvalue problems. *Proc. Amer. Math. Soc.* 81 (1981), no. 2, 287-292. (C. E. Langenhop) **81k:34012** 34B05 (34A30)
- Prasad Rao, D. R. V. See Prasad Rao, D. R. V.
- Rao, Daljit (with Mohanty, S. P.) Characterization and enumeration of hypotraversable graphs. *Bull. Austral. Math. Soc.* 20 (1979), no. 3, 437-445. (Carsten Thomassen) **81b:05073** 05C45
- Venkateswara Rao, G. See Venkateswara Rao, G.
- Rao, G. Koteswara (with Ramakotiah, D.) IFP near-rings. *J. Austral. Math. Soc. Ser. A* 27 (1979), no. 3, 365-370. (R. Gorton) **81c:16053** 16A76
- Rao, G. L. N. A complex inversion theorem for a distributional J_1 -transform. *Bull. Calcutta Math. Soc.* 68 (1976), no. 4, 267-273. (From the introduction) **81m:44002** 44A20
- The distributional J_1 -transform. *Collect. Math.* 29 (1978), no. 2, 119-131. (C. M. Joshi) **81c:44004** 44A20 (33A35, 44A10, 44A15)
- Prabhakara Rao, G. V. See Prabhakara Rao, G. V.
- Rao, Ganji Prasad (with Saha, Dines Chandra) Identification of lumped linear systems in the presence of unknown initial conditions via Poisson moment functionals. *Internat. J. Control* 31 (1980), no. 4, 637-644. (Authors' summary) **81c:93028** 93B30 (93C05)
- (with Saha, Dines Chandra) Identification of lumped linear time-varying parameter systems via Poisson moment functionals. *Internat. J. Control* 32 (1980), no. 4, 709-721. (Authors' summary) **81m:93024** 93B30 (94A40)
- (with Srinivasan, T.) Multidimensional block-pulse functions and their use in the study of distributed parameter systems. *Internat. J. Systems Sci.* 11 (1980), no. 6, 689-709. (Authors' summary) **81f:93045** 93C20
- (with Srinivasan, T.) An optimal method of solving differential equations characterizing the dynamics of a current collection system for an electric locomotive. *J. Inst. Math. Appl.* 25 (1980), no. 4, 329-342. (E. R. Hansen) **81j:68082** 65L05
- Rao, Geetha S. Simultaneous approximation, interpolation and norm preservation (SAIN). *Jahresber. Deutsch. Math.-Verein.* 81 (1978/79), no. 4, 189-198. (F. Deutsch) **81a:41061** 41A65
- Rao, Giuseppe (with Bondi, A.; Bongiorno, Benedetto) On some classes of functions. (Italian. English summary) *Rend. Circ. Mat. Palermo* (2) 27 (1978), no. 3, 417-425. (P. V. Reichelderfer) **81b:26004** 26A45 (26A39)
- Madhusudana Rao, J. See Madhusudana Rao, J.
- Rao, J. N. K. (with Graham, Jack E.) Sample surveys: theory and practice. *Studies in statistics*, pp. 107-167. *MAA Studies in Math.*, 19, Math. Assoc. America, Washington, D.C., 1978. (See **80b:62002**) 62D05
- Optimization in the design of sample surveys. *Optimizing methods in statistics* (Proc. Internat. Conf., Indian Inst. Tech., Bombay, 1977), pp. 419-434. Academic Press, New York, 1979. (K. Vijayan) **81b:62017** 62D05
- (with Hughes, Edward) Some problems of optimal allocation in sample surveys involving inequality constraints. *Comm. Statist. A—Theory Methods* 8 (1979), no. 15, 1551-1574. (Kenneth R. W. Brewer) **81f:62017** 62D05
- Rao, J. R. (with Rao, P. P.; Tiwari, R. N.) A class of stationary Brans-Dicke vacuum fields. *Indian J. Pure Appl. Math.* 10 (1979), no. 9, 1140-1145. (Alan Barnes) **81c:83036** 83D05
- (with Dhar, U. R.) A comparative study of three norms for facility location problem on spherical surface. *New Zealand Oper. Res.* 8 (1980), no. 2, 173-183. (Authors' summary) **81j:90040** 90B05
- Rao, J. S. (with Mardia, Kantil Varichand) Pitman efficiencies of some two-sample nonparametric tests. *Recent developments in statistical inference and data analysis* (Proc. Internat. Conf., Inst. Statist. Math., Tokyo, 1979), pp. 247-254. North-Holland, Amsterdam, 1980. (V. Susarla) **81m:62078** 62G10
- Rao, J. V. (with Koneru, S. R.; Kulkarni, D. R.) An inherent property in numerical methods for two-point boundary value problems. *J. Math. Phys. Sci.* 13 (1979), no. 5, 445-452. (Tassilo Küpper) **81h:34015** 34B10 (65L10)
- Rama Mohana Rao, K. See Rama Mohana Rao, K.
- Singh Rao, K. See Singh Rao, K.
- Rao, K. Murali See Rao, Murali
- Rao, K. Nagaswara Some analogues of the Hall polynomial. *Proceedings of the Sixth Manitoba Conference on Numerical Mathematics* (Univ. Manitoba, Winnipeg, Man., 1976), pp. 331-342. *Congress. Numer., XVIII, Utilitas Math., Winnipeg, Man., 1977.* (G. J. Rieger) **81d:10004** 10A10 (05B10)
- On some analogues of the Hall polynomial and their products. *Proceedings of the Eighth Manitoba Conference on Numerical Mathematics and Computing* (Univ. Manitoba, Winnipeg, Man., 1978), pp. 445-451. *Congress. Numer., XXII, Utilitas Math., Winnipeg, Man., 1979.* (T. C. Brown) **81c:10019** 10A40
- Rao, K. P. Stress concentrations around discontinuities in thin cylindrical and spherical shells. *Theory of shells* (Proc. Third IUTAM Sympos., Tbilisi, 1978), pp. 473-494. North-Holland, Amsterdam, 1980. (M. Sokolowski) **81e:73071** 73L99
- Rao, K. P. S. Bhaskara (with Rao, B. V.) On the isomorphism problem for analytic sets. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math. Astronom. Phys.* 26 (1978), no. 9-10, 767-769. (Authors' summary) **81g:54043** 54H05 (04A15, 28A05)
- (with Rao, B. V.) Mixtures of nonatomic measures. III. *Colloq. Math.* 41 (1979), no. 1, 85-88. (B. Kronfeld) **81a:28005** 28A35 (28A12)
- Rao, K. R. (with Jalali, A.; Yip, P.) Rationalized Hadamard-Haar transform. *Appl. Math. Comput.* 6 (1980), no. 3, 263-281. (A. D. Booth) **81f:68011** 68A05 (65V05)
- (with Ahmed, Nasir) A class of discrete orthogonal transforms. *Comput. Electr. Engng.* 7 (1980), no. 2, 79-97. (Authors' summary) **81d:65072** 65R10
- Rao, K. V. (with Frick, A.; Mohler, R. R.) On bilinear system identification by Walsh functions. *Identification and system parameter estimation* (Proc. Fourth IFAC Sympos., Tbilisi, 1976), Part 3, pp. 1749-1758. North-Holland, Amsterdam, 1978. (See **80d:93010c**) 93B30
- Rama Mohana Rao, M. See Rama Mohana Rao, M.
- Rao, M. Bhaskara (with Bozorgnia, A.) Limit theorems for weighted sums of random elements in separable Banach spaces. *J. Multivariate Anal.* 9 (1979), no. 3, 428-433. (Robert L. Taylor) **81a:60011** 60B12
- Rao, M. M. Stochastic processes and integration. *Sijthoff & Noordhoff International Publishers, Alphen aan den Rijn*, 1979. 456 pp. ISBN 90-286-04383 (M. Métivier) **81i:60002** 60-02 (28-02)
- Non- L^1 -bounded martingales. *Stochastic control theory and stochastic differential systems* (Proc. Workshop, Deutsch. Forschungsgemeinschaft, Univ. Bonn, Bad Honnef, 1979), pp. 527-538. *Lecture Notes in Control and Information Sci.*, 16, Springer, Berlin, 1979. (Rashid Ahmad) **81i:60049** 60G42
- Bistochastic operators. Special issue dedicated to Wladyslaw Orlicz on the occasion of his seventy-fifth birthday. *Comment. Math. Special Issue* 2 (1979), 301-313. (Ray C. Shifflett) **81a:47032** 47B38 (47D20)
- Rao, M. R. (with Diricks, Yvo M. I.) Linear programming methods for computing gain-optimal policies in Markov decision models. *Cahiers Centre Études Rech. Opér.* 21 (1979), no. 2, 133-142. (Kailash C. Kapur) **81d:90195** 90C40
- Ranga Rao, Melam P. See Ranga Rao, Melam P.
- Rao, Murali (with Chung, Kai Lai) Sur la théorie du potentiel avec la fonctionnelle de Feynman-Kac. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 13, A629-A631. (Authors' summary) **81c:60085** 60J45 (31B15)
- Rao, N. Prabhakara Brouwerian semigroups. II. *Math. Sem. Notes Kobe Univ.* 7 (1979), no. 1, 33-43. (H. D'Alarcao) **81a:06020** 06F05 (06D99)
- Ranga Rao, P. See Ranga Rao, P.
- Rao, P. P. (with Tiwari, R. N.; Rao, J. R.) A class of stationary Brans-Dicke vacuum fields. *Indian J. Pure Appl. Math.* 10 (1979), no. 9, 1140-1145. (Alan Barnes) **81c:83036** 83D05
- Rao, P. V. (with Wackerly, D. D.) A large deviation result for the difference in sample medians. *Statist. Neerlandica* 34 (1980), no. 2, 107-116. (Jan C. Geertsema) **81c:60043** 60F10 (62F07, 62L10)
- Sitaramachandrarao Rao, Rudrabhatla See Sitaramachandrarao Rao, Rudrabhatla
- Rao, S. K. Lakshmana Cosserat fluid motions. *Proceedings of the Conference on Mathematical Methods in Physics* (Mysore, 1978), Part B, pp. 31-44. Matscience Rep., 96, Inst. Math. Sci., Madras, 1979. (Author's summary) **81g:76061** 76E99 (76A05)
- Rao, S. Narasimha (with Jih, Jyh Hwang; Hartsuck, Jean Ann) Rotation-function space groups. *Acta Cryst. Sect. A* 36 (1980), no. 6, 878-884. (Authors' summary) **81i:20058** 20H15 (82A60)
- Seshagiri Rao, S. V. See Seshagiri Rao, S. V.
- Rao, S. Vittal (with Atherton, D. P.) Near optimal regulators for large scale systems using Routh approximant reduced order models. *Systems analysis and simulation*, 1980 (Proc. Internat. Sympos., Berlin, 1980), pp. 146-150. Math. Research, 5, Akademie-Verlag, Berlin, 1980. (Authors' summary) **81m:49035** 49D27 (70P05, 93A15)
- Rao, Siddhanti Bhaskara Explored, semi-explored and unexplored territories in the structure theory of self-complementary graphs and digraphs. *Proceedings of the Symposium on Graph Theory* (Indian Statist. Inst., Calcutta, 1976), pp. 10-35. ISI Lecture Notes, 4, Macmillan of India, New Delhi, 1979. (F. Harary) **81a:05036** 05Cxx
- The range of the number of triangles in self-complementary graphs of given order. *Proceedings of the Symposium on Graph Theory* (Indian Statist. Inst., Calcutta, 1976), pp. 103-123. ISI Lecture Notes, 4, Macmillan of India, New Delhi, 1979. (F. Harary) **81a:05072** 05C30
- (with Hebbare, S. P. Rao) Characterization of planar distance convex simple graphs. *Proceedings of the Symposium on Graph Theory* (Indian Statist. Inst., Calcutta, 1976), pp. 138-150. ISI Lecture Notes, 4, Macmillan of India, New Delhi, 1979. (M. L. Marx) **81b:05099** 05C99
- Solution of the Hamiltonian problem for self-complementary graphs. *J. Combin. Theory Ser. B* 27 (1979), no. 1, 13-41. (R. H. Schelp) **81c:05058** 05C45
- (with Naik, R.; Shrikhande, S. S.; Singhi, N. M.) Intersection graphs of k -uniform hypergraphs. Combinatorial mathematics, optimal designs and their applications (Proc. Sympos. Combin. Math. and Optimal Design, Colorado State Univ., Fort Collins, Colo., 1978). *Ann. Discrete Math.* 6 (1980), 275-279. (F. Sterboul) **81m:05104** 05C65
- Rao, T. R. N. (with Bose, Bella) Separating and completely separating systems and linear codes. *IEEE Trans. Comput.* 29 (1980), no. 7, 665-668. (L. Dornhoff) **81k:94055** 94C99 (68D50, 94B05)
- Sree hari Rao, V. See Sree Hari Rao, V.
- Subba Rao, V. See Subba Rao, V.
- Rao, V. V. L. N. A property of self-reciprocal functions. *Math. Student* 45 (1977), no. 1, 60-61 (1978). (From the text) **81i:44005** 44A15
- On relations between kernels and self-reciprocal functions in the Hankel transform. *Bull. Calcutta Math. Soc.* 70 (1978), no. 4, 261-264. (A. Schwartz) **81j:44005** 44A15
- Puech-Raoult, A. See Puech-Raoult, A.
- Raoult, J. C. (with Vuillemin, Jean E.) Optimal unbounded search strategies. *Automata, languages and programming* (Proc. Seventh Internat. Colloq., Noordwijkerhout, 1980), pp. 512-530. *Lecture Notes in Comput. Sci.*, 85, Springer, Berlin, 1980. (Authors' summary) **81j:68075** 68E05
- Raoult, Jean-Pierre (with Tayar, Abdelhamid) Rangement en contexte aléatoire. (English summary) *Rev. CETHEDC* No. 62 (1980), 31-54. (Françoise Garcia-Schaeffer) **81c:62014** 62C10 (62H30, 62L10)
- Raous, M. On two variational inequalities arising from a periodic viscoelastic unilateral problem. *Variational inequalities and complementarity problems* (Proc. Internat. School, Erice, 1978), pp. 285-302. Wiley, Chichester, 1980. (Ranbir S. Sandhu) **81j:73044**

- 73F20 (49A29, 65N30)
- Rapaport, Michel** Resolution methods of perturbed differential equations, using tools of differential geometry. Proceedings of the Sixth Conference on Mathematical Methods in Celestial Mechanics (Math. Forschungsinst., Oberwolfach, 1978), Part II. *Celestial Mech.* 21 (1980), no. 2, 177-182. (Vittorio Cantoni) **81b:58037** 58F30 (34C20)
- Rapcsák, Tamás** On second-order optimality conditions. (Hungarian. English summary) *Alkalmaz. Mat. Lapok* 4 (1978), no. 1-2, 109-116 (1979). (Author's summary) **81b:90136** 90C30
- The optimal power transmission of mechanical speed gear. (Hungarian. English summary) *Alkalmaz. Mat. Lapok* 4 (1978), no. 3-4, 229-243 (1979). (Author's summary) **81b:70002** 70B15 (49D30, 90C30)
- Rapchun, Joseph** See Capenhaver, Brian P. **81i:01009**
- Rapinich, A. S.** (with Platonov, V. P.) On the group of rational points of three-dimensional groups. (Russian) *Dokl. Akad. Nauk SSSR* 247 (1979), no. 2, 279-282. (Daniel Coray) **81a:12014** 12A80 (14G25, 20G30)
- Rapley, C. W.** (with Gosman, A. D.) Fully-developed flow in passages of arbitrary cross-section. Recent advances in numerical methods in fluids, Vol. 1, pp. 335-399, Pineridge, Swansea, 1980. (See **81j:76002**) 76F05
- Rapport, Amnon** (with Kahan, James P.; Funk, Sandra G.; Horowitz, Abraham D.) Coalition formation by sophisticated players. Lecture Notes in Economics and Mathematical Systems, 169. Springer-Verlag, Berlin-New York, 1979. vii + 170 pp. ISBN 3-540-09249-8 (G. Durr) **81f:90127** 90D12 (90-02)
- (with Kahan, James P.) Standards of fairness in 4-person monopolistic cooperative games. *Applied game theory* (Proc. Conf., Inst. Adv. Stud., Vienna, 1978), pp. 74-95, IHS—Studies, 1, Physica, Würzburg, 1979. (Israel Dragan) **81h:90144** 90D12
- Rapport, Amnon** A probabilistic approach to networks. *Social Networks* 2 (1979/80), no. 1, 1-18. (Author's summary) **81a:90088** 90B15
- Rapport, E. F.** (with Kiselev, O. M.) Jet flow around an elastic shell with various methods for its fastening. (Russian) *Trudy Sem. Krasov. Zadačam* No. 15 (1978), 62-70, 215. (Authors' summary) **81j:73067** 73J06 (76B10)
- (with Kiselev, O. M.) Jet flow around an elastic shell of variable rigidity. (Russian) *Trudy Sem. Krasov. Zadačam* No. 15 (1978), 71-76, 215. (Authors' summary) **81j:73068** 73J06 (76B10)
- (with Kiselev, O. M.) An elastic plate in a supersonic gas flow. (Russian) *Trudy Sem. Krasov. Zadačam* No. 16 (1979), 89-93, 243. (P. P. Teodorescu) **81m:73045** 73J05 (73K10, 76J99)
- Rapp, Piotr** On some integral formulation for differential equations with deviated argument. *Comment. Math. Prace Mat.* 21 (1980), no. 1, 233-239. (Erwin Kozakiewicz) **81j:34128** 34K15
- Rappaz, J.** Approximation du spectre d'un opérateur non compact. *Journées "Éléments Finis" (Rennes, 1975)*, 17 pp., Univ. Rennes, Rennes, 1975. (Author's introduction) **81d:49029** 49G20 (65J10)
- Spectral approximation by finite elements of a problem of MHD-stability of a plasma. *Mathematics of finite elements and applications, III* (Proc. Third MAFELAP Conf., Brunel Univ., Uxbridge, 1978), pp. 311-318, Academic Press, London, 1979. (M. N. L. Narasimhan) **81c:76023** 76E25 (65P05, 76X05)
- Rappoport, I. S.** (with Čikrii, A. A.) A linear problem of tracking by several control objects. (Russian. English summary) *Kibernetika* (Kiev) 1978, no. 3, 86-92. (A. I. Subbotin) **81b:90180** 90D26
- On the solution of a problem of group pursuit in linear differential games. (Russian) *Theory of optimal decisions* (Russian), pp. 24-28, 108-109, *Akad. Nauk Ukrain. SSR, Inst. Kibernet.*, Kiev, 1979. (Author's summary) **81i:90123** 90D26
- (with Pieniūny, B. N.) On solving a problem of simple pursuit of several control objects. (Russian) The group pursuit problem in linear differential n -person games. *Akad. Nauk Ukrain. SSR Inst. Kibernet. Preprint* No. 47 (1979), 3-6, 47. (Editors) **81d:90122** 90D26
- A linear problem of group pursuit with various constraints on the control. (Russian) The group pursuit problem in linear differential n -person games. *Akad. Nauk Ukrain. SSR Inst. Kibernet. Preprint* No. 47 (1979), 7-44, 47. (Milan Medved) **81f:90142** 90D26
- Sufficient condition for approach in a linear several-person differential game with different types of constraints on the controls. *Kibernetika* (Kiev) 1979, no. 4, 112-114 (Russian); translated as *Cybernetics* 15 (1979), no. 4, 559-562 (1980). (From the text) **81d:90129** 90D42 (90D25)
- See also Group pursuit problem in linear differential n -person games. **81a:90003**
- Rappoport, Ju. M.** Nonlinear integral equations in perfect spaces. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1978, no. 1(188), 91-96. (P. P. Zabreiko) **81g:45009** 45G10 (47H15)
- ★ Таблицы модифицированных функций Бесселя $K_1 + \nu(x)$. (Russian) [Tables of modified Bessel functions $K_1 + \nu(x)$] "Nauka", Moscow, 1979. 338 pp. (Editors) **81j:65014** 65A05
- Rapin, A. A.** (with Kafousias, N. G.; Massalas, C. V.; Tzivanidis, G. J.; Georgantopoulos, G. A.; Goudas, C. L.) Free convection effects on the hydromagnetic oscillatory flow in the Stokes problem past an infinite porous vertical limiting surface with constant suction. I. *Astrophys. and Space Sci.* 68 (1980), no. 1, 99-110. (A. K. Singh) **81i:76053** 76W05 (76R10)
- Rardin, Ronald L.** (with Bazaraa, Mokhtar S.; Goode, Jamie J.) An algorithm for finding the shortest element of a polyhedral set with application to Lagrangian duality. *J. Math. Anal. Appl.* 65 (1978), no. 2, 278-288. (Authors' summary) **81e:90083** 90C30 (90C06, 90C25)
- (with Lin, Benjamin W.) Controlled experimental design for statistical comparison of integer programming algorithms. *Management Sci.* 25 (1979), no. 12, 1258-1271 (1980). (Authors' summary) **81d:90077** 90C10 (62K99)
- (with Karwan, Mark H.) Some relationships between Lagrangian and surrogate duality in integer programming. *Math. Programming* 17 (1979), no. 3, 320-334. (M. Gondran) **81d:90069** 90C05 (90C10)
- Răşescu, Aurel** Stochastic integral and an optimal stopping problem. *Variational inequalities and optimization problems* (Proc. Summer School, Constanța, 1979), pp. 47-61, Minist. Ed. Învățământului, Constanța, 1979. (Halim Doss) **81m:60122** 60F59
- Rasetti, Mario** Structural stability in statistical mechanics. *Structural stability in physics* (Proc. Internat. Symposia Appl. Catastrophe Theory and Topological Concepts in Phys., Inst. Inform. Sci., Univ. Tübingen, Tübingen, 1978), pp. 159-175, Springer Ser. in Synergetics, 4, Springer, Berlin, 1979. (R. Kotecny) **81e:82024** 82A25 (58G10)
- Rashevskii, P. K.** Description of closed invariant subspaces in certain function spaces. (Russian) *Trudy Moskov. Mat. Obšč.* 38 (1979), 139-185. (G. L. Litvinov) **81d:4307** 43A45 (22E30)
- Rashed, Roshdi** L'analyse diophantienne au Xe siècle: l'exemple d'al-Khāzin. (English summary) *Rev. Histoire Sci. Appl.* 32 (1979), no. 3, 193-222. (B. Rozenfeld) **81k:01012** 01A30
- Rashid, M. A.** (with Asghar, S.) Diffraction of planetary waves by two parallel semi-infinite plates. *Bull. Math. Soc. Sci. Math. R. S. Roumanie (N.S.)* 23(71) (1979), no. 4, 339-348. (E. Meister) **81a:76008** 76B15 (78A45)
- Lattice Green's functions for cubic lattices. *J. Math. Phys.* 21 (1980), no. 10, 2549-2552. (Richard S. Ellis) **81h:82009** 82A05 (82A67)
- Simple derivation of a formula for $y_{lm}(r_1 \times r_2)$. *J. Phys. A* 13 (1980), no. 8, 2631-2633. (R. K. Gupta) **81j:33006b** 33A70
- Rashid, Salim** (with Khan, M. Ali) A limit theorem for an approximate core of a large but finite economy. *Econom. Lett.* 1 (1978), no. 4, 297-302. (Andrew Postlewaite) **81a:90050** 90A14
- Rashkova, Ts. G.** See Ralikova, C. G.
- Rasin, V. V.** Free completely simple semigroups. (Russian) *Ural. Gos. Univ. Mat. Zap.* 11 (1979), no. 3 Issled. po Sovrem. Algebre, 140-151, 212. (André Lentin) **81i:20079** 20M07
- Free completely simple semigroups. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1980, no. 4, 98-100. (André Lentin) **81i:20079b** 20M07
- Rasina, I. V.** (with Gurman, V. I.) Approximate synthesis of an optimal control on the basis of sufficient conditions for a strong relative minimum. (Russian) *Questions in applied mathematics* (Russian), pp. 31-38, *Sibirsk. Energet. Inst., Akad. Nauk SSSR Sibirsk. Otdel., Irkutsk*, 1977. (From the text) **81a:93061** 93C99
- (with Gurman, V. I.) Sufficient conditions for a relative minimum for discrete systems. (Russian) *Numerical methods of optimization (applied mathematics)* (Russian), pp. 46-53, *Akad. Nauk SSSR Sibirsk. Otdel., Energet. Inst., Irkutsk*, 1978. (M. Vlach) **81i:90176** 90C30 (49B34, 90C39)
- (with Orlov, A. G.) Sufficient optimality conditions for complex systems. (Russian) *Problems of stability of motion, analytical mechanics and control of motion* (Third All-Union Četaev Conf., Irkutsk, 1977) (Russian), pp. 257-261, 326. "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. (Authors' summary) **81g:49023** 49B34
- (with Gurman, V. I.) Practical applications of conditions sufficient for a strong relative minimum. *Axiomat. i Telemekh.* 1979, no. 10, 12-18 (Russian. English summary); translated as *Automat. Remote Control* 40 (1979), no. 10, part 1, 1410-1415 (1980). (Pranade K. Bhagat) **81k:49016** 49B99 (73K40)
- Raslova, Helena** Logic of complex algorithms. *Fundamentals of computation theory* (Proc. Conf. Algebraic, Arith. and Categorical Methods in Comput. Theory, Berlin/Wendisch-Rietz, 1979), pp. 370-381, *Math. Research*, 2, Akademie-Verlag, Berlin, 1979. (Author's summary) **81d:68047** 68C05 (03D80)
- Algorithmic logic. Multiple-valued extensions. *Studia Logica* 38 (1979), no. 4, 317-335. (G. Mirkowaka) **81j:68045** 68C05 (03B50, 03G20)
- Completeness in classical logic of complex algorithms. *Mathematical foundations of computer science, 1980* (Proc. Ninth Sympos., Rydzyna, 1980), pp. 488-503, *Lecture Notes in Comput. Sci.*, 88, Springer, Berlin, 1980. (See **81k:68003**) 68C01
- See also Mostowski, Andrzej; Włodzimierz, 81i:01018a and Mostowski, Andrzej; Włodzimierz, 81i:01018b
- Rasnik, John S.** (with Johnson, Johnny A.) Semigroups and lattices. *Semigroup Forum* 20 (1980), no. 4, 385-386. (From the text) **81i:90006** 06B15 (20M12)
- Rashkova, C. G.** (with Cukanov, Vladimir) On one property of Noetherian rings with finite Krull dimension. (Bulgarian and Russian summaries) *Godišnik Visš. Učebn. Zvel. Priložna Mat.* 14 (1978), no. 1, 17-20. (S. S. Page) **81j:16025a** 16A46 (16A66)
- On the Krull dimension of Noetherian rings. (Bulgarian and Russian summaries) *Godišnik Visš. Učebn. Zaved. Priložna Mat.* 14 (1978), no. 1, 21-26. (S. S. Page) **81j:16025b** 16A46 (16A66)
- Rasmussen, H.** (with Forsyth, P., Jr.) A Kantorovich method of solution of time-dependent electrochemical machining problems. *Comput. Methods Appl. Mech. Engrg.* 23 (1980), no. 2, 129-141. (Shawky Shamma) **81j:78020** 78A55
- (with Forsyth, P., Jr.) High order perturbation solution of the electrochemical smoothing problem. *J. Comput. Appl. Math.* 6 (1980), no. 1, 37-42. (P. Keast) **81g:65108** 65P05 (35R35, 65N30)
- Rasmussen, J. Jund** (with Karpman, V. I.; Lynov, J. P.; Michelsen, P.; Pécse, H. L.; Turikov, V. A.) Modification of plasma solitons by resonant particles. *Phys. Fluids* 23 (1980), no. 9, 1782-1794. (D. ter Haar) **81j:76107** 76X05 (35Q20)
- Raspopov, B. M.** Synthesis and estimation of the efficiency of suboptimal control with application of Laguerre polynomials. (Russian) *Optimization and adaptive control in large-scale systems* (Russian), pp. 28-34, 106, "Ilim", Frunze, 1980. (Author's summary) **81m:49042** 49D40 (49E05)
- (with Krivenko, V. A.) An approach to the synthesis of suboptimal control algorithms. (Russian) *Optimization and adaptive control in large-scale systems* (Russian), pp. 41-50, 107, "Ilim", Frunze, 1980. (Authors' summary) **81m:49015** 49A99
- Raspopova, N. S.** Regularizing algorithms. (Russian) *Studies in functional analysis* (Russian), pp. 71-77, iii, *Ural. Gos. Univ., Sverdlovsk*, 1978. (Author's summary) **81b:47015** 47A50 (65J10)
- Rasputin, G. G.** Cubature formulas and common zeros of orthogonal polynomials. (Russian. English summary) *Vestnik Leningrad. Univ. Mat. Meh. Astronom.* 1978, op. 1, 40-45, 155. (G. P. Ismatullayev) **81b:41000** 41A55 (41A10, 65D32)
- Rassias, George M.** Morse functions on differentiable manifolds. (Greek summary) *Prakt. Akad. Athinon* 53 (1978), 197-201 (1979). (James Callahan) **81i:57033** 57R70 (57R60, 58F09)
- On the nondegenerate critical points of differentiable functions. *Tamkang J. Math.* 10 (1979), no. 1, 67-73. (Felice Ronga) **81a:57034** 57R70 (58C25)
- (with Rassias, John Michael; Rassias, Themistocles M.) Weak solutions of the Frankl-Morawetz problem in R^{n+1} ($n \geq 2$). *Tamkang J. Math.* 10 (1979), no. 1, 81-91. (A. P. Soldatov) **81e:35091** 35M05

- Ramirez, John Michael** A new mixed type boundary value problem. *Bull. Soc. Roy. Sci. Liège* 48 (1979), no. 11-12, 420-421. (A. M. Nahusev) **81k:35112** 35M05
- The 3-dimensional Frankl' problem. *Bull. Soc. Roy. Sci. Liège* 48 (1979), no. 11-12, 422-423. (A. M. Nahusev) **81k:35113** 35M05
- The Bitsadze-Lavrent'ev problem. *Bull. Soc. Roy. Sci. Liège* 48 (1979), no. 11-12, 424-425. (A. M. Nahusev) **81k:35114** 35M05
- (with Rassias, George M.; Rassias, Themistocles M.) Weak solutions of the Frankl'-Morawetz problem in \mathbb{R}^{n+1} ($n \geq 2$). *Tamkang J. Math.* 10 (1979), no. 1, 81-91. (A. P. Soldatov) **81c:35091** 35M05
- On a Goursat type problem. *C. R. Math. Rep. Acad. Sci. Canada* 2 (1980), no. 1, 49-51. (A. P. Soldatov) **81m:35099** 35M05 (35L80)
- A maximum principle in \mathbb{R}^n . *C. R. Math. Rep. Acad. Sci. Canada* 2 (1980), no. 3, 131-133. (Graham H. Williams) **81k:35092** 35L15 (35B50)
- Rassias, Themistocles M.** Global analysis. Morse theory on Hilbert manifolds and the Plateau's problem. (Greek summary) *Prakt. Akad. Athinon* 52 (1977), 365-374 (1978). (A. J. Tromba) **81d:58027** 58E12
- On Plateau's problem and a generalization of the Riemann mapping theorem. (Greek summary) *Prakt. Akad. Athinon* 52 (1977), 627-635 (1978). (A. J. Tromba) **81d:58028** 58E12 (53A10)
- On fixed point theory in nonlinear analysis. *Tamkang J. Math.* 8 (1977), no. 2, 233-237. (F. J. Papp) **81h:54055** 54H25
- On a problem of L. Nirenberg. *C. R. Math. Rep. Acad. Sci. Canada* 1 (1978/79), no. 4, 207-210. (M. Craioveanu) **81a:58010** 58C25 (47Hxx)
- (with Rassias, George M.; Rassias, John Michael) Weak solutions of the Frankl'-Morawetz problem in \mathbb{R}^{n+1} ($n \geq 2$). *Tamkang J. Math.* 10 (1979), no. 1, 81-91. (A. P. Soldatov) **81c:35091** 35M05
- Rastorgov, G. L.** (with Kuršin, L. M.) The optimal form of cross section of a torsional rod. (Russian. Armenian and English summaries) *Izv. Akad. Nauk Armjan. SSR Ser. Meh.* 32 (1979), no. 6, 17-19, 78. (M. O. Bašelešvili) **81g:73090** 73K40 (49D37, 73K05)
- (with Kuršin, L. M.) Reinforcement of the contour of a hole in a plate. *Izv. Akad. Nauk SSSR Meh. Teor. Tela* 14 (1979), no. 6, 94-102 (Russian); translated as *Mech. Solids* 14 (1979), no. 6, 79-86. (From the introduction) **81g:73091** 73K40 (49B22, 73C45)
- Rastrunov, V. A.** Approximation of equations in Banach space with a nonlinear multivalued operator. (Russian) *Differentsial'nye Uravnenija* 15 (1979), no. 3, 560-562, 575. (Russell C. Thompson) **81b:34057** 34G20 (65J15)
- Rastrigin, L. A.** Random search in the problems of identification. *Identification and system parameter estimation* (Proc. Fourth IFAC Sympos., Tbilisi, 1976), Part 1, pp. 127-139. North-Holland, Amsterdam, 1978. (Ivar Gustavsson) **81f:90059** 90B40 (93E12)
- (with Ripa, K. K.) Synthesis of factorial designs of experiments by the adaptive random search method. (Russian) *Problemy Shchun. Poiska No. 8 Voprosy Strukturalnoi Adaptacii* (1980), 237-253, 334. (Authors' summary) **81g:62134** 62K15 (90B40)
- Rastrunov, Constantin** (with Andrei, Neculai) Bandwidth of sparse matrices. *Proceedings of the International Symposium on Applications of Mathematics in System Theory* (Univ. Braşov, Braşov, 1978), II, pp. 267-274. Univ. Braşov, Braşov, 1979. (See **81j:93006b**) 65F99
- Rasulov, K. M.** On the solution of some boundary value problems of Riemann type for polyanalytic functions. (Russian) *Dokl. Akad. Nauk SSSR* 252 (1980), no. 5, 1059-1063. (Wolfgang Tutschke) **81h:30047** 30E25 (30G30)
- Rasulov, M. A.** Effective solution of a mixed problem of filtration theory. (Russian) *Differentsial'nye Uravnenija* 15 (1979), no. 11, 2044-2055, 2110. (Jakub Siemek) **81c:76042** 76S05
- Rasulov, T. M.** Plane mixed problems for parabolic systems in domains with boundaries that are variable in time. (Russian) *Differentsial'nye Uravnenija* 15 (1979), no. 12, 2183-2192, 2300. (G. W. Hedstrom) **81d:35041** 35K20
- Ramova, M. Ju.** Evolution of perturbations of equilibrium solutions of Bogoljubov's kinetic equations. (Russian. English summary) *Teoret. Mat. Fiz.* 42 (1980), no. 1, 124-132. (Nina B. Maslova) **81f:82017** 82A40 (45K05)
- Ravran, Vladimir** Approximation of distributed parameter systems by lumped parameter systems. *Proceedings of the International Symposium on Applications of Mathematics in System Theory* (Univ. Braşov, Braşov, 1978), II, pp. 365-373. Univ. Braşov, Braşov, 1979. (See **81j:93006b**) 93C20 (93B40)
- Absolute stability of nonlinear difference systems. (French and German summaries) *Rev. Roumaine Sci. Tech. Sér. Electrotech. Energét.* 24 (1979), no. 3, 495-500, xi, xii. (Wolfgang Hahn) **81d:39002** 39A11
- (with Halanay, Aristide) Stabilization of a class of bilinear control systems with applications to steam turbine regulation. *Tohoku Math. J. (2)* 32 (1980), no. 2, 299-308. (J. M. Skowronski) **81h:93073** 93D20 (34D20)
- Raziller, I.** Constraints on low energy Compton scattering amplitudes. (French summary) *Rev. Roumaine Phys.* 24 (1979), no. 9, 873-883. (G. R. Allcock) **81a:81085** 81F30 (30D50, 47A40)
- (with Guaiyu, I.; Radescu, E. E.) Optimal sum-rule inequalities for spin- $\frac{1}{2}$ Compton scattering. *Ann. Physics* 127 (1980), no. 2, 436-457. (Authors' summary) **81h:81125** 81F20 (81G25)
- Ratatzak, Zbigniew** On monotone solutions of a system of n linear nonhomogeneous differential equations. *Fasc. Math. No. 10* (1978), 47-52. (Roger T. Lewis) **81j:34062** 34C10 (34C11)
- Ratatzky, Zygmunt** On sentences provable in impredicative extensions of theories. *Dissertationes Math. (Rosprawy Mat.)* 178 (1979), 40 pp. (A. Lévy) **81g:03062** 03E70 (03E30)
- Ratcliff, Keith F.** Level spacing distributions for electrons confined by irregular surfaces. *Multivariate analysis, V* (Proc. Fifth Internat. Sympos., Univ. Pittsburgh, Pittsburgh, Pa., 1978), pp. 593-611. North-Holland, Amsterdam, 1980. (Author's summary) **81f:82036** 82A65 (60K99)
- Ratcliffe, John G.** On the second transgression of the Lyndon-Hochschild-Serre spectral sequence. *J. Algebra* 61 (1979), no. 2, 593-598. (Ross Staffeldt) **81e:18021** 18G40 (20J99)
- (with Hirschhorn, Philip S.) A simple proof of the algebraic unknotting of spheres in codimension two. *Amer. J. Math.* 102 (1980), no. 3, 489-491. (J. P. Levine) **81j:57012** 57Q45
- Free and projective crossed modules. *J. London Math. Soc. (2)* 22 (1980), no. 1, 66-74. (Timothy Porter) **81h:18012** 18G05
- Rathie, A. K.** Problems on electrostatic potential in spherical regions. *Ranchi Univ. Math. J.* 9 (1978), 89-98. (J. P. Singhal) **81m:33001** 33A35 (78A30)
- Some double integrals involving the H -function. II. (Hindi. English summary) *Vijnana Parishad Amasandhan Patrika* 22 (1979), no. 1, 11-16. (Author's summary) **81j:33004** 33A35
- An integral involving an H -function. II. (Hindi. English summary) *Vijnana Parishad Amasandhan Patrika* 22 (1979), no. 3, 235-238. (From the summary) **81c:33004** 33A35
- Rathie, Pushpa N.** (with Kaufman, Hyman) On the distribution of products and quotients of independent random variables. *Metron* 35 (1977), no. 1-2, 133-148 (1979). (Authors' introduction) **81m:62032** 62E15
- (with Mathai, A. M.) On the nonnull distribution of a test criterion for testing equality of populations. *Multivariate analysis, V* (Proc. Fifth Internat. Sympos., Univ. Pittsburgh, Pittsburgh, Pa., 1978), pp. 327-335. North-Holland, Amsterdam, 1980. (R. P. Gupta) **81e:62015** 62E15
- (with Sheng, Lilian T.) On the measurable solutions of certain functional equations. *Czechoslovak Math. J.* 30(105) (1980), no. 3, 418-425. (A. Smajdor) **81m:39011** 39B20
- (with Pederzoli, G.) Distribution of product and quotient of Pareto variates. *Metrika* 27 (1980), no. 3, 165-169. (Authors' summary) **81j:62045** 62E15
- (with Mathai, A. M.) On the nonnull distribution of Wilks' L_{∞} criterion. (French and Italian summaries) *Statistica (Bologna)* 40 (1980), no. 1, 92-99. (M. S. Srivastava) **81m:62087** 62H10 (62E15)
- Rathore, Mahendra Pal Singh** (with Mishra, R. S.) On conformal Weingarten's map. *Indian J. Pure Appl. Math.* 7 (1976), no. 12, 1466-1471. (T. Okubo) **81c:53051** 53C40 (53C55)
- On almost complex submanifolds. *Progr. Math. (Allahabad)* 12 (1978), no. 1-2, 33-38. (S. I. Husain) **81h:53039** 53C15
- Rathore, R. K. S.** (with Agrawal, P. N.) The unsettled problem of M. G. Krein on nonnegative polynomials in T -systems. *SIAM J. Math. Anal.* 10 (1979), no. 5, 1092-1094. (Authors' summary) **81b:41004** 41A05
- (with Singh, O. P.) On convergence of derivatives of Post-Widder operators. *Indian J. Pure Appl. Math.* 11 (1980), no. 5, 547-561. (M. W. Müller) **81j:41035** 41A35 (41A28, 44A10)
- Ratiner, V. A.** The structure of semiperfect rings with a commutative Jacobson radical. (Russian) *Mat. Sb. (N.S.)* 110(152) (1979), no. 3, 459-470, 472. (W. G. Leavitt) **81c:16036** 16A51
- Ratu, Tudor** On the smoothness of the time t -map of the KdV equation and the bifurcation of the eigenvalues of Hill's operator. *Global analysis* (Proc. Biennial Sem. Canad. Math. Congr., Univ. Calgary, Calgary, Alta., 1978), pp. 248-294. *Lecture Notes in Math.*, 755, Springer, Berlin, 1979. (Yvette Kosmann-Schwarzbach) **81j:58025** 58D25 (58F07)
- The motion of the free n -dimensional rigid body. *Indiana Univ. Math. J.* 29 (1980), no. 4, 609-629. (V. Oproiu) **81f:58032** 58F05 (58F07, 70E15)
- See also Abraham, Ralph; et al. **81c:58025**
- Ratiff, Ernest** An algebraic system pertaining to a loop. *Texas J. Sci.* 32 (1980), no. 3, 195-198. (Afzal Beg) **81k:20103** 20N05 (16A76)
- Ratiff, H. Donald** (with Picard, Jean-Claude) A cut approach to the rectilinear distance facility location problem. *Oper. Res.* 26 (1978), no. 3, 422-433. (James G. Morris) **81d:90040** 90B05 (90C50)
- (with Picard, Jean-Claude) A cut approach to a class of quadratic integer programming problems. *Networks* 10 (1980), no. 4, 363-370. (Authors' summary) **81f:90066** 90C10 (90C20)
- (with Bartholdi, John J., III; Orlin, James B.) Cyclic scheduling via integer programs with circular ones. *Oper. Res.* 28 (1980), no. 5, 1074-1085. (Authors' summary) **81f:90142** 90C10
- Ratiff, L. J., Jr.** Notes on a new chain condition for prime ideals. *J. Pure Appl. Algebra* 12 (1978), no. 2, 159-175. (Markus Brodmann) **81g:13001** 13A15
- Polynomial rings and H -local rings. *Pacific J. Math.* 75 (1978), no. 2, 497-510. (From the text) **81h:13013** 13H05 (13F20)
- On maximal ideals and simple integral extension rings. *Comm. Algebra* 7 (1979), no. 18, 1977-2005. (Stephen McAdam) **81a:13005** 13B20
- Notes on essentially powers filtrations. *Michigan Math. J.* 26 (1979), no. 3, 313-324. (Paul M. Eakin) **81a:13007** 13B25 (13E15)
- Three notes on unmixed local rings. *Indiana Univ. Math. J.* 29 (1980), no. 4, 631-637. (Daniel Lazard) **81h:13008** 13H10
- Ratner, Marina** The Cartesien square of the horocycle flow is not loosely Bernoulli. *Israel J. Math.* 34 (1979), no. 1-2, 72-96 (1980). (Gustav A. Hedlund) **81g:58032** 58F25 (28D99, 58F15)
- Ratschek, H.** (with Rokne, Jon) About the centered form. *SIAM J. Numer. Anal.* 17 (1980), no. 3, 333-337. (G. Alefeld) **81e:65037** 65G10
- Centered forms. *SIAM J. Numer. Anal.* 17 (1980), no. 5, 656-662. (Ramon E. Moore) **81f:65068** 65G10 (65D99)
- ramakrishna Rau, B.** See Ramakrishna Rau, B.
- Rau, V. G.** (with Ijuihin, V. V.; Belov, N. V.) Isovector structures of pseudosymmetric crystals. Theory of isovector structures. Distance groups and isovector structures. (Russian) *Dokl. Akad. Nauk SSSR* 249 (1979), no. 3, 611-613. (Ch. Adam) **81i:82059** 82A60 (20H15)
- Rausch, Harry E.** The magic flute. Crude theoretical models of jet-driven wind instruments and the edgetone. *Math. Intelligencer* 1 (1978/79), no. 1, 52-57. (Editors) **81e:76063** 76Q05
- (with Keen, L.; Vazquez, A. T.) Moduli of punctured tori and the accessory parameter of Lamé's equation. *Trans. Amer. Math. Soc.* 255 (1979), 201-230. (Authors' summary) **81j:30074** 30F10 (14H15)
- Rauch, Jeffrey** (with McKenna, P. J.) Strongly nonlinear perturbations of nonnegative boundary value problems with kernel. *J. Differential Equations* 28 (1978), no. 2, 253-265. (Frederick A. Howes) **81m:35032** 35G30
- Boundary value problems as limits of problems in all space. *Séminaire*

- Goulaouic-Schwartz (1978/1979), *Exp. No. 3*, 17 pp., École Polytech., Palaiseau, 1979. (R. Glassey) **81d:35053** 35L45 (35L50)
(with Reed, Michael C.) Propagation of singularities for semilinear hyperbolic equations in one space variable. *Ann. of Math.* (2) **111** (1980), no. 3, 531–552. (Alan Jeffrey) **81h:35028** 35L10 (35L25)
Perturbation theory for eigenvalues and resonances of Schrödinger Hamiltonians. *J. Funct. Anal.* **35** (1980), no. 3, 304–315. (James S. Howland) **81g:81016** 81C12 (35P25)
- Raugel, Geneviève Résolution numérique par une méthode d'éléments finis du problème de Dirichlet pour le laplacien dans un polygone. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **286** (1978), no. 18, A791–A794. (Author's summary) **81e:65060** 65N30
- Rauhala, Urho A. Intuitive derivation of loop inverses and array algebra. *Bull. Géodésique* **53** (1979), no. 4, 317–342. (N. N. Abdelmalek) **81h:65039** 65F20 (15A24)
- Raufels, Peter (with Hornung, Günter) Terminal algebra semantics and retractions for abstract data types. *Automata, languages and programming (Proc. Seventh Internat. Colloq., Noordwijkerhout, 1980)*, pp. 310–323, *Lecture Notes in Comput. Sci.*, 85, Springer, Berlin, 1980. (Authors' summary) **81j:68033** 68B15
- Raupp, M. A. (with Feijó, R. A.; Moura, Carlos A.) An optimization algorithm for the pile driver problem. *Bol. Soc. Brasil. Mat.* **9** (1978), no. 2, 39–61. (Ja. I. Al'ber) **81d:49008** 49A29 (49D45, 65K10, 65P05, 73K30)
(with Moura, Carlos A.; Barbeta, J. C.) Numerical study of an equation related to wave propagation. *Bol. Soc. Brasil. Mat.* **10** (1979), no. 1, 57–69. (Authors' summary) **81k:65138** 65P05
- Rautenberg, Wolfgang ★Klassische und nichtklassische Aussagenlogik. (German) [Classical and nonclassical propositional logic] Logik und Grundlagen der Mathematik [Logic and Foundations of Mathematics], 22. Friedr. Vieweg & Sohn, Braunschweig, 1979. xi + 361 pp. ISBN 3-528-08385-9 (Peter Köhler) **81i:03002** 03-01 (03Bxx, 03Gxx)
- Rautmann, Reinhold On the convergence rate of nonstationary Navier-Stokes approximations. *Approximation methods for Navier-Stokes problems (Proc. Sympos., Univ. Paderborn, Paderborn, 1979)*, pp. 425–449, *Lecture Notes in Math.*, 771, Springer, Berlin, 1980. (W. F. Ames) **81e:35106** 35Q10 (65N30)
See also Approximation methods for Navier-Stokes problems, **81a:76004**
- Ravaglia, Carlo On the comparison theorem. (Italian. English summary) *Atti Accad. Sci. Ist. Bologna Cl. Sci. Fis. Rend.* (13) **6** (1978/79), no. 2, 67–75. (M. Tvrdý) **81m:34047** 34C10
- Ravnska, Timo Differential geometry of C^∞ helices in Hilbert space. *J. Math. Anal. Appl.* **75** (1980), no. 2, 385–401. (M. P. Hebble) **81j:58023** 58D05 (47A10)
- Raveché, H. J. (with Kayser, R. F., Jr.) Equivalence of integral equations in the molecular theory of fluids. *Phys. A* **97** (1979), no. 2, 399–409. (G. Stell) **81a:82038** 82A50
- Ravenel, Douglas C. Complex cobordism and its applications to homotopy theory. *Proceedings of the International Congress of Mathematicians (Helsinki, 1978)*, pp. 491–496, *Acad. Sci. Fennica, Helsinki*, 1980. (J. F. Adams) **81b:55012** 55N22 (55Q45)
(with Wilson, W. Stephen) The Morava K -theories of Eilenberg-Mac Lane spaces and the Conner-Floyd conjecture. *Amer. J. Math.* **102** (1980), no. 4, 691–748. (J. F. Adams) **81i:55005** 55N20 (55P20, 55T20, 57R85)
- Raviart, J. M. (with Hamdani, P.) Nonequilibrium computer network distribution. *Optimization techniques (Proc. Ninth IFIP Conf., Warsaw, 1979)*, Part 2, pp. 300–308, *Lecture Notes in Control and Information Sci.*, 23, Springer, Berlin, 1980. (Authors' summary) **81m:68033** 68C15
- Raviart, P.-A. (with Girault, V.) An analysis of a mixed finite element method for the Navier-Stokes equations. *Numer. Math.* **33** (1979), no. 3, 235–271. (Authors' summary) **81a:65100** 65N30 (35Q10)
Éléments finis et dualité. *Proceedings of the International Congress of Mathematicians (Helsinki, 1978)*, pp. 929–935, *Acad. Sci. Fennica, Helsinki*, 1980. (V. Thomé) **81f:65008** 65N30 (65N15, 76D05)
(with Adam, J. C.; Gourdin-Serviere, A.; Nédélec, J.-C.) Study of an implicit scheme for integrating Maxwell's equations. *Comput. Methods Appl. Mech. Engrg.* **22** (1980), no. 3, 327–346. (Authors' summary) **81e:78008** 78A25 (65N30)
- Ravichandran, N. (with Bass, J.; Srinivasan, V.) Stationary solutions of differential equations. *J. Math. Phys. Sci.* **13** (1979), no. 6, 621–633. (J. M. Cushing) **81g:34054** 34C27 (34C28)
(with Subramanian, Ramachandran) A complex two-unit system. (German summary) *Z. Oper. Res. Ser. A-B* **24** (1980), no. 3, A83–A90. (Authors' summary) **81d:90051** 90B25 (60K10)
- Ravindran, A. (with Arthur, Jeffrey L.) PAGP, a partitioning algorithm for (linear) goal programming problems. *ACM Trans. Math. Software* **6** (1980), no. 3, 378–386. (Authors' summary) **81i:90122** 90C05
(with Arthur, Jeffrey L.) A branch and bound algorithm with constraint partitioning for integer goal programming problems. *European J. Oper. Res.* **4** (1980), no. 6, 421–425. (Authors' summary) **81j:90066** 90C10 (90C31)
- Ravindran, Renuka (with Prasad, Phoolan) On signal propagation velocity and phase velocity. *Proceedings of the Conference on Mathematical Methods in Physics (Mysore, 1978)*, Part B, pp. 52–59, *Matscience Rep.*, 96, Inst. Math. Sci., Madras, 1979. (Authors' summary) **81h:76011** 76B15
- Ravndal, F. Supersymmetric Dirac particles in external fields. *Phys. Rev. D* (3) **21** (1980), no. 10, 2823–2832. (Author's summary) **81d:81142** 81M05 (81E99)
- al-Rawi, A. See Al-Rawi, A.
- Rawnsley, J. H. Self-dual Yang-Mills fields. *Global analysis (Proc. Biennial Sem. Canad. Math. Congr., Univ. Calgary, Calgary, Alta., 1978)*, pp. 295–312, *Lecture Notes in Math.*, 755, Springer, Berlin, 1979. (Victor Aldaya) **81g:53054** 53C80 (14F05, 53C05, 58E20)
A nonunitary pairing of polarizations for the Kepler problem. *Trans. Amer. Math. Soc.* **250** (1979), 167–180. (Virgil Obideanu) **81m:58037** 58F06 (53C80, 81D99)
- Ray, A. K. (with Chaki, M. C.) On certain types of Kähler spaces. *Publ. Math. Debrecen* **26** (1979), no. 3-4, 255–262. (A. Gray) **81i:53050** 53C55
- Ray, Alak An unstable solution of hydromagnetic equations in a plasma cylinder and pulsar magnetic fields. *Phys. Fluids* **23** (1980), no. 5, 898–903. (Author's summary) **81d:76107** 76W05
- Ray, Barada K. Fixed points in metric and Banach spaces for generalized contraction mappings. *Bull. Math. Soc. Sci. Math. R. S. Roumanie (N.S.)* **22**(70) (1978), no. 1, 71–74. (From the summary) **81e:54043** 54H25
(with Kasahara, Shouro) On some pairwise contractive mappings. *Math. Sem. Notes Kobe Univ.* **6** (1978), no. 3, 425–427. (From the text) **81g:54062** 54H25
(with Chatterjee, Haimabati) On further extension of a theorem of Edelstein. *Indian J. Pure Appl. Math.* **11** (1980), no. 2, 256–257. (Jerry F. Williams) **81g:54069** 54H25
- Ray, Dipankar Self-gravitating irrotational barotropic fluid in a conformally flat space. *J. Math. Phys.* **19** (1978), no. 3, 723–726. (Author's summary) **81h:83027** 83C55
Gödel-like cosmological solutions. *J. Math. Phys.* **21** (1980), no. 12, 2797–2798. (Author's summary) **81m:83049** 83F05 (58D25)
Self-dual solutions for SU(2) gauge fields on Euclidean space. *Phys. Lett. B* **97** (1980), no. 1, 113–114. (Author's summary) **81j:81043** 81E10
- Ray, Jayanti (with Chakraborti, Amitava) Unsteady magnetohydrodynamic Couette flow between two plates when one of the plates is subjected to random pulses. *J. Phys. Soc. Japan* **48** (1980), no. 4, 1361–1364. (Authors' summary) **81d:76101** 76W05
- Ray, John R. (with Reid, James L.) More exact invariants for the time-dependent harmonic oscillator. *Phys. Lett. A* **71** (1979), no. 4, 317–318. (Authors' summary) **81h:81020** 81C05 (35Q20)
(with Reid, James L.) Exact time-dependent invariants for N -dimensional systems. *Phys. Lett. A* **74** (1979), no. 1-2, 23–25. (Authors' summary) **81k:81019** 81C05 (58F05, 70J99)
(with Reid, James L.) Ermakov systems, nonlinear superposition, and solutions of nonlinear equations of motion. *J. Math. Phys.* **21** (1980), no. 7, 1583–1587. (L. G. Chambers) **81h:70018** 70K99 (70H35)
Noether's theorem and exact invariants for time-dependent systems. *J. Phys. A* **13** (1980), no. 6, 1969–1975. (H. S. P. Grässer) **81h:70011** 70H99 (49C05, 58F05)
(with Reid, James L.) Ermakov systems, Noether's theorem and the Sartet-Bahar method. *Lett. Math. Phys.* **4** (1980), no. 3, 235–240. (Authors' summary) **81h:70007** 70H35 (49C05, 70K99)
Time-dependent invariants with applications in physics. *Lett. Nuovo Cimento* (2) **27** (1980), no. 13, 424–428. (Takayuki Nono) **81f:70016** 70H30 (78A35, 83F05)
Neutrinos in cosmological models. *Progr. Theoret. Phys.* **63** (1980), no. 4, 1213–1216. (Garry Ludwig) **81h:83010** 83C15 (53B50, 83F05)
- Ray, L. M. (with Shrikhande, V. L.; Mital, D. P.) On minimal canonical realization from input-output data sequences. *IEEE Trans. Automat. Control* **25** (1980), no. 2, 309–312. (Authors' introduction) **81e:93022** 93B15
- Ray, M. K. (with Banerji, S.) "Pauli effect" in relativity. *Phys. Lett. A* **70** (1979), no. 4, 269–270. (From the text and the summary) **81j:83024** 83C50
- Ray, Nigel Invariants of reframed manifolds. *Proc. London Math. Soc.* (3) **39** (1979), no. 2, 253–275. (Stanley Kochman) **81a:55024** 55Q45
- Ray, S. K. (with Sahai, Ashok) On variance of the MVU inverse binomial estimator. *Calcutta Statist. Assoc. Bull.* **27** (1978), no. 105-108, 155–157 (1979). (Authors' summary) **81b:62032** 62F10
(with Sahai, Ashok; Sahai, Ajit) A note on ratio and product type estimators. *Ann. Inst. Statist. Math.* **31** (1979), no. 1, 141–144. (Mankal N. Murthy) **81f:62019** 62D05
(with Sahai, Ashok) Efficient families of ratio and product-type estimators. *Biometrika* **67** (1980), no. 1, 211–215. (Mankal N. Murthy) **81g:62018** 62D05
- Ray, W. D. Computation of reorder levels when the demands are correlated and the lead time random. *J. Oper. Res. Soc.* **32** (1981), no. 1, 27–34. (Author's summary) **81k:90031** 90B05
- Ray, W. Harmon (with Jensen, K. F.) Bifurcation phenomena in stirred tanks and catalytic reactors. *New approaches to nonlinear problems in dynamics (Proc. Conf., Pacific Grove, Calif., 1979)*, pp. 235–255, *SIAM, Philadelphia, Pa.*, 1980. (Authors' summary) **81m:90015** 80A30 (35B32, 58F14)
(with Greiss, F. K.) Stochastic control of processes having moving boundaries—an experimental study. *Automatica—J. IFAC* **16** (1980), no. 2, 157–166. (Authors' summary) **81d:93060** 93E10 (49D40)
See also Reactive systems, **81i:80001**
- Ray, William O. The fixed point property and unbounded sets in Hilbert space. *Trans. Amer. Math. Soc.* **258** (1980), no. 2, 531–537. (Siméon Reich) **81e:47044** 47H09 (47H10)
- Raychaudhuri, A. (with Leroyer, Y.) On the energy of Yang-Mills fields in the presence of an external source. *Nuclear Phys. B* **156** (1979), no. 3, 465–481. (T. F. Morris) **81g:81070** 81E99 (22E70, 35Q20)
- Raychowdhury, P. N. (with Boyd, James N.) Projection operator techniques in Lagrangian mechanics: symmetrically coupled oscillators. *Internat. J. Math. Math. Sci.* **3** (1980), no. 2, 369–382. (D. P. Rašković) **81e:70018** 70H35 (20C35)
(with Boyd, James N.) Representation theory of finite abelian groups applied to a linear diatomic crystal. *Internat. J. Math. Math. Sci.* **3** (1980), no. 3, 559–574. (Authors' summary) **81i:81034** 81C40 (20C35, 82A60)
(with Boyd, James N.) Improper integrals and Laplace transforms from generating functions. *Pure Appl. Math. Sci.* **11** (1980), no. 1-2, 3–7. (Hans-Jürgen Gieske) **81d:44002** 44A10 (44A20)
(with Boyd, James N.) Fresnel integrals and improper integrals of Bessel functions. *Pure Appl. Math. Sci.* **12** (1980), no. 1-2, 79–81. (J. P. Singhal) **81j:33007** 33A40 (44A10)
- Raymon, L. (with Hill, D.; Passow, Eli) Correction to our paper: "Approximation with interpolatory constraints" [Illinois J. Math. **20** (1976), no. 1, 65–71; MR **52** #8727]. *Illinois J. Math.* **24** (1980), no. 1, 48. (Editors) **81c:41013** 41A10
- Raymond, Frank A. The Nielsen theorem for Seifert fibered spaces over locally symmetric spaces. *J. Korean Math. Soc.* **16** (1979/80), no. 1, 87–93. (W. D. Neumann) **81h:57029** 57S25 (57S30)
(with Kwun, Kyung Whan) Periodic maps on product 3-manifolds which are isotopic to the identity. *J. Korean Math. Soc.* **16** (1979/80), no. 2, 113–116. (Ian Hambleton) **81k:57041** 57S17
- Raymond, Jean See Saint-Raymond, Jean
- Raynal, Jacques On the definition and properties of generalized 6-j symbols. *J. Math. Phys.* **20** (1979), no. 12, 2398–2415. (S. Saran) **81b:33022** 33A75 (22E70, 81C40)
- Raynal, Marie-Lise On some nonlinear problems of diffusion. *Volterra equations (Proc.*

- Helinski Sympos. Integral Equations, Otaniemi, 1978, pp. 251-266, *Lecture Notes in Math.*, 737, Springer, Berlin, 1979. (V. Lakshmikantham) **81b:45024** 45K05 (35K05, 76S05)
- Raynaud, H. (with Dion, Jean-Guy) Quelques nouvelles conditions suffisantes pour qu'une vidange soit forte. (English summary) *Problèmes combinatoires et théorie des graphes (Colloq. Internat. CNRS, 1978. Orsay, Orsay, 1976)*, pp. 103-107, *Colloques Internat. CNRS*, 260, CNRS, Paris, 1978. (Colin J. H. McDiarmid) **81f:05018** 60C05 (05C99)
- A propos de quelques conditions de transitivité de la méthode majoritaire bien connues. *Cahiers Centre Études Rech. Opér.* 22 (1980), no. 1, 17-21. (Author's summary) **81g:90014** 90A08
- Raynaud, Jacques (with Maury, Guy) ★Ordres maximaux au sens de K. Asano. (French) [Maximal orders in the sense of K. Asano] *Lecture Notes in Mathematics*, 808, Springer-Verlag, Berlin-New York, 1980. viii + 192 pp. ISBN 0-540-10016-4 (I. Reiner) **81m:16002** 16-02 (16A18)
- Raynaud, Michel Contre-exemple au "vanishing theorem" en caractéristique $p > 0$. C. P. Ramanujam—a tribute, pp. 273-278, *Tata Inst. Fund. Res. Studies in Math.*, 8, Springer, Berlin, 1978. (Daniel Comenetz) **81b:14011** 14F12 (14J10, 14J25)
- "p-torsion" du schéma de Picard. *Journées de Géométrie Algébrique de Rennes (Rennes, 1978)*, Vol. II, pp. 87-148, *Astérisque*, 64, Soc. Math. France, Paris, 1979. (H. Gillet) **81f:14026** 14K30 (14L05)
- Rayner, A. C. (with Giles, D. E. A.) The mean squared errors of the maximum likelihood and natural-conjugate Bayes regression estimators. *J. Econometrics* 11 (1979), no. 2-3, 319-334. (D. V. Lindley) **81m:62124** 62J05 (62F15)
- Rayner, P. J. W. (with Arambepola, Bernard) Discrete transforms over polynomial rings with applications in computing multidimensional convolutions. *IEEE Trans. Acoust. Speech Signal Process.* 28 (1980), no. 4, 407-414. (Authors' summary) **81h:94004** 94A11
- Rayzi, Jack M., Jr. (with Arodz, Henryk) Functional approach to the parametric derivatives of renormalized Green's functions with multiple insertions. *Rep. Math. Phys.* 15 (1979), no. 3, 407-416. (U. Cattaneo) **81f:81049** 81E15
- Rayward-Smith, V. J. Optimization problems arising from the incorporation of split values in search trees. *Combinatorial optimization, II (Proc. Conf., Univ. East Anglia, Norwich, 1979)*, *Math. Programming Stud.* No. 13 (1980), 111-120. (Author's summary) **81m:68050** 68E05 (68H05)
- See also Combinatorial optimization, **81i:90003**
- Raz, Y. (with Paz, Azaria) Complexity of pattern generation by MAP-L systems. Abridged version. *Graph-grammars and their application to computer science and biology (Internat. Workshop, Bad Honnef, 1978)*, pp. 367-378, *Lecture Notes in Comput. Sci.*, 73, Springer, Berlin, 1979. (William R. Edwards) **81m:68043** 68D20 (68E10, 68F05)
- Raza, S. H. On D. J. Foulis' paper: "Relative inverses in Baer *-semigroups" [Michigan Math. J. 10 (1963), 65-84; MR 27 #4882]. *Kyungpook Math. J.* 19 (1979), no. 2, 231-235. (Joseph Chacron) **81g:20118** 20M10
- Razanamenon, Jean-Baptiste Sur les automorphismes infinitésimaux du fibré tangent riemannien. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 17, A803-A806. (Author's summary) **81e:53029** 53C20
- Razavy, M. A model for diffusion in a bistable potential field. *Phys. Lett. A* 72 (1979), no. 2, 89-90. (From the summary) **81i:81019** 81C05
- Wave equation for dissipative systems derived from a quantized many-body problem. (French summary) *Canad. J. Phys.* 58 (1980), no. 7, 1019-1025. (Author's summary) **81h:81179** 81Hxx (82A35)
- Razen, Reinhard A. A characterization of transversal topologies. *J. Combin. Theory Ser. A* 27 (1979), no. 3, 254-262. (A. Császár) **81e:54031** 54D10
- Ordered partitions and codes generated by circulant matrices. *J. Combin. Theory Ser. A* 27 (1979), no. 3, 333-341. (Henk van Tilborg) **81g:05016** 05A15 (94B05)
- Razin, Assaf (with Yahav, Joseph A.) On stochastic models of economic growth. *Internat. Econom. Rev.* 20 (1979), no. 3, 599-604. (M. Aoki) **81g:90030** 90A16
- Razmadze, S. A. Optimization of the longitudinal profile of a subway tunnel layout with account taken of special constraints. (Russian. Georgian and English summaries) *Sobch. Akad. Nauk Gruz. SSR* 97 (1980), no. 3, 561-564. (Author's summary) **81h:90064** 90B99 (73K40)
- Razmyslov, Ju. P. The nonsolvability of the variety of groups of exponent 4. *Ring theory (Proc. Antwerp Conf. (NATO Adv. Study Inst.), Univ. Antwerp, Antwerp, 1978)*, pp. 219-231, *Lecture Notes in Pure and Appl. Math.*, 51, Dekker, New York, 1979. (E. Formanek) **81f:20047** 20F50 (17B30)
- Razorenov, G. N. (with Brandin, V. N.) Decoupling of nonlinear dynamic systems. *Automat. i Telemekh.* 1979, no. 10, 5-11. (Russian. English summary); translated as *Automat. Remote Control* 40 (1979), no. 10, part 1, 1405-1410 (1980). (Authors' summary) **81h:93017** 93C10
- Razumov, A. V. (with Hrustalev, O. A.; Taranov, A. Ju.) Collective coordinate method in the canonical formalism: Bogolubov's transformation. *Nuclear Phys. B* 172 (1980), no. 1, 44-58. (From the summary) **81h:81095** 81E99
- al-Razzak al-Jazari, Badi 'al-Zaman Abi al-'Izz Isma'il ★Al-Jāmi' bain al-'ilm wal-'amal al-nāfi' fi zin'at al-hiyāl. (Arabic) [A compendium on the theory and practice of the mechanical arts] With an English preface and introduction. Edited by Ahmad Y. al-Hassan. With the collaboration of Imad Ghanem, Malik Māllūhi and Mustafa Ta'Muri. Sources & Studies in the History of Arabic-Islamic Science: History of Technology Series, 2. University of Aleppo, Institute for the History of Arabic Science, Aleppo, 1979. 613 pp. (not consecutively pagged) (16 plates). (David A. King) **81e:01010** 01A30 (01A75)
- See also Hill, Donald R., **81e:01008**
- Reculivili, G. L. (with Logunov, A. A.; Mestvirishvili, M. A.; Samohin, A. P.) Contribution of distant singularities in the cos θ -plane to the scattering amplitude and distribution function of inclusive processes. (Russian. English summary) *Teoret. Mat. Fiz.* 43 (1980), no. 3, 291-308. (V. S. Ol'hovskij) **81i:81068** 81F20
- Rea, Claudio Approximated Cauchy problem for linear, first order, overdetermined systems. (Italian summary) *Ann. Mat. Pura Appl.* (4) 122 (1979), 383-397. (David S. Tartakoff) **81a:35071** 35N15 (32F25)
- Read, Ronald C. Some applications of computers in graph theory. *Selected topics in graph theory*, pp. 417-444, Academic Press, London, 1978. (See **81e:05059**) 05C30 (05-04)
- Algorithms in graph theory. *Applications of graph theory*, pp. 381-417, Academic Press, London, 1979. (See **81h:05050**) 05C99 (05-04)
- The chord intersection problem. *Second International Conference on Combinatorial Mathematics (New York, 1978)*, pp. 444-454, *Ann. New York Acad. Sci.*, 319, New York Acad. Sci., New York, 1979. (J. B. Roberts) **81g:05017** 05A15 (05C05)
- (with Wormald, Nicholas C.) Catalogues of graphs and digraphs. *Discrete Math.* 31 (1980), no. 2, 224. (From the text) **81h:05117** 05C99
- A note on tiling rectangles with dominoes. *Fibonacci Quart.* 18 (1980), no. 1, 24-27. (Jack Giles, Jr.) **81g:05053** 05B45 (05-04)
- (with Wormald, Nicholas C.) Number of labeled 4-regular graphs. *J. Graph Theory* 4 (1980), no. 2, 203-212. (Authors' summary) **81e:05085** 05C30
- Read, Stephen "Exists" is a predicate. *Mind* 89 (1980), no. 355, 412-417. (From the conclusion) **81j:03018** 03A05
- Read, Thomas T. Second-order differential equations with small solutions. *J. Math. Anal. Appl.* 77 (1980), no. 1, 165-174. (D. A. Lutz) **81m:34009** 34A30 (34C05, 34D05)
- Reade, Maxwell O. (with Miller, Sanford S.; Mocanu, Petru T.) The order of starlikeness of alpha-convex functions. *Mathematica (Cluj)* 20(43) (1978), no. 1, 25-30. (S. Ruscheweyh) **81d:30016** 30C45
- Real, Leslie A. Fitness, uncertainty, and the role of diversification in evolution and behavior. *Amer. Natur.* 115 (1980), no. 5, 623-638. (Author's summary) **81h:92037** 92A10
- Reale, Enrico (with di Pasquale, Salvatore; Paradiso, Michele) Matrix formulation of large deformation analysis. (German and Russian summaries) Special issue on large elastic deformation of discrete systems (Lectures, Euromech 69' Internat. Colloq., Balatonszemes, 1977). *Acta Tech. Acad. Sci. Hungar.* 87 (1978), no. 1-2, 87-101 (1979). (Hwa-Shan Ho) **81c:73043** 73K30 (73G05, 73K20)
- Reas, P. G. (with Michelucci, M. L.; Papuzza, F. P.) A differential model concerning morphogenetic processes. (Italian) *Atti Accad. Sci. Lett. Arti Palermo Parte I* (4) 36 (1976/77), 235-248 (1978). (T. Poggio) **81h:92007** 92A09 (58C99, 82A35)
- (with Michelucci, M. L.; Papuzza, F. P.) The growth of a microbial/population as approximate solution of a first-order partial differential equation. (Italian) *Atti Accad. Sci. Lett. Arti Palermo Parte I* (4) 36 (1976/77), 457-472 (1978). (Authors' summary) **81c:92015** 92A17 (35L67)
- (with Michelucci, M. L.; Papuzza, F. P.) Approximate solution of a first-order differential system that represents a "predator-prey" model with account taken of age. (Italian) *Atti Accad. Sci. Lett. Arti Palermo Parte I* (4) 36 (1976/77), 473-490 (1978). (Authors' summary) **81c:92016** 92A17 (35L67)
- (with Michelucci, M. L.; Papuzza, F. P.) A mathematical model concerning the behavior of two biological associations: numerical approximation. (Italian) *Atti Accad. Sci. Lett. Arti Palermo Parte I* (4) 36 (1976/77), 557-579 (1978). (Authors' summary) **81c:92017** 92A17 (35L67)
- Reay, John R. Twelve general position points always form three intersecting tetrahedra. *Discrete Math.* 28 (1979), no. 2, 193-199. (Ethan D. Bolker) **81c:05021** 05B30
- Several generalizations of Tverberg's theorem. *Israel J. Math.* 34 (1979), no. 3, 238-244 (1980). (Jean-Paul Doignon) **81f:52017** 52A35
- Reay, N. A. (with Hunt, Giles W.; Yoshimura, T.) Local diffeomorphisms in the bifurcation manifestations of the umbilic catastrophe. *Proc. Roy. Soc. London Ser. A* 369 (1979), no. 1736, 47-65. (D. R. J. Chillingworth) **81g:58005** 58C28 (73H05)
- Rebbl, Claudio Interaction of superconducting vortices. *Geometrical and topological methods in gauge theories (Proc. Canad. Math. Soc. Summer Res. Inst., McGill Univ., Montreal, Que., 1979)*, pp. 96-113, *Lecture Notes in Phys.*, 129, Springer, Berlin, 1980. (F. J. Bloore) **81h:81117** 81J05 (53C05, 58F05, 81E10)
- Rebenko, A. L. (with Petrina, D. Ja.; Ivanov, S. S.) ★Уравнения для коэффициентов матрицы рассеяния. (Russian) [Equations for coefficient functions of the scattering matrix] "Nauka", Moscow, 1979. 296 pp. (L. A. Takhtajan (Tahtadjian)) **81a:81061** 81F15 (35P25, 47B38, 81E10)
- (with Petrina, D. Ja.) A projection-iteration method for solving quantum field theory equations and its relation to the normalization theory. Quantum field theory equations and ill-posed problems of mathematical physics. (Russian. English summary) *Teoret. Mat. Fiz.* 42 (1980), no. 2, 167-183. (James D. Fabry) **81h:81070** 81E15
- Rebhorn, E. (with Lortz, D.) Eigenvalue bounds for Hill's equation. *Math. Methods Appl. Sci.* 2 (1980), no. 3, 288-302. (Brian DeFacio) **81h:34025** 34B30 (76W05)
- Rebhuhn, Deborah Invertibility of C^m multivariable input-output systems. *IEEE Trans. Automat. Control* 25 (1980), no. 2, 207-212. (Antoinette Sec) **81d:93023** 93C10 (57R27)
- Rebolledo, Rolando La méthode des martingales appliquée à l'étude de la convergence en loi de processus. *Bull. Soc. Math. France Mém.* No. 62 (1979), v + 125 pp. (1980). (V. Mackevičius) **81g:60002** 60B10 (60C44)
- Semi-martingales et variations quadratiques. Conditions nécessaires et suffisantes de convergence en loi vers une martingale gaussienne. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 17, A815-A817. (Author's summary) **81f:60064** 60G42
- Sur l'existence de solutions à certains problèmes de semimartingales. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 18, A843-A846. (Author's summary) **81f:60069** 60G44
- Central limit theorems for local martingales. *Z. Wahrsch. Verw. Gebiete* 51 (1980), no. 3, 269-286. (Gh. Oprea) **81g:60023** 60F05 (60C44)
- Rebouças, M. J. A rotating universe with violation of causality. *Phys. Lett. A* 70 (1979), no. 3, 161-163. (Author's summary) **81i:83033** 83C50 (83C15)
- Recami, E. (with Garuccio, A.; Maccarrone, G. D.; Vigier, J.-P.) On the physical nonexistence of signals going backwards in time, and quantum mechanics. *Lett. Nuovo Cimento* (2) 27 (1980), no. 2, 60-64. (From the text) **81i:81006** 81B05
- Rechester, A. B. (with Rosenbluth, M. N.; White, R. B.) Statistical description of stochastic orbits in a tokamak. *J. Physique* 41 (1980), no. 4 Colloq. C-3, C3-351-C3-358. (Authors' summary) **81f:76055** 76X05 (58F13)
- (with White, R. B.) Calculation of turbulent diffusion for the Chirikov-Taylor model. *Phys. Rev. Lett.* 44 (1980), no. 24, 1586-1589. (Authors' summary) **81f:62026** 82A45 (60K35)
- Recillas, Horacio See Tapia-Recillas, Horacio
- Recio Muñoz, Tomás J. Some considerations on the tangent cone. (Spanish) *Proceedings of the First Spanish-Portuguese Mathematical Conference (Madrid, 1973)* (Spanish).

- pp. 367-371, *Consejo Sup. Inv. Cient., Madrid*, 1977. (José M. Aroca) **81m:14004**
14B05
- Recknagel, R.-D.** Quadratische Optimierung für Mixturen. (English summary) *Biometrical J.* **21** (1979), no. 4, 333-345. (H. Bandemer) **81d:62009** 62K05 (90C20)
- Rečković, Nikola S.** Sur un prolongement d'une distribution de (D') sur (O') . (Macedonian summary) *Privod.-Mat. Fak. Univ. Kiril Metodij Skopje Godišen Zb.* **28** (1977), 59-67. (Harris S. Shultz) **81i:46054** 46F05
- Analytic representation of certain pseudofunctions. (Russian. Macedonian summary) *Privod.-Mat. Fak. Univ. Kiril Metodij Skopje Godišen Zb.* **29** (1978), 45-50. (Ioana Ciorănescu) **81k:46049** 46F12
- Reckziegel, Helmut** Completeness of curvature surfaces of an isometric immersion. *J. Differential Geom.* **14** (1979), no. 1, 7-20 (1980). (Yoshio Matsuyama) **81f:53045** 53C40
- Recksi, Andrius** Sufficient conditions for the unique solvability of linear networks containing memoryless 2-ports. *Internat. J. Circuit Theory Appl.* **8** (1980), no. 2, 95-103. (Authors' summary) **81g:94050** 94C05
- (with Iri, Masao) What does duality really mean? *Internat. J. Circuit Theory Appl.* **8** (1980), no. 3, 317-324. (Authors' summary) **81f:94030** 94Cxx
- Rector, D. L.** Homotopy theory of rigid profinite spaces. I. *Pacific J. Math.* **85** (1979), no. 2, 413-445. (Harold Hastings) **81k:55009** 55P15 (14F20, 55P60)
- Redaelli, Aldo** (with Maiellaro, Michele) On steady magnetohydrodynamic motions between coaxial cylinders in the presence of anisotropic currents and on their stability. (Italian. English summary) *Rend. Accad. Sci. Fis. Mat. Napoli* (4) **46** (1979), 483-499 (1980). (Salvatore Rionero) **81j:76036** 76E25 (76W05)
- Redekens, G. A.** (with Segeda, Ju. N.) The structure of invariant equations of motion in generalized Lagrange-Ostrogradskii mechanics. (Russian. English summary) *Ukrain. Fiz. Ž.* **25** (1980), no. 1, 117-122, 170. (Authors' summary) **81a:70023** 70H99 (49H05)
- (with Fušić, V. I.; Segeda, Ju. N.) Invariant systems of equations in generalized mechanics. (Russian) *Ukrain. Mat. Ž.* **32** (1980), no. 4, 569-576. (D. P. Rašković) **81i:70006** 70H15 (58F05, 70H35)
- Reddien, George W.** Discretizations in optimal control and mesh selection. *Proceedings of the 1979 Army Numerical Analysis and Computers Conference (White Sands Missile Range, White Sands, N.M., 1979)*, pp. 361-369, ARO Rep. 79, 3, U. S. Army Res. Office, Research Triangle Park, N.C., 1979. (Authors' summary) **81a:65064** 65K10 (49D99)
- Newton's method and high order singularities. *Comput. Math. Appl.* **5** (1979), no. 2, 79-86. (J. W. Schmidt) **81c:65026** 65H10 (58C15)
- (with Heinemann, Robert F.; Overholser, Knowles A.) Multiplicity and stability of the hydrogen-oxygen-nitrogen flame: the influence of chemical pathways and kinetics on transitions between steady states. *AIChE J.* **26** (1980), no. 5, 725-734. (Aubrey B. Poore) **81m:80010** 80A25 (35K55)
- Projection methods for two-point boundary value problems. *SIAM Rev.* **22** (1980), no. 2, 156-171. (Johannes Elschner) **81c:65049** 65L10 (34B05)
- Reddingius, J.** (with de Vries, S. A.; Siam, A. J.) Note on a death process. *J. Appl. Probab.* **17** (1980), no. 3, 853-855. (W. A. O'N. Waugh) **81i:60079** 60J80 (92A15)
- Reddy, A. R.** (with Newman, Donald J.) Rational approximation. III. *J. Approx. Theory* **21** (1977), no. 2, 117-125. (From the text) **81h:30043** 30E10
- (with Newman, Donald J.) Rational approximation to x^* . II. *Canad. J. Math.* **32** (1980), no. 2, 310-316. (G. D. Taylor) **81g:41024** 41A20 (41A25)
- Reddy, D. C.** (with Reddy, P. Kista) Factorization of multidimensional transfer functions of a class of nonlinear systems. *Proceedings of the Conference on Mathematical Methods in Physics (Mysore, 1978)*, Part A, pp. 200-209, *Matscience Rep.*, 96, Inst. Math. Sci., Madras, 1979. (Authors' summary) **81g:93046** 93C10
- Reddy, Harnatha C.** (with Ramachandran, V.; Swamy, M. N. S.) New results in sum separability of multivariable reactance and positive real functions. *Proceedings of the Fourth International Symposium on Network Theory (Ljubljana, 1979)*, pp. 305-310, *Georgi, St.-Sophorin*, 1979. (See **81b:94003**) 94C99
- Reddy, J. N.** On the finite element method with penalty for incompressible fluid flow problems. *Mathematics of finite elements and applications, III (Proc. Third MAFELAP Conf., Brunel Univ., Uxbridge, 1978)*, pp. 227-235, Academic Press, London, 1979. (Stephen W. Brady) **81a:76019** 76D05 (65N30)
- (with Warburton, J. D.) A comparative study of numerical schemes for the solution of two-dimensional advection flows. *Nonlinear partial differential equations in engineering and applied science (Proc. Conf., Univ. Rhode Island, Kingston, R.I., 1979)*, pp. 187-212, *Lecture Notes in Pure and Appl. Math.*, 54, Dekker, New York, 1980. (Stephen W. Brady) **81m:76015** 76C05 (65M10)
- (with Sasaki, Y. K.) A comparison of stability and accuracy of some numerical models of two-dimensional circulation. *Internat. J. Numer. Methods Engrg.* **16** (1980), Special Issue, 149-170. (From the summary) **81m:76016** 76C15 (65N30)
- Reddy, K. Govardhan** (with Seshagiri Rao, S. V.) Oscillating source flow of a conducting fluid between parallel disks. *Rev. Roumaine Sci. Tech. Sér. Méc. Appl.* **25** (1980), no. 2, 243-254. (Authors' summary) **81d:76108** 76W05
- Reddy, K. Narasimha** Integral inequalities and applications. *Bull. Austral. Math. Soc.* **21** (1980), no. 1, 13-20. (Editors) **81d:34010** 34A40 (26D10, 45M99)
- Reddy, P. Kista** (with Reddy, D. C.) Factorization of multidimensional transfer functions of a class of nonlinear systems. *Proceedings of the Conference on Mathematical Methods in Physics (Mysore, 1978)*, Part A, pp. 200-209, *Matscience Rep.*, 96, Inst. Math. Sci., Madras, 1979. (Authors' summary) **81g:93046** 93C10
- Reddy, S. M.** See Bose, Bella. **81d:94030**
- Rodekop, Larry G.** Similarity solutions of some two-space-dimensional nonlinear wave evolution equations. *Stud. Appl. Math.* **63** (1980), no. 3, 185-207. (Francesco Calogero) **81m:35129** 35Q20
- Redfield, R. H.** Nonsecular, locally compact TRL groups. *Glasgow Math. J.* **21** (1980), no. 1, 1-7. (Klaus Keimel) **81c:22009** 22A30 (06F15, 22D05)
- Redhead, Michael** Models in physics. *British J. Philos. Sci.* **31** (1980), no. 2, 145-163. (From the introduction) **81g:03003** 03A05
- Redheffer, Raymond** (with Walter, Wolfgang) Inequalities involving derivatives. *Pacific J. Math.* **85** (1979), no. 1, 165-178. (Jöran Bergh) **81f:26012** 26D10
- (with Walter, Wolfgang) Comparison theorems for parabolic functional inequalities. *Pacific J. Math.* **85** (1979), no. 2, 447-470. (A. I. Atanasyov) **81i:35164** 35R45 (35K60)
- (with Smith, Carey) On a surprising inequality of Goldberg and Straus. *Amer. Math. Monthly* **87** (1980), no. 5, 387-390. (A. E. Danese) **81e:15006** 15A39 (26D15)
- (with Walter, Wolfgang) Counterexamples for uniqueness in strongly coupled parabolic systems. *Math. Z.* **171** (1980), no. 1, 83-90. (Jagdish Chandra) **81f:35066** 35K55
- Redington, Patrick K.** (with Coon, Nancy; Ma, Shao Mu; Brown, Billings; Eyring, Henry) A theory of distortion of the reaction zone. *Proc. Nat. Acad. Sci. U.S.A.* **77** (1980), no. 10, part 1, 5575-5579. (Authors' summary) **81i:80009** 80A25 (76A05)
- Redish, Edward F.** (with Benzec, Gy.) The two-potential formula and the integral form of the distorted Faddeev equations. *Phys. Lett. B* **91** (1980), no. 1, 1-3. (Authors' summary) **81d:81087** 81F10
- Red'kin, N. P.** Self-correcting contact schemata. II. (Russian) *Problemy Kibernet. No. 36* (1979), 195-208, 280. (W. Kwasowicz) **81g:94038** 94B50 (94C10)
- Red'ko, V. N.** (with Lisovik, L. P.) Generators of regular languages. *Kibernetika (Kiev)* **1979**, no. 3, 19-22, 121 (Russian); translated as *Cybernetics* **15** (1979), no. 3, 311-315 (1980). (From the text) **81c:68008** 68F10
- (with Škil'njak, S. S.) Syntactic structure of programming languages. *Programirovanie* **1979**, no. 4, 3-15, 95 (Russian); translated as *Programming and Comput. Software* **5** (1979), no. 4, 225-235. (Authors' summary) **81c:68016** 68B10
- Redkovskii, N. N.** (with Pieničnyi, B. N.) Some methods of unconditional minimization. (Russian) *Ž. Vysisl. Mat. i Mat. Fiz.* **19** (1979), no. 5, 1127-1133, 1355. (B. T. Poljak) **81a:65063** 65K10
- Redlich, K.** (with Turko, L.) Phase transitions in the statistical bootstrap model with an internal symmetry. *Z. Phys. C* **5** (1980), no. 3, 201-204. (Authors' summary) **81f:81008** 81G05
- Redmond, Don** Omega theorems for a class of Dirichlet series. *Rocky Mountain J. Math.* **9** (1979), no. 4, 733-748. (D. R. Heath-Brown) **81c:10054** 10H25 (30B50)
- Some remarks on a paper of A. Ivic. *Univ. Beograd. Publ. Elektrotehn. Fak. Ser. Mat. Fiz. No. 634-677* (1979), 137-142. (V. C. Harris) **81h:10007** 10A20
- A density theorem for a class of Dirichlet series. *Illinois J. Math.* **24** (1980), no. 2, 296-312. (D. R. Heath-Brown) **81i:10052** 10H10
- Redner, Richard** (with Peters, B. Charles, Jr.; Decell, Henry P., Jr.) Characterizations of linear sufficient statistics. *Sankhyā Ser. A* **40** (1978), no. 3, 303-309. (R. H. Farrell) **81i:62007** 62B05 (62H30, 68G10)
- Reed, Allen H.** (with Frantz, Mary E.) A sequential two-sample t test using Welch type modification for unequal variances. *Comm. Statist. A—Theory Methods* **8** (1979), no. 14, 1459-1471. (P. W. Jones) **81f:62124** 62L10
- Reed, G. M.** (with van Douwen, Eric K.; Lutzer, David J.; Pelant, Jan) On unions of metrizable subspaces. *Canad. J. Math.* **32** (1980), no. 1, 76-85. (Brian M. Scott) **81h:54008** 54B05 (54E35)
- See also *Proceedings: Topology Conference, 81h:54001* and *Proceedings: Topology Conference, 81h:54001*
- Reed, George F.** (with McHugh, Richard B.) The estimation of dental caries incidence in the presence of diagnostic error. *Biometrics* **35** (1979), no. 2, 473-478. (Authors' summary) **81c:62110** 62P10
- Reed, I. S.** (with Truong, T. K.; Miller, R. L.) A new algorithm for computing primitive elements in the field of Gaussian complex integers modulo a Mersenne prime. *IEEE Trans. Acoust. Speech Signal Process.* **27** (1979), no. 5, 561-563. (S. W. Golomb) **81b:10002** 10A10 (12C15, 68G99)
- Reed, Martin** A series solution for the root of a polynomial. *Bull. Inst. Math. Appl.* **16** (1980), no. 1, 24-28. (T. L. Freeman) **81g:65063** 65H05 (26C10, 30C15)
- Reed, Michael C.** (with Berning, John A., Jr.) Reflection of singularities of one-dimensional semilinear wave equations at boundaries. *J. Math. Anal. Appl.* **72** (1979), no. 2, 635-653. (L. N. Tao) **81c:35084** 35L67
- (with Rauch, Jeffrey) Propagation of singularities for semilinear hyperbolic equations in one space variable. *Ann. of Math. (2)* **111** (1980), no. 3, 531-552. (Alan Jeffrey) **81h:35028** 35L10 (35L25)
- Reed, Robert E.** Foundations of Vietoris homology theory with applications to noncompact spaces. (Russian) *Dissertationes Math. (Rozprawy Mat.)* **180** (1980), 47 pp. (Timothy Porter) **81h:55002** 55N05
- Reeds, James** Correction terms for multinomial large deviations. *Asymptotic theory of statistical tests and estimation (Proc. Acad. Internat. Sympos., Univ. North Carolina, Chapel Hill, N.C., 1979)*, pp. 287-305, Academic Press, New York, 1980. (Dominique Picard) **81h:60036** 60F10
- Reeh, H.** (with Garber, W. D.) On the structure of symmetry generators. *Comm. Math. Phys.* **67** (1979), no. 2, 179-186. (Gerald A. Goldin) **81f:81028** 81D15
- (with Garber, W. D.) Additive conservation laws in local relativistic quantum field theory. *Comm. Math. Phys.* **70** (1979), no. 2, 169-180. (Gerald A. Goldin) **81d:81046** 81D15 (81E05)
- Reeken, Michael** Rotating chain fixed at two points vertically above each other. *Rocky Mountain J. Math.* **10** (1980), no. 2, 409-427. (A. Vanderbauwhede) **81h:34019** 34B15 (58E07, 73D35)
- Reeks, M. W.** Eulerian direct interaction applied to the statistical motion of particles in a turbulent fluid. *J. Fluid Mech.* **97** (1980), no. 3, 569-590. (Authors' summary) **81g:76068** 76F99
- Rees, C. S.** (with Garrett, J. W.; Stanojević, Č. V.) L^1 -convergence of Fourier series with coefficients of bounded variation. *Proc. Amer. Math. Soc.* **80** (1980), no. 3, 423-430. (S. Izumi) **81i:42010** 42A28
- Rees, Elmer** (with Thomas, Emery) Realizing homology classes by almost-complex submanifolds. *Math. Z.* **172** (1980), no. 2, 195-201. (P. J. Kahn) **81i:57035** 57R95 (57R77)
- van Rees, G. H. J.** See Van Rees, G. H. J.
- Rees, M.** Nonconjugacy of a minimal distal diffeomorphism of the torus to a C^1 skew-product. *Israel J. Math.* **32** (1979), no. 2-3, 193-200. (Ethan M. Coven) **81i:58035** 58F99 (28D99)
- A point distal transformation of the torus. *Israel J. Math.* **32** (1979), no. 2-3, 201-208. (Ethan M. Coven) **81g:54054** 54H20
- Rees, Philip H.** Regional population projection models and accounting methods. *J. Roy. Statist. Soc. Ser. A* **142** (1979), no. 2, 223-255. (P. D. M. Macdonald) **81j:92040** 92A15 (62P99)

- Regade, Ján** Oscillation criteria for fourth-order linear differential equations. (Russian summary) *Math. Slovaca* 29 (1979), no. 1, 3–16. (A. Halanay) **81a:34035** 34C10
- Renger, Amal** The identities of matrices, described by the characters of the symmetric groups. *Ring theory (Proc. Antwerp Conf. (NATO Adv. Study Inst.), Univ. Antwerp, Antwerp, 1978)*, pp. 233–241, *Lecture Notes in Pure and Appl. Math.*, 51, Dekker, New York, 1979. (From the introduction) **81f:20014** 20C30
- Algebras satisfying a Capelli identity. *Israel J. Math.* 33 (1979), no. 2, 149–154. (A. P. Popov) **81i:16022** 16A38**
- A primeness property for central polynomials. *Pacific J. Math.* 83 (1979), no. 1, 269–271. (A. Kuskulejs) **81e:16030** 16A38 (16A42)**
- Rego, T. (with D'Adda, A.; D'Auria, R.; Fré, P.)** Geometrical formulation of supergravity as a theory on a supergroup manifold. *Supergravity (Proc. Workshop, Stony Brook, N.Y., 1979)*, pp. 85–92, North-Holland, Amsterdam, 1979. (See **81j:83001**) **83E99** (53B50, 53C80, 83E15)
- (with D'Auria, R.; Sciuto, S.)** Group-theoretical construction of two-dimensional models with infinite sets of conservation laws. *Nuclear Phys. B* 171 (1980), no. 1–2, 167–188. (Enrico Onofri) **81j:35096** 35Q20 (58A15, 58F07, 81E99)
- (with D'Adda, A.; D'Auria, R.; Fré, P.)** Geometrical formulation of supergravity theories on orthosymplectic supergroup manifolds. *Riv. Nuovo Cimento* (3) 3 (1980), no. 6, 81 pp. (M. Carmeli) **81j:83040** 83E99 (53C05, 58A15)
- Regis, Cristina** SH in direct limits of structures and interpretation. (Italian. English summary) *Riv. Mat. Univ. Parma* (4) 4 (1978), 269–275 (1979). (G. Cherlin) **81i:03042** 03C30
- Conservation of the SH of type $\forall\exists$ in direct limits. (Italian. English summary) *Boll. Un. Mat. Ital. A* (5) 16 (1979), no. 3, 568–576. (Annalisa Marcja) **81a:03029** 03C40 (18A30)**
- Rago, C. J.** The compactified Jacobian. *Ann. Sci. École Norm. Sup. (4)* 13 (1980), no. 2, 211–223. (T. Oda) **81i:14006** 14C05 (14K30)
- Regali, Giuliana (with Coletti, Giulianella; Vincenti, Rita)** Algebraic and topological structure of nonstandard models of the reals. (Italian. English summary) *Rend. Sem. Mat. Univ. Politec. Torino* 37 (1979), no. 2, 75–82 (1980). (Annalisa Marcja) **81k:03065** 03H20 (12J15, 54J05)
- (with Coletti, Giulianella; Vincenti, Rita)** Errata: "Algebraic and topological structure of nonstandard models of the reals". (Italian) *Rend. Sem. Mat. Univ. Politec. Torino* 37 (1979), no. 3, 165 (1980). (Annalisa Marcja) **81k:03065** 03H20 (12J15, 54J05)
- Rehder, Wulf** Spectral properties of products of projections in quantum probability theory. *Internat. J. Theoret. Phys.* 18 (1979), no. 11, 791–805 (1980). (Author's summary) **81d:81023** 81C10 (46L50)
- The asymptotic distribution of random molecules. *Adv. in Appl. Probab.* 12 (1980), no. 3, 640–654. (M. Záhle) **81j:60016** 60D05 (82A05)**
- On the volume of unions of translates of a convex set. *Amer. Math. Monthly* 87 (1980), no. 5, 382–384. (Z. Waksman) **81g:52004** 52A20 (52A35)**
- When is the pseudobest estimator BLUE? *Ann. Inst. Statist. Math.* 32 (1980), no. 2, 179–185. (I. S. Alalouf) **81m:62128** 62J05 (62F10)**
- On the commutativity of two projections. *Elem. Math.* 35 (1980), no. 5, 120–122. (Kenneth R. Davidson) **81k:47001** 47A05**
- Quantum logic of sequential events and their objective probabilities. *Internat. J. Theoret. Phys.* 19 (1980), no. 3, 221–237. (S. Gudder) **81f:81012** 81B10**
- When do projections commute?** *Z. Naturforsch. A* 35 (1980), no. 4, 437–441. (Hennner Kröger) **81h:81013** 81B10 (03G12, 06C15, 47A99)
- Rehman, Sirajur (with Khan, I. A.)** On estimation of the matrix of the first moments of a two-dimensional branching process. *Pure Appl. Math. Sci.* 12 (1980), no. 1–2, 41–48. (Soren Asmussen) **81m:60154** 60J85 (62M05)
- Rehr, J. J. (with Joyce, G. S.; Guttman, A. J.)** A recurrence technique for confluent singularity analysis of power series. *J. Phys. A* 13 (1980), no. 5, 1587–1602. (Authors' summary) **81f:41019** 41A21 (81C99, 82A67)
- Rehren, K.-H. (with Pohlmeier, K.)** Reduction of the two-dimensional $O(n)$ nonlinear σ -model. *J. Math. Phys.* 20 (1979), no. 12, 2628–2632. (Charles A. Nelson) **81a:81072** 81E99
- Constraints on the currents in principal models giving rise to integrable nonlinear systems. *Phys. Lett. B* 93 (1980), no. 4, 400–402. (Author's summary) **81e:81073** 81E10**
- Reich, Daniel** Partitioning integers using a finitely generated semigroup. *Pacific J. Math.* 78 (1978), no. 1, 233–240. (S. Milne) **81e:10093** 10A05 (10A45, 30E10)
- Reich, Edgar** On the uniqueness problem for extremal quasiconformal mappings with prescribed boundary values. *Complex analysis Joensuu 1978 (Proc. Colloq., Univ. Joensuu, Joensuu, 1978)*, pp. 314–320, *Lecture Notes in Math.*, 747, Springer, Berlin, 1979. (K. Strebel) **81c:30039** 30C60 (30C70)
- Reich, J. I. (with Blum, Julius R.)** p -sets for random walks. *Z. Wahrsch. Verw. Gebiete* 48 (1979), no. 2, 193–200. (Authors' summary) **81j:60079** 60J15 (28D99, 60F05)
- Reich, Karin** See **Tropfke, Johannes**, **81j:01004**
- Reich, Ludwig** Probleme der analytischen Iteration bei formal-biholomorphen und bei kontrahierenden Abbildungen. *Komplexe Analysis und ihre Anwendung auf partielle Differentialgleichungen (Tagung, Martin-Luther-Universität, Halle, 1976)*. *Wiss. Beir. Martin-Luther-Universität Halle-Wittenberg M* 27 (1977), 45–49. (From the text) **81h:32009** 32B05 (22E10, 39B10)
- (with Niederbichler, Günter)** Über multiplikative Funktionen von Automorphismen des Potenzreihenrings und invariante Funktionen analytischer Iterationen. *Iterationsprobleme (Graz, 1977)*, *Ber. No. 88*, 26 pp., Forschungszentrum Graz, Graz, 1978. (D. A. Lutz) **81h:39005** 39B50 (22E05, 39A10, 39B10, 58C10)
- (with Schwaiger, Jens)** Analytische und fraktionale Iteration formal-biholomorpher Abbildungen. *Jahrbuch Überblicke Mathematik*, 1979, pp. 123–144, *Biographisches Inst., Mannheim*, 1979. (K.-T. Chen) **81h:58056** 58F99 (32A99, 34C20)
- (with Gronau, Detlef)** Meromorphe Lösungen einer Klasse linearer partieller Differentialgleichungen. *Beiträge Anal.* No. 14 (1979), 93–107. (J. Kajiwara) **81m:35021** 35C10 (32A30, 35A20)
- Reich, Simeon** On infinite products of resolvents. (Italian summary) *Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur.* (8) 63 (1977), no. 5, 338–340 (1978). (J. Kolomý) **81d:47033** 47H06
- An iterative procedure for constructing zeros of accretive sets in Banach spaces. *Nonlinear Anal.* 2 (1978), no. 1, 85–92. (P. M. Fitzpatrick) **81b:47065** 47H06**
- (with Torrejón, Ricardo)** Zeros of accretive operators. *Comment. Math. Univ. Carolin.* 21 (1980), no. 3, 619–625. (Dan Tibba) **81k:47075** 47H06 (47H09, 47H10)
- Product formulas, nonlinear semigroups, and accretive operators. *J. Funct. Anal.* 36 (1980), no. 2, 147–168. (A. Pazy) **81k:47076** 47H06 (47H09)**
- Convergence and approximation of nonlinear semigroups. *J. Math. Anal. Appl.* 76 (1980), no. 1, 77–83. (T. Kato) **81m:47090** 47H20**
- (with Kaper, Hans G.; Leaf, Gary K.)** Convergence of semigroups with an application to the Carleman equation. *Math. Methods Appl. Sci.* 2 (1980), no. 3, 303–308. (Robert H. Martin, Jr.) **81h:47058** 47H20
- (with Bruck, Ronald E.)** A general convergence principle in nonlinear functional analysis. *Nonlinear Anal.* 4 (1980), no. 5, 939–950. (Mo Tak Kiang) **81j:47049** 47H15 (58C15)
- A solution to a problem on the asymptotic behavior of nonexpansive mappings and semigroups. *Proc. Japan Acad. Ser. A Math. Sci.* 56 (1980), no. 3, 85–87. (G. F. Webb) **81h:47060** 47H20**
- Reich, T. (with Rice, John; Cloninger, C. R.; Wette, R.)** An approximation to the multivariate normal integral: its application to multifactorial qualitative traits. (French summary) *Biometrics* 35 (1979), no. 2, 451–459. (Authors' summary) **81k:62181** 62P10 (62H10)
- Reichard, Klaus** Roots of differentiable functions of one real variable. *J. Math. Anal. Appl.* 74 (1980), no. 2, 441–445. (K. Lamotte) **81j:26005** 26A24 (32B05, 32K05, 58C25)
- Reichardt, Hans** See **Pieper, Herbert**, **81i:10001**
- Reichardt, W. (with Poggio, T.)** On the representation of multi-input systems: computational properties of polynomial algorithms. *Biol. Cybernet.* 37 (1980), no. 3, 167–186. (P. Bertrand) **81j:92015** 92A09 (68C05, 92A27)
- Reichel, H.-C.** Towards a unified theory of semimetric and metric spaces. *S-metrizable spaces. Topological structures, II (Proc. Sympos. Topology and Geom., Amsterdam, 1978)*, Part 2, pp. 209–241, *Math. Centre Tracts*, 116, Math. Centrum, Amsterdam, 1979. (C. M. Pareek) **81k:54047** 54E35 (54E25)
- Reichel, Horst (with Kaphengst, H.)** Finite limit-colimit completions of small categories. *Algebraische Modelle, Kategorien und Gruppoide*, pp. 21–33, *Studien zur Algebra und ihre Anwendungen*, 7, Akademie-Verlag, Berlin, 1979. (M. Barr) **81d:18004** 18A35 (18A25)
- Initially-restricting algebraic theories. *Mathematical foundations of computer science*, 1980 (Proc. Ninth Sympos., Ryzdzya, 1980), pp. 504–514, *Lecture Notes in Comput. Sci.*, 88, Springer, Berlin, 1980. (See **81k:68003**) 68C01 (68B15)**
- bharucha-Reid, A. T.** See **Bharucha-Reid, A. T.**
- Reid, J. D.** See **Survey of numerical methods for partial differential equations**, **81i:65002**
- Reid, J. Gary** A new parallel identification algorithm for linear time-invariant systems: preliminary results. *Information linkage between applied mathematics and industry, II (Proc. Second Annual Workshop, Monterey, Calif., 1979)*, pp. 179–192, Academic Press, New York, 1980. (See **81j:93004**) 93C45
- Reid, James L. (with Ray, John R.)** More exact invariants for the time-dependent harmonic oscillator. *Phys. Lett. A* 71 (1979), no. 4, 317–318. (Authors' summary) **81h:81020** 81C05 (35Q20)
- (with Ray, John R.)** Exact time-dependent invariants for N -dimensional systems. *Phys. Lett. A* 74 (1979), no. 1–2, 23–25. (Authors' summary) **81k:81019** 81C05 (58F05, 70J99)
- (with Ray, John R.)** Ermakov systems, nonlinear superposition, and solutions of nonlinear equations of motion. *J. Math. Phys.* 21 (1980), no. 7, 1583–1587. (L. G. Chambers) **81h:70018** 70K99 (70H35)
- (with Ray, John R.)** Ermakov systems, Noether's theorem and the Sarlet-Bahar method. *Let. Math. Phys.* 4 (1980), no. 3, 235–240. (Authors' summary) **81h:70007** 70H35 (49C05, 70K99)
- Reid, K. B.** Score sets for tournaments. *Proceedings of the Ninth Southeastern Conference on Combinatorics, Graph Theory, and Computing (Florida Atlantic Univ., Boca Raton, Fla., 1978)*, pp. 607–618, *Congress. Numer.*, XXI, Utilitas Math., Winnipeg, Man., 1978. (J. W. Moon) **81a:05059** 05C20
- (with Beineke, Lowell W.)** Tournaments. *Selected topics in graph theory*, pp. 169–204, Academic Press, London, 1978. (See **81e:05059**) 05C20
- Reid, Miles τ_1** for surfaces with small K^2 . *Algebraic geometry (Proc. Summer Meeting, Univ. Copenhagen, Copenhagen, 1978)*, pp. 534–544, *Lecture Notes in Math.*, 732, Springer, Berlin, 1979. (Steven Zucker) **81j:14018** 14J10 (14E20)
- Reid, Russell M. (with Russell, David L.)** Water waves and problems of infinite time control. *International Symposium on Systems Optimization and Analysis (Rocquencourt, 1978)*, pp. 291–303, *Lecture Notes in Control and Information Sci.*, 14, Springer, Berlin, 1979. (A. I. Perov) **81a:76009** 76B15 (49B22)
- Reid, William T.** Ramifications of the fundamental lemma of the calculus of variations. *Houston J. Math.* 4 (1978), no. 2, 249–262. (From the introduction) **81g:49006** 49A21
- A historical note on the maximum principle. *SIAM Rev.* 20 (1978), no. 3, 580–582. (Author's introduction) **81h:49002** 49–03 (01A60)**
- Reif, John H.** Universal games of incomplete information. *Conference Record of the Eleventh Annual ACM Symposium on Theory of Computing (Atlanta, Ga., 1979)*, pp. 288–308, ACM, New York, 1979. (R. E. Stearns) **81h:68043** 68D27 (90D05)
- Logics for probabilistic programming (extended abstract). *Conference Proceedings of the Twelfth Annual ACM Symposium on Theory of Computing (Los Angeles, Calif., 1980)*, pp. 8–13, ACM, New York, 1980. (See **81j:68006**) 03B48**
- (with Spirakis, Paul G.)** Random matroids. *Conference Proceedings of the Twelfth Annual ACM Symposium on Theory of Computing (Los Angeles, Calif., 1980)*, pp. 385–397, ACM, New York, 1980. (See **81j:68006**) 68E99 (05B35, 68C05, 90C35)
- Code motion. *SIAM J. Comput.* 9 (1980), no. 2, 375–395. (Author's summary) **81j:68024** 68B10**
- Reiffen, Hans-Jörg** Metrische Größen in C^q -Räumen. (English summary) *Rend. Accad. Naz. XL* (5) 3 (1977/78), 1–29 (1979). (Charles D. Marshall) **81h:58012** 58A40 (32K05)
- Reiter, Thomas** Stabilitätsuntersuchungen bei rückwärtigen Differenzierungsformeln in Abhängigkeit von einem Parameter. *Berichte der Tagung "Numerische Behandlung*

- Gewöhnlicher Differentialgleichungen* (Humboldt Univ., Berlin, 1978), pp. 68–95, Seminarberichte, 11, Humboldt Univ., Berlin, 1978. (See 80d:65009) 65L05
- Reilly, Ivan** (with Raghavan, T. G.) On projective and injective objects in some topological categories. *Categorical topology* (Proc. Internat. Conf., Free Univ. Berlin, Berlin, 1978), pp. 308–315, *Lecture Notes in Math.*, 719, Springer, Berlin, 1979. (From the introduction) **81i:18004** 18B30 (54B30)
- (with Raghavan, T. G.) On nonsymmetric topological structures. *Topology* (Proc. Fourth Collq., Budapest, 1978), Vol. II, pp. 1005–1014, *Colloq. Math. Soc. János Bolyai*, 23, North-Holland, Amsterdam, 1980. (Jacob Kofner) **81k:54037** 54E15 (54D30)
- (with Vamanamurthy, M. K.) Compactness and finiteness. *Topology* (Proc. Fourth Collq., Budapest, 1978), Vol. II, pp. 1033–1041, *Colloq. Math. Soc. János Bolyai*, 23, North-Holland, Amsterdam, 1980. (Z. Balogh) **81m:54045** 54D99
- (with Hutton, Bruce) Separation axioms in fuzzy topological spaces. *Fuzzy Sets and Systems* 3 (1980), no. 1, 93–104. (Anne K. Steiner) **81k:54008** 54A40 (54D10, 54D15)
- (with Vamanamurthy, M. K.) Some topological anti-properties. *Illinois J. Math.* 24 (1980), no. 3, 382–389. (Paul Bankston) **81j:54029** 54D10 (54D20)
- Reilly, James W.** A combinatorial solution of two related problems in sequence enumeration. *J. Combin. Theory Ser. A* 26 (1979), no. 3, 304–307. (David M. Jackson) **81h:05014** 05A15
- (with Tanny, Stephen M.) Counting successions in permutations. *Stud. Appl. Math.* 61 (1979), no. 1, 73–81. (D. P. Roselle) **81h:05014** 05A15
- (with Tanny, Stephen M.) Counting permutations by successions and other figures. *Discrete Math.* 32 (1980), no. 1, 69–76. (D. P. Roselle) **81j:05017** 05A15
- "Bicoverings of a finite set" by generating function methods. *J. Combin. Theory Ser. A* 28 (1980), no. 3, 219–225. (G. L. Alexanderson) **81h:05013** 05A15
- Reilly, Norman R.** Varieties of inverse semigroups. *Proceedings of the Conference on Semigroups in Honor of Alfred H. Clifford* (Tulane Univ., New Orleans, La., 1978), pp. 85–93, Tulane Univ., New Orleans, La., 1979. (P. Goralik) **81f:20074** 20M07
- A class of regular \ast -semigroups. *Semigroup Forum* 18 (1979), no. 4, 385–386. (Phullendu Das) **81g:20128** 20M99
- (with Petrich, Mario) Congruences on bisimple inverse semigroups. *J. London Math. Soc.* (2) 22 (1980), no. 2, 251–262. (Bridget B. Baird) **81k:20090** 20M10
- Reilly, Robert C.** Geometric applications of the solvability of Neumann problems on a Riemannian manifold. *Arch. Rational Mech. Anal.* 75 (1980), no. 1, 23–29. (Harold Donnelly) **81m:53071** 53C65 (52A40)
- Reiman, A. G.** (with Semenov-Tjan-Sanskii, M. A.; Frenkel', I. E.) Graded Lie algebras and completely integrable dynamical systems. (Russian) *Dokl. Akad. Nauk SSSR* 247 (1979), no. 4, 802–805. (V. Oproiu) **81c:58042** 58F07 (17B65, 17B70)
- (with Semenov-Tjan-Sanskii, M. A.) Reduction of Hamiltonian systems, affine Lie algebras and Ixx equations. *Invent. Math.* 54 (1979), no. 1, 81–100. (P. A. Kučment) **81h:58021** 58F07 (35Q20, 58F05, 58F06)
- (with Semenov-Tjan-Sanskii, M. A.) A family of Hamiltonian structures, hierarchy of Hamiltonians and reduction for first-order matrix differential operators. (Russian) *Funkcional. Anal. i Priložen.* 14 (1980), no. 2, 77–78. (P. A. Kučment) **81k:58037** 58F07 (34C99)
- Reiman, Allan** Decay of a lower-hybrid wave to two lower-hybrid waves. *Phys. Fluids* 23 (1980), no. 6, 1254–1262. (Author's summary) **81d:76123** 76X05 (76E25)
- Reimann, H. M.** Extensions of quasiconformal deformations. *Complex analysis Joensuu 1978* (Proc. Collq., Univ. Joensuu, Joensuu, 1978), pp. 321–328, *Lecture Notes in Math.*, 747, Springer, Berlin, 1979. (Jukka Sarvas) **81a:30015** 30C60
- Reimer, Manfred** Best approximations to polynomials in the mean and norms of coefficient-functionals. *Multivariate approximation theory* (Proc. Conf., Math. Res. Inst., Oberwolfach, 1979), pp. 289–304, *Internat. Ser. Numer. Math.*, 51, Birkhäuser, Basel, 1979. (Helmut Brass) **81h:41068** 41A50 (41A63)
- Reimers, Bernd** Konstruktion endlicher Funktionengruppen mit gebrochen linearen Funktionen. *Math.-Phys. Semesterber.* 27 (1980), no. 1, 104–137. (Troels Jørgensen) **81c:20035** 20H20 (30-01)
- Reina, C.** (with Martellini, Maurizio; Sodano, P.) A first order system of differential equations for covariant σ models. *J. Math. Phys.* 20 (1979), no. 12, 2619–2620. (Authors' summary) **81f:81065** 81E99 (53C05, 58E20)
- (with Moriast, S.; Treves, A.) Petrov classification of vacuum axisymmetric space-times. *Gen. Relativity Gravitation* 12 (1980), no. 8, 619–632. (Alan Barnes) **81k:83018** 83C20
- Reineker, P.** (with Kühne, R.) Calculation of two-time-correlation functions in Liouville space. *Phys. Lett. A* 70 (1979), no. 3, 187–190. (Authors' summary) **81i:82016** 82A15 (82A60)
- Reiner, Irving** (with Bushnell, Colin J.) Solomon's conjectures and the local functional equation for zeta functions of orders. *Bull. Amer. Math. Soc. (N.S.)* 2 (1980), no. 2, 306–310. (Louis Solomon) **81i:12019** 12A80
- Zeta functions of integral representations. *Comm. Algebra* 8 (1980), no. 10, 911–925. (Louis Solomon) **81i:12018** 12A80 (20C10)
- (with Bushnell, Colin J.) Zeta functions of arithmetic orders and Solomon's conjectures. *Math. Z.* 173 (1980), no. 2, 135–161. (Freydoon Shahidi) **81k:12019** 12A82 (12B37)
- Reinermann, Jochen** (with Müller, Gisela) Eine Charakterisierung strikt-konvexer Banach-Räume über einen Fixpunktsatz für nichtexpansive Abbildungen. *Math. Nachr.* 93 (1979), 239–247. (S. Swaminathan) **81j:47044** 47H09 (47H10)
- Reingold, Edward M.** (with Supowit, Kenneth J.; Plaisted, David A.) Heuristics for weighted perfect matching. *Conference Proceedings of the Twelfth Annual ACM Symposium on Theory of Computing* (Los Angeles, Calif., 1980), pp. 398–419, *ACM, New York*, 1980. (See 81j:68006) 68E10 (68C25, 90B35, 90C35)
- Reinhard, Jean-Marie** Jeux de survie économique: un modèle semi-markovien. *Cahiers Centre Études Rech. Opér.* 22 (1980), no. 1, 101–110. (Author's summary) **81g:90115** 90D40 (90A12)
- Reinhardt, Fritz** (with Soeder, Heinrich) \star dtv-Atlas zur Mathematik. Band I. (German) [dtv-handbook of mathematics. Vol. I] Grundlagen, Algebra und Geometrie. [Foundations, algebra and geometry] Third edition. Tafeln und Texte. [Tables and Texts] Deutscher Taschenbuch Verlag, Munich, 1978. 266 pp. ISBN 3-423-03007-0 (Editors) **81m:0002a** 00A05 (00A20)
- (with Soeder, Heinrich) \star dtv-Atlas zur Mathematik. Band 2. (German) [dtv-handbook of mathematics. Vol. 2] Analysis und angewandte Mathematik. [Analysis and applied mathematics] Second edition. Tafeln und Texte. [Tables and Texts] Deutscher Taschenbuch Verlag, Munich, 1978. pp. i–xi and 274–498. ISBN 3-423-03008-9 (Editors) **81m:0002b** 00A05 (00A20)
- Reinhardt, H.** Semiclassical theory of large amplitude collective excitations. *Nuclear Phys. A* 346 (1980), no. 1–2, 1–69. (Author's summary) **81i:81105** 81G35 (58D30, 58G15)
- Reinhardt, Hans-Jürgen** On asymptotic expansions in nonlinear, singularly perturbed difference equations. *Numer. Funct. Anal. Optim.* 1 (1979), no. 6, 565–587. (A. Haimovici) **81h:39005** 39A12 (34E15, 39A10)
- On asymptotic expansions in nonlinear operator equations with applications to singular perturbation problems. *Vorträge der Wissenschaftlichen Jahrestagung der Gesellschaft für Angewandte Mathematik und Mechanik, Teil I* (Brussels, 1978). *Z. Angew. Math. Mech.* 59 (1979), no. 3, T38–T40. (From the text) **81i:65048** 65J15 (41A60)
- Singular perturbations of difference methods for linear ordinary differential equations. *Applicable Anal.* 10 (1980), no. 1, 53–70. (R. E. O'Malley, Jr.) **81d:65049** 65L20
- Reinhardt, William N.** Satisfaction definitions and axioms of infinity in a theory of properties with necessity operator. *Mathematical logic in Latin America* (Proc. IV Latin Amer. Sympos. Math. Logic, Santiago, 1978), pp. 267–303, *Studies in Logic and Foundations of Math.*, 99, North-Holland, Amsterdam, 1980. (N. B. Cocchiarella) **81j:03034** 03B45 (03E70)
- Reinhart, Bruce L.** Foliations and second fundamental forms. *Proceedings of the IV International Colloquium on Differential Geometry* (Univ. Santiago de Compostela, Santiago de Compostela, 1978), pp. 246–253, *Cursos Congr. Univ. Santiago de Compostela*, 15, Univ. Santiago de Compostela, Santiago de Compostela, 1979. (Claude Lamoureux) **81j:58089** 58H05 (53C05, 57R30)
- Reinoehl, John H.** Lie algebras and affine algebraic groups. *Pacific J. Math.* 86 (1980), no. 1, 287–300. (Andy R. Magid) **81j:17010** 17B45
- Reinov, O. I.** Purely topological characteristics of operators of RN type. (Russian) *Funkcional. Anal. i Priložen.* 12 (1978), no. 4, 89–90. (B. M. Makarov) **81c:46009** 46B05 (46G10)
- A class of universally measurable mappings. (Russian) *Mat. Zametki* 26 (1979), no. 6, 949–955, 974. (Przemyslaw Kranz) **81c:46015** 46B22 (46G10)
- (with Gluskin, E. D.; Kisiljakov, S. V.) Tensor products of p -absolutely summing operators and right (I_p, N_p) -multipliers. (Russian. English summary) *Investigations on linear operators and the theory of functions, IX. Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 92 (1979), 85–102, 319–320. (A. Pletsch) **81f:47026** 47B10 (46B22, 47D30)
- On hereditarily dentable sets in Banach spaces. (Russian. English summary) *Investigations on linear operators and the theory of functions, IX. Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 92 (1979), 294–299, 326–327. (Author's summary) **81h:46024** 46B20
- Some vector-lattice characteristics of operators of type RN. (Russian) *Mat. Zametki* 27 (1980), no. 4, 607–620, 670. (N. Tiia) **81g:47039** 47B55
- Examples of nonnuclear operators that are simultaneously integral and quasinnuclear. (Russian. English summary) *Vestnik Leningrad. Univ. Mat. Meh. Astronom.* 1980, vyp. 2, 120–122, 126. (A. Pletsch) **81k:47030** 47B10
- Reinisch, Christian** Die Behandlung von Rundungsfehlern in der numerischen Analysis. *Jahrbuch Überblicke Mathematik*, 1979, pp. 43–62, *Bibliographisches Inst., Mannheim*, 1979. (Joachim Hirsche) **81c:65021** 65G05 (65-02)
- Reinschke, Kurt** Zur strukturellen Steuerbarkeit dynamischer Systeme. (English and Russian summaries) *Elektron. Informationsverarb. Kybernet.* 16 (1980), no. 5–6, 253–280. (Author's summary) **81m:93016** 93B05
- Reis, C. M.** (with Rankin, S. A.; Thierrin, Gabriel) Right subdirectly irreducible semigroups. *Pacific J. Math.* 85 (1979), no. 2, 403–412. (T. Tamura) **81h:20004** 20M10
- (with Rankin, S. A.) Semigroups with quasizeroes. *Canad. J. Math.* 32 (1980), no. 3, 511–530. (Joseph Chacron) **81m:20083** 20M10
- Reis, J. G.** (with Izé, Antonio Fernandes; Freira, A. A.) Relationship between Lyapunov functionals and nonlinear perturbed neutral functional differential equations. *4th Latin-American School of Mathematics* (Lima, 1978), pp. 170–178, *IV ELAM, Lima*, 1979. (N. Onuchic) **81f:34070** 34K15 (34K20)
- da Costa Reis, M. Raquel P.** See da Costa Reis, M. Raquel P.
- Reis, Richard H.** A formula for $C(T)$ in the paper: "Enumeration of incongruent cyclic k -gons" [Indian J. Pure Appl. Math. 10 (1979), no. 8, 964–999; MR 81f:10022a]. *Indian J. Pure Appl. Math.* 10 (1979), no. 8, 1000–1001. (Giuseppe Pellegrino) **81f:10022b** 10A45 (05A17, 51M99)
- Reisch, Stefan** Gobang ist PSPACE-vollständig. (English summary) *Acta Inform.* 13 (1980), no. 1, 59–66. (Aviezer S. Fraenkel) **81c:90110** 90D05 (68C25)
- Reischer, C.** (with Martin, L.; Rosenberg, Ivo G.) Completeness problems for switching circuits constructed from delayed gates. *Proceedings of the Eighth International Symposium on Multiple-Valued Logic* (Rosemont, Ill., 1978), pp. 142–148, *IEEE, Long Beach, Calif.*, 1978. (Authors' summary) **81h:94069** 94C10
- Reischuk, Rüdiger A.** "A fast implementation" of a multidimensional storage into a tree structure. *Automata, languages and programming* (Proc. Seventh Internat. Colloq., Noordwijkerhout, 1980), pp. 531–542, *Lecture Notes in Comput. Sci.*, 85, Springer, Berlin, 1980. (Author's summary) **81i:68064** 68C40
- Reiser, Benjamin** (with Feigin, Paul D.) On asymptotic ancillarity and inference for Yule and regular nonergodic processes. *Biometrika* 66 (1979), no. 2, 279–283. (Niels Keiding) **81g:62145** 62M05 (62F12)
- Reiser, M.** Mean value analysis of queuing networks—a new look at an old problem. *Performance of computer systems* (Proc. Fourth Internat. Sympos. Modelling Performance Evaluation Comput. Systems, Vienna, 1979), pp. 63–77, North-Holland, Amsterdam, 1979. (Author's summary) **81h:68041** 68C15 (60K25, 68J10)
- (with Lavenberg, S. S.) Stationary state probabilities at arrival instants for closed queueing networks with multiple types of customers. *J. Appl. Probab.* 17 (1980), no. 4, 1048–1061. (Benjamin Melamed) **81i:60089** 60K25 (90B22)
- (with Lavenberg, S. S.) Mean-value analysis of closed multichain queueing networks.

- J. Assoc. Comput. Mach.* 27 (1980), no. 2, 313-322. (Benjamin Melamed) **81d:60107** 60K25 (68C15)
- Reisig, Wolfgang** Schemes for nonsequential processing systems. *Mathematical foundations of computer science*, 1980 (*Proc. Ninth Sympos., Rydzyca, 1980*), pp. 515-527. *Lecture Notes in Comput. Sci.*, 88, Springer, Berlin, 1980. (See **81k:68003**) 68B20
- Reisman, H.** (with Malone, D. P.; Pawlik, P. S.) Laser induced thermoelastic response of circular plates. *Solid Mech. Arch.* 5 (1980), no. 3, 253-323. (From the introduction) **81m:73062** 73U05
- Reisner, Shlomo** On Banach spaces having the property G.L. *Pacific J. Math.* 83 (1979), no. 2, 505-521. (W. J. Davis) **81b:46025** 46B20 (47D30)
- Reiss, Edward L.** (with Ahluwalia, Daljit S.; Stickler, David C.) Sound propagation in a temporally varying waveguide. *J. Acoust. Soc. Amer.* 68 (1980), no. 6, 1801-1808. (Authors' summary) **81k:76056** 76Q05
(with Matkowsky, Bernard J.; Putnick, Leonard J.) Secondary states of rectangular plates. *SIAM J. Appl. Math.* 38 (1980), no. 1, 38-51. (T. J. Mahar) **81a:73026** 73H05 (35B32)
- Reiss, R.-D.** Optimum confidence bands for density functions. *Studia Sci. Math. Hungar.* 12 (1977), no. 1-2, 207-214 (1980). (P. Révész) **81d:62034** 62G05 (62G15)
Estimation of quantiles in certain nonparametric models. *Ann. Statist.* 8 (1980), no. 1, 87-105. (Rudolph J. Bera) **81e:62043** 62G05 (62G20)
- Reiss, Steven P.** (with Dobkin, David P.) The complexity of linear programming. *Theoret. Comput. Sci.* 11 (1980), no. 1, 1-18. (K. G. Murty) **81e:90055** 90C05 (68C25)
- Reising, Rolf** Continua of periodic solutions of the Liénard equation. *Constructive methods for nonlinear boundary value problems and nonlinear oscillations (Proc. Conf., Math. Res. Inst., Oberwolfach, 1978)*, pp. 126-133. *Internat. Ser. Numer. Math.*, 48, Birkhäuser, Basel, 1979. (Jean Mawhin) **81b:34035** 34C25
- Reissner, Eric** Note on the effect of transverse shear deformation in laminated anisotropic plates. *Comput. Methods Appl. Mech. Engrg.* 20 (1979), no. 2, 203-209. (W. Kosiński) **81j:73018a** 73C30 (73K10)
On the influence of a rigid circular inclusion on the twisting and shearing of a shallow spherical shell. *Trans. ASME Ser. E J. Appl. Mech.* 47 (1980), no. 3, 586-588. (Author's summary) **81j:73100** 73L99 (73C40)
See also Cohen, Gerald A., **81j:73018b**; Bibliography: Reissner, Eric, **81m:01067** and Bibliography: Reissner, Eric, **81m:01092**
- Reithberger, Heinrich** Pilgerschritt-Transformation und verallgemeinerte Liegruppen. *Iterationsprobleme (Graz, 1977)*, Ber. No. 85, 8 pp., Forschungszentrum Graz, Graz, 1978. (Author's introduction) **81m:22012** 22E05 (22E65)
- Reiten, Idun** Almost split sequences. *Ring theory (Proc. Antwerp Conf. (NATO Adv. Study Inst.), Univ. Antwerp, Antwerp, 1978)*, pp. 513-533. *Lecture Notes in Pure and Appl. Math.*, 51, Dekker, New York, 1979. (Ronald S. Irving) **81i:16026** 16A64
Algebras stably equivalent to Nakayama algebras of Loewy length at most 4. *J. Austral. Math. Soc. Ser. A* 27 (1979), no. 1, 37-50. (Author's summary) **81j:16029** 16A46 (16A89)
- Reitman, Jan A.** note to the ADJ's subset systems. *Fundamentals of computation theory (Proc. Conf. Algebraic, Arith. and Categorical Methods in Comput. Theory, Berlin/Wendisch-Rietz, 1979)*, pp. 387-390. *Math. Research*, 2, Akademie-Verlag, Berlin, 1979. (Josef Dalić) **81e:06003** 06A10
Small-fibred semitopological functors without small-fibred initial completions. *Comment. Math. Univ. Carolin.* 20 (1979), no. 3, 539-546. (Walter Tholen) **81f:18007** 18A35 (18A32)
Structure-semantics relation for nonvariational equational theories. *Algebra Universalis* 10 (1980), no. 3, 399-401. (Robert C. Davis) **81e:08010** 08B05 (03C05)
(with Rödl, Vojtěch) Atoms in uniformities. (Czech) *Pokroky Mat. Fyz. Astronom.* 25 (1980), no. 4, 208-217. (Pavel Pták) **81k:54038** 54E15 (54A25)
- Reitman, V.** (with Wolfenstein, M.; Hanin, M.) The interaction of an oblique shock wave with a flat plate boundary layer. *Recent advances in numerical methods in fluids*, Vol. 1, pp. 169-202. *Pineridge, Swansea*, 1980. (See **81j:76002**) 76L05 (76N99)
- Reitman, V.** Über Instabilität im ganzen von nichtlinearen diskreten Systemen. *Z. Angew. Math. Mech.* 59 (1979), no. 11, 652-655. (From the text) **81k:93045** 93C55
- Reiwer, Wolfram** Die Nielsenäquivalenzklassen der metabelschen gemachten Torusknotengruppen. *Arch. Math. (Basel)* 33 (1979/80), no. 4, 310-324. (D. E. Cohen) **81i:20034** 20E06
- Reizip, L.** Smooth reparametrization of differential equations. (Russian) *Lav. Mat. Ezhegodnik* No. 23 (1979), 119-123, 273. (A. A. Reinfelds) **81d:34037** 34C99 (34A15, 58F10)
- Rejtő, L.** (with Földes, Antónia; Winter, B. B.) Strong consistency properties of nonparametric estimators for randomly censored data. The product-limit estimator, estimation of density and failure rate. *Transactions of the Eighth Prague Conference on Information Theory, Statistical Decision Functions, Random Processes (Prague, 1978)*, Vol. C, pp. 105-121. *Reidel, Dordrecht*, 1979. (A. P. Basu) **81g:62164** 62N05 (62G05)
- Rekant, M. A.** Optimality of A. B. Bakušinskii's method in the solution of ill-posed problems with an approximately given operator. (Russian) *Studies in functional analysis (Russian)*, pp. 78-86, iii-iv. *Ural. Gos. Univ., Sverdlovsk*, 1978. (V. V. Vasin) **81m:65009** 65J10 (47A50)
- Rekhatov, Z. V.** (with Wu, Y. C.) Deterministic identification of linear dynamic systems. *IEEE Trans. Automat. Control* 25 (1980), no. 3, 501-504. (Authors' summary) **81e:93030** 93B30
- Reivik, H.** On equations of Hamiltonian type. (Russian. Estonian and English summaries) *Tartu Riikl. Ül. Toimetised* No. 487 (1979), 82-94. (G. V. Hmelevskaja-Plotnikova) **81f:70014** 70H05 (70F25)
- Remblichinski, Jakub** Notes on the proposed test for complex versus quaternionic quantum theory. *Phys. Lett. B* 88 (1979), no. 3-4, 279-281. (Author's summary) **81c:81004** 81B05
- Remondelov, V. N.** Imbedding theorems for profinite groups. (Russian) *Izv. Akad. Nauk SSSR Ser. Mat.* 43 (1979), no. 2, 399-417, 480. (J. Wiegold) **81e:20018** 20E18 (12B15)
An algorithmic problem for nilpotent groups and rings. (Russian) *Sibirsk. Mat. Ž.* 20 (1979), no. 5, 1077-1081, 1167. (O. V. Belegradskii) **81g:03051** 03D40 (10C30, 10N05, 17B30, 20F10)
(with Romanovskii, N. S.) Algorithmic problems for solvable groups. *Word* problems, II (*Conf. on Decision Problems in Algebra, Oxford, 1976*), pp. 337-346. *Studies in Logic and Foundations of Math.*, 95, North-Holland, Amsterdam, 1980. (M. M. Richter) **81b:20044** 20F10 (03D40)
- Remmel, J. B.** R-maximal Boolean algebras. *J. Symbolic Logic* 44 (1979), no. 4, 533-548. (John W. Berry) **81b:03049** 03D45 (03D25)
Complementation in the lattice of subalgebras of a Boolean algebra. *Algebra Universalis* 10 (1980), no. 1, 48-64. (R. Beazer) **81e:06023** 06E05
Recursion theory on algebraic structures with independent sets. *Ann. Math. Logic* 18 (1980), no. 2, 153-191. (Viggo Stoltenberg-Hansen) **81j:03076** 03D45
(with Garsia, Adriano M.) A combinatorial interpretation of q -derangement and q -Laguerre numbers. *European J. Combin.* 1 (1980), no. 1, 47-59. (M. S. Cheema) **81g:05011** 05A15 (05A19)
On r.e. and co-r.e. vector spaces with nonextendible bases. *J. Symbolic Logic* 45 (1980), no. 1, 20-34. (Cristian Calude) **81b:03048** 03D45
Recursion theory on orderings. II. *J. Symbolic Logic* 45 (1980), no. 2, 317-333. (Gabriel Lohi) **81e:03046** 03D45 (03D75)
- Remmers, John H.** On the geometry of semigroup presentations. *Adv. in Math.* 36 (1980), no. 3, 283-296. (P. R. Jones) **81m:20074** 20M05
- Remmert, Reinhold** See Cartan, Henri, **81e:01031**
- Rempel, Stephan** ξ -function of general elliptic boundary value problems for pseudodifferential operators. (Russian) *C. R. Acad. Bulgare Sci.* 32 (1979), no. 3, 281-283. (V. S. Rabinović) **81a:58049** 58G20
An analytical index formula for elliptic pseudodifferential boundary problems. I. *Math. Nachr.* 94 (1980), 243-275. (M. F. Atiyah) **81k:58066** 58G20 (35S15, 47G05)
- Rémy, J. L.** (with Bellegarde, F.; Quére, A.) Construction et transformation systématiques de programmes. (English summary) *RAIRO Inform.* 14 (1980), no. 3, 219-252. (Authors' summary) **81k:68008** 68B05
- Ren, Chao Zuo** The Dirichlet problem for a class of quasilinear elliptic partial differential equations with discontinuous boundary values. (Chinese. English summary) *Beijing Daxue Xuebao No. 2* (1979), 73-86. (Long-Yi Tsai) **81m:35061** 35J65
- Renard, M. F.** Écoulement divergent d'un fluide visqueux incompressible entre deux cônes de même axe et de même sommet. (English summary) *J. Mécanique* 19 (1980), no. 3, 415-431. (Author's summary) **81j:76026** 76D05
- Rensitt, Guy** Actions de groupes et anneaux réguliers injectifs. *Ring theory (Proc. Conf., Univ. Waterloo, Waterloo, 1978)*, pp. 236-248. *Lecture Notes in Math.*, 734, Springer, Berlin, 1979. (David Handelman) **81i:16018** 16A26 (16A52)
- Rend, B.** (with Trandafir, A.) Topologies for complete abelian groups. (Romanian. French and English summaries) *Bul. Ştiinţ. Tehn. Inst. Politehn. "Traian Vuia" Timişoara* 23(37) (1978), no. 2, 81-82 (1979). (Authors' summary) **81i:20069** 20K45
On the lattice structure of universal algebras with an infinitary operation. (Romanian. French summary) *Bul. Ştiinţ. Tehn. Inst. Politehn. "Traian Vuia" Timişoara* 23(37) (1978), no. 2, 104-105 (1979). (Author's summary) **81i:08003** 08A30
- Rendu, Jean-Michel** Disjunctive kriging: comparison of theory with actual results. *J. Internat. Assoc. Math. Geol.* 12 (1980), no. 4, 305-320. (Author's summary) **81k:60009** 86A20
- Reנגל, H.** On holomorphic mappings of annuli into annuli. *Romanian-Finnish Seminar on Complex Analysis (Proc., Bucharest, 1976)*, pp. 344-348. *Lecture Notes in Math.*, 743, Springer, Berlin, 1979. (E. Reich) **81i:30019** 30C20
- Reuten, Ray L.** (with Richards, Peter M.) Computer-simulated hopping in a random one-dimensional system. *Phys. Rev. B* (3) 21 (1980), no. 8, 3740-3744. (From the summary) **81b:82006** 82A42
- Renner, R. M.** The independence of functions of certain uniform order statistics. *Internat. J. Math. Ed. Sci. Tech.* 10 (1979), no. 2, 287. (From the text) **81b:62021** 62E15 (62G30)
- Reunie, R.** Role of breather solutions in the statistical mechanics of sine-Gordon chains. *Phys. Lett. A* 72 (1979), no. 4-5, 287-288. (Author's summary) **81i:82017** 82A15 (35A25, 81E99)
- Renninger, G. H.** (with Coleman, Bernard D.; Maxwell, J. A.) On oscillatory responses of the Limulus retina. *Biol. Cybernet.* 37 (1980), no. 3, 125-129. (From the summary) **81i:92005** 92A09 (92A27)
- Renno, Pasquale** (with de Socio, Luciano) On the boundary layer function in M.H.D. flows over a flat plate. II. (Italian summary) *Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur.* (8) 63 (1977), no. 5, 385-390 (1978). (Authors' summary) **81e:76085** 76W05
(with Mazziotti, Enrico) Wave propagation in a linear viscoelastic system in the presence of mass forces. (Italian. English summary) *Ann. Univ. Ferrara Sez. VII (N.S.)* 25 (1979), 183-195. (M. Migici) **81i:73041** 73F15 (45K05, 73D10, 73F99)
(with D'Anna, Armando; de Socio, Luciano) Three-dimensional wave propagation in a semi-infinite relaxing continuum. *Mech. Res. Comm.* 7 (1980), no. 2, 71-76. (From the introduction) **81e:76074** 76T05 (73D99)
- Renouard, Pierre** Analyticité et sommabilité "de Borel" des fonctions de Schwinger du modèle de Yukawa en dimension $d=2$. II. La "limite adiabatique". (English summary) *Ann. Inst. H. Poincaré Sect. A (N.S.)* 31 (1979), no. 3, 235-318 (1980). (A. O. Barui) **81i:81043** 81E10
- Renschuch, Bodo** Beiträge zur konstruktiven Theorie der Polynomideale. XIII. Veronesische Projektionskurven im S_n (Russian and English summaries) *Wiss. Z. Pädagog. Hochschule "Karl Liebknecht" Potsdam* 21 (1977), no. 1, part 2, 159-163. (Manfred Herrmann) **81d:14029** 14M99 (13C10)
Beiträge zur konstruktiven Theorie der Polynomideale. XIV. Zur Berechnung der Hilbertfunktion. (Russian and English summaries) *Wiss. Z. Pädagog. Hochschule "Karl Liebknecht" Potsdam* 21 (1977), no. 1, part 2, 163-173. (Manfred Herrmann) **81d:13001** 13A15 (13-04, 13H15, 14A99)
Beiträge zur konstruktiven Theorie der Polynomideale. XV. Algorithmen zur Basisberechnung von Idealen, Syzygienmodulen und Eliminationsidealen. (Russian and English summaries) *Wiss. Z. Pädagog. Hochschule "Karl Liebknecht" Potsdam* 21 (1977), no. 1, part 2, 173-181. (Manfred Herrmann) **81d:13002** 13A15 (13-04, 14A99)
Beiträge zur konstruktiven Theorie der Polynomideale. XVI. Klassifikation eindimensionaler Abhyankarscher Ideale aus $K[x_0, x_1, x_2, x_3]$ für $m=4$ und $m=5$. (Russian and English summaries) *Wiss. Z. Pädagog. Hochschule "Karl Liebknecht" Potsdam* 23 (1979), no. 1, 13-28. (Manfred Herrmann) **81d:13003** 13A15 (13-04, 14A99)

- von Rensteln, Michael Ideals generated by singular inner functions. *Bull. Austral. Math. Soc.* 21 (1980), no. 2, 237-252. (D. N. Clark) **81j:30052** 30D55 (30H05)
- Restrop, P. An algorithm for the computation of the exponential spline. *Numer. Math.* 35 (1980), no. 1, 81-93. (Claude Carasso) **81h:65011** 65D07
- Reuz, Wolfgang Approximationen und Umgebungen. *Math. Nachr.* 84 (1978), 213-218. (M. G. Murdeshwar) **81a:54026** 54D55
- Repin, G. E. (with Četverukin, B. N.) A method of solving the radiation transport equation in two-dimensional problems of radiative gas dynamics. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 19 (1979), no. 6, 1513-1520, 1629. (Authors' summary) **81a:80005** 80A20 (65N05)
- Repina, L. G. (with Zmorovič, T. S.) On the theory of convergence for infinite numerical series. (Russian) *Ukrain. Mat. Ž.* 31 (1979), no. 2, 182-186, 223. (M. Tomić) **81b:40004** 40A05
- Requardt, Manfred About the nonvanishing of boundary terms in correlation functions as origin of phase transitions. A microscopic proof of a Goldstone theorem in classical statistical mechanics. *Z. Phys. B* 36 (1979/80), no. 2, 187-194. (Richard S. Ellis) **81d:82010** 82A05 (81D20)
- Dynamical cluster properties in the quantum statistical mechanics of phase transitions. *J. Phys. A* 13 (1980), no. 5, 1769-1781. (Author's summary) **81d:82017** 82A15 (81D20, 82A25)
- Res, Ivo Asymptotic properties of solutions of the differential equation $\{A_1^{-1}(t) \dots [A_1^{-1}(t)Y' \dots] = A_2(t)Y + F(t)$. *Arch. Math. (Brno)* 15 (1979), no. 2, 119-128. (M. Ráb) **81d:34045** 34E05
- Resco, Richard Krull dimension of Noetherian algebras and extensions of the base field. *Comm. Algebra* 8 (1980), no. 2, 161-183. (Marie-Paule Malliavin) **81f:16041** 16A55
- A dimension theorem for division rings. *Israel J. Math.* 35 (1980), no. 3, 215-221. (S. Elliger) **81j:16021** 16A39 (16A55)
- A reduction theorem for the primitivity of tensor products. *Math. Z.* 170 (1980), no. 1, 65-76. (J. Luh) **81i:16016** 16A20 (15A72)
- Rešetnikov, Ju. A. (with Akseñev, L. A.) Monotonicity of mean values of subharmonic functions in an annulus. (Russian) *Mat. Zametki* 27 (1980), no. 5, 813-823, 831. (A. V. Bratščev) **81i:31003** 31A05
- Rešetnikov, V. N. A model of information retrieval in information-retrieval systems. *Kibernetika (Kiev)* 1979, no. 5, iv, 129-132, 156. (Russian. English summary); translated as *Cybernetics* 15 (1979), no. 5, 745-748 (1980). (Author's summary) **81e:68118** 68H05
- Algebraic theory of information search. *Programirovanie* 1979, no. 3, 68-73, 96. (Russian); translated as *Programming and Comput. Software* 5 (1979), no. 3, 201-205. (Author's summary) **81e:68078** 68H05
- Rešetnikova, G. N. (with Egorova, L. Ja.; Levin, L. L.; Osin, B. G.; Paraev, Ju. I.; Cvetnickaja, S. A.) ★Практикум по численным методам. (Russian) [Workbook on numerical methods] *Tomsk. Gos. Univ., Tomsk*, 1979. 212 pp. (Editors) **81e:65002** 65-01
- Rešetnjak, V. M. (with Ešov, I. I.) Integral functionals of nonhomogeneous branching processes. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* 1980, no. 4, 9-12, 97. (Walter Wurmuth) **81f:60113** 60J80 (60J55)
- (with Ešov, I. I.) On integral functionals of homogeneous branching processes. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* 1980, no. 5, 6-8, 92. (Authors' summary) **81f:60083** 60J25
- Rešetnikov, V. N. See Rešetnikov, V. N.
- Reishodko, L. V. See Reiofko, L. V.
- Reis, Michael On models in the alternative set theory. *Comment. Math. Univ. Carolin.* 20 (1979), no. 4, 723-736. (W. Marek) **81e:03053** 03E70 (03C99)
- de Reusini, Mariolina J. On congruences on Steiner ternary algebras. A class of resolvable SQSs. (Italian summary) *Boll. Un. Mat. Ital. B* (5) 17 (1980), no. 1, 74-81. (F. De Clerck) **81i:51004** 51E10 (05B05, 08A05)
- Reusack, Sidney (with Greenwood, Priscilla) A bivariate stable characterization and domains of attraction. *J. Multivariate Anal.* 9 (1979), no. 2, 206-221. (M. G. Hahn) **81i:60018** 60E07 (60F05)
- Reiofko, L. V. (with Kolář, Pavel; Kulikova, N. V.) Biological systems of cellular organization and their automata models. *Third Formator Symposium on Mathematical Methods for the Analysis of Large-Scale Systems*, pp. 81-92, Academia, Prague, 1979. (See **81j:93007**) **68F10** (68D20, 92A05)
- Reusel, Paul (with Christensen, Jens Peter Reus) Functions operating on positive definite matrices and a theorem of Schoenberg. *Trans. Amer. Math. Soc.* 243 (1978), 89-95. (J. Gil de Lamadrid) **81f:15031** 15A48 (42A63)
- Resta, Giovanni (with Treccani, Giulio) Convergence of a "steepest descent" technique for the solution of a minimax problem. (Italian. English summary) *Boll. Un. Mat. Ital. A* (5) 16 (1979), no. 3, 459-466. (B. T. Poljak) **81a:49017** 49D10 (65K05)
- Restivo, Antonio (with De Luca, Aldo) Synchronization and maximality for very pure subsemigroups of a free semigroup. *Mathematical foundations of computer science*, 1979 (Proc. Eighth Sympos., Olomouc, 1979), pp. 363-371, *Lecture Notes in Comput. Sci.*, 74, Springer, Berlin, 1979. (From the introduction) **81g:94039** 94B60 (20M35, 68F05)
- (with Berstel, Jean; Perrin, D.; Perrot, J.-F.) Sur le théorème du défaut. *J. Algebra* 60 (1979), no. 1, 169-180. (André Lentini) **81b:20038** 20M05 (68F05)
- (with De Luca, Aldo) A characterization of strictly locally testable languages and its application to subsemigroups of a free semigroup. *Inform. and Control* 44 (1980), no. 3, 300-319. (Authors' summary) **81g:68108** 68F05
- (with De Luca, Aldo) On some properties of very pure codes. *Theoret. Comput. Sci.* 10 (1980), no. 2, 157-170. (From the introduction) **81h:94025** 94B50
- Restrepo, Guillermo Convergence of sequences in Banach spaces. (Spanish) *Rev. Colombiana Mat.* 13 (1979), no. 3, 155-169. (R. W. Cross) **81h:46010** 46B05 (54A20)
- Continuity of polynomials in topological vector spaces. (Spanish) *Rev. Colombiana Mat.* 13 (1979), no. 4, 271-310. (R. C. Buck) **81k:58003** 58C07 (46A99, 46G99)
- Restuccia, A. (with Aragone, C.) The Baker-Campbell-Hausdorff formula for the chiral SU(2) supergroup. *Lett. Math. Phys.* 3 (1979), no. 1, 29-34. (C. S. Sharma) **81h:81006** 81E99 (22E70)
- (with Aragone, C.; Chela-Flores, J.) The Baker-Campbell-Hausdorff formula for the SU(2) supergroups. *J. Math. Phys.* 21 (1980), no. 5, 1229-1233. (R. Mirman) **81i:17010** 17B70 (20C35, 81C40)
- Retherford, James R. (with König, Hermann; Tomczak-Jaegermann, Nicole) On the eigenvalues of $(p, 2)$ -summing operators and constants associated with normed spaces. *J. Funct. Anal.* 37 (1980), no. 1, 88-126. (Bernd Rosenberger) **81m:47033** 47B10 (46B20)
- Rettrup, S. (with Sarma, C. R.) A programmable procedure for generating many-particle states. *Phys. Lett. A* 75 (1979/80), no. 3, 181-182. (Authors' summary) **81k:81009** 81G20 (81G50)
- Retzlaff, Allen Simple and hyperhypersimple vector spaces. *J. Symbolic Logic* 43 (1978), no. 2, 260-269. (John W. Berry) **81g:03053** 03D45 (03D25)
- (with Kalantari, Iraj) Recursive constructions in topological spaces. *J. Symbolic Logic* 44 (1979), no. 4, 609-625. (John W. Berry) **81f:03059** 03D45 (54E99)
- Direct summands of recursively enumerable vector spaces. *Z. Math. Logik Grundlag. Math.* 25 (1979), no. 4, 363-372. (A. Nerode) **81a:03049** 03D45
- Reusch, Bernd (with Detering, Lothar) On the generation of prime implicants. *Fund. Inform.* (4) 2 (1978/79), no. 2, 167-186. (È. A. Primenko) **81d:94041** 94C10
- Reuss, Jeremias David See Gresky, Wolfgang. **81k:01034**
- Reutenauer, Christophe On Pólya series in noncommuting variables. *Fundamentals of computation theory (Proc. Conf. Algebraic, Aritih. and Categorical Methods in Comput. Theory, Berlin/Wendisch-Rietz, 1979)*, pp. 391-396, *Math. Research*, 2, Akademie-Verlag, Berlin, 1979. (From the introduction) **81h:68096** 68F05 (68D30)
- An Ogden-like iteration lemma for rational power series. *Acta Inform.* 13 (1980), no. 2, 189-197. (Author's summary) **81d:68107** 68F05
- Reva (with Prabhakar, T. R.) An Appell cross-sequence suggested by the Bernoulli and Euler polynomials of general order. *Indian J. Pure Appl. Math.* 10 (1979), no. 10, 1216-1227. (L. Carlitz) **81i:10018** 10A40 (05A15, 33A70)
- Reva, V. N. Smith functions and optimization on permutations consistent with a partial order. (Russian. English summary) *Izsl. Del. Operacij i ASU No. 14* (1979), 54-61, 134. (P. Vondráček) **81c:90049** 90B35 (05C20)
- Revankar, Nagesh S. Testing of the rational expectations hypothesis. *Econometrica* 48 (1980), no. 6, 1347-1363. (G. Tintner) **81i:62198** 62P20
- Analysis of regressions containing serially correlated and serially uncorrelated error components. *Internat. Econom. Rev.* 21 (1980), no. 1, 185-199. (Bert M. Steece) **81h:62164** 62M10 (62J05)
- ReVelle, Charles (with Gundlach, Joseph) A variance minimizing linear decision rule for reservoir management and design. *Stochastic programming (Proc. Internat. Conf., Univ. Oxford, Oxford, 1974)*, pp. 341-355, *Academic Press, London*, 1980. (Authors' summary) **81m:90039** 90A30
- Reventós, A. On the Gauss-Bonnet formula on odd-dimensional manifolds. *Proceedings of the IV International Colloquium on Differential Geometry (Univ. Santiago de Compostela, Santiago de Compostela, 1978)*, pp. 254-260, *Cursos Congr. Univ. Santiago de Compostela*, 15, Univ. Santiago de Compostela, Santiago de Compostela, 1979. (David Blair) **81j:53066** 53C99 (57R20)
- Révész, Pál (with Csörgő, M.) How big are the increments of a multiparameter Wiener process? *Z. Wahrsch. Verw. Gebiete* 42 (1978), no. 1, 1-12. (Won Joon Park) **81a:60041** 60F15 (60G15, 60J65)
- On the nonparametric estimation of the regression function. (Russian summary) *Problems Control Inform. Theory/Problemy Upravlen. Teor. Inform.* 8 (1979), no. 4, 297-302. (E. Nadaraja) **81i:62068** 62G05
- A note to the Chung-Erdős-Sirao theorem. *Asymptotic theory of statistical tests and estimation (Proc. Adv. Internat. Sympos., Univ. North Carolina, Chapel Hill, N.C., 1979)*, pp. 147-158, *Academic Press, New York*, 1980. (S. J. Taylor) **81g:60082** 60J65 (60G17)
- Strong theorems on coin tossing. *Proceedings of the International Congress of Mathematicians (Helsinki, 1978)*, pp. 749-754, *Acad. Sci. Fennica, Helsinki*, 1980. (Andrew D. Barbour) **81e:60033** 60F15 (60C05)
- (with Móricz, Ferenc) Multiplicative systems. (Hungarian) *Mat. Lapok* 28 (1980), no. 1-3, 43-63. (K. Tandori) **81m:42023** 42C10 (60F15)
- See also Bibliography: Révész, Pál. **81m:01088**
- Revišvil, L. V. (with Begišvil, G. A.) A numerical method for regularized estimation of the spectral density by means of cubic splines. (Russian. Georgian and English summaries) *Soobšč. Akad. Nauk Gruz. SSR* 96 (1979), no. 2, 313-316. (E. M. Klimko) **81c:65068** 65U05 (62M15)
- Revoxy, Ph. (with Micali, Artibiano) Modules quadratiques. *Bull. Soc. Math. France Mém. No. 63* (1979), 144 pp. (1980). (Maurice Flamant) **81f:15035** 15A63 (10C05)
- Sommes de bicarrés dans $\mathbb{Z}[\sqrt{-1}]$ et $\mathbb{Z}[\sqrt{1}]$. *Enseign. Math.* (2) 25 (1979), no. 3-4, 257-260 (1980). (Henri Joris) **81j:10073** 10J06
- Revuz, Daniel (with Brunel, A.) Marches de Harris sur les groupes localement compacts. V. (English summary) *Ann. Inst. H. Poincaré Sect. B (N.S.)* 15 (1979), no. 3, 205-234. (H. Kesten) **81h:60100** 60J50 (60B15)
- Sur la définition des classes cycliques des chaînes de Harris. (English summary) A collection of invited papers on ergodic theory. *Israel J. Math.* 33 (1979), no. 3-4, 378-383 (1980). (Yves Derriennic) **81f:60092** 60J05
- Rey, G. Properties and application of the location-test $V(n, k)$. (German summary) *Biometrical J.* 21 (1979), no. 3, 259-276. (Urs R. Maag) **81g:62078** 62G10
- Reyes, Gonzalo E. Théorie des modèles et faisceaux. *Adv. in Math.* 30 (1978), no. 2, 156-170. (Cyprian Gnanvo) **81f:03050** 03C90 (03G30, 14F20, 18B25, 18F20)
- (with Kock, Anders) Manifolds in formal differential geometry. *Applications of sheaves (Proc. Res. Sympos. Appl. Sheaf Theory to Logic, Algebra and Anal., Univ. Durham, Durham, 1977)*, pp. 514-533, *Lecture Notes in Math.*, 753, Springer, Berlin, 1979. (I. Kolář) **81d:58001** 58A05 (18F15)
- Cramer's rule in the Zariski topos. *Applications of sheaves (Proc. Res. Sympos. Appl. Sheaf Theory to Logic, Algebra and Anal., Univ. Durham, Durham, 1977)*, pp. 586-594, *Lecture Notes in Math.*, 753, Springer, Berlin, 1979. (Gavin Wraith) **81e:03063** 03G30 (14F20, 18B25)
- (with Dubuc, Eduardo J.) Subtoposes of the ring classifier. *Topos theoretic methods in geometry*, pp. 101-122, *Various Publ. Ser.*, 30, *Mat. Inst., Aarhus Univ., Aarhus*, 1979. (From the introduction) **81j:03098** 03G30 (14A20, 18B20)
- (with Kock, Anders) Connections in formal differential geometry. *Topos theoretic methods in geometry*, pp. 158-195, *Various Publ. Ser.*, 30, *Mat. Inst., Aarhus Univ., Aarhus*, 1979. (Jean Pradines) **81h:53030** 53C05 (03H05, 18F15, 58A05)
- de los Reyes, J. (with Mello, P. A.; Seligman, Thomas H.) Analyticity and ergodicity in

- the maximum-entropy approach to statistical nuclear reactions. *Z. Phys. A* **295** (1980), no. 3, 247-249. (From the summary) **81c:81114** 81F15
- Reynan, A. G. See Reisman, A. G.
- Reya, J. W. Generation of limit cycles from separatrix polygons in the phase plane. *Geometrical approaches to differential equations (Proc. Fourth Scheveningen Conf., Scheveningen, 1979)*, pp. 264-289, *Lecture Notes in Math.*, **810**, Springer, Berlin, 1980. (Dean A. Neumann) **81m:34033** 34C05 (58F14)
- Reynolds, H. Semilattices of modules and the solvability of the functional equation $\Sigma_{i=1}^n h_i \times \varphi \circ g_i = h$. *Bull. Soc. Math. Belg.* **30** (1978), no. 2, 185-194. (Karol Baron) **81i:39009** 39B70 (06A12)
- Reyes de Reyna Martínez, Juan. See Arias de Reyna Martínez, Juan
- Reynaud, R. (with Thomasset, D.) Commande modale découplée des systèmes multivariables retardés. (English summary) With a comment by L. Le Letty. *RAIRO Automat.* **13** (1979), no. 3, 283-301. (Luciano Pandolfi) **81c:93052** 93C35
- Reynolds, Dennis A. (with Metzke, Gernot) Fault detection capabilities of alternating logic. *IEEE Trans. Comput.* **27** (1978), no. 12, 1093-1098. (Authors' summary) **81g:94062** 94C10
- Reynolds, Donald F. (with Schleusner, John W.) Weak topologies and equicontinuity. *Proc. Amer. Math. Soc.* **80** (1980), no. 2, 349-352. (Joe A. Guthrie) **81j:54021** 54C30
- Reynolds, George. On the spectrum of a real representable ring. *Applications of sheaves (Proc. Res. Sympos. Appl. Sheaf Theory to Logic, Algebra and Anal., Univ. Durham, Durham, 1977)*, pp. 595-611, *Lecture Notes in Math.*, **753**, Springer, Berlin, 1979. (T. Thirvikraman) **81c:18006** 18B25 (54B40, 54D60)
- (with Rice, Michael D.) Weakly Borel-complete topological spaces. *Fund. Math.* **105** (1979/80), no. 3, 179-185. (H. Sarbadhikari) **81j:54059** 54H05 (28A12, 54A25)
- Alexandroff algebras and complete regularity. *Proc. Amer. Math. Soc.* **76** (1979), no. 2, 322-326. (Donald Plank) **81d:54014** 54D15 (06B30, 54A05, 54A10)
- Reynolds, W. C. (with Cebeci, Tuncer) Calculation of turbulent flows. *Turbulence*, 193-229, *Topics in Appl. Phys.*, **12**, Springer, Berlin, 1978. (See **80d:76044**) 70F99
- Reymat, Éric. Irrationalité de $\zeta(3)$ selon Apéry. *Séminaire Delange-Pisot-Poitou, 20e année: 1978/1979. Théorie des nombres, Fasc. 1 (French)*, Exp. No. 6, 6 pp., *Secrétariat Math.*, Paris, 1980. (F. Beukers) **81i:10041** 10F35
- Approximation de nombres liés à la fonction sigma de Weierstrass. (English summary) *Ann. Fac. Sci. Toulouse Math.* (5) **2** (1980), no. 1, 79-91. (W. J. LeVeque) **81i:10053** 10F35
- Fonctions de Weierstrass et indépendance algébrique. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **290** (1980), no. 10, A439-A441. (D. W. Masser) **81i:10043** 10F37
- Reznick, Bruce (with Choi, Man Duen; Lam, Tsit Yuen; Rosenberg, Alex) Sums of squares in some integral domains. *J. Algebra* **65** (1980), no. 1, 234-256. (Manfred Knebusch) **81h:10028** 10C04 (12D15, 13B99)
- (with Choi, Man Duen; Lam, Tsit Yuen) Real zeros of positive semidefinite forms. *I. Math. Z.* **171** (1980), no. 1, 1-26. (Ron Brown) **81d:10012** 10C04
- Reznik, A. A. (with Rjaben'kii, V. S.) An accelerated method of internal boundary conditions and a related approach to the calculation of singular integrals. (Russian) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 54* (1979), 35 pp. (From the introduction) **81b:65086** 65N05 (39A12, 65D15)
- Riznikov, S. I. Asymptotic phase enlargement of weakly inhomogeneous Markov processes. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A No. 2* (1980), 19-22, 95. (Authors' summary) **81a:60079** 60J25 (60F05)
- Rui, Tong-Shiang. See Lai, Tung Shiang
- Rheinboldt, Werner C. Solution fields of nonlinear equations and continuation methods. *SIAM J. Numer. Anal.* **17** (1980), no. 2, 221-237. (Eugene Allgower) **81h:65053** 65H10 (55M20)
- Riba, Georges. Sur la répartition modulo 1 de quelques suites arithmétiques. *Séminaire Delange-Pisot-Poitou, 18e année: 1976/77. Théorie des nombres, Fasc. 2, Exp. No. G3, 4 pp., Secrétariat Math.*, Paris, 1977. (L. Kuipers) **81g:10051** 10F40 (10G05)
- (with Dubois, Eugène) Approximations simultanées de deux nombres réels. (English summary) *Séminaire Delange-Pisot-Poitou, 20e année: 1978/1979. Théorie des nombres, Fasc. 1 (French)*, Exp. No. 9, 13 pp., *Secrétariat Math.*, Paris, 1980. (Thomas W. Cusick) **81j:10041** 10F10 (41A28)
- Ribnow, Gerd. Über Automorphismenbahnen von Elementen $u \neq 0$ mit $(\text{ad } u)^2 = a \text{ ad } u$ in endlichdimensionalen einfachen komplexen Lie-Algebren. (English summary) *Manuscripta Math.* **27** (1979), no. 3, 253-258. (Helmut Strade) **81c:17012** 17B05 (17B60)
- Rho, Jae Chul. A continuous operator-valued representation on a certain B^* -algebra. *J. Korean Math. Soc.* **17** (1980/81), no. 1, 81-90. (B. E. Johnson) **81k:46061** 46J25
- Rhodes, B. E. A fixed point theorem for some non-self-mappings. *Math. Japon.* **23** (1978/79), no. 4, 457-459. (P. M. Fitzpatrick) **81h:47072** 47H10
- A fixed-point theorem in metric spaces. *Bull. Calcutta Math. Soc.* **71** (1979), no. 3, 131-134. (S. L. Singh) **81j:54077** 54H25 (54E50)
- Contraction type mappings on a 2-metric space. *Math. Nachr.* **91** (1979), 151-155. (Rainald Schöneberg) **81h:54047** 54H25
- Hausdorff matrices as bounded operators over \mathbb{I} . *Proc. Amer. Math. Soc.* **78** (1980), no. 2, 210-212. (Jean Tzimbaraliou) **81h:40009** 40C05 (47B37)
- Rhode, R. (with Huckert, K.; Roglin, O.; Weber, Reinhard) On the interactive solution to a multicriteria scheduling problem. (German summary) *Z. Oper. Res. Ser. A-B* **24** (1980), no. 1, A47-A60. (Authors' summary) **81a:90100** 90B35
- Rhodes, Frank (with Coven, Ethan M.; Hedlund, G. A.) The commuting block maps problem. *Trans. Amer. Math. Soc.* **249** (1979), no. 1, 113-138. (M. Eisenberg) **81k:54072** 54H20
- Rhodes, Ian B. (with Snyder, Donald L.) Some implications of the cutoff-rate criterion for coded direct-detection optical communication systems. *IEEE Trans. Inform. Theory* **26** (1980), no. 3, 327-338. (Authors' summary) **81h:94013** 94A14
- Rhodes-Robinson, P. F. On surface waves in the presence of immersed vertical boundaries. *I. Quart. J. Mech. Appl. Math.* **32** (1979), no. 2, 109-124. (Authors' summary) **81i:76009** 76B15
- On surface waves in the presence of immersed vertical boundaries. II. *Quart. J. Mech. Appl. Math.* **32** (1979), no. 2, 125-133. (Authors' summary) **81i:76009** 76B15
- On waves at an interface between two liquids. *Math. Proc. Cambridge Philos. Soc.* **88** (1980), no. 1, 183-191. (M. A. Gorgui) **81g:76025** 76B99
- Rhodes, Adolf. Numerische Wertebereiche linearer Operatoren und Einschließungsmengen für die nichttrivialen Eigenwerte von Integraloperatoren mit stochastischen Kernen. *Beiträge Anal.* **14** (1979), 47-61. (E. R. Dea) **81h:47085** 47A12 (47B38)
- Rhyne, T. B. (with Williams, James C., III) Boundary layer development on a wedge impulsively set into motion. *SIAM J. Appl. Math.* **38** (1980), no. 2, 215-224. (C. R. Illingworth) **81b:76025** 76D10
- Riad, N. Nonlinear double-diffusive convection in a low Prandtl number fluid. *Austral. J. Phys.* **33** (1980), no. 1, 59-71. (Authors' summary) **81h:76054** 76R05 (76E15)
- On a nonlinear hydromagnetic convection under a rotational constraint. *J. Austral. Math. Soc. Ser. B* **22** (1980/81), no. 2, 161-174. (Authors' summary) **81m:76040** 76R99 (76U05, 76W05)
- Riazuddin. Neutral-current weak interaction without electroweak unification. *Phys. Rev. Lett.* **45** (1980), no. 12, 976-979. (Authors' summary) **81h:81150** 81G15
- Riazuddin, Mohammad. Matrix transformations between sequence spaces and F_α -convergence. *Tamkang J. Math.* **10** (1979), no. 1, 45-57. (Hubert Tietz) **81h:40003** 40C99 (40D05)
- Ribak, M. O. On asymptotic distribution of eigenvalues of certain boundary value problems for the operator Sturm-Liouville equation. (Russian) *Ukrain. Mat. Ž.* **32** (1980), no. 2, 248-252, 286. (J. W. Macki) **81c:34045** 34G10 (34B25)
- Ribarič, M. Relation between the functional analytic properties of a nonlinear operator $A(\cdot)$ and the properties of the function $x = x(y)$ such that $x = A(x+y)$. (Slovenian summary) *Glas. Mat. Ser. III* **15** (35) (1980), no. 1, 121-131. (D. E. Edmunds) **81m:47091** 47H99
- Ribaut, M. (with Scheld, R.) A hybrid method for calculating vector fields subject to inhomogeneous boundary conditions. (French summary) *Z. Angew. Math. Phys.* **30** (1979), no. 3, 503-513. (From the introduction) **81c:76020** 76D99 (65N30, 76H05)
- A kinematical study of Kirchhoff-Rayleigh flow. (French summary) *Z. Angew. Math. Phys.* **31** (1980), no. 1, 83-93. (Authors' summary) **81h:76017** 76D15 (76C05)
- Ribbens-Pavella, M. (with Van Cutsem, Th.; Howard, J. L.) Hierarchical state estimator: a new way for large power systems estimations. *Simulation of distributed-parameter and large-scale systems (Proc. IMACS European Simulation Meeting, Univ. Patras, Patras, 1979)*, pp. 173-180, North-Holland, Amsterdam, 1980. (Authors' summary) **81i:93005** 93A13 (93A15, 93E10)
- Ribe, M. Examples for the nonlocally convex three space problem. *Proc. Amer. Math. Soc.* **73** (1979), no. 3, 351-355. (M. Valdivia) **81a:46010** 46A10
- Ribenboim, Paulo. ★13 lectures on Fermat's last theorem. Springer-Verlag, New York-Heidelberg, 1979. xvi+302 pp. (1 plate). ISBN 0-387-90432-8 (T. Metsänkylä) **81f:10023** 10B15 (01A55, 12A35, 12A65)
- Fermat's last theorem: recent developments. *Séminaire de Théorie des Nombres, 1978-1979, Exp. No. 17, 22 pp., CNRS, Talence, 1979.* (Editors) **81m:10025** 10B15 (01A65, 12A35, 12A65)
- Vector space graphs. *Nanta Math.* **12** (1979), no. 2, 125-132. (W. Dörfler) **81h:05114** 05C99 (15A99)
- Ribes, Luis (with Gildenhuys, Dion; Herfort, Wolfgang N.) Results on profinite Frobenius groups. *C. R. Math. Rep. Acad. Sci. Canada* **1** (1978/79), no. 6, 319-322. (Editors) **81c:20017** 20E18
- (with Gildenhuys, Dion) Profinite groups and Boolean graphs. *J. Pure Appl. Algebra* **12** (1978), no. 1, 21-47. (S. P. Demukhin) **81g:20059** 20E18 (05C25, 12G05, 22E41)
- (with Gildenhuys, Dion; Herfort, Wolfgang N.) Profinite Frobenius groups. *Arch. Math. (Basel)* **33** (1979/80), no. 6, 518-528. (F. Pickel) **81g:20058** 20E18 (20F26)
- Ribet, Kenneth A. ★Fonctions L -p-adiques et théorie d'Iwasawa. (French) p -adic L -functions and Iwasawa theory Course notes by Philippe Satgé Publications Mathématiques d'Orsay 79, 1. Université de Paris-Sud, Département de Mathématique, Orsay, 1979. 149 pp. (not consecutively pagged). (Lawrence Washington) **81c:12022** 12A70 (12A35, 12B20)
- Report on p -adic L -functions over totally real fields. *Journées Arithmétiques de Luminy (Colloq. Internat. CNRS, Centre Univ. Luminy, Luminy, 1978)*, pp. 177-192, *Astérisque*, **61**, Soc. Math. France, Paris, 1979. (Daniel Barsky) **81f:12009** 12A70 (10D30, 12A95, 12B30)
- Kummer theory on extensions of abelian varieties by tori. *Duke Math. J.* **46** (1979), no. 4, 745-761. (Daniel Coray) **81g:14019** 14K15 (12A35, 12F10)
- (with Deligne, Pierre) Values of abelian L -functions at negative integers over totally real fields. *Invent. Math.* **59** (1980), no. 3, 227-286. (Neal Koblitz) **81m:12019** 12A70 (10D21)
- Ribeyre, Serge. Structures floues et algèbres de Post. *Publ. Dép. Math. (Lyon)* **15** (1978), no. 1, 1-37. (From the introduction) **81h:03056** 03E72 (03G20, 06D25)
- Ribet, Gordon P. Eigenvalue- S matrix element relations for some common devices with two-fold symmetry using group theory. *IEEE Trans. Circuits and Systems* **27** (1980), no. 12, 1205-1210. (Authors' summary) **81h:94045** 94C05
- Riccihazzi, Paul J. (with Canfield, Richard C.) A probabilistic approach to radiative energy loss calculations for optically thick atmospheres: hydrogen lines and continua. *Astrophys. J.* **239** (1980), no. 3, part 1, 1036-1044. (Authors' summary) **81h:85010** 85A25
- Ricci, Fulvio. A multiplicative structure on some spaces of pseudomeasures on the circle and related properties. (French summary) *Bull. Sci. Math.* (2) **103** (1979), no. 4, 423-434. (J. D. Stegeman) **81j:43018** 43A46
- Ricci, Paolo Emilio (with Bruschi, Massimo) Powers of a quadratic matrix whose minimal polynomial is known. (Italian. English summary) *Pubbl. Istit. Mat. Appl. Fac. Ingeg. Univ. Stud. Roma Quaderno No. 13* (1978), 9-18. (Authors' summary) **81i:15012** 15A24
- Chebyshev polynomials in several variables. (Italian. English summary) *Rend. Mat.* (6) **11** (1978), no. 2, 295-327. (R. G. Buschman) **81e:41039** 41A50 (15A24, 33A65, 41A63)
- (with Bruschi, Massimo) Functions of matrices and generator functions of Lucas polynomials in r variables. (Italian. English summary) *Pubbl. Istit. Mat. Appl. Fac. Ingeg. Univ. Stud. Roma Quaderno No. 14* (1979), 13-24. (E. Frank) **81f:05012a** 05A15 (10A35, 32A25)
- (with Bruschi, Massimo) The functions F_k and generalized Lucas polynomials of

- the second kind. (Italian. English summary) *Pubbl. Istit. Mat. Appl. Fac. Ingr. Univ. Stud. Roma Quaderno No. 14* (1979), 49-58. (E. Frank) **81f:05012b** 05A15 (10A35, 32A25)
- Ricci, Riccardo** Critical solution for neutron transport in a cylinder with reflector. (Italian summary) *Riv. Mat. Univ. Parma* (4) 5 (1979), part 1, 403-413 (1980). (Authors' summary) **81f:02077** 82A70
- Ricciardi, Luigi M.** Diffusion processes and first passage problems in biomathematics. (Italian. English summary) *Boll. Un. Mat. Ital. A* (5) 16 (1979), no. 3, 427-440. (Authors' summary) **81a:92026** 92A05
- Ricciardi, N.** (with Salinetti, Gabriella) Quasiadmissibility in general decision theory. (Italian. English summary) *Riv. Mat. Sci. Econom. Social.* 2 (1979), no. 2, 85-94. (A. L. Rukhin) **81e:62005** 62C05 (62C07)
- (with Salinetti, Gabriella) A new characterization of admissibility in decision theory. (Italian. English summary) *Riv. Mat. Sci. Econom. Social.* 3 (1980), no. 1, 45-57. (A. L. Rukhin) **81f:62011** 62C15 (62C05)
- Ricciardi, P.** (with Ardito, A.) Existence and regularity for linear delay partial differential equations. *Nonlinear Anal.* 4 (1980), no. 2, 411-414. (Curtis C. Travis) **81f:34076** 34K30 (35R10)
- Rice, John** (with Reich, T.; Cloninger, C. R.; Wette, R.) An approximation to the multivariate normal identity: its application to multifactorial qualitative traits. (French summary) *Biometrics* 35 (1979), no. 2, 451-459. (Authors' summary) **81h:62181** 62P10 (62H10)
- Rice, John R.** Remarks on piecewise polynomial approximation. *The theory of the approximation of functions* (Proc. Internat. Conf., Kahala, 1975) (Russian), pp. 305-311, "Nauka", Moscow, 1977. **81m:41010** 41A15 (65D15)
- Multivariate piecewise polynomial approximation. *Multivariate approximation* (Sympos., Univ. Durham, Durham, 1977), pp. 261-277, Academic Press, London, 1978. (From the introduction) **81j:41022** 41A15 (65D07, 65D15)
- (with Lynch, Robert E.) The Hodge method and its performance for solving elliptic partial differential equations. *Recent advances in numerical analysis* (Proc. Sympos., Math. Res. Center, Univ. Wisconsin, Madison, Wis., 1978), pp. 143-175, Publ. Math. Res. Center Univ. Wisconsin, 41, Academic Press, New York, 1978. (Authors' introduction) **81i:65077** 65N05
- (with de Boor, Carl) An adaptive algorithm for multivariate approximation giving optimal convergence rates. *J. Approx. Theory* 25 (1979), no. 4, 337-359. (H. Werner) **81j:41052** 41A63 (41A15, 41A99)
- (with Rudnicki, J. W.) A note on some features of the theory of localization of deformation. *Internat. J. Solids and Structures* 16 (1980), no. 7, 597-605. (Authors' summary) **81d:73037** 73E99
- Rice, Michael D.** (with Reynolds, George) Weakly Borel-complete topological spaces. *Fund. Math.* 105 (1979/80), no. 3, 179-185. (H. Sarbadhikari) **81j:54059** 54H05 (28A12, 54A25)
- Rice, R. E.** (with Schweizer, Berthold; Sklar, Abe) When is $f(f(z)) = az^2 + bz + c$? *Amer. Math. Monthly* 87 (1980), no. 4, 252-263. (József Tabor) **81e:39005** 39B10 (30C10, 39B70)
- Rice, Stephen** (with Lugannani, Robert) Saddle point approximation for the distribution of the sum of independent random variables. *Adv. in Appl. Probab.* 12 (1980), no. 2, 475-490. (H. Bergström) **81f:60034** 60F05
- (with Lugannani, Robert) Expressions for the behavior of a Fourier transform near its singularities. *J. Comput. Phys.* 37 (1980), no. 2, 259-263. (John S. Lew) **81k:42012** 42A38 (41A60)
- (with Lugannani, Robert) Use of Gaussian convergence factors in the numerical evaluation of slowly converging integrals. *J. Comput. Phys.* 37 (1980), no. 2, 264-267. (I. P. Mysovskikh) **81k:65025** 65D30
- Rice, Stuart A.** (with Novak, Frank A.) The influence of rotational motion on intersystem crossing in isolated molecules. *J. Chem. Phys.* 73 (1980), no. 2, 858-864. (Authors' summary) **81k:81112** 81G50
- Rich, L. Waldo** See *Black mathematicians and their works*, **81e:00004**
- Richard, Denis** Saturation des modèles de Peano. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 8, A351-A353. (P. Štěpánek) **81f:03079** 03H15 (03C50)
- Richard, J.-F.** (with Tompa, H.) On the evaluation of poly- t density functions. *J. Econometrics* 12 (1980), no. 3, 335-351. (John E. Hewett) **81e:62060** 62H10 (62-04, 65D30)
- Richard, J. L.** (with Madore, J.; Stora, R.) $F = \circ F$, a review. *Feynman path integrals* (Proc. Internat. Colloq., Marseille, 1978), pp. 304-334, Lecture Notes in Phys., 106, Springer, Berlin, 1979. (R. O. Wells, Jr.) **81d:81055** 81E10 (14F05, 32G13, 53C05)
- Richard, Scott F.** A generalized capital asset pricing model. *Portfolio theory, 25 years after*, pp. 215-232, *Studies in the Management Sci.*, 11, North-Holland, Amsterdam, 1979. (See **80k:90001**) 90A09
- Richard, C. W.** (with Crane, C. M.) Pressure marching schemes that work. *Internat. J. Numer. Methods Engrg.* 15 (1980), no. 4, 599-610. (Authors' summary) **81d:76035** 76D05 (65N10)
- Richards, D.** (with Dickinson, A. S.) Scattering of state-selected molecules in the sudden approximation. *J. Phys. B* 13 (1980), no. 16, 3189-3199. (Authors' summary) **81h:81169** 81G55 (81F99)
- Richards, Dana S.** On a theorem of Chorneyko and Mohanty. *J. Combin. Theory Ser. A* 27 (1979), no. 3, 392-393. (I. Z. Chorneyko) **81f:05015** 05A15
- Generalized magic cubes. *Math. Mag.* 53 (1980), no. 2, 101-105. (Frank K. Hwang) **81f:05047** 05B30 (68C05)
- Richards, Ian** Number theory. *Mathematics today*, pp. 37-64, Springer, New York, 1978. (See **80b:00007**) 10-02
- (with Pour-El, Marian Boykan) A computable ordinary differential equation which possesses no computable solution. *Ann. Math. Logic* 17 (1979), no. 1-2, 61-90. (From the introduction) **81k:03064** 03F60 (34A99)
- (with Priky, Karel) Uniform approximation in the semiring of positive continuous functions. *Adv. in Math.* 37 (1980), no. 1, 66-73. (W. J. Kotzé) **81m:41043** 41A65 (46J10)
- Richards, Joan L.** The art and the science of British algebra: a study in the perception of mathematical truth. (French and German summaries) *Historia Math.* 7 (1980), no. 3, 343-365. (I. Grattan-Guinness) **81m:01039** 01A55 (08-03)
- Richards, P. G.** (with Young, E. R.; Torr, D. G.) A flux preserving method of coupling first and second order equations to simulate the flow of plasma between the protonosphere and the ionosphere. *J. Comput. Phys.* 38 (1980), no. 2, 141-156. (Authors' summary) **81j:86003** 86A35
- Richards, Peter M.** (with Renken, Ray L.) Computer-simulated hopping in a random one-dimensional system. *Phys. Rev. B* (3) 21 (1980), no. 8, 3740-3744. (From the summary) **81h:82006** 82A42
- Richardson, David L.** A note on a Lagrangian formulation for motion about the collinear points. *Celestial Mech.* 22 (1980), no. 3, 231-236. (Authors' summary) **81j:70010** 70F15 (70H35)
- Analytic construction of periodic orbits about the collinear points. *Celestial Mech.* 22 (1980), no. 3, 241-253. (Authors' summary) **81j:70011** 70F15 (70H99)
- Richardson, Gary D.** (with Kent, Darrell C.) Two generalizations of Novák's sequential envelope. *Math. Nachr.* 91 (1979), 77-85. (Václav Koutník) **81j:54005** 54A20 (54B30)
- Applications of convergence spaces. *Bull. Austral. Math. Soc.* 21 (1980), no. 1, 107-123. (W. A. Feldman) **81d:54001** 54A20 (28A20, 54E99, 60B10)
- Richardson, John L.** (with Blankenbecler, R.) Orthogonal transforms and lattice field theories. *Phys. Rev. D* (3) 21 (1980), no. 10, 2867-2877. (Authors' summary) **81g:81061** 81E15 (81E99)
- Richardson, R. W.** The conjugating representation of a semisimple group. *Invent. Math.* 54 (1979), no. 3, 229-245. (Wim H. Hesselink) **81a:14023** 14L30 (20G05)
- Richardson, S. T.** (with Wilkinson, K. M.) Stopping time transformations and towers. *Z. Wahrsch. Verw. Gebiete* 48 (1979), no. 3, 259-284. (Alan Saleski) **81a:28020** 28D05
- Richberg, R.** (with Müller, C.) Über die Radon-Transformation kreissymmetrischer Funktionen und ihre Beziehung zur Sommerfeldschen Theorie der Hankelfunktionen. (English summary) *Math. Methods Appl. Sci.* 2 (1980), no. 1, 108-129. (I. Fenyő) **81i:44006** 44A20 (33A40)
- Richelson, Jeffrey T.** A characterization result for the plurality rule. *J. Econom. Theory* 19 (1978), no. 2, 548-550. (From the text) **81h:90013** 90A08
- Richert, Walter R.** Über Intermediateprobleme zweiter Art. (English summary) *Numerische Behandlung von Eigenwertaufgaben* (Tagung, Tech. Univ. Clausthal, Clausthal, 1978), pp. 140-153, Internat. Schriftenreihe Numer. Math., 43, Birkhäuser, Basel, 1979. (L. Collatz) **81g:49037** 49G15 (65F15)
- Gauß-Quadraturformeln mit mehrfachen Knoten. (English summary) *Numerische Integration* (Tagung, Math. Forschungsinst., Oberwolfach, 1978), pp. 241-244, Internat. Ser. Numer. Math., 45, Birkhäuser, Basel, 1979. (Helmut Brass) **81f:65029** 65D32
- Richman, F.** (with Julian, W.; Mines, R.) Algebraic numbers, a constructive development. *Pacific J. Math.* 74 (1978), no. 1, 91-102. (S. A. Basarab) **81a:03061** 03F65 (12L05)
- (with Arnold, David M.; Hunter, Roger H.) Global Azumaya theorems in additive categories. *J. Pure Appl. Algebra* 16 (1980), no. 3, 223-242. (Wolfgang Grözl) **81j:18014** 18E05 (16A90)
- Richoux, Anthony N.** (with Chung, Lung O.; Luh, Jiang) Derivations and commutativity of rings. II. *Pacific J. Math.* 85 (1979), no. 1, 19-34. (Howard E. Bell) **81h:16052** 16A70 (16A72, 17A35)
- A commutativity theorem for division rings. *Canad. Math. Bull.* 23 (1980), no. 2, 241-243. (Howard E. Bell) **81f:16051** 16A70
- Richter, Burghard** (with Grafarend, Erik W.; Mueller, Ivan I.; Papo, Haim B.) Concepts for reference frames in geodesy and geodynamics: the reference directions. *Bull. Géodésique* 53 (1979), no. 3, 195-213. (Z. Nádeník) **81b:86005** 86A30 (53A05, 53A99)
- Richter, C.** Zur globalen Konvergenz des gedämpften Wilsonverfahrens. (English and Russian summaries) *Math. Operationsforsch. Statist. Ser. Optim.* 10 (1979), no. 2, 213-218. (Jon W. Tolle) **81e:90062** 90C30 (49D40)
- Richter, Gerd** Verallgemeinerung eines Satzes von Kertész. *Publ. Math. Debrecen* 26 (1979), no. 1-2, 127-131. (P. Grabe) **81e:20038** 20K10
- Einige Ergebnisse aus der Theorie der zyklisch erzeugten modularen Verbände. Beiträge zur Algebra und Geometrie, 8. Wiss. Beir. Martin-Luther-Universität-Wittenberg M 12 (1979), 33-53. (Hennrich Kröger) **81e:06016** 06C05 (20K27)
- Richter, Gerhard** (with Neumann, Klaus) Zur Bestimmung der asymptotischen Verteilung des Lösungsvektors zufälliger linearer Gleichungssysteme. *Serdica* 4 (1978), no. 1, 50-60. (Ludwig Arnold) **81k:60023** 60F05 (60H25)
- Richter, Marcel K.** Continuous and semicontinuous utility. *Internat. Econom. Rev.* 21 (1980), no. 2, 293-299. (O. N. Bondareva) **81k:90018** 90A10 (06A10)
- Richter, Matthias** Berechnung der Verteilungsfunktion der Zufallsgröße $\int_0^1 X_t^2(\omega) dt$ und deren Anwendungen. *Wiss. Z. Tech. Hochsch. Karl-Marx-Stadt* 21 (1979), no. 5, 633-643. (D. A. Darling) **81e:60013** 60E05
- Richter, P.** Zur Extremalzerlegung von Zuständen. *Wiss. Z. Karl-Marx-Universität Leipzig Math.-Natur. Reihe* 27 (1978), no. 3, 293-297. (P. Saworotnow) **81a:46068** 46K05 (46L99)
- Richter, Siegfried** Einige neue Erkenntnisse aus der historischen Untersuchung der Automatisierung. *Wiss. Z. Tech. Univ. Dresden* 28 (1979), no. 4, 1019-1022. (Editors) **81j:01053** 01A80
- Richter, W.-D.** Wahrscheinlichkeiten großer Abweichungen von Summen unabhängiger, identisch verteilter Zufallsvektoren. (Lithuanian and Russian summaries) *Litovsk. Mat. Šb.* 19 (1979), no. 3, 55-68. (J. Steinebach) **81d:60037** 60F10
- Richter, W. F.** Shapley's value and fair solutions of location conflicts. *Game theory and related topics* (Proc. Sem., Bonn and Hagen, 1978), pp. 383-393, North-Holland, Amsterdam, 1979. (Hans Keiding) **81d:90128** 90D40 (90D45)
- Richard, J. A.** (with Russell, A. M.) The effect of product differentiation on dynamic Cournot and Stackelberg stability. *Econom. Lett.* 5 (1980), no. 2, 101-107. (Authors' summary) **81j:90034** 90A16
- Rickman, Benjamin** Finite groups admitting automorphisms whose fixed point set is an elementary abelian 2-group. *Proc. London Math. Soc.* (3) 40 (1980), no. 2, 320-345. (W. E. Deskins) **81e:20028** 20D45 (20D10)
- Finite groups which admit a coprime automorphism of prime order whose fixed point set is a cyclic 3-group. *Quart. J. Math. Oxford Ser. (2)* 31 (1980), no. 122, 233-246. (Richard Davitt) **81h:20030** 20D45
- Rickman, Seppo** On the theory of quasiregular mappings. *Proceedings of the Rolf*

- Necanlinna Symposium on Complex Analysis (Math. Res. Inst., Univ. Istanbul, Siltiri, 1976), pp. 79–87, Publ. Math. Res. Inst. Istanbul, 7, Univ. Istanbul, Istanbul, 1978. (H. M. Reimann) 81k:30026 30C60 (30D35)**
- (with Mattila, Pertti) Quasiregular mappings and value distribution. *Romanian-Finnish Seminar on Complex Analysis (Proc., Bucharest, 1976), pp. 204–211, Lecture Notes in Math., 743, Springer, Berlin, 1979. (Olli Martio) 81c:30037 30C60 (30D35)*
- (with Mattila, Pertti) Averages of the counting function of a quasiregular mapping. *Acta Math.* 143 (1979), no. 3–4, 273–305. (V. Micić) 81b:30037 30C60
- On the number of omitted values of entire quasiregular mappings. *J. Analyse Math.* 37 (1980), 100–117. (Tadashi Kuroda) 81m:30030 30D60
- Riddell, I. J.** (with Baker, Christopher T. H.; Keech, M. S.; Amini, S.) Runge-Kutta methods with error estimates for Volterra integral equations of the second kind. *Numerical treatment of integral equations (Workshop, Math. Res. Inst., Oberwolfach, 1979), pp. 24–42, Internat. Ser. Numer. Math., 53, Birkhäuser, Basel, 1980. (L. Collatz) 81m:65191 65R20*
- Riddell, J.** Partitions into small primes. *C. R. Math. Rep. Acad. Sci. Canada* 2 (1980), no. 1, 11–16. (Author's summary) 81a:10061 10J20 (10A45)
- Riddell, R. C.** The latitudes of Venus and Mercury in the *Almagest*. *Arch. Hist. Exact Sci.* 19 (1978/79), no. 2, 95–111. (G. J. Toomer) 81a:01006 01A20
- Eudoxan mathematics and the Eudoxan spheres. *Arch. Hist. Exact Sci.* 20 (1979), no. 1, 1–19. (G. J. Toomer) 81a:01007 01A20
- Rieder, J.** See Westermann, L. R. J., 81m:01082
- Riebes, G.** On the extensions of mass-zero representations of the Poincaré group. *Rep. Math. Phys.* 16 (1979), no. 2, 251–263. (Author's summary) 81k:81049 81D25 (22E70, 81C40)
- Ridenhour, Jerry** Lyapunov-type functions for n th-order linear ordinary differential equations. *Rocky Mountain J. Math.* 10 (1980), no. 2, 387–399. (C. A. Swanson) 81f:34019 34B05 (34C10)
- Ridha, A. H.** (with Barclay, W. H.) Flow in streamline corners of arbitrary angle. *AIAA J.* 18 (1980), no. 12, 1413–1420. (Authors' summary) 81j:76021 76D05
- Riečan, Beloslav** On the Kolmogoroff theorem and the infinite product of probability spaces. (Slovak and Russian summaries) *Acta Fac. Rerum Natur. Univ. Comenian. Math.* 34 (1979), 169–176. (Dimitri Vandev) 81j:28010 28A35 (60A05, 60G05)
- (with Dvurečnickij, Anatolij) On the individual ergodic theorem on a logoc. *Comment. Math. Univ. Carolin.* 21 (1980), no. 2, 385–391. (Fumio Hiai) 81g:28024 28D99 (03G12)
- On a lemma of G. Choquet. (Russian summary) *Math. Slovaca* 30 (1980), no. 3, 209–212. (B. Rodríguez-Salinas) 81k:28013 28C05
- Riečanová, Zdena** On two strengthenings of regularity of measures. (Russian summary) *Math. Slovaca* 30 (1980), no. 3, 281–288. (O. Lipovan) 81j:28023 28C15
- Riecke, C.** See *Proceedings: Conference on Convergence Structures, 81m:54003*
- Riehe, Harald** A -assozierte Topologien. *Arch. Math. (Basel)* 33 (1979/80), no. 5, 444–453. (M. S. Ramanujan) 81m:46010 46A12 (46A45)
- Riehl, M.** Representation of the characteristic function of a stochastic integral. *J. Appl. Probab.* 17 (1980), no. 2, 448–455. (Barthel W. Huff) 81h:60022 60E07 (60H05)
- On a characterization problem in the queueing model $G/G/1$. (Russian summary) *Teor. Veroyatnost. i Primenen.* 25 (1980), no. 1, 129–139. (N. U. Prabhu) 81b:60099 60K25
- Determination of a stochastic process by means of stochastic integrals. (Russian summary) *Teor. Veroyatnost. i Primenen.* 25 (1980), no. 2, 339–349. (B. L. S. Prakasa Rao) 81h:60077 60H05 (60J30)
- Riehl, Norbert** Direkte Integrale von Hilbertalgebren. *Math. Ann.* 246 (1979/80), no. 3, 167–192. (T. A. Cook) 81c:46054 46L10 (46K15)
- Remarks on the fixed-point algebras of product type actions. *Monatsh. Math.* 89 (1980), no. 3, 235–242. (Ola Bratteli) 81i:46087 46L40
- Rieder, G.** On Maxwell's, Klein's and Wiegand's stress functions for discontinuous media. (Polish and Russian summaries) *Rozprawy Inż.* 27 (1979), no. 1, 3–26. (D. P. Rašković) 81c:73005 73C05
- Rieder, Helmut** Estimates derived from robust tests. *Ann. Statist.* 8 (1980), no. 1, 106–115. (F. P. Tarasenko) 81i:62063 62F35 (62G05)
- Locally robust correlation coefficients. *Comm. Statist. A—Theory Methods* 9 (1980), no. 8, 803–819. (Noel Cressie) 81i:62064 62F35
- Rieder, U.** Equilibrium plans for non-zero-sum Markov games. *Game theory and related topics (Proc. Sem., Bonn and Hagen, 1978), pp. 91–101, North-Holland, Amsterdam, 1979. (Jaap Wessels) 81b:90179 90D15 (93E05)*
- Riederer, Alois J.** (with Weinberg, Louis) Synthesis of lumped-distributed networks: lossless cascades. *IEEE Trans. Circuits and Systems* 27 (1980), no. 10, 943–956. (Authors' summary) 81i:94025 94C05
- Rieckhoff, Thomas** On vector-topological properties of zero-neighbourhoods of topological vector spaces. *Comment. Math. Univ. Carolin.* 21 (1980), no. 1, 119–129. (Klaus-Dieter Bierstedt) 81j:46010 46A15 (46A10, 46E30, 54C15, 54D05)
- Riehm, Christine** (with Bongartz, Klaus) Algèbres stables héréditaires. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 15, 703–706. (Authors' summary) 81i:16055 16A89
- Rieffel, Marc A.** Unitary representations of group extensions; an algebraic approach to the theory of Mackey and Blattner. *Studies in analysis, pp. 43–82, Advances in Math., Suppl. Studies, 4, Academic Press, New York, 1979. (G. L. Litvinov) 81b:22004 22D30 (46L05)*
- (with Popa, Sorin T.) The Ext groups of the C^* -algebras associated with irrational rotations. *J. Operator Theory* 3 (1980), no. 2, 271–274. (Vern Paulsen) 81j:46106 46L55 (46L05, 46M20)
- Rieger, Georg J.** Sur les nombres de Cullen. *Séminaire de Théorie des Nombres (1976–1977), Exp. No. 16, 9 pp., CNRS, Talence, 1977. (Jean-Marie De Koninck) 81c:10006 10A21 (10A10)*
- Mischung und Ergodizität bei Kettenbrüchen nach nächsten Ganzen. *J. Reine Angew. Math.* 310 (1979), 171–181. (F. Schweiger) 81c:10066 10K10 (28D05)
- Über die Schrittzahl beim Algorithmus von Harris und dem nach nächsten Ganzen. *Arch. Math. (Basel)* 34 (1980), no. 5, 421–427. (E. J. Barbeau) 81m:10012 10A30 (10A32)
- Rieksing, V.** Uniform asymptotic expansion of a class of integrals with oscillating kernels. (Russian) *Lato. Mat. Ezegodnik No. 22 (1978), 144–154, 283. (L. Berg) 81c:41072 41A60 (30E15)*
- Rieksing, E.** Application of the convergence factor to asymptotic expansion of integrals. (Russian) *Lato. Mat. Ezegodnik No. 23 (1979), 23–36, 271. (L. Berg) 81c:41073 41A60*
- te Riele, H. J. J.** Introduction and global survey of numerical methods for integral equations. *Colloquium Numerical Treatment of Integral Equations (Math. Centre, Amsterdam, 1978/79), pp. 1–25, MC Syllabus, 41, Math. Centrum, Amsterdam, 1979. (P. M. Anselone) 81g:65182 65R20 (45L10, 65–02)*
- Computations concerning the conjecture of Mertens. *J. Reine Angew. Math.* 311/312 (1979), 356–360. (J. D. Dixon) 81c:10055 10H25 (10–04)
- ★Numerical solution of two coupled nonlinear equations related to the limits of Buchstab's iteration sieve. *Afdeling Numerieke Wiskunde [Department of Numerical Mathematics], 86, Mathematisch Centrum, Amsterdam, 1980. iii+15 pp. (G. A. Evans) 81j:65048 65D30*
- See also *Colloquium: Numerical Treatment of Integral Equations, 81c:65004*
- Riemenschneider, Sherman D.** (with Lorentz, George G.) Recent progress in Birkhoff interpolation. *Approximation theory and functional analysis (Proc. Internat. Sympos. Approximation Theory, Univ. Estadual de Campinas, Campinas, 1977), pp. 187–236, North-Holland Math. Studies, 35, North-Holland, Amsterdam, 1979. (Darell J. Johnson) 81a:41006 41A05 (41–02)*
- (with DeVore, Ronald A.; Sharpley, Robert C.) Weak interpolation in Banach spaces. *J. Funct. Anal.* 33 (1979), no. 1, 58–94. (Colin Bennett) 81f:46040 46E35 (41A65)
- (with Lorentz, George G.) Birkhoff interpolation: some applications of coalescence. *Quantitative approximation (Proc. Internat. Sympos., Bonn, 1979), pp. 197–208, Academic Press, New York, 1980. (Helmut Brass) 81j:41006 41A05*
- Rienecker, M. M.** (with Webber, B.; Teubner, M. D.; Noye, B. J.) Comparison of some finite difference and analytical methods of solving tidal propagation equations. *Numerical simulation of fluid motion (Proc. Internat. Conf. Numerical Simulation of Fluid Dynamic Systems, Monash Univ., Melbourne, 1976), pp. 453–465, North-Holland, Amsterdam, 1978. (See 81a:76005) 76B15 (65F05)*
- Riera, A.** (with Macías, A.) The Stark effect: relationship between perturbation and variation treatments. *J. Phys. B* 12 (1979), no. 22, 3631–3647. (From the summary) 81a:81112 81G45
- Riera, Rosane** (with Oliveira, P. Murilo; de Queiroz, S. L. A.; Chaves, C. M.) Bond percolation in a square lattice in presence of a "magnetic field". *J. Phys. A* 13 (1980), no. 7, 2457–2463. (Authors' summary) 81c:82039 82A42 (81E15, 82A67)
- Ries, V.** (with Gallardo, Léonard) La loi des grands nombres pour les marches aléatoires sur le dual de $SU(2)$. (English summary) *Studia Math.* 66 (1979), no. 2, 93–105. (Philippe Bougerol) 81f:60046 60F15 (60B15, 60J15)
- Riesenberg, Nathaniel R.** An extreme point in $H^{\infty}(U^2)$. *Proc. Amer. Math. Soc.* 76 (1979), no. 1, 129–130. (Guy Lavielle) 81c:32007 32A35 (30D55, 46J15)
- Riesinger, Rolf** Eniarte Steinerkegelschnitte in nichtpapposchen Desarguesebenen. (English summary) *Monatsh. Math.* 89 (1980), no. 3, 243–251. (A. Barlotti) 81j:51005 51A30
- Riesz, Frigyes** See *Mitropol'skij, Ju. A.; et al., 81j:01040*
- Rigacci, Rosella** (with Paveri-Fontana, Stefano L.) A singularly perturbed weakly-singular integro-differential problem from analytical chemistry. *Numerical analysis of singular perturbation problems (Proc. Conf., Math. Inst., Catholic Univ., Nijmegen, 1978), pp. 475–484, Academic Press, London, 1979. (Authors' summary) 81c:65128 65R20*
- Rigas, A.** Geodesic spheres as generators of the homotopy groups of O . *Bo. J. Differential Geom.* 13 (1978), no. 4, 527–545 (1979). (Samuel A. Iliori) 81c:57043 57T20 (53C40)
- Rigby, J. F.** On the Money-Coutts configuration of nine anti-tangent cycles. *C. R. Math. Rep. Acad. Sci. Canada* 1 (1978/79), no. 3, 161–164. (Dov Avishalom) 81f:51004 51A20
- Quartic and sextic inequalities for the sides of triangles, and best possible inequalities. *Univ. Beograd. Publ. Elektrotehn. Fak. Ser. Mat. Fiz.* No. 602-633 (1978), 195–202 (1979). (O. Bottema) 81i:51024 51N20
- Rigby, M. J.** (with Mallion, R. B.) On the eigenvalues and eigenvectors of certain finite, vertex-weighted, bipartite graphs. *J. Combin. Theory Ser. B* 27 (1979), no. 2, 122–129. (H. Sachs) 81d:05052 05C50
- de Rigg, Dennis F.** See *De Rigg, Dennis F.*
- Rigbi, R.** (with Venturi, G.) Conformal invariance and the fine-structure constant in a nonlinear approach to electrodynamics. (Italian and Russian summaries) *Nuovo Cimento A* (11) 57 (1980), no. 3, 309–319. (Authors' summary) 81h:81146 81G10 (81L05)
- Rigbi, Roberto** (with Casadei, Giorgio; Teolis, Antonio G. B.) An algebraic theory for the "guarded commands" of Dijkstra. (Italian) *Rend. Sem. Mat. Univ. Padova* 59 (1978), 269–283 (1979). (From the introduction) 81d:68040 68B05
- Righini, Guglielmo** See *Drake, Stillman, 81m:01048*
- Rigler, A. K.** (with St. Clair, D. C.) An algorithm for least squares analysis of spectroscopic data. *BIT* 19 (1979), no. 4, 448–456. (G. C. Barozzi) 81j:65035 65D10 (65F25)
- See also *Proceedings: International Conference on Mathematical Modelling, 81j:00027*
- Rigolot, Christine** Équation de Boltzmann stationnaire sur la droite et sur la demi-droite. (Polish and Russian summaries) *Arch. Mech. (Arch. Mech. Stos.)* 31 (1979), no. 4, 467–487. (Hans Kaper) 81i:82036 82A40
- Équation de Boltzmann non-stationnaire sur la droite: problème linéaire et non linéaire. II. (Polish and Russian summaries) *Arch. Mech. (Arch. Mech. Stos.)* 31 (1979), no. 5, 605–621. (Hans Kaper) 81i:82036 82A40
- Rigotti, Carlo** On the essential duality condition for Hermitian scalar field. (French summary) *Algèbres d'opérateurs et leurs applications en physique mathématique (Proc. Colloq., Marseille, 1977), pp. 307–320, Colloques Internat. CNRS, 274, CNRS, Paris, 1979. (Ola Bratteli) 81c:81030 81E05 (46L60)*
- Riha, Pavel** (with Lhota, Edgar; Mitschka, Pavel) Numerical analysis of the circulating flow in a mixing vessel with a draught tube. *Acta Tech. ČSAV* 25 (1980), no. 3, 347–357. (Authors' summary) 81f:76016 76D05
- Rihiev, B. B.** (with Satimov, N.) Quasilinear differential evasion games. (Russian)

- Differencial'nye Uravneniya* 14 (1978), no. 6, 1046-1052, 1149. (Authors' summary) 81g:90111 90D26
- (with Satimov, N.) On the theory of differential evasion games with several pursuers. (Russian) *Voprosy Vyčisl. i Prikl. Mat. (Tashkent)* No. 53 (1978), 71-83, 181. (A. B. Kurzanakii) 81e:90124 90D26
- Riihantaus, Juhani** Removable singularities of analytic and meromorphic functions of several complex variables. *Complex analysis Joensuu 1978 (Proc. Colloq., Univ. Joensuu, Joensuu, 1978)*, pp. 329-342. *Lecture Notes in Math.*, 747, Springer, Berlin, 1979. (Gary A. Harris) 81d:32025 32D20
- Rika, E.** A unified method for the computation of critical equilibrium states of nonlinear, elastic systems. Special issue on large elastic deformation of discrete systems (Lectures, Euromech 69' Internat. Colloq., Balatonszemes, 1977). *Acta Tech. Acad. Sci. Hungar.* 87 (1978), no. 1-2, 121-141 (1979). (Author's summary) 81b:73024 73H99 (73C50, 73H10)
- Riley, G. W.** On spectral properties of skew products over irrational rotations. *J. London Math. Soc. (2)* 17 (1978), no. 1, 152-160. (From the introduction) 81f:28018 28D05 (10K05, 58F11)
- Approximations and the spectral properties of measure-preserving group actions. *Israel J. Math.* 33 (1979), no. 1, 9-31. (Robert J. Zimmer) 81h:28014 28D15 (22D10)
- Riley, N.** (with Potter, Janet M.) Free convection from a heated sphere at large Grashof number. *J. Fluid Mech.* 100 (1980), no. 4, 769-783. (Authors' summary) 81k:76062 76R10
- Riley, Robert** An elliptical path from parabolic representations to hyperbolic structures. *Topology of low-dimensional manifolds (Proc. Second Sussex Conf., Chelwood Gate, 1977)*, pp. 99-133. *Lecture Notes in Math.*, 722, Springer, Berlin, 1979. (G. Peter Scott) 81e:57011 57N10 (30F40, 57M25)
- Rimer, David** Complexes de quadriques dans P_3 . *An. Științ. Univ. "Al. I. Cuza" Iași Sec. I a Mat. (N.S.)* 25 (1979), no. 2, 399-410. (From Marcus) 81e:53014 53A20
- Sur un opérateur matriciel. (Romanian summary) *Bul. Inst. Politehn. Iași Sec. I* 25(29) (1979), no. 1-2, 39-42. (B. Levinger) 81j:15003 15A04
- The modernity of the pedagogical thought of Gh. Țițeica. (Romanian. French summary) *Stud. Cerc. Mat. 31* (1979), no. 4, 479-482. (H. B. Griffiths) 81k:01044 01A70 (00A25)
- Rimoldi, Alfredo** (with Pranevičius, Henrikas) Application of the Bayesian approach in statistical estimation of the results of modeling non-steady-state systems. (Russian. Lithuanian and English summaries) *Statist. Problemy Upravleniya—Trudy Sem. Protsessy Optimal. Upravleniya V Sektora No. 41* (1979), 75-96, 101. (Authors' summary) 81h:93104 93E10
- Rimoldi, A.** (with Ghirardi, G. C.; Weber, T.) A general argument against superluminal transmission through the quantum mechanical measurement process. *Lett. Nuovo Cimento (2)* 27 (1980), no. 10, 293-298. (From the text) 81k:81006 81B05
- (with Zambotti, G.) Initial and regime situations in the decay of unstable quantum systems. (Italian summary) *Nuovo Cimento A (11)* 55 (1980), no. 2, 197-214. (Authors' summary) 81e:81065 81D99 (81C20)
- Rimmer, M.** (with Pearson, K. R.) Nilpotents and units in skew polynomial rings over commutative rings. *J. Austral. Math. Soc. Ser. A* 28 (1979), no. 4, 423-426. (Jean-Marie Goursaud) 81m:16007 16A05 (13B20)
- v. Rimscha, Michael** Mengentheoretische Modelle des λ K-Kalküls. *Arch. Math. Logik Grundlag.* 20 (1980), no. 1-2, 65-73. (J. P. Seldin) 81g:03012 03B40 (03C65, 03E65)
- Rindler, Harald** (with Loert, Viktor) Almost constant sequences. *Journées Arithmétiques de Luminy (Colloq. Internat. CNRS, Centre Univ. Luminy, Luminy, 1978)*, pp. 133-143. *Astérisque*, 61, Soc. Math. France, Paris, 1979. (Harald Niederreiter) 81h:10070 10K05
- (with Loert, Viktor) A note on random walks on compact groups. *Probability measures on groups (Proc. Fifth Conf., Oberwolfach, 1978)*, pp. 212-219. *Lecture Notes in Math.*, 706, Springer, Berlin, 1979. (A. Mukherjee) 81d:60069 60I15 (10K05, 22C05, 60B15)
- Lineare Gleichverteilung. (English summary) *Manuscripta Math.* 30 (1979/80), no. 1, 103-106. (F. Schweiger) 81i:10064 10K05
- Rine, David** Possibility theory: as a means for modeling computer security and protection. *Proceedings of the Eighth International Symposium on Multiple-Valued Logic (Romeont, Ill., 1978)*, pp. 276-286. *IEEE, Long Beach, Calif.*, 1978. (Author's summary) 81d:68009 68A05 (68J10)
- Ringelsen, Richard D.** On additivity in maximum genus. (French summary) *Problèmes combinatoires et théorie des graphes (Colloq. Internat. CNRS, Univ. Orsay, Orsay, 1976)*, pp. 345-347. *Colloques Internat. CNRS*, 260, CNRS, Paris, 1978. (Ian Anderson) 81b:05039 05C10
- (with Little, Charles H. C.) On the strong graph embedding conjecture. *Proceedings of the Ninth Southeastern Conference on Combinatorics, Graph Theory, and Computing (Florida Atlantic Univ., Boca Raton, Fla., 1978)*, pp. 479-487. *Congress. Numer.*, XXI, Utilitas Math., Winnipeg, Man., 1978. (Gary Haggard) 81f:05067 05C10
- (with Lipman, Marc J.) Cohesion in alliance graphs. *Proceedings of the Tenth Southeastern Conference on Combinatorics, Graph Theory and Computing (Florida Atlantic Univ., Boca Raton, Fla., 1979)*, pp. 713-720. *Congress. Numer.*, XXIII-XXIV, Utilitas Math., Winnipeg, Man., 1979. (L. W. Beineke) 81f:05100 05C40
- (with Shingledecker, Clark A.) A digraph model of behavior under stress. *Proceedings of the Tenth Southeastern Conference on Combinatorics, Graph Theory and Computing (Florida Atlantic Univ., Boca Raton, Fla., 1979)*, pp. 823-831. *Congress. Numer.*, XXIII-XXIV, Utilitas Math., Winnipeg, Man., 1979. (Guy Jumarie) 81d:94049 94C15 (92A25)
- (with Beineke, Lowell W.; Straight, H. Joseph) The cochromatic index of a graph. *Discrete Math.* 31 (1980), no. 2, 153-159. (Linda Leenak-Foster) 81i:05063 05C15
- (with Beineke, Lowell W.) On the crossing numbers of products of cycles and graphs of order four. *J. Graph Theory* 4 (1980), no. 2, 145-155. (Geoffrey Exoo) 81i:05059 05C10
- Ringel, Claus Michael** Infinite-dimensional representations of finite-dimensional hereditary algebras. *Symposia Mathematica, Vol. XXIII (Conf. Abelian Groups and their Relationship to the Theory of Modules, INDAM, Rome, 1977)*, pp. 321-412. *Academic Press, London*, 1979. (Idun Reiten) 81i:16032 16A64 (16A64)
- (with Roggenkamp, Klaus W.) Diagrammatic methods in the representation theory of orders. *J. Algebra* 60 (1979), no. 1, 11-42. (P. Donovan) 81b:16006 16A18 (16A64)
- The rational invariants of the tame quivers. *Invent. Math.* 58 (1980), no. 3, 217-239. (P. Donovan) 81f:16048 16A64
- (with Roggenkamp, Klaus W.) Socle-determined categories of representations of Artinian hereditary tensor algebras. *J. Algebra* 64 (1980), no. 1, 249-269. (William H. Gustafson) 81f:16032 16A64 (16A18)
- Reflection functors for hereditary algebras. *J. London Math. Soc. (2)* 21 (1980), no. 3, 465-479. (Daniel Simson) 81j:16035 16A64 (15A21, 20G05)
- Ringermacher, Harry I.** Intrinsic geometry of curves and the Minkowski force. *Phys. Lett. A* 74 (1979), no. 6, 381-383. (Author's summary) 81j:78014 78A35 (53B30)
- Ringo, I. I.** Prediction of the behavior of processes with incompletely known control. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 19 (1979), no. 6, 1422-1435, 1628. (Author's summary) 81b:93024 93C15
- Ringwood, G. A.** (with Devreese, J. T.) The hydrogen atom: quantum mechanics on the quotient of a conformally flat manifold. *J. Math. Phys.* 21 (1980), no. 6, 1390-1392. (Authors' summary) 81d:81017 81C05 (53B50, 81C35)
- Rinke, Max** The relation between relativistic strings and Maxwell fields of rank 2. *Comm. Math. Phys.* 73 (1980), no. 3, 265-271. (Author's summary) 81e:78016 78A25 (81E99, 83A05)
- Rimnoy Kan, A. H. G.** (with Lenstra, J. K.) Computational complexity of discrete optimization problems. *Interfaces between computer science and operations research (Proc. Sympos., Math. Centrum, Amsterdam, 1976)*, pp. 63-85. *Math. Centre Tracts*, 99, Math. Centrum, Amsterdam, 1978. (See 81f:68001) 68C25
- (with Lenstra, J. K.) Complexity of packing, covering and partitioning problems. *Packing and covering in combinatorics*, pp. 275-291. *Math. Centre Tracts*, 106, Math. Centrum, Amsterdam, 1979. (See 81b:05001) 68C25 (05B40)
- (with Boender, C. G. E.; Stougie, L.; Timmer, G. T.) Global optimization: a stochastic approach. *Numerical techniques for stochastic systems (Conf., Gargano, 1979)*, pp. 387-394. *North-Holland, Amsterdam*, 1980. (Authors' introduction) 81h:90107 90C15
- (with Lenstra, J. K.) Complexity results for scheduling chains on a single machine. *European J. Oper. Res.* 4 (1980), no. 4, 270-275. (Authors' summary) 81a:68020 68C25 (90B35)
- (with Florian, M.; Lenstra, J. K.) Deterministic production planning: algorithms and complexity. *Management Sci.* 26 (1980), no. 7, 669-679. (James R. Evans) 81k:68030 68C25 (90B30)
- (with Lawler, Eugene L.; Lenstra, J. K.) Generating all maximal independent sets: NP-hardness and polynomial-time algorithms. *SIAM J. Comput.* 9 (1980), no. 3, 558-565. (O. D'Antona) 81j:68044 68C05 (68C25)
- See also *Interfaces between computer science and operations research*, 81f:68001
- Rimott, Yosef** (with Pollak, Moshe) A stochastic ordering induced by a concept of positive dependence and monotonicity of asymptotic test sizes. *Ann. Statist.* 8 (1980), no. 1, 190-198. (Mir Maswood Ali) 81j:62041 62E99 (60E15)
- Rinzel, John** Integration and propagation of neuroelectric signals. *Studies in mathematical biology, Part I*, pp. 1-66. *MAA Studies in Math.*, 15, Math. Assoc. America, Washington, D.C., 1978. (See 80m:92005) 92A09 (35K55)
- (with Miller, Robert N.) Numerical calculation of stable and unstable periodic solutions to the Hodgkin-Huxley equations. *Math. Biosci.* 49 (1980), no. 1-2, 27-59. (Gail A. Carpenter) 81g:92012 92A09 (65M10, 92-04)
- Riobóo Almazor, José M.** Consistency and asymptotic unbiasedness of multivariate density estimators. (Spanish. English summary) *Estadist. Española No. 82-83* (1979), 159-169. (Author's summary) 81j:62078 62G05
- Rionero, Salvatore** (with Maiellaro, Michele) Uniqueness and universal stability in media in fluid dynamics. (Italian. English summary) *Rend. Circ. Mat. Palermo (2)* 27 (1978), no. 2, 305-326. (Giovanni P. Galdi) 81f:76027 76E99
- On the use of weighted norms in stability questions on exterior domains. *Confer. Sem. Mat. Univ. Bari No. 157* (1979), 21 pp. (Author's summary) 81d:73050 73H99 (35J65, 76E30)
- (with Galdi, Giovanni P.) A priori estimates, continuous dependence and stability for solutions to Navier-Stokes equations on exterior domains. *Ric. Mat. Univ. Parma (4)* 5 (1979), part 2, 533-556 (1980). (A. Elcrat) 81j:35093 35Q10 (76D05)
- Riordan, John** A budget of rhyme scheme counts. *Second International Conference on Combinatorial Mathematics (New York, 1978)*, pp. 455-465. *Ann. New York Acad. Sci.*, 319, New York Acad. Sci., New York, 1979. (G. L. Alexanderson) 81h:05020 05A99
- ★ An introduction to combinatorial analysis. Reprint of the 1958 edition. *Princeton University Press, Princeton, N.J.*, 1980. xii + 244 pp. ISBN 0-691-02365-4 (Editors) 81e:05002 05-01
- Rios, Sixto** On certain practical criteria for ordering decisions in an uncertain environment. (Spanish) *Contributions in probability and mathematical statistics, teaching of mathematics and analysis (Spanish)*, pp. 47-55. *Grindley, Granada*, 1979. (G. Federzoli) 81h:62012 62C05 (62P20, 90A05, 90A09)
- Riou-Perrin, Bernadette** See **Perrin-Riou, Bernadette**
- Ripa, K. K.** (with Rastrigin, L. A.) Synthesis of factorial designs of experiments by the adaptive random search method. (Russian) *Problemy Shuchai. Poiska No. 8 Voprosy Strukturnoi Adaptatsii* (1980), 237-253, 334. (Authors' summary) 81g:62134 62K15 (90B40)
- Ripeanu, Dumitru** Sur les racines des solutions de l'équation $y'' + p_1(x)y' + p_2(x)y = 0$. *Mathematica (Cluj)* 19(42) (1977), no. 1, 95-111 (1978). (S. Rankin) 81c:34029 34C10
- (with Mocanu, Petru T.) An extremal problem for the transfinite diameter of a continuum. *Romanian-Finnish Seminar on Complex Analysis (Proc., Bucharest, 1976)*, pp. 323-330. *Lecture Notes in Math.*, 743, Springer, Berlin, 1979. (E. Reich) 81c:30043 30C85
- Sur la fonctionnelle $f(z_1)/f(z_2)$ au cas des fonctions typiquement réelles. I. *Mathematica (Cluj)* 21(44) (1979), no. 2, 163-188. (M. S. Robertson) 81m:30013 30C45
- Rippon, P. J.** The boundary cluster sets of subharmonic function. *J. London Math. Soc. (2)* 17 (1978), no. 3, 469-479. (C. L. Beina) 81h:30036 30D40 (31B25)
- Semifine limits of Green potentials. *Bull. London Math. Soc.* 11 (1979), no. 3,

- 259-264. (Jang Mei G. Wu) **81d:31008** 31B15
- Elps, I. B.** (with Čápek, V.) On stochastic models of the excitation transfer in molecular crystals. The lineshape of the phononless exciton band. (German summary) *Phys. Status Solidi (B)* **100** (1980), no. 2, 451-461. (Authors' summary) **81g:82066** 82A60 (60K35)
- Elmger, Folmer** Simple correlated autoregressive processes. *Scand. J. Statist.* **7** (1980), no. 2, 49-60. (Gy. Terdik) **81j:62187** 62M10
- Elisch, Robert H.** Algebraic properties of the elementary functions of analysis. *Amer. J. Math.* **101** (1979), no. 4, 743-759. (J. L. Johnson) **81h:12029** 12H05
- Elidel, Raymond** (with Kohlmann, Michael) A variational inequality for a partially observed stopping time problem. *Stochastic control theory and stochastic differential systems (Proc. Workshop, Deutsch. Forschungsgemeinschaft, Univ. Bonn, Bad Honnef, 1979)*, pp. 472-480. *Lecture Notes in Control and Information Sci.*, **16**, Springer, Berlin, 1979. (Robert F. Anderson) **81e:60046** 60G40 (49A60, 60J75, 93E03)
- Elkies, H.** (with Vollmer, H. D.) Low friction nonlinear mobility for the diffusive motion in periodic potentials. *Phys. Lett. A* **69** (1978/79), no. 6, 387-389. (Authors' summary) **81h:82055** 82A70
- (with Vollmer, H. D.) On the application of truncated generalized Fokker-Planck equations. *Z. Phys. B* **35** (1979), no. 3, 313-315. (G. Papanicolaou) **81g:82028** 82A35
- (with Vollmer, H. D.) Solutions and applications of tridiagonal vector recurrence relations. *Z. Phys. B* **39** (1980), no. 4, 339-346. (L. F. Shampine) **81h:65099** 65L15 (65F15)
- (with Vollmer, H. D.; Mörsch, M.) Matrix continued fraction solutions of the Kramers equation and their inverse friction expansions. *Z. Phys. B* **40** (1980/81), no. 4, 343-352. (Authors' summary) **81m:82010** 82A05 (65N99, 82A70)
- Elmas, Lawrence J.** Cohabitation of division algebras. *Bull. Calcutta Math. Soc.* **69** (1977), no. 6, 379-388. (Paul van Praag) **81h:16019** 16A39
- Elmnen, Jorma** Minimax codes for finite alphabets. *IEEE Trans. Inform. Theory* **24** (1978), no. 3, 389-392. (Author's summary) **81e:94015** 94A29
- Shortest data description and consistency of order estimates in ARMA-processes. *International Symposium on Systems Optimization and Analysis (Rocquencourt, 1978)*, pp. 92-98. *Lecture Notes in Control and Information Sci.*, **14**, Springer, Berlin, 1979. (Hironao Kawashima) **81f:93070** 93E10 (62M10)
- Arithmetic codings as number representations. Topics in systems theory. *Acta Polytech. Scand. Math. Comput. Sci. Ser. No. 31* (1979), 44-51. (H. Jürgensen) **81j:94023** 94B40 (94A29)
- (with Langdon, G. G., Jr.) Arithmetic coding. *IBM J. Res. Develop.* **23** (1979), no. 2, 149-162. (From the introduction) **81j:94024** 94B40
- Elie, Vladimir M.** (with Hussein, Ali M.) Surface charge and field distribution in a finite SAW transducer. *IEEE Trans. Microwave Theory Tech.* **27** (1979), no. 11, 897-901. (V. H. Weston) **81g:78015** 78A30
- Elmes, E. L.** (with Pao, Y. C.; Pardiari, R.) Regional stresses and strains in a urethane plastic cast of left ventricular myocardium calculated from computer-tomographically recorded displacements of affixed surface markers. *Proceedings of the 16th Midwestern Mechanics Conference (Kansas State Univ., Manhattan, Kan., 1979)*, pp. 219-223. *Develop. in Mech.*, **10**, Kansas St. Univ., Manhattan, Kan., 1979. (See **81m:73010**) 92A07
- Elmesberg, V.** (with Casalbuoni, R.; Yankielowicz, S.) Self-duality conditions for spin systems defined on a new class of nonabelian solvable finite groups. *Nuclear Phys. B* **170** (1980), no. 1, FS 1, 139-155. (Authors' summary) **81f:82008** 82A25 (20D99)
- Elmer, Jürgen** (with Sehgal, Sudarshan) Group rings of metabelian groups. *Comm. Algebra* **8** (1980), no. 10, 941-951. (W. E. Deakins) **81f:20005** 20C05 (13G05)
- (with Jarden, Moshe) Normal automorphisms of absolute Galois groups of p -adic fields. *Duke Math. J.* **47** (1980), no. 1, 47-56. (S. P. Demuškin) **81j:12010** 12B15 (10D30, 20E18)
- Elmer, Klaus** A variable metric method for linearly constrained minimization problems. *Nonlinear programming, 3 (Proc. Sympos., Special Interest Group Math. Programming, Univ. Wisconsin, Madison, Wis., 1977)*, pp. 225-243. *Academic Press, New York*, 1978. (From the introduction) **81h:90142** 90C30 (65K05)
- See also *Mathematical programming at Oberwolfach*, **81k:49001**
- Elm, V. L.** Quantum effects of the interaction of elementary particles with an intense electromagnetic field. (Russian) *Trudy Fiz. Inst. Lebedev*, **1979**, no. 111, 5-151, 279. (S. G. Mamaev) **81h:81204** 81L05 (35C20)
- Elis, Zvi** (with Kalai, Ehud) Characterization of the private alternatives domains admitting Arrow social welfare functions. *J. Econom. Theory* **22** (1980), no. 1, 23-36. (Authors' summary) **81a:90030** 90A08
- Elmal, Ivan** Lattices and partially ordered sets. (French summary) *Problèmes combinatoires et théorie des graphes (Colloq. Internat. CNRS, Univ. Orsay, Orsay, 1976)*, pp. 349-351. *Colloques Internat. CNRS*, **260**, CNRS, Paris, 1978. (See **80e:05005**) 05C99 (06A10, 06B99)
- (with Sands, Bill) Planar sublattices of a free lattice. I. *Canad. J. Math.* **30** (1978), no. 6, 1256-1283. (K. A. Baker) **81f:06011a** 06B25
- (with Bollobás, Béla) The maximal size of the covering graph of a lattice. *Algebra Universalis* **9** (1979), no. 3, 371-373. (W. Russell Belding) **81g:05008** 05C70 (06B05)
- (with Sands, Bill) Planar sublattices of a free lattice. II. *Canad. J. Math.* **31** (1979), no. 1, 17-34. (K. A. Baker) **81f:06011b** 06B25
- (with Jönsson, Bjarni) Lattice varieties covering the smallest nonmodular variety. *Pacific J. Math.* **82** (1979), no. 2, 463-478. (M. E. Adams) **81j:06007** 06B20
- (with Duffus, Dwight) A note on weak embeddings of distributive lattices. *Algebra Universalis* **10** (1980), no. 2, 258-259. (Editors) **81e:06012** 06D05
- (with Duffus, Dwight; Poguntke, Werner) Retracts and the fixed point problem for finite partially ordered sets. *Canad. Math. Bull.* **23** (1980), no. 2, 231-236. (James B. Nation) **81h:06001** 06A10
- (with Björner, Anders) A note on fixed points in semimodular lattices. *Discrete Math.* **29** (1980), no. 3, 245-250. (Manfred Stern) **81d:06010** 06C10
- (with Sands, Bill) On the adjacency of vertices to the vertices of an infinite subgraph. *J. London Math. Soc.* (2) **21** (1980), no. 3, 393-400. (M. E. Watkins) **81i:05094** 05C35 (06A10)
- Elmanc, V.** (with Speer, E.) The Borel transform in Euclidean e_s^4 local existence for
- $Re < 4$. *Comm. Math. Phys.* **72** (1980), no. 3, 293-302. (J.-P. Antoine) **81e:81063** 81E15 (81C30)
- Lieb's correlation inequality for plane rotors. *Comm. Math. Phys.* **77** (1980), no. 2, 145-147. (G. Della Riccia) **81h:82020** 82A25 (60K35, 82A05)
- Rivera Rodríguez, Pedro Humberto** On local strong solutions of a nonlinear partial differential equation. *Applicable Anal.* **10** (1980), no. 2, 93-104. (Jacques Robert) **81h:34070** 34G10
- Rivers, R. J.** (with Cant, R. J.) The summability of the $1/N$ expansion in a simplified $O(N)$ model. *J. Phys. A* **13** (1980), no. 5, 1623-1642. (Tuan W. Chen) **81j:81059** 81G05
- Rivest, Ronald L.** (with Meyer, Albert R.; Kleitman, Daniel J.; Winkmann, K.) Coping with errors in binary search procedures. *J. Comput. System Sci.* **20** (1980), no. 3, 396-404. (Authors' summary) **81i:68092** 68E05 (68C25)
- (with Baker, Brenda S.; Coffman, E. G., Jr.) Orthogonal packings in two dimensions. *SIAM J. Comput.* **9** (1980), no. 4, 846-855. (D. J. Kleitman) **81m:68034** 68C25 (90C25)
- Riviere, Michel** Recouvrement des sommets d'un graphe planaire par des arêtes et des stables. (English summary) *Cahiers Centre Études Rech. Opér.* **20** (1978), no. 2, 137-146. (Author's summary) **81d:05031** 05C15
- Riviere, N. M.** (with Fabes, E. B.) Dirichlet and Neumann problems for the heat equation in C^1 -cylinders. *Harmonic analysis in Euclidean spaces (Proc. Sympos. Pure Math., Williams Coll., Williamstown, Mass., 1978)*, Part 2, pp. 179-196. *Proc. Sympos. Pure Math.*, **XXXV**, Part 2, Amer. Math. Soc., Providence, R.I., 1979. (L. Cattabriga) **81h:35044** 35K20 (42B20)
- Rivin, G. S.** (with Drobyševič, V. I.; Dymnikov, V. P.) ★Задача по вычислительной математике. (Russian) [Problems in numerical mathematics] "Nauka", Moscow, 1980. 144 pp. (errata insert). (A. Haimovici) **81k:00004** 00A07 (65-01)
- Rivkind, V. Ja.** Estimation of the error of approximation methods of calculating flows of a viscous incompressible fluid with a free boundary. (Russian) Boundary value problems of mathematical physics and related questions in the theory of functions, **12**. *Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* **96** (1980), 247-254, 311. (Jaroslav Jeleň) **81h:76017** 76D05 (35Q10, 65P05)
- Rivlin, Ronald S.** The mechanics of non-Newtonian fluids. *Transactions of the Twenty-Fifth Conference of Army Mathematicians (Johns Hopkins Univ., Baltimore, Md., 1979)*, pp. 1-22. *ARO Rep.* **80**, 1, U. S. Army Res. Office, Research Triangle Park, N.C., 1980. (Author's summary) **81h:76004** 76A05
- Rivlin, T. J.** (with Micchelli, Charles A.) Optimal recovery of best approximations. *Resultate Math.* **3** (1980), no. 1, 25-32. (J. Szabados) **81h:41031** 41A50
- Rivore, Paul** Dernier théorème de Fermat et groupes de classes dans certains corps quadratiques imaginaires. *Ann. Sci. Univ. Clermont Math.* **18** (1979), 1-35. (Takeo Miyoshi) **81m:10026** 10B15 (12A25, 12A65)
- Rizvi, M. Haseeb** (with Shorrock, R. W.) A note on matrix-convexity. (French summary) *Canad. J. Statist.* **7** (1979), no. 1, 39-41. (George Marsaglia) **81h:15024** 15A52 (62H10)
- Rizvi, S. G. A.** (with Alam, S. N.) On the slippage problem for negative exponential distribution. *Pure Appl. Math. Sci.* **12** (1980), no. 1-2, 63-70. (Authors' summary) **81h:62042** 62F03 (62N05)
- Rizza, Giovanni Battista** A boundary method in differential geometry. (Italian. English summary) *Rend. Circ. Mat. Palermo (2)* **28** (1979), no. 1, 27-32. (C. Di Comite) **81f:53021** 53C05 (53B15)
- Almost complex conditions and weakly Kähler manifolds. (Italian summary) *Riv. Mat. Univ. Parma (4)* **5** (1979), part 2, 869-877 (1980). (K. Yano) **81i:53035** 53C15
- Rizzi, Bruno** Problems from mathematical competitions. With an introduction by Bruno de Finetti. *Period. Mat. (5)* **No. 1 Special Issue** (1974), viii+139 pp. (Editors) **81a:00004** 00A07
- Extension of the notions of additivity and complete additivity. (Italian. English summary) *Ricerca (4) (Napoli)* **28** (1977), no. 1, 5-20. (S. E. Schuur) **81e:10005** 10A20
- (with Eugeni, Franco) An incidence algebra on rational numbers. (Italian summary) *Rend. Mat. (6)* **12** (1979), no. 3-4, 557-576 (1980). (N. G. de Bruijn) **81h:10009** 10A22 (06A10)
- (with Moriconi, Franco) Dystropy and information. (Italian summary) *Boll. Un. Mat. Ital. A (5)* **17** (1980), no. 1, 102-108. (Andrea Sgarro) **81h:94021** 94A17
- Rizzitelli, Giuseppe** On a particular class of algebraic hypersurfaces. (Italian. English and French summaries) *Atti Accad. Ligure Sci. Lett.* **36** (1979), 239-241. (Editors) **81i:14036** 14N05
- (with Conte, M.; Dellavalle, G.) Resonant oscillations driven by a nonlinear forcing term. (Italian and Russian summaries) *Nuovo Cimento B (11)* **57** (1980), no. 1, 59-81. (Authors' summary) **81e:70025** 70K30
- Rjabeev, I. I.** Operational calculus in terms of perfect operators. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* **1978**, no. 5(192), 103-113. (Hans-Jürgen Gieske) **81h:44015** 44A40 (46F05)
- Rjabeev, V. S.** The use of the method of intrinsic boundary conditions for computations. (Russian) *Proceedings of an All-Union Conference on Partial Differential Equations (Moscow State Univ., Moscow, 1976)* (Russian), pp. 211-212. *Moskov. Gos. Univ., Meh.-Mat. Fakul'tet, Moscow*, 1978. (See **80f:35003**) 65N99
- (with Reznik, A. A.) An accelerated method of internal boundary conditions and a related approach to the calculation of singular integrals. (Russian) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 54* (1979), 35 pp. (From the introduction) **81h:65086** 65N05 (39A12, 65D15)
- Rjabikova, I. N.** (with Zabrelko, P. P.) On the theory of higher-order derivatives for operators in Banach spaces. (Russian) *Qualitative and approximate methods for the investigation of operator equations*, **No. 4** (Russian), pp. 87-101. *Jaroslavl. Gos. Univ., Yaroslavl*, 1979. (A. B. Németh) **81i:46047** 46G05 (47E05, 47H99)
- Rjabko, B. Ja.** A universal encoding of compacta. (Russian) *Dokl. Akad. Nauk SSSR* **252** (1980), no. 6, 1325-1328. (I. Csizsar) **81m:94010** 94A15 (41A46)
- Rjabogin, A. K.** Integral inequalities for conjugate harmonic functions of several variables. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* **1980**, no. 3, 62-66. (Ü. Kuran) **81h:31008** 31B05
- Rjabov, V. M.** (with Basilevskii, M. V.) A new method of the investigation of quantum

- dynamics of the light atom exchange reactions. *Chem. Phys.* **50** (1980), no. 2, 231-248. (Authors' summary) **81i:81119** 81G99
- Rjabov, Ju. A.** Estimates of the radius of convergence for expansions in powers of the parameter and algorithms for construction of Mathieu functions. (Russian) *Differentsial'nye Uravneniya* **15** (1979), no. 11, 1993-2003, 2108-2109. (G. Bojadziev) **81d:34032** 34C25 (33A55)
(with Mollova, K. G.) Stability of periodic solutions of second-order equations with small lag in the resonance case. (Russian) *Mat. Fiz. No. 27* (1980), 46-50, 121. (P. Talpalaru) **81k:34079** 34K20
- Rjabov, V. M.** Application of Padé approximations to Laplace transformation inversion. (Russian. English summary) *Vestnik Leningrad. Univ. Mat. Meh. Astronom.* **1979**, no. 2, 41-44, 119. (Gheorghe Micula) **81c:65064** 65R10 (65D32)
- Rjabuhin, Ju. M.** (with Andrunakievič, V. A.) Complementary and dual torsions. (Russian) Algebra, number theory and their applications. *Trudy Mat. Inst. Steklov.* **148** (1978), 16-26, 271. (B. J. Gardner) **81h:16017** 16A21
(with Florja, R. S.) Atomicity of the "lattice" of hereditarily annihilator torsions. (Russian) Ring-theoretical constructions. *Mat. Issled. No. 49* (1979), 115-121, 163. (L. A. Skornjakov) **81f:16043** 16A63
(with Vodjanjuk, E. A.) Description of coatoms in the lattice of supernilpotent radicals of algebras of bounded dimension. (Russian) Algebraic structures. *Mat. Issled. No. 56* (1980), 112-122, 161. (B. J. Gardner) **81h:16018** 16A21
(with Florja, R. S.) Radicals and classification of varieties. I. (Russian) Algebraic structures. *Mat. Issled. No. 56* (1980), 123-131, 161-162. (A. A. Iskander) **81f:16004** 16A06 (16A21)
- Rjabuhin, A. P.** (with Bel'ko, I. V.; Vedernikov, V. I.; Vodnev, V. T.; Gusak, A. A.; Nahimovskaja, A. I.; Tutae, L. K.; Fedenko, A. S.) ★Сборник задач по дифференциальной геометрии. (Russian) [A collection of problems in differential geometry] Second edition, revised. "Nauka", Moscow, 1979. 272 pp. (Editors) **81i:53001** 53-01 (00A07)
(with Bahan'kov, A. A.) The stability of motion of rotating bodies under various supplementary conditions. (Russian. English summary) *Vestn. Akad. Nauk BSSR Ser. Fiz.-Mat. Nauk* **1979**, no. 6, 80-84, 142. (I. A. Galiullin) **81c:83011** 83C10
- Rjafin, A. G.** (with Tihomirov, N. B.) ★Линейные положительные операторы и сингулярные интегралы. (Russian) [Linear positive operators and singular integrals] Kalinin. Gos. Univ., Kalinin, 1979. 76 pp. (M. Z. Berkolaiko) **81m:45024** 45P05 (45E99)
- Rjanzanceva, I. P.** Regularization of equations with accretive operators by the method of successive approximations. (Russian) *Sibirsk. Mat. Ž.* **21** (1980), no. 1, 223-226, 240. (Ja. I. Al'ber) **81d:65029** 65J15 (47H06)
- Rnash, G. F.** (with Hsiao, George C.) On the relationship between boundary value problems. *J. Math. Anal. Appl.* **68** (1979), no. 2, 557-566. (O. John) **81b:35023** 35J25
- Roads, John O.** Stable near-resonant states forced by perturbation heating in a simple baroclinic model. *J. Atmospheric Sci.* **37** (1980), no. 9, 1958-1967. (Author's summary) **81k:86007** 86A10
- Roon, Raymond C.** Composition operators on a space of Lipschitz functions. *Rocky Mountain J. Math.* **10** (1980), no. 2, 371-379. (J. A. Cima) **81g:30046** 30D99 (46E15, 47B38)
- Roon, Shi Shyr** See Yuan, Hai Shih
- Robaschik, D.** (with Bogoljubov, P. N.; Matveev, V. A.; Petrov, G. I.) Causality properties of form factors. *Rep. Math. Phys.* **10** (1976), no. 2, 195-202. (Authors' summary) **81i:81006** 81F10
(with Geyer, B.; Matveev, V. A.; Wiczeorek, E.) Analytical properties of conformal invariant four-point functions. *Rep. Math. Phys.* **10** (1976), no. 2, 203-211. (Charles L. Hammer) **81i:81051** 81E05
(with Geyer, B.; Wiczeorek, E.) Field-theoretic description of deep inelastic scattering. (Russian. English summary) *Fiz. Elementar. Častic i Atom. Jdra* **11** (1980), no. 1, 132-181. (Authors' summary) **81a:81063** 81F20
(with Bordag, M.) Light-cone expansion in renormalized perturbation theory. *Nuclear Phys. B* **169** (1980), no. 5-6, 445-460. (Authors' summary) **81f:81050** 81E15
- Robba, Philippe** Factorisation d'un opérateur différentiel. III. *Groupe d'Étude d'Analyse Ultramétrique* (3e année: 1975/76) Fasc. 1, Exp. No. 6, 6 pp., Secrétariat Math., Paris, 1977. (From the text) **81k:14021** 14G20 (47E05)
Prolongement algébrique et équations différentielles. *Proceedings of the Conference on p-adic Analysis* (Nijmegen, 1978), pp. 172-184, Report, 7806, Katholieke Univ., Nijmegen, 1978. (Alan Adolphson) **81d:12014** 12B40 (14G20)
(with Bosch, S.; Dwork, B.) Un théorème de prolongement pour des fonctions analytiques. *Math. Ann.* **252** (1979/80), no. 2, 165-173. (W. Bartenwerfer) **81m:32016** 32D25 (30G05)
(with Dwork, B.) On natural radii of p-adic convergence. *Trans. Amer. Math. Soc.* **256** (1979), 199-213. (Daniel Barsky) **81c:12030** 12B40 (34A25)
(with Dwork, B.) Effective p-adic bounds for solutions of homogeneous linear differential equations. *Trans. Amer. Math. Soc.* **259** (1980), no. 2, 559-577. (Alan Adolphson) **81k:12022** 12B40 (14G20)
- Robbiano, Lorenzo** A theorem on normal flatness. *Compositio Math.* **38** (1979), no. 3, 293-298. (Manfred Herrmann) **81c:13004** 13C99 (14B99)
Remarks on blowing-up divisorial ideals. *Manuscripta Math.* **30** (1979/80), no. 4, 375-382. (Mary Schaps) **81i:14003** 14B05 (13H10)
(with Valla, Giuseppe) On the equations defining tangent cones. *Math. Proc. Cambridge Philos. Soc.* **88** (1980), no. 2, 281-297. (Jonathan M. Wahl) **81i:14004** 14B05 (13H10)
- Robbins, David P.** The probability that neighbors remain neighbors after random rearrangements. *Amer. Math. Monthly* **87** (1980), no. 2, 122-124. (A. H. Tao) **81c:05009** 05A05
- Robbins, Herbert** (with Lai, Tze Leung) Limit theorems for weighted sums and stochastic approximation processes. *Proc. Nat. Acad. Sci. U.S.A.* **75** (1978), no. 3, 1068-1070. (Authors' summary) **81g:60029** 60F15 (60F17, 62L20)
(with Lai, Tze Leung) Adaptive design and stochastic approximation. *Ann. Statist.* **7** (1979), no. 6, 1196-1221. (V. Fabian) **81c:62093** 62L20 (62K99)
(with Lai, Tze Leung) Local convergence theorems for adaptive stochastic approximation schemes. *Proc. Nat. Acad. Sci. U.S.A.* **76** (1979), no. 7, 3065-3067. (V. Fabian) **81d:62089** 62L20
Some estimation problems for the compound Poisson distribution. *Asymptotic theory of statistical tests and estimation* (Proc. Adv. Internat. Sympos., Univ. North Carolina, Chapel Hill, N.C., 1979), pp. 251-257, Academic Press, New York, 1980. (I. Tiago de Oliveira) **81j:62067** 62F10 (62C12)
Estimation and prediction for mixtures of the exponential distribution. *Proc. Nat. Acad. Sci. U.S.A.* **77** (1980), no. 5, part 1, 2382-2383. (Divakar Sharma) **81f:62095** 62F10
(with Lai, Tze Leung; Levin, Bruce; Siegmund, David) Sequential medical trials. *Proc. Nat. Acad. Sci. U.S.A.* **77** (1980), no. 6, part 1, 3135-3138. (Authors' summary) **81c:62080** 62L05 (62P10, 92A07)
- Robbins, K. A.** Periodic solutions and bifurcation structure at high R in the Lorenz model. *SIAM J. Appl. Math.* **36** (1979), no. 3, 457-472. (Richard C. Churchill) **81i:58036** 58F13 (65L99)
- Robbins, Neville** A class of solutions of the equation $\phi(n) = 2n + 1$. *Fibonacci Quart.* **18** (1980), no. 2, 137-147. (Carl Pomerance) **81k:10007** 10A20
(with Pham The Lai) Sur un problème aux valeurs propres non linéaire. *Journal: Équations aux Dérivées Partielles* (Saint-Cast, 1979), Exp. No. 15, 5 pp., École Polytech., Palaiseau, 1979. (C. Bardos) **81c:35098** 35P20 (47F05)
(with Pham The Lai) Valeurs propres d'une classe d'équations différentielles singulières sur une demi-droite. *Ann. Scuola Norm. Sup. Pisa Cl. Sci.* (4) **6** (1979), no. 2, 335-366. (C. Bardos) **81c:35099** 35P20
- Robert, F.** Iterations sur des ensembles finis et automates cellulaires contractants. (English summary) *Linear Algebra Appl.* **29** (1980), 393-412. (Author's summary) **81d:68067** 68D20 (68B20)
- Robert, Gilles** (with Gillard, Roland) Groupes d'unités elliptiques. (English summary) *Bull. Soc. Math. France* **107** (1979), no. 3, 305-317. (Lawrence Washington) **81c:12009** 12A45 (10D25, 12A40)
Caractères exceptionnels. *J. Number Theory* **11** (1979), no. 2, 161-170. (Lawrence Washington) **81c:12010** 12A45 (10D25, 12A70)
- Robert, M. A.** (with Abraham, D. B.) Phase separation in the spherical model. *J. Phys. A* **13** (1980), no. 6, 2229-2245. (Authors' summary) **81d:82018** 82A25
- Robert, Pierre** (with Escoufier, Yves) Choosing variables and metrics by optimizing the RV-coefficient. *Optimizing methods in statistics* (Proc. Internat. Conf., Indian Inst. Tech. Bombay, 1977), pp. 205-219, Academic Press, New York, 1979. (P. A. K. Covey-Crump) **81d:62052** 62H25 (62-07)
- Roberts, A. P.** (with Smith, M. W. A.) The observability of initial- and lagging-state observers. *Inform. Sci.* **16** (1978), no. 2, 89-93. (Eitelbert N. Chukwu) **81c:93011** 93B07 (93C45)
- Roberts, Charles E., Jr.** (with de Korvin, André) Interchange of vector-valued integrals when the measures are Bochner or Pettis indefinite integrals. *Bull. Austral. Math. Soc.* **20** (1979), no. 2, 199-206. (Richard A. Alò) **81j:46009** 46G10 (28B05)
(with Alò, Richard A.; de Korvin, André) The optional sampling theorem for convex set-valued martingales. *J. Reine Angew. Math.* **310** (1979), 1-6. (S. D. Chatterji) **81i:60014** 60B99 (90A16)
(with Alò, Richard A.; de Korvin, André) On some properties of continuous multimeasures. *J. Math. Anal. Appl.* **75** (1980), no. 2, 402-410. (Michel Valadier) **81m:28012** 28B20
(with Alò, Richard A.; de Korvin, André) Some stability theorems for autonomous systems of differential equations in critical cases. *Utilitas Math.* **17** (1980), 111-126. (A. F. Izé) **81j:34087** 34D20
- Roberts, D. H.** (with Green, W. A.) Large axisymmetric deformation of a nonlinear viscoelastic circular membrane. (German summary) *Acta Mech.* **36** (1980), no. 1, 31-42. (Warren S. Edelstein) **81k:73027** 73G15
- Roberts, D. M.** (with Gittins, J. C.) The search for an intelligent evader concealed in one of an arbitrary number of regions. *Naval Res. Logist. Quart.* **26** (1979), no. 4, 651-666. (Lawrence D. Stone) **81b:90096** 90B40
- Roberts, F. D. K.** (with Barrodale, I.) Algorithms for restricted least absolute value estimation. Computations for least absolute values estimation. *Comm. Statist. B—Simulation Comput.* **6** (1977), no. 4, 353-363. (See **81h:62127**) 62J05 (65U05, 90C05)
- Roberts, Fred S.** ★Measurement theory. With applications to decisionmaking, utility and the social sciences. Advanced Book Program. Encyclopedia of Mathematics and its Applications, 7. Addison-Wesley Publishing Co., Reading, Mass., 1979. xxii+420 pp. ISBN 0-201-13506-X (R. D. Luce) **81b:90003** 90Axx (06-01, 90-01, 92A27)
Graph theory and the social sciences. *Applications of graph theory*, pp. 255-291. Academic Press, London, 1979. (See **81h:05050**) 92A20 (05Cxx)
Structure and stability in weighted digraph models. *Papers in mathematics*, pp. 64-77, Ann. New York Acad. Sci., 321, New York Acad. Sci., New York, 1979. (Author's summary) **81f:93004** 93A10 (90B05)
On the mobile radio frequency assignment problem and the traffic light phasing problem. *Second International Conference on Combinatorial Mathematics* (New York, 1978), pp. 466-483, Ann. New York Acad. Sci., 319, New York Acad. Sci., New York, 1979. (Saul Stahl) **81c:05071** 05C15 (90B20)
Indifference and seriation. *Topics in graph theory* (New York, 1977), pp. 173-182, Ann. New York Acad. Sci., 328, New York Acad. Sci., New York, 1979. (Saul Stahl) **81c:05120** 05C99 (05C75)
- Roberts, J. B.** (with Gaster, M.) On the estimation of spectra from randomly sampled signals: a method of reducing variability. *Proc. Roy. Soc. London Ser. A* **371** (1980), no. 1745, 235-258. (Authors' summary) **81d:94021** 94A34 (62M15)
- Roberts, J. D.** Linear model reduction and solution of the algebraic Riccati equation by use of the sign function. *Internat. J. Control* **32** (1980), no. 4, 677-687. (Author's summary) **81m:93042** 93C15 (93C05)

- Roberts, Jean E. Some Borsuk-Ulam type theorems. *Geometric topology (Proc. Georgia Topology Conf., Athens, Ga., 1977)*, pp. 693-698, Academic Press, New York, 1979. (A. V. Zarelua) **81m:55004** 55M20
- Roberts, Joel (with Holme, Audun) Pinch-points and multiple locus of generic projections of singular varieties. *Adv. in Math.* 33 (1979), no. 3, 212-256. (Knut Lønsted) **81c:14030** 14N10
- Some properties of double point schemes. *Compositio Math.* 41 (1980), no. 1, 61-94. (Ragni Piene) **81k:14044** 14N10 (14E99, 14J30, 57R45)
- Roberts, John (with Kalai, Ehud; Postlewaite, Andrew) Arbitration of exchange situations with public goods. *Applied game theory (Proc. Conf., Inst. Adv. Stud., Vienna, 1978)*, pp. 198-203, IHS—Studies, 1, Physica, Würzburg, 1979. (Authors' summary) **81d:90026** 90A14 (90D40)
- Roberts, John E. Mathematical aspects of local cohomology. *Algèbres d'opérateurs et leurs applications en physique mathématique (Proc. Colloq., Marseille, 1977)*, pp. 321-332, Colloques Internat. CNRS, 274, CNRS, Paris, 1979. (Jean Giraud) **81e:19017** 18G50 (81E99)
- Roberts, Leslie G. $SK_1 R[X, Y]/(X^2 + Y^2 - 1)$: remarks on an example of Bass and Milnor. *Bol. Soc. Brasil. Mat.* 10 (1979), no. 1, 77-82. (H. Bass) **81a:19008** 18F25 (12A62)
- An example of a decreasing Hilbert function. *C. R. Math. Rep. Acad. Sci. Canada* 2 (1980), no. 5, 265-268. (D. Kirby) **81j:13025** 13H15 (14H20)
- Roberts, Paul Abelian extensions of regular local rings. *Proc. Amer. Math. Soc.* 78 (1980), no. 3, 307-310. (R. A. Wiegand) **81a:13017** 13H05 (13H10)
- Roberts, S. M. Reduction and the Kagiwada-Kalaba method of invariant imbedding. *J. Math. Anal. Appl.* 72 (1979), no. 2, 615-628. (G. Anichini) **81c:34010** 34B10 (65L99)
- Multidimensional Kagiwada-Kalaba method of invariant imbedding with general linear implicit boundary conditions. *J. Math. Anal. Appl.* 77 (1980), no. 1, 73-99. (J. R. Cash) **81k:65094** 65L10 (34B05)
- Robertson, Edmund F. (with Campbell, Colin M.) Finitely presented groups of Fibonacci type. II. *J. Austral. Math. Soc. Ser. A* 28 (1979), no. 2, 250-256. (A. M. Brunner) **81e:20040** 20F05
- (with Campbell, Colin M.) A deficiency zero presentation for $SL(2, p)$. *Bull. London Math. Soc.* 12 (1980), no. 1, 17-20. (James E. Humphreys) **81d:20023** 20F05
- Robertson, Edward L. (with Purdom, Paul Walton, Jr.; Brown, Cynthia A.) Backtracking with multilevel dynamic search rearrangement. *Acta Inform.* 15 (1981), no. 2, 99-113. (Authors' summary) **81m:68049** 68E05
- Robertson, Jack M. (with DeTemple, Duane W.) On generalized symmetric means of two variables. *Univ. Beograd. Publ. Elektrotehn. Fak. Ser. Mat. Fiz.* No. 634-677 (1979), 236-238. (Paul R. Boesack) **81h:26014** 26D15
- Robertson, James E. The ORDVAC and the ILLIAC. *A history of computing in the twentieth century*, pp. 347-364, Academic Press, New York, 1980. (See **81i:68002**) 68-03 (01A65)
- Robertson, Tim Testing for and against an order restriction on multinomial parameters. *J. Amer. Statist. Assoc.* 73 (1978), no. 361, 197-202. (Author's summary) **81g:62044** 62F05
- (with Wright, F. T.) Algorithms in order restricted statistical inference and the Cauchy mean value property. *Ann. Statist.* 8 (1980), no. 3, 645-651. (James N. Adichie) **81m:62047** 62F10 (62C20)
- Robertson, W. J. (with Yeomans, F. E.) On the stability of barrelled topologies. I. *Bull. Austral. Math. Soc.* 20 (1979), no. 3, 385-395. (I. Tweddle) **81a:46007** 46A07 (46A20)
- (with Tweddle, I.; Yeomans, F. E.) On the stability of barrelled topologies. III. *Bull. Austral. Math. Soc.* 22 (1980), no. 1, 99-112. (Author's review (I.T.)) **81m:46006** 46A07 (46A20)
- Roberty, N. C. (with Minelli, T. A.; Pusterla, M.) Analytical approximate solutions of the nonlinear basic equations in classical physics. *Lett. Nuovo Cimento* (2) 27 (1980), no. 11, 331-335. (B. Buti) **81a:34011** 34A45 (76X05, 78A55)
- Robin, I. A. (with Markellos, Vassilis) Numerical determination of three-dimensional periodic orbits generated from vertical self-resonant satellite orbits. *Celestial Mech.* 21 (1980), no. 4, 395-434. (Authors' summary) **81a:70030** 70M10 (70M05)
- Bifurcations of plane with three-dimensional periodic orbits in the elliptic restricted problem. *Celestial Mech.* 23 (1981), no. 1, 97-106. (Author's summary) **81m:70016** 70F07 (34C25, 58F14)
- Robinet, André Intervention terminale. *Leibniz in Paris (1672-1676) (Sympos. G. W. Leibniz Soc./CNRS, Chantilly, 1976)*, Vol. II (French), pp. 169-170, Studia Leibnitiana Suppl., XVIII, Steiner, Wiesbaden, 1978. (See **81m:01022b**) 01A45
- Robinet, Bernard See *Symposium: Programming*, **81j:68010**
- Robinson, Clark (with Young, Lai Sang) Nonabsolutely continuous foliations for an Anosov diffeomorphism. *Invent. Math.* 61 (1980), no. 2, 159-176. (C. S. Hartzman) **81m:58061** 58F15 (34D20)
- See also *Global theory of dynamical systems*, **81j:58002**
- Robinson, D. R. Optimality conditions for a Markov decision chain with unbounded costs. *J. Appl. Probab.* 17 (1980), no. 4, 996-1003. (E. A. Fainberg) **81m:90107** 90C40
- Robinson, David Foster Decomposition of integral pseudometrics. *Combinatorial mathematics, VI (Proc. Sixth Austral. Conf., Univ. New England, Armidale, 1978)*, pp. 112-118, *Lecture Notes in Math.*, 748, Springer, Berlin, 1979. (Alain J. Phares) **81f:05018** 05A17 (10A45)
- (with Foulds, Les R.) Comparison of weighted labelled trees. *Combinatorial mathematics, VI (Proc. Sixth Austral. Conf., Univ. New England, Armidale, 1978)*, pp. 119-126, *Lecture Notes in Math.*, 748, Springer, Berlin, 1979. (Nicholas Wormald) **81j:05052** 05C05
- (with Foulds, Les R.) Construction properties of combinatorial deltahedra. *Discrete Appl. Math.* 1 (1979), no. 1-2, 75-87. (F. Harary) **81h:05091** 05C99 (52A25, 90B10)
- Egyptian fractions via Greek number theory. *New Zealand Math. Mag.* 16 (1979/80), no. 2, 47-52. (E. J. Barbeau) **81c:10013** 10A30 (10A05)
- The mathematician and the carpet tiles. *New Zealand Math. Mag.* 16 (1979/80), no. 3, 85-93. (B. Artmann) **81e:00010** 00A25 (52A45)
- (with Foulds, Les R.) Digraphs: theory and techniques. *Gordon & Breach Science Publishers, New York*, 1980. xv + 256 pp. ISBN 0-677-05470-X (Pavel Tomasta) **81h:05055** 05C20 (05-01)
- Robinson, Derek J. S. Infinite torsion groups as automorphism groups. *Quart. J. Math.* Oxford Ser. (2) 30 (1979), no. 119, 351-364. (Seymour Bachmuth) **81c:20023** 20F28 (with Hartley, Brian) On finite complete groups. *Arch. Math. (Basel)* 35 (1980), no. 1-2, 67-74. (Koichiro Harada) **81g:20048** 20D45
- (with Lennox, John C.) Soluble products of nilpotent groups. *Rend. Sem. Mat. Univ. Padova* 62 (1980), 261-280. (John F. Bowers) **81j:20050** 20F16 (20F18, 20J99)
- Infinite soluble groups with no outer automorphisms. *Rend. Sem. Mat. Univ. Padova* 62 (1980), 281-294. (John F. Bowers) **81j:20051** 20F16
- Robinson, Derek W. (with Bratteli, Ola) \star Operator algebras and quantum statistical mechanics. Vol. 1. C^* - and W^* -algebras, algebras, symmetry groups, decomposition of states. Texts and Monographs in Physics. Springer-Verlag, New York-Heidelberg, 1979. xii + 500 pp. ISBN 0-387-09187-4 (H. Araki) **81a:46070** 46Lxx (81D99, 81E05, 82A15)
- A review of derivations. *Mathematical problems in theoretical physics (Proc. Internat. Conf. Math. Phys., Lausanne, 1979)*, pp. 377-391, *Lecture Notes in Phys.*, 116, Springer, Berlin, 1980. (C. J. K. Batty) **81j:46091** 46L55 (47B47, 82A15)
- (with Sturmer, Erling) Lie and Jordan structures in operator algebras. *J. Austral. Math. Soc. Ser. A* 29 (1980), no. 2, 129-142. (Pierre de la Harpe) **81d:46067** 46L99 (17B60, 17C65)
- Robinson, Donald W. The Frobenius rank equality for morphisms. *Linear Algebra Appl.* 29 (1980), 413-421. (H.-B. Brinkmann) **81j:18015** 18E10
- Robinson, Eric E. Inverse systems for light-open mappings onto polyhedra. *Houston J. Math.* 5 (1979), no. 3, 395-406. (P. T. Church) **81h:57031** 57S10 (54C10, 54F25, 57M12, 57S30)
- Robinson, G. C. (with Welsh, Dominic) The computational complexity of matroid properties. *Math. Proc. Cambridge Philos. Soc.* 87 (1980), no. 1, 29-45. (From the introduction) **81m:68035** 68C25
- Robinson, G. de B. Alfred Young as I knew him. *Combinatorics, representation theory and statistical methods in groups*, pp. 1-14, *Lecture Notes in Pure and Appl. Math.*, 57, Dekker, New York, 1980. (J. Dieudonné) **81m:01072** 01A70 (01A60)
- Robinson, J. P. See *Bose, Bela*, **81d:94030**
- Robinson, Jennifer M. The global 2000 study: an attempt to increase consistency in government forecasting. *Optimization techniques (Proc. Ninth IFIP Conf., Warsaw, 1979)*, Part 1, pp. 137-142, *Lecture Notes in Control and Information Sci.*, 22, Springer, Berlin, 1980. (See **81j:49001a**) 90A30
- Robinson, John Four-node quadrilateral stress membrane element with rotational stiffness. *Internat. J. Numer. Methods Engrg.* 15 (1980), no. 10, 1567-1569. (Author's summary) **81j:65125** 65N30
- Robinson, M. L. (with Alladi, K.) On certain irrational values of the logarithm. *Number theory, Carbondale 1979 (Proc. Southern Illinois Conf., Southern Illinois Univ., Carbondale, Ill., 1979)*, pp. 1-9, *Lecture Notes in Math.*, 751, Springer, Berlin, 1979. (Authors' introduction) **81j:10044** 10F35
- (with Alladi, K.) Legendre polynomials and irrationality. *J. Reine Angew. Math.* 318 (1980), 137-155. (F. Beukers) **81i:10036** 10F35
- Rhodes-Robinson, P. F. See *Rhodes-Robinson*, P. F.
- Robinson, P. M. Time series modeling and estimation over frequency bands. *Proceedings of the First International Conference on Mathematical Modeling (St. Louis, Mo., 1977)*, Vol. 1, pp. 459-468, Univ. Missouri-Rolla, Rolla, Mo., 1977. (Author's summary) **81k:62135** 62M15
- Distributed lag approximation to linear time-invariant systems. *Ann. Statist.* 7 (1979), no. 3, 507-515. (E. J. Hannan) **81j:62132** 62M10 (62E20)
- Robinson, R. Clark (with Murdoch, James) Qualitative dynamics from asymptotic expansions: local theory. *J. Differential Equations* 36 (1980), no. 3, 425-441. (Richard Cushman) **81h:58053** 58F30 (34C29)
- Structural stability on manifolds with boundary. *J. Differential Equations* 37 (1980), no. 1, 1-11. (Carmen Chicone) **81m:58041** 58F09 (34C35)
- (with Murdoch, James) A note on the asymptotic expansion of eigenvalues. *SIAM J. Math. Anal.* 11 (1980), no. 3, 458-459. (W. Allegretto) **81k:15013** 15A18 (47A70)
- Robinson, Raphael M. Undecidable tiling problems in the hyperbolic plane. *Invent. Math.* 44 (1978), no. 3, 259-264. (Editors) **81k:30091** 03D35 (05B45)
- Robinson, Robert W. (with Harary, Frank; Wormald, Nicholas C.) Isomorphic factorisations. III. Complete multipartite graphs. *Combinatorial mathematics (Proc. Internat. Conf. Combinatorial Theory, Australian Nat. Univ., Canberra, 1977)*, pp. 47-54, *Lecture Notes in Math.*, 686, Springer, Berlin, 1978. (Jean-Claude Bermond) **81c:05111** 05C99
- Isomorphic factorisations. VI. Automorphisms. *Combinatorial mathematics, VI (Proc. Sixth Austral. Conf., Univ. New England, Armidale, 1978)*, pp. 127-136, *Lecture Notes in Math.*, 748, Springer, Berlin, 1979. (Jean-Claude Bermond) **81c:05083** 05C25 (05C70)
- Robinson, Stephen M. Strongly regular generalized equations. *Math. Oper. Res.* 5 (1980), no. 1, 43-62. (M. B. Suryanarayana) **81m:90109** 90C48 (58C15, 90C31)
- See also *Analysis and computation of fixed points*, **81j:65093**
- Robinson, William (with Dubinsky, Ed) Quotient spaces of (\mathfrak{g}) with basis. *Studia Math.* 63 (1978), no. 3, 267-281. (Authors' summary) **81g:46006** 46A12 (46A45)
- Robison, John See *Pedersen, Kurt Møller*, **81j:01017**
- Robson, D. (with Webber, D. M.) Gauge theories on a small lattice. *Z. Phys. C* 7 (1980/81), no. 1, 53-60. (Authors' summary) **81m:81051** 81E99
- Robson, J. C. Well quasi-ordered sets and ideals in free semigroups and algebras. *J. Algebra* 55 (1978), no. 2, 521-535. (From the introduction) **81h:20075** 20M05 (06A99, 16A66)
- \star Some results on ring extensions. Edited by Christine Bessenrodt. *Vorlesungen aus dem Fachbereich Mathematik der Universität Essen (Lecture Notes in Mathematics at the University of Essen)*, 4. *Universitäts Essen, Fachbereich Mathematik, Essen*, 1979. 79 pp. (W. S. Martindale, III) **81a:16018** 16A56 (16A12)
- Generators of the polynomials satisfied by matrices. *Ring theory (Proc. Antwerp Conf. (NATO Adv. Study Inst.), Univ. Antwerp, Antwerp, 1978)*, pp. 243-255, *Lecture Notes in Pure and Appl. Math.*, 51, Dekker, New York, 1979. (A. V. Jategaonkar) **81i:16023** 16A38
- Robson, J. M. The height of binary search trees. *Austral. Comput. J.* 11 (1979), no. 4, 151-153. (Author's summary) **81a:68071** 68E10 (68E05)
- Robson, R. E. (with Kumar, Kailash; Skulerrud, H. R.) Kinetic theory of charged particle

- swarms in neutral gases. *Austral. J. Phys.* 33 (1980), no. 2, B, 343-448. (Authors' summary) **81j:82620** 82A40 (82A70)
- Roby, Norbert Lois polynômes multiplicatives universelles. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 19, A869-A871. (C. R. Fletcher) **81j:13011** 13C99
- ronchi della Rocca, S. See Ronchi Della Rocca, S.
- rahbar-Rinchandel, Hamid See Rahbar-Rinchandel, Hamid
- Reich, Jean-Claude ★Mathématiques pour la gestion de l'environnement. (French) [Mathematics for the management of the environment] With a preface by Dominique de Werra. Interdisciplinary Systems Research, 74. Birkhäuser Verlag, Basel-Boston, Mass., 1980. xii + 413 pp. ISBN 3-7643-1126-6 (P. Bertrand) **81j:92001** 92-02 (90Bxx, 92A17)
- Reichberg, R. (with Coifman, Ronald R.; Cwikel, M.; Sagher, Yoram; Weiss, Guido) Complex interpolation for families of Banach spaces. *Harmonic analysis in Euclidean spaces (Proc. Sympos. Pure Math., Williams Coll., Williamstown, Mass., 1978), Part 2*, pp. 269-282, *Proc. Sympos. Pure Math., XXXV, Part 2, Amer. Math. Soc., Providence, R.I., 1979*. (Bernard Beauzamy) **81j:46002** 46M35
- (with Coifman, Ronald R.; Weiss, Guido; Cwikel, M.; Sagher, Yoram) The complex method for interpolation of operators acting on families of Banach spaces. *Euclidean harmonic analysis (Proc. Sem., Univ. Maryland, College Park, Md., 1979)*, pp. 123-153, *Lecture Notes in Math.*, 779, Springer, Berlin, 1980. (M. Z. Berkolaiko) **81j:46075** 46M35 (46E30)
- (with Coifman, Ronald R.) Another characterization of BMO. *Proc. Amer. Math. Soc.* 79 (1980), no. 2, 249-254. (W. R. Madych) **81j:42067** 42B25 (42B30)
- Roche, J. R. Sur le calcul de l'exponentielle d'une matrice. *Padé approximation and its applications (Proc. Conf., Univ. Antwerp, Antwerp, 1979)*, pp. 246-256, *Lecture Notes in Math.*, 765, Springer, Berlin, 1979. (From the introduction) **81j:65033** 65F30
- Rochette, René (with Lakshminarayan, Sankaran; Lakshmanan, Ram; Papineau, Robert L.) Order preserving allocation of jobs to two nonidentical parallel machines: a solvable case of the maximum cut problem. (French summary) *INFOR-Canad. J. Oper. Res. Inform. Process.* 17 (1979), no. 3, 230-241. (N. N. Mirenkov) **81h:90078** 90B35 (68C15)
- Rockafellar, R. T. Generalized directional derivatives and subgradients of nonconvex functions. *Canad. J. Math.* 32 (1980), no. 2, 257-280. (Françoise Berquier) **81f:49006** 49A27 (46G05, 58C20, 90C30)
- Rod, David L. (with Churchill, Richard C.) Pathology in dynamical systems. III. Analytic Hamiltonians. *J. Differential Equations* 37 (1980), no. 1, 23-38. (Robert L. Devaney) **81k:58034** 58F05 (34C35, 70H99)
- Rodabaugh, S. E. Upper semicontinuous decompositions of convex metric spaces. *Fund. Math.* 105 (1979/80), no. 3, 213-227. (Jimmie D. Lawson) **81j:54008** 54B15 (54E45)
- Ridder, W. A satisfying aggregation of objectives by duality. *Multiple criteria decision making theory and application (Proc. Third Conf., Hagen/Königswinter, 1979)*, pp. 389-399, *Lecture Notes in Econ. and Math. Systems*, 177, Springer, Berlin, 1980. (Authors' summary) **81d:90028** 90A14 (90C05)
- Rode, É. E. (with Bleier, Ja. F.; Grinhof, M. F.; Spalvin', A. P.; Janbicki, R. A.) Parallel computing methods and means for solving boundary value problems of field theory. (Russian) *Latojas PSR Zinaty. Akad. Vsesi* 1980, no. 6(395), 105-117, 159-160. (Authors' summary) **81g:78042** 78A99 (65N05)
- Rodeh, Michael (with Pratt, Vaughan R.; Even, Shimon) Linear algorithm for data compression via string matching. *J. Assoc. Comput. Mach.* 28 (1981), no. 1, 16-24. (Authors' summary) **81m:68036** 68C25
- rodríguez-Rodríguez, E. See García-Rodríguez Fernández, E.
- Rodemich, Eugene R. (with Baumert, Leonard D.; McEliece, Robert J.; Rumsey, Howard, Jr.) A probabilistic version of Sperner's theorem. *Ars Combin.* 9 (1980), 91-100. (Charles M. Grinstead) **81j:50001** 05A05 (04A20)
- (with McEliece, Robert J.) The Constantin-Rao construction for binary asymmetric error-correcting codes. *Inform. and Control* 44 (1980), no. 2, 187-196. (Bart Rice) **81f:94028** 94B60
- sierra Rodero, Germán See Sierra Rodero, Germán
- Rodgers, William E. (with Luckey, Robert B.) Burst-error-correcting convolutional codes with short constraint length. *IEEE Trans. Inform. Theory* 26 (1980), no. 3, 354-359. (Authors' summary) **81h:94045** 94B20 (94B10)
- Rodhe, Henning (with Grandell, Jan) A mathematical model for the residence time of aerosol particles removed by precipitation scavenging. *Transactions of the Eighth Prague Conference on Information Theory, Statistical Decision Functions, Random Processes (Prague, 1978), Vol. A*, pp. 247-261, Reidel, Dordrecht, 1978. (P. D. M. Macdonald) **81j:60080** 60K10 (86A10)
- Rodin, Burton (with Warschawski, Stefan E.) Extremal length and univalent functions. III. Consequences of the Ahlfors distortion property. *Bull. Inst. Math. Acad. Sinica* 6 (1978), no. 2, 583-597. (Stanislaw Walczak) **81k:30013** 30C35 (30C75, 30C85)
- (with Warschawski, Stefan E.) Estimates of the Riemann mapping function near a boundary point. *Romanian-Finnish Seminar on Complex Analysis (Proc., Bucharest, 1976)*, pp. 349-366, *Lecture Notes in Math.*, 743, Springer, Berlin, 1979. (E. C. Schlesinger) **81f:30005** 30C35 (30D40)
- (with Warschawski, Stefan E.) Extremal length and univalent functions. II. Integral estimates of strip mappings. *J. Math. Soc. Japan* 31 (1979), no. 1, 87-99. (Y. Komatu) **81k:30012** 30C35 (30C75, 30C85)
- (with Warschawski, Stefan E.) On the derivative of the Riemann mapping function near a boundary point and the Visser-Ostrowski problem. *Math. Ann.* 248 (1980), no. 2, 125-137. (D. Gaier) **81d:30049** 30D40 (30C35)
- Rodin, Ju. L. The structure of the general solution of a Riemann boundary value problem for a holomorphic vector-valued function on a compact Riemann surface. (Russian) *Questions in the metric theory of mappings and its application (Proc. Fifth Colloq. Quasiconformal Mappings, Generalizations Appl., Donetsk, 1976) (Russian)*, pp. 109-120, 185, "Naukova Dumka", Kiev, 1978. (Authors' summary) **81k:30063** 30F10
- (with Turakulov, A.) The Riemann boundary value problem for generalized analytic functions with singular coefficients on a compact Riemann surface. (Russian. Georgian and English summaries) *Sobch. Akad. Nauk Gruz. SSR* 96 (1979), no. 1, 21-24. (E. V. Tjurikov) **81j:30055** 30E25 (30F30, 30G20)
- Rodino, Luigi Nonsolvability of a higher-order degenerate elliptic pseudodifferential equation. *Amer. J. Math.* 102 (1980), no. 1, 1-12. (M. S. Agranović) **81i:35008** 35H05 (35A07)
- (with Parenti, Cesare) Examples of hypoelliptic operators which are not microhypoelliptic. (Italian summary) *Boll. Un. Mat. Ital. B* 5 (17) (1980), no. 1, 390-409. (Makhlouf Derridj) **81f:35028** 35H05 (35S05)
- mascarello Rodino, Maria See Mascarello Rodino, Maria
- Rodionov, A. Ja. (with Alekseev, A. I.; Arbuzov, B. A.) The possibility of dynamical mass generation in finite quantum electrodynamics. (Russian. English summary) *Teoret. Mat. Fiz.* 42 (1980), no. 3, 291-305. (Nguyễn Văn Hiệ) **81k:81124** 81L05 (81E15, 81F30)
- Rodionov, A. M. An application of integro-differential equations in the problem of synthesizing linear optimal systems with delay. (Russian) *Differentsial'nye Uravneniya* 15 (1979), no. 6, 1106-1112, 1150-1151. (K. Seitz) **81c:45019** 45J05 (93C05)
- Rödl, Vojtěch (with Nešetřil, Jaroslav) On Ramsey minimal graphs. (French summary) *Problèmes combinatoires et théorie des graphes (Colloq. Internat. CNRS, Univ. Orsay, Orsay, 1976)*, pp. 307-308, *Colloques Internat. CNRS*, 260, CNRS, Paris, 1978. (See 80c:05005) 05C55
- (with Nešetřil, Jaroslav) Partition theory and its application. *Surveys in combinatorics (Proc. Seventh British Combinatorial Conf., Cambridge, 1979)*, pp. 96-156, *London Math. Soc. Lecture Note Ser.*, 38, Cambridge Univ. Press, Cambridge, 1979. (A. Pultr) **81m:05015** 05A17 (05-02, 05C55)
- (with Nešetřil, Jaroslav) On Ramsey graphs without cycles of short odd length. *Comment. Math. Univ. Carolin.* 20 (1979), no. 3, 565-582. (R. L. Graham) **81h:05003** 05C55 (05C38)
- (with Nešetřil, Jaroslav) A short proof of the existence of highly chromatic hypergraphs without short cycles. *J. Combin. Theory Ser. B* 27 (1979), no. 2, 225-227. (F. Harary) **81h:05048** 05C15 (05C65)
- (with Reiterman, Jan) Atoms in uniformities. (Czech) *Pokroky Mat. Fyz. Astron.* 25 (1980), no. 4, 208-217. (Pavel Pták) **81k:54038** 54E15 (54A25)
- Rodman, Leiba (with Gohberg, Israel; Kaashoek, Marinus A.) Spectral analysis of families of operator polynomials and a generalized Vandermonde matrix. I. The finite-dimensional case. *Topics in functional analysis (essays dedicated to M. G. Krein on the occasion of his 70th birthday)*, pp. 91-128, *Advances in Math., Suppl. Studies*, 3, Academic Press, New York, 1978. (Heinz Langer) **81j:47027a** 47A99 (15A18, 15A30, 47A68, 47D99)
- (with Gohberg, Israel; Kaashoek, Marinus A.) Spectral analysis of families of operator polynomials and a generalized Vandermonde matrix. II. The infinite-dimensional case. *J. Funct. Anal.* 30 (1978), no. 3, 358-389. (Heinz Langer) **81j:47027b** 47A99 (15A18, 15A30, 47A68, 47D99)
- (with Schaps, M.) On the partial multiplicities of a product of two matrix polynomials. *Integral Equations Operator Theory* 2 (1979), no. 4, 565-599. (K. Veselić) **81k:15021** 15A24 (47A68)
- (with Gohberg, Israel; Lerer, L.) Stable factorization of operator polynomials. I. Spectral divisors simply behaved at infinity. *J. Math. Anal. Appl.* 74 (1980), no. 2, 401-431. (Peter Lancaster) **81m:47028a** 47A68 (47B35)
- (with Gohberg, Israel; Lerer, L.) Stable factorization of operator polynomials. II. Main results and applications to Toeplitz operators. *J. Math. Anal. Appl.* 75 (1980), no. 1, 1-40. (Peter Lancaster) **81m:47028b** 47A68 (47B35)
- On connected components in the set of divisors of a monic matrix polynomial. *Linear Algebra Appl.* 31 (1980), 33-42. (Peter Lancaster) **81h:15009** 15A23 (32B05)
- malart Rodón, David See Nualart Rodón, David
- Rodrigo, P. (with Gaurvit, M.) Convergence des algorithmes bayesiens en boucle ouverte et fermée. (English summary) With comments by P. Variava. *RAIRO Automat.* 14 (1980), no. 1, 33-54. (Authors' summary) **81j:93097** 93E99
- Rodriguez, A. J. Convergence of Padé kernel approximants to the delayed Dirac function. *J. Inst. Math. Appl.* 25 (1980), no. 1, 17-27. (Pierre Hillion) **81c:41031** 41A21 (30E10, 65D15)
- Rodrigues, Alexandre H. S. Statmoanalysis. (Portuguese) *Proceedings of the First Spanish-Portuguese Mathematical Conference (Madrid, 1973) (Spanish)*, pp. 372-383, *Consejo Sup. Inv. Cient., Madrid*, 1977. (See 81j:00009) 03C05
- Rodrigues, Flávio W. On an inverse problem for reducible Markov chains. *Proceedings of the 3rd National Symposium on Probability and Statistics (Inst. Mat. Estatist., Univ. São Paulo, São Paulo, 1978) (Portuguese)*, pp. 96-98, Univ. São Paulo, São Paulo, 1978. (From the text) **81m:60128** 60J10
- Rodrigues, José-Francisco Sur un problème à frontière libre stationnaire traduisant la cristallisation d'un métal. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 17, A823-A825. (Authors' summary) **81c:80010** 80A20 (35Q20)
- Rodrigues, Paulo R. (with Roussarie, Robert) Sur l'existence de séparatrices pour les germes de difféomorphismes du plan. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 286 (1978), no. 11, A503-A506. (Authors' summary) **81c:58045** 58F19 (57R25, 58C40)
- Rodrigues Cadete, M. Odete C. (with Farinha Cadete, Antonio M.) A program for curve-fitting for an ICL 4130 computer. (Portuguese) *Proceedings of the First Spanish-Portuguese Mathematical Conference (Madrid, 1973) (Spanish)*, pp. 671-677, *Consejo Sup. Inv. Cient., Madrid*, 1977. (Editors) **81m:65023** 65D10
- Rodriguez, A. (with Bastos Filho, J. B.; Baltensperger, W.) Form of the memory function for a degenerate electron gas with elastic scatterers. *Z. Phys. B* 39 (1980), no. 3, 207-211. (Authors' summary) **81j:82060** 82A65
- Rodriguez, F. Compelled operations and operations of degree p. *Math. Systems Theory* 13 (1979/80), no. 4, 331-347. (Authors' summary) **81j:68113** 68F05
- erice Rodriguez, F. Javier See Erice Rodriguez, F. Javier
- rivera Rodriguez, Pedro Humberto See Rivera Rodriguez, Pedro Humberto
- Rodriguez-Camino, E. (with González Gascón, F.) Symmetries, first integrals, and differential forms of dynamical systems. *Hadronic J.* 3 (1979/80), no. 3, 1059-1079. (Clark Robinson) **81g:58010** 58F05 (58F35, 70H99)
- (with González Gascón, F.; Moreno-Inertis, F.) The inverse problem of nonlinear dynamical systems: a constructive approach. *Hadronic J.* 3 (1979/80), no. 5, 1491-1520. (Noel G. Lloyd) **81j:34021** 34A55 (58F22, 83A05)
- (with González Gascón, F.) New results and open problems concerning the obtention of first integrals and pseudosymmetries of dynamical systems. *Lett. Nuovo Cimento* (2) 27 (1980), no. 12, 363-368. (Mineo Ikeda) **81k:58057** 58F35 (58F99, 70H99)

- (with González Gascón, F.) On the axoids of a moving rigid body. *Lett. Nuovo Cimento* (2) 27 (1980), no. 13, 409–412. (M. Hussain) **81h:70091** 70E15 (53A17)
- (with González Gascón, F.) On a certain kind of invariant sets of dynamical systems. *Lett. Nuovo Cimento* (2) 27 (1980), no. 13, 429–432. (Mineo Ikeda) **81h:58058** 58F35 (58F99, 70H99)
- Rodriguez-Gómez, Jesús Dirac mechanics and Landau two-fluid model in ^4He II. *Internat. J. Theoret. Phys.* 19 (1980), no. 7, 477–484. (Authors' summary) **81h:81186** 81J05
- Rodriguez Palacios, Ángel A Vidav-Palmer theorem for Jordan C^* -algebras and related topics. *J. London Math. Soc.* (2) 22 (1980), no. 2, 318–332. (Horst Behncke) **81j:46096** 46L05 (46K05, 47A12)
- Rodiers, K. A. See Rogers, C. A.
- Rodnik, E. G. (with Litvinenko, I. N.) Longitudinal bending of a rod with complexly distributed forces. (Russian) *Teoret. i Prikl. Meh. (Minsk)* No. 7 (1980), 58–63, 3. (Authors' summary) **81k:73035** 73K05 (73H99)
- Roe, J. A characterization of the sine function. *Math. Proc. Cambridge Philos. Soc.* 87 (1980), no. 1, 69–73. (R. A. Askey) **81a:33001** 33A10 (26A12)
- Roecherath, M. Th. (with Butzer, P. L.; Hahn, L.) General theorems on "little-o" rates of closeness of two weighted sums of independent Hilbert space valued random variables with applications. *J. Multivariate Anal.* 9 (1979), no. 4, 487–510. (Robert L. Taylor) **81f:60012** 60B12
- Roeder, B. (with Toutenburg, H.) Minimax-linear and Theil estimator for restrained regression coefficients. (German and Russian summaries) *Math. Operationsforsch. Statist. Ser. Statist.* 9 (1978), no. 4, 499–505. (Prem K. Goel) **81d:62065** 62J05 (62C20)
- Roel, Frank Über distributive Paare von Ringen und arithmetische, nilpotente Ringe. (English summary) *Manuscripta Math.* 31 (1980), no. 1–3, 1–16. (I. Gy. Maurer) **81f:16020** 16A22
- Rokhars, D. (with Langouche, F.; Tirapegui, E.) WKB-type expansion for Langevin equations. *Phys. A* 101 (1980), no. 2–3, 301–323. (Authors' summary) **81d:82005** 82A05 (58G32, 60J70, 81C35)
- (with Langouche, F.; Tirapegui, E.) Comment on functional integration and the Onsager-Machup Lagrangian in Riemannian geometries. *Phys. Rev. A* (3) 21 (1980), no. 4, 1344–1346. (Authors' summary) **81h:81031** 81C35 (58D20, 82A35)
- Rodley, P. (with Dibos, O.) Caractérisation d'une famille de quasi-ordres bâtis sur un ensemble de quasi-critères. (English summary) *Cahiers Centre Études Rech. Opér.* 22 (1980), no. 1, 51–72. (Authors' summary) **81a:90018** 90A06
- Roe, J. On an example of impossibility to build a canonical transformation when the eigenvalues are zero. Proceedings of the Sixth Conference on Mathematical Methods in Celestial Mechanics (Math. Forschungsinst., Oberwolfach, 1978), Part II. *Celestial Mech.* 21 (1980), no. 2, 203–211. (Doré Dukić) **81e:70016** 70H15 (70E15)
- Romer, John E. A general equilibrium approach to Marxian economics. *Econometrica* 48 (1980), no. 2, 505–530. (M. S. Stulman) **81h:90034** 90A14
- Rosenbluth, G. (with Hein, S.) Vortices in infinite free Bose systems. *Ann. Inst. H. Poincaré Sect. A (N.S.)* 32 (1980), no. 1, 21–31. (Authors' summary) **81j:82009** 82A15 (46C99, 81Hxx)
- Rover, Clara Silvia (with Giacardi, Livia; Viola, Tullio) Contribution à l'interprétation d'un passage du dialogue *Théétète* de Platon, concernant Théodore de Cyrène. *C. R. Acad. Sci. Paris Vie Académique* 287 (1978), no. 7–11, 41–46. (William C. Waterhouse) **81f:01002** 01A20 (01F35)
- Rosel, F. (with Hänggi, P.; Trautmann, D.) Evaluation of infinite series by use of continued fraction expansions: a numerical study. *J. Comput. Phys.* 37 (1980), no. 2, 242–258. (Authors' summary) **81k:65006** 65B10
- de Rover, J. W. Analytic representations and Fourier transforms of analytic functionals in Z' carried by the real space. *SIAM J. Math. Anal.* 9 (1978), no. 6, 996–1019. (Z. Zielesny) **81d:46047** 46F15 (32A45)
- de Rover, Willem P. (with Francoz, Nissim; Hoare, C. A. R.; Lehmann, Daniel J.) Semantics of nondeterminism, concurrency, and communication. *J. Comput. System Sci.* 19 (1979), no. 3, 290–308. (From the introduction) **81a:68090** 68F20 (68B10)
- Rufe-Beketov, F. S. Generalization of the Prüfer transformation and the discrete spectrum in gaps of the continuous spectrum. (Russian) *Spectral theory of operators (Proc. Second All-Union Summer Math. School, Baku, 1975) (Russian)*, pp. 146–153, "Ekm", Baku, 1979. (M. Otelbaev) **81h:34021** 34B25 (47E05)
- (with Kogan, V. I.) Deficiency indices for systems with a Nevanlinna weight. (Russian) *Spectral theory of operators (Proc. Second All-Union Summer Math. School, Baku, 1975) (Russian)*, pp. 153–161, "Ekm", Baku, 1979. (J. B. Butler, Jr.) **81d:34020** 34B25 (47E05)
- Rogak, E. D. On some necessary conditions for optimality in a Banach space. *J. Math. Anal. Appl.* 68 (1979), no. 1, 152–156. (E. O. Roxin) **81i:49019** 49B27
- Rogov, D. I. (with Krickaja, S. S.) A mathematical consideration of the problem of longitudinal impact on a rod in the presence of the Boltzmann-Volterra law. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1980, no. 4, 47–52. (H. G. Hopkins) **81h:73025** 73F15 (73D05)
- Roger, Claude Homology of affine groups, and classifying spaces of piecewise linear foliations. (Russian) *Funkcional. Anal. i Prilozhen.* 13 (1979), no. 4, 47–52, 96. (B. Cenkl) **81e:57032** 57R32
- Sur la cohomologie de l'espace classifiant des feuilletages symplectiques. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 13, A617–A619. (Edgar H. Brown, Jr.) **81h:57027** 57R30 (58H10)
- Roger, Claudine (with Valton, Michel; Guillaume, Jean-Louis; Hoffmann, Patrick) Une solution formelle de la hiérarchie B.B.G.K.Y. (Bogoliubov, Born, Green, Kirkwood, Yvon). (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 291 (1980), no. 5, B137–B140. (Authors' summary) **81h:82027** 82A40 (58G35, 82A70)
- Rogers, C. A. (with Jayne, John E.) Borel isomorphisms of the first level. (Russian) *Dokl. Akad. Nauk SSSR* 247 (1979), no. 6, 1309–1312. (M. P. Eršov) **81h:54039** 54H05 (28A05, 54C10)
- (with Jayne, John E.) Borel isomorphisms at the first level. I. *Mathematika* 26 (1979), no. 1, 125–156. (De Preiss) **81h:54048a** 54H05 (04A15, 28A05)
- (with Jayne, John E.) Borel isomorphisms at the first level. II. *Mathematika* 26 (1979), no. 2, 157–179 (1980). (De Preiss) **81h:54048b** 54H05 (04A15, 28A05)
- (with Jayne, John E.) Fonctions et isomorphismes boréliens du premier niveau. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 291 (1980), no. 5, A351–A354. (Authors' summary) **81h:54069** 54H05 (54C99)
- Rogers, Colin (with Baker, John A.) The finite elastodynamics of hyperelastic thin tubes. (French and German summaries) *Internat. J. Non-Linear Mech.* 15 (1980), no. 3, 225–233. (Authors' summary) **81h:73017** 73D35
- Rogers, Donald D. On Fuglede's theorem and operator topologies. *Proc. Amer. Math. Soc.* 75 (1979), no. 1, 32–36. (Robert L. Moore) **81h:47028** 47B15
- Rogers, Douglas G. (with Koh, Khue Meng; Tan, Tey) On graceful trees. *Nanta Math.* 10 (1977), no. 2, 207–211. (A. Rosa) **81h:05033** 05C05
- A graceful algorithm. *Southeast Asian Bull. Math.* 2 (1978), no. 1, 42–44. (Gary S. Bloom) **81h:05119** 05C99 (05C05)
- (with Koh, Khue Meng; Tan, Tey) Interlaced trees: a class of graceful trees. *Combinatorial mathematics, VI (Proc. Sixth Austral. Conf., Univ. New England, Armidale, 1978)*, pp. 65–78, *Lecture Notes in Math.*, 748, Springer, Berlin, 1979. (A. Rosa) **81h:05054** 05C05
- (with Kim, Ki Hang; Roush, Fred W.) Similarity relations and semiordeers. *Proceedings of the Tenth Southeastern Conference on Combinatorics, Graph Theory and Computing (Florida Atlantic Univ., Boca Raton, Fla., 1979)*, pp. 577–594, *Congress. Numer., XXIII–XXIV, Utilitas Math., Winnipeg, Man.*, 1979. (Colin J. H. McDiarmid) **81h:05013** 05A15
- (with Pelling, M. J.) Stein quasigroups. II. Algebraic aspects. *Bull. Austral. Math. Soc.* 20 (1979), no. 3, 321–344. (Tomáš Kepka) **81e:20054** 20N05
- The enumeration of some restricted matrices. *Discrete Math.* 27 (1979), no. 1, 81–91. (L. Carlitz) **81h:05015** 05A15 (05B30)
- (with Dickson, T. J.) Problems in graph theory. V. Magic valuations. *Southeast Asian Bull. Math.* 3 (1979), no. 1, 40–43. (Editors) **81h:05092** 05C99
- (with Koh, Khue Meng; Tan, Tey) Products of graceful trees. *Discrete Math.* 31 (1980), no. 3, 279–292. (Jean-Claude Bermond) **81h:05100** 05C99 (05C05)
- Rhyming schemes: crossings and coverings. *Discrete Math.* 33 (1981), no. 1, 67–77. (H. N. V. Temperley) **81h:05090** 05C30 (05C70, 10A40)
- Rogers, G. A. J. Locke, Newton and the Enlightenment. Newton and the Enlightenment (Proc. Internat. Sympos., Cagliari, 1977). *Vistas Astronom.* 22 (1978), no. 4, 471–476. (F. C. Kreiling) **81h:01005** 01A45
- Rogers, G. S. A characterization of a normal intraclass covariance matrix. *South African Statist. J.* 14 (1980), no. 1, 43–45. (M. S. Srivastava) **81h:62096** 62H05
- Rogers, Joel C. W. (with Berger, Alan E.; Brézis, Haïm) A numerical method for solving the problem $u - \Delta(u) = 0$. (French summary) *RAIRO Anal. Numér.* 13 (1979), no. 4, 297–312. (I. P. Gavriljuk) **81g:65120** 65M10
- Rogers, Laurel Basic subgroups from a constructive viewpoint. *Comm. Algebra* 8 (1980), no. 20, 1903–1925. (Fred Richman) **81j:20073** 20K10 (03F65)
- Rogers, Lawrence D. (with Gonnet, Gaston H.; George, J. Alan) An algorithmic and complexity analysis of interpolation search. *Acta Inform.* 13 (1980), no. 1, 39–52. (C. Dagino) **81f:68054** 68C25 (65D05)
- Rogers, T. G. (with Moss, R. L.; Spencer, A. J. M.) Axiially symmetric deformations of fibre-reinforced cylinders. *J. Inst. Math. Appl.* 26 (1980), no. 1, 21–38. (G. A. Nariboli) **81h:73014** 73C40 (73L10)
- Rogerson, William P. Aggregate expected consumer surplus as a welfare index with an application to price stabilization. *Econometrica* 48 (1980), no. 2, 423–436. (Maurice Salles) **81d:90016** 90A10
- Rogge, L. (with Landers, D.) On nonuniform Gaussian approximation for random summation. *Metrika* 25 (1978), no. 2, 95–114. (Authors' summary) **81h:60022** 60F05
- (with Landers, D.) A short proof for a.e. convergence of generalized conditional expectations. *Proc. Amer. Math. Soc.* 79 (1980), no. 3, 471–473. (C. L. Scheffer) **81h:60030** 60F15
- (with Landers, D.) Best approximants in L_q -spaces. *Z. Wahrsch. Verw. Gebiete* 51 (1980), no. 2, 215–237. (M. M. Rao) **81c:41042** 41A30 (62M20)
- Roggenkamp, Klaus W. Diagrammatic methods in integral representation theory. *Proceedings of the 5th School of Algebra (Rio de Janeiro, 1978)*, pp. 45–58, *Soc. Brasil. Mat., Rio de Janeiro, 1978*. (D. A. R. Wallace) **81j:20010** 20C10
- (with Ringel, Claus Michael) Diagrammatic methods in the representation theory of orders. *J. Algebra* 69 (1979), no. 1, 11–42. (P. Donovan) **81h:16008** 16A18 (16A64)
- ★ Integral representations and structure of finite group rings. *Séminaire de Mathématiques Supérieures [Seminar on Higher Mathematics]*, 71. *Presses de l'Université de Montréal, Montréal, Que.*, 1980. 165 pp. *ISBN 2-7606-0485-3* (Donald S. Passman) **81e:20010** 20C11 (20C20)
- The lattice type of orders: a diagrammatic approach. I. *Ring theory, Antwerp 1980 (Proc. Conf., Univ. Antwerp, Antwerp, 1980)*, pp. 104–129, *Lecture Notes in Math.*, 825, Springer, Berlin, 1980. (I. Reiner) **81h:16003** 16-02 (16A18, 16A64)
- Zur Einheitengruppe der ganzzahligen Gruppenringe metazyklischer Frobeniusgruppen. *Arch. Math. (Basel)* 35 (1980), no. 3, 263–266. (W. E. Deskins) **81j:16016** 16A26 (16A25, 20C05)
- Group rings of metabelian groups and extension categories. *Canad. J. Math.* 32 (1980), no. 2, 449–459. (K. A. Hirsch) **81j:16019** 16A26 (16A62, 20C07)
- Auslander-Reiten sequences for "nice" torsion theories of Artinian algebras. *Canad. Math. Bull.* 23 (1980), no. 1, 61–65. (M. Teply) **81e:16015** 16A46 (16A63)
- Indecomposable representations of orders of global dimension two. *J. Algebra* 64 (1980), no. 1, 230–248. (William H. Gustafson) **81f:16033** 16A46 (16A18)
- (with Ringel, Claus Michael) Socle-determined categories of representations of Artinian hereditary tensor algebras. *J. Algebra* 64 (1980), no. 1, 249–269. (William H. Gustafson) **81f:16032** 16A46 (16A18)
- Roggero, Margherita (with Martinengo, Chiara) The divisor class group of certain Krull rings. (Italian. English summary) *Boll. Un. Mat. Ital. A* (5) 17 (1980), no. 1, 167–173. (W. V. Vasconcelos) **81e:13008** 13F20 (14C22)
- Roglin, O. (with Huckert, K.; Rhode, R.; Weber, Reinhard) On the interactive solution to a multicriteria scheduling problem. (German summary) *Z. Oper. Res. Ser. A-B* 24 (1980), no. 1, A47–A60. (Authors' summary) **81a:90100** 90B35
- Rogoshinski, W. W. See Hardy, Geoffrey Harold, **81e:01028**
- Rogov, V. B. K. The Laplace-Beltrami operator on homogeneous symmetric spaces of rank 1. (Russian) *Mat. Zametki* 28 (1980), no. 1, 59–66, 168. (Th. Friedrich) **81j:53053** 53C35 (58G05)

- Rogovin, D. (with Scully, Marian O.) Quantum modeling of a current-driven Josephson oscillator. *Phys. Rev. B* (3) 21 (1980), no. 9, 3868-3878. (From the summary) **81a:81130** 81J05
- Rogovin, A. A. Solution of integral equations by the source method. (Russian) *Problems in the theory of elasticity and viscoelasticity* (Russian), pp. 3-18, 121, *Akad. Nauk SSSR, Ural. Nauch. Centr. Sverdlovsk*, 1978. (Author's summary) **81f:65092** 65R20 (45L10)
- Rogovin, B. A. (with Sgibnev, M. S.) Banach algebras of absolutely continuous measures on the real line. (Russian) *Funktsional. Anal. i Prilozhen.* 11 (1977), no. 3, 92-93. (G. M. Fel'dman) **81a:43008** 43A20 (43A32, 46J10)
- (with Sgibnev, M. S.) Banach algebras of measures on the line. (Russian) *Sibirsk. Mat. Zh.* 21 (1980), no. 2, 160-169, 239. (V. Losert) **81e:43003** 43A10 (46J20)
- Rogovin, V. S. (with Radchenko, T. N.) An equation of convolution type and singular integral equations in the exceptional case. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1979, no. 8, 87-93. (William L. Perry) **81f:45008** 45E05 (45E10)
- (with Kartasheva, L. V.) Corrections to our article: "A singular equation in spaces of test functions and generalized functions on a closed contour in the exceptional case" [Izv. Vysš. Učebn. Zaved. Matematika 1975, no. 6(157), 114-123; MR 53 #3620]. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1979, no. 12, 80-81. (R. V. Dudučava) **81g:45006** 45E99
- Rogovin, D. (with Holnicki-Szulc, Jan) Nonlocal, continuum models of large engineering structures. (Polish and Russian summaries) *Arch. Mech. (Arch. Mech. Stos.)* 31 (1979), no. 6, 793-802. (Peter J. Chen) **81f:73008** 73K05 (73B05)
- (with Holnicki-Szulc, Jan) Boundary problems in nonlocal continuum models of large engineering structures. (Polish and Russian summaries) *Arch. Mech. (Arch. Mech. Stos.)* 31 (1979), no. 6, 803-811. (Peter J. Chen) **81f:73008** 73K05 (73B05)
- Rohatgi, V. K. (with Gupta, A. K.) Inference on the difference of means of correlated variables from fragmentary samples. *Sankhyā Ser. B* 40 (1978), no. 1-2, 49-64. (Steven Arnold) **81m:62090** 62H12 (62F10)
- (with Gupta, Arjun K.) Estimating the restricted mean of a continuous population. *Optimizing methods in statistics* (Proc. Internat. Conf., Indian Inst. Tech., Bombay, 1977), pp. 237-249, *Academic Press, New York*, 1979. (M. M. Siddiqui) **81h:62052** 62F10
- (with Laha, R. G.) Semistable measures on a Hilbert space. *J. Multivariate Anal.* 10 (1980), no. 1, 88-94. (B. Schreiber) **81h:60010** 60B11 (28C20)
- Rohde, S. M. (with McAllister, G. T.; McAllister, Marialuisa N.) Optimal bearing designs for one-dimensional problems with compressible lubricants. *J. Math. Anal. Appl.* 73 (1980), no. 2, 543-560. (Frederick A. Howe) **81h:76045** 76N10
- Rohleder, Hans. Zur Umformung von Anweisungsfolgen. (English and Russian summaries) *Elektron. Informatsionerarb. Kybernet.* 15 (1979), no. 7, 377-382. (Author's summary) **81d:68025** 68B10
- Rohlfis, J. Die maximalen arithmetisch definierten Untergruppen zerfallender einfacher Gruppen. *Math. Ann.* 244 (1979), no. 3, 219-231. (A. A. Bondarenko) **81g:22015** 22E40 (10C30, 20G99)
- Rohlin, V. A. Complex topological characteristics of real algebraic curves. (Russian) *Uspehi Mat. Nauk* 33 (1978), no. 5(203), 77-89, 237. (Anatoly Libgober) **81m:14024** 14H99 (14F45, 14G30)
- Rohrbach, Hans. Mathematical and mechanical methods in cryptography. I. *Cryptologia* 2 (1978), no. 1, 21-37. (J. S. Joel) **81e:9407a** 94B99 (00A69, 05A15, 94-01)
- Mathematical and mechanical methods in cryptography. II. *Cryptologia* 2 (1978), no. 2, 101-121. (J. S. Joel) **81e:9407b** 94B99 (00A69, 05A15, 94-01)
- Rührich, Johannes. Automatic construction of error correcting parsers in compiler generating systems. *Langages et traducteurs (Papers, IRIA Sem., Rocquencourt, 1977)*, pp. 121-133, *IRIA, Rocquencourt, 1977*. (See **80c:68002**) 68B99 (68F25)
- Methods for the automatic construction of error correcting parsers. *Acta Inform.* 13 (1980), no. 2, 115-139. (Author's summary) **81f:68117** 68F25 (68D35)
- Rohrich, David E. The nonvanishing of certain Hecke L-functions at the center of the critical strip. *Duke Math. J.* 47 (1980), no. 1, 223-232. (Reinhard Bölling) **81k:12017** 12A70 (10D24, 14K07)
- On the L-functions of canonical Hecke characters of imaginary quadratic fields. *Duke Math. J.* 47 (1980), no. 3, 547-557. (Reinhard Bölling) **81m:12020** 12A70 (10H10)
- Rohrich, F. Relativistic Hamiltonian dynamics. *Phys. Lett. A* 66 (1978), no. 4, 268-270. (Author's summary) **81k:70014** 70H99 (70F99, 81D05)
- Lectures on the relativistic string. *Recent developments in particle and field theory (Sympos. Particles and Fields, Tübingen Univ., Tübingen, 1977)*, pp. 197-226, *Vieweg, Braunschweig*, 1979. (From the summary) **81e:81191** 81M05 (81E99, 81G05)
- Fundamental physical problems of quantum electrodynamics. *Foundations of radiation theory and quantum electrodynamics*, pp. 155-163, *Plenum, New York*, 1980. (See **81i:81002**) 81L05
- Rohsenel, C. (with Kim, C. W.) SU(8) grand unification. *Phys. Lett. B* 93 (1980), no. 3, 343-346. (Authors' summary) **81e:81133** 81G20
- Rohrer, A. R. (with Berkinova, A. B.) On the construction by the operator method of linearly independent solutions of systems of equations of nonstationary filtration and their application to boundary value problems. (Russian) *Voprosy Vyssh. i Prikl. Mat. (Tashkent)* No. 58 (1979), 46-53, 120-121. (L. Berg) **81f:76082** 76S05 (65N99)
- Rolsen, J.-R. On functorializing usual first-order model theory. *Applications of sheaves (Proc. Res. Sympos. Appl. Sheaf Theory to Logic, Algebra and Anal., Univ. Durham, Durham, 1977)*, pp. 612-622, *Lecture Notes in Math.*, 753, *Springer, Berlin*, 1979. (Anna Labella) **81f:83051** 03C99 (03G30, 18A15)
- Rothberg, Joseph (with Hilton, Peter) Profinite completion and generalizations of a theorem of Blackburn. *J. Algebra* 60 (1979), no. 1, 289-306. (Guido Mislin) **81h:20029** 20F18 (55P60)
- (with Hilton, Peter) On a generalization of two exact sequences of Steiner. *Illinois J. Math.* 24 (1980), no. 2, 206-215. (Chih-Han Sah) **81h:20099** 20J05
- Rothenberg, E. Ja. (with Roitenberg, L. Ja.) Observability of nonlinear stochastic systems. (Russian) *Dynamics of control systems (Third All-Union Četaeo Conf., Irkutsk, 1977)* (Russian), pp. 244-249, 342, "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. (Authors' summary) **81h:93094** 93E03 (93B07)
- Rothenberg, L. Ja. (with Roitenberg, E. Ja.) Observability of nonlinear stochastic systems. (Russian) *Dynamics of control systems (Third All-Union Četaeo Conf., Irkutsk, 1977)* (Russian), pp. 244-249, 342, "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. (Authors' summary) **81h:93094** 93E03 (93B07)
- summary) **81h:93094** 93E03 (93B07)
- Roitner, A. V. (with Nazarova, L. A.; Ovsienko, S. A.) Polyquivers of finite type. (Russian) Algebra, number theory and their applications. *Trudy Mat. Inst. Steklov.* 148 (1978), 190-194, 277. (Sheila Brenner) **81d:16023** 16A64
- Roots of integral quadratic forms. (Russian) Algebra, number theory and their applications. *Trudy Mat. Inst. Steklov.* 148 (1978), 201-210, 277. (K. W. Roggenkamp) **81e:10018** 10C01 (16A64)
- Matrix problems. *Proceedings of the International Congress of Mathematicians (Helsinki, 1978)*, pp. 319-322, *Acad. Sci. Fennica, Helsinki*, 1980. (William H. Gustafson) **81f:15020** 15A21 (16A64)
- Roitman, A. A. The torsion of the group of 0-cycles modulo rational equivalence. *Ann. of Math.* (2) 111 (1980), no. 3, 553-569. (D. Lieberman) **81g:14003** 14C15 (14C25)
- Rational equivalence of zero-dimensional cycles. (Russian) *Mat. Zametki* 28 (1980), no. 1, 85-90, 169. (Gerhard Pfister) **81g:14009** 14C25 (14C15)
- Roitman, J. Adding a random or a Cohen real: topological consequences and the effect on Martin's axiom. *Fund. Math.* 103 (1979), no. 1, 47-60. (William G. Fleissner) **81h:03008** 03E50 (03E40, 54A35)
- Easy S and L groups. *Proc. Amer. Math. Soc.* 78 (1980), no. 3, 424-428. (H. H. Wicke) **81a:54039** 54G20 (54H13)
- Roisen, S. I. Unsolvability of the additive theory of automata isols over a unary alphabet. (Russian) *Discrete systems, formal languages and complexity of algorithms* (Russian), pp. 66-74, *Inst. Kibernet., Akad. Nauk Ukrain. SSR, Kiev*, 1978. (A. Adam) **81a:03047** 03D35 (68C30, 68D99)
- Rojtman, A. A. See Roitman, A. A.
- Rokhlin, S. Diffraction of Lamb waves by a finite crack in an elastic layer. *J. Acoust. Soc. Amer.* 67 (1980), no. 4, 1157-1165. (Author's summary) **81a:73047** 73M05 (73D25)
- Rokae, Jon (with Singh, Brij M.; Dhaliwal, Ranjit S.) An axisymmetric external crack problem for an infinite medium with a cylindrical inclusion. *J. Engrg. Math.* 13 (1979), no. 3, 235-247. (Authors' summary) **81f:73076** 73M05 (45B05, 73C40)
- (with Grassmann, Eckhard) Calculation of extremum problems for univalent functions. *SIAM J. Math. Anal.* 10 (1979), no. 4, 850-874. (Authors' summary) **81c:30024** 30C50 (30C30)
- (with Singh, Brij M.; Dhaliwal, Ranjit S.) Diffraction of antiplane shear waves by a Griffith crack or a rigid strip lying at the interface of homogeneous and nonhomogeneous elastic half-spaces. *Acta Mech.* 37 (1980), no. 1-2, 137-144. (From the introduction) **81e:73081** 73M05
- (with Ratschek, H.) About the centered form. *SIAM J. Numer. Anal.* 17 (1980), no. 3, 333-337. (G. Alefeld) **81i:65037** 65G10
- Rokowska, Barbara. On resolvable designs. (Polish and Russian summaries) *Prace Nauk. Inst. Mat. Politech. Wrocław. Ser. Stud. Materialy* No. 14 *Analiza Dyskretna* (1980), 3-9. (Elizabeth J. Billington) **81k:05017** 05B05 (62K10)
- Roland, Francesca. A maximum principle for the solution to the nonlinear heat equation that is discontinuous with respect to the unknown. (Italian) *Istit. Lombardo Accad. Sci. Lett. Rend. A* 112 (1978), no. 1, 12-18 (1979). (Antonio Fasano) **81d:35040** 35K10 (35B50)
- Roldugin, V. L. (with Bakanov, S. P.; Derjagin, B. V.) Thermophoresis in gases. *Uspehi Fiz. Nauk* 129 (1979), no. 2, 255-278. (Russian); translated as *Soviet Phys. Uspehi* 22 (1979), no. 10, 813-825 (1980). (From the summary) **81g:82033** 82A40 (76P05)
- przeworska-Robiewicz, Danuta. See Przeworska-Robiewicz, Danuta
- Robiewicz, Stefan. Multifunctions and optimization. *Game theory and related topics (Proc. Sem., Bonn and Hagen, 1978)*, pp. 203-206, *North-Holland, Amsterdam*, 1979. (A. Averna) **81h:90138** 90C48 (90C30)
- On upper semicontinuity of families of optimal control and families of supporting functionals. *Beiträge Anal.* No. 14 (1979), 79-83. (L. D. Berkovitz) **81f:49014** 49A50 (49A27)
- On γ -paraconvex multifunctions. *Math. Japon.* 24 (1979/80), no. 3, 293-300. (Seymour Dolecki) **81a:52013** 52A99 (49B99, 90C30)
- See also Banach, Stefan, **81f:46001**
- Rolf, Bertil. A theory of vagueness. *J. Philos. Logic* 9 (1980), no. 3, 315-325. (From the introduction) **81h:03017** 03A05 (03B99)
- Rolley Le Coz, Monique (with Billiet, Yves) Le groupe P_1 et ses sous-groupes. II. Tables de sous-groupes. (English summary) *Acta Cryst. Sect. A* 36 (1980), no. 2, 242-248. (Authors' summary) **81k:20065a** 20H15
- (with Billiet, Yves) Le groupe P_1 et ses sous-groupes. III. Conservation réticulaire. (English summary) *Acta Cryst. Sect. A* 36 (1980), no. 5, 785-792. (Authors' summary) **81k:20065b** 20H15 (20C30)
- Rollik, H. A. Automaten in planaren Graphen. (English summary) *Theoretical computer science (Fourth GI Conf., Aachen, 1979)*, pp. 266-275, *Lecture Notes in Comput. Sci.*, 67, *Springer, Berlin*, 1979. (Petr Kůrka) **81f:68074** 68D99 (68E05)
- Automaten in planaren Graphen. (English summary) *Acta Inform.* 13 (1980), no. 3, 287-298. (László T. Kóczy) **81f:68073** 68D90 (68E10)
- Rolf, Hartmut (with Stückrad, Jürgen) Bemerkungen über Zusammenhangeigenschaften und mengentheoretische Darstellung projektiver algebraischer Mannigfaltigkeiten. Beiträge zur Algebra und Geometrie [Contributions to Algebra and Geometry], 8. Wst. Beitr. Martin-Luther-Univ. Halle-Wittenberg M 12 (1979), 125-131. (W. Vogel) **81f:14031** 14M15 (13H10)
- Rolski, Tomasz (with Bergmann, Reinhard; Daley, D. J.; Stoyan, Dietrich) Bounds for cumulants of waiting-times in $G_1/G_1/1$ queues. (German and Russian summaries) *Math. Operationsforsch. Statist. Ser. Optim.* 10 (1979), no. 2, 257-263. (Peter Franken) **81c:60095** 60K25
- A note on queues with a common traffic intensity. (German and Russian summaries) *Math. Operationsforsch. Statist. Ser. Optim.* 10 (1979), no. 3, 413-419. (B. M. Kirstein) **81h:60123** 60K25 (90B22)
- See also Klimov, G. P., **81h:60094c**
- Rom, Walter O. (with Hung, Ming S.) Application of primitive sets to multicriteria optimization problems. *J. Math. Econom.* 7 (1980), no. 1, 77-90. (Authors' summary) **81a:90147** 90C31
- (with Hung, Ming S.) Solving the assignment problem by relaxation. *Oper. Res.* 28 (1980), no. 4, 969-982. (Authors' summary) **81h:90057** 90B10
- Romain, Yves (with Arconte, Alain; Dauxois, Jacques; Pousse, Alain) Étude

- asymptotique de l'analyse en composantes principales linéaire d'une fonction aléatoire à valeurs dans un espace de Hilbert. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 291 (1980), no. 4, A319-A322. (Authors' summary) **81j:62110** 62H25
- Roman, A. Configurations Myller $90(C; \xi, \xi; T^{-1})$ dans des espaces riemanniens. *An. Ştiinţ. Univ. "Al. I. Cuza" Iaşi Sec. I a Mat. (N.S.)* 25 (1979), no. 1, 89-92. (M. Decuypere) **81e:53012** 53B21
- Parallélisme relatif dans une configuration Myller dans des espaces de Riemann. *An. Ştiinţ. Univ. "Al. I. Cuza" Iaşi Sec. I a Mat. (N.S.)* 26 (1980), no. 1, 137-139. (Bernard Rouxel) **81m:53029** 53B20
- Roman, B. F. Estimate of the topology of a communications network with respect to reliability. (Russian) *Information processes in complex systems* (Russian), pp. 149-161, 167, "Štiinca", Kishinev, 1978. (From the introduction and summary) **81e:94065** 94C99 (68A05)
- Sancho de San Román, Juan See Sancho de San Román, Juan
- Roman, P. Statistical thermodynamics of ur-systems. *Quantum theory and the structures of time and space, Vol. 2* (Second Conf., Tutzing, 1976), pp. 143-173, Hanser, Munich, 1977. (From the introduction) **81m:83050** 83F05 (82A35)
- Can the microstructure of space-time explain hadrons? *Quantum theory and the structures of time and space, Vol. 3* (Third Conf., Tutzing, 1978), pp. 151-174, Hanser, Munich, 1979. (See **81j:81002b**) **81M05** (81G05)
- Roman, Steven The algebra of formal series. *Adv. in Math.* 31 (1979), no. 3, 309-329. (J. E. Cigler) **81b:05016a** 05A15 (13J05)
- The algebra of formal series. III. Several variables. *J. Approx. Theory* 26 (1979), no. 4, 340-381. (J. E. Cigler) **81i:05023b** 05A19 (33A70)
- Erratum: "The algebra of formal series". *Adv. in Math.* 35 (1980), no. 3, 274. (Editors) **81b:05016b** 05A15 (13J05)
- The algebra for [of] formal series. II. Sheffer sequences. *J. Math. Anal. Appl.* 74 (1980), no. 1, 120-143. (J. E. Cigler) **81i:05023a** 05A19 (33A70)
- Romanenko, E. Ju. See Romanenko, O. Ju.
- Romanenko, E. V. Basic approaches to algorithms for organizing the choice of continued moves in chess programs. (Russian) *Akad. Nauk Ukrain. SSR Inst. Kibernet. Preprint No. 11* (1979), 70 pp. (Author's summary) **81b:68044** 68D27
- (with Kondrat'ev, A. I.) Game-theoretic modeling of a chess game with standard representation of information. (Russian) *Akad. Nauk Ukrain. SSR Ser. A* 1980, no. 6, 79-81, 95. (Authors' summary) **81f:90122** 90D05 (90D40)
- Romanenko, O. Ju. (with Šarkovskii, O. M.) Asymptotic behavior of the solutions of linear functional-differential equations. (Russian) *Asymptotic behavior of solutions of functional-differential equations* (Russian), pp. 5-39, 153, *Akad. Nauk Ukrain. SSR, Inst. Mat., Kiev*, 1978. (L. J. Grimm) **81b:34067** 34K15
- (with Šarkovskii, O. M.) Functional-differential equations that are close to functional equations. (Russian) *Asymptotic methods in the theory of nonlinear oscillations* (Proc. All-Union Conf. Asymptotic Methods in Nonlinear Mech., Katsiveli, 1977) (Russian), pp. 178-209, 276, "Naukova Dumka", Kiev, 1979. (Józef Kalinowski) **81i:34063** 34K15
- Roman, Francesco (with Santoro, N.) On hash techniques in a paged environment. *Calcolo* 16 (1979), no. 3, 289-303 (1980). (Authors' summary) **81g:68033** 68B15 (68E05, 68H05)
- Shortest-path problem is not harder than matrix multiplication. *Inform. Process. Lett.* 11 (1980), no. 3, 134-136. (From the introduction) **81k:68036** 68C25 (90B10)
- Romanjuk, L. P. Necessary conditions of optimality in a discrete optimal control problem. (Russian) *Mathematical methods of optimization and structuring of systems* (Russian), pp. 126-129, 185, *Kaliningrad. Gos. Univ., Kaliningrad*, 1979. (Author's summary) **81k:49020** 49D05
- Romanuk, A. M. (with Gorozin, A. D.; Valuskii, V. N.) Simplification of fault-detection circuitry by increasing the checking time in control automata. *Automat. i Vychisl. Tehn. (Riga)* 12 (1978), no. 5, 18-22 (Russian); translated as *Automat. Control Comput. Sci.* 12 (1978), no. 5, 15-19. (Authors' summary) **81c:94042** 94C10
- (with Valuskii, V. N.) A τ -decomposition method for monitoring a control automation with time redundancy. *Kibernetika (Kiev)* 1979, no. 5, 28-33, 153 (Russian). (English summary); translated as *Cybernetics* 15 (1979), no. 5, 634-640 (1980). (Authors' summary) **81d:94042** 94C10
- Roman'kov, V. A. Unsolvability of the problem of endomorphism reducibility in free nilpotent groups and in free rings. (Russian) *Algebra i Logika* 16 (1977), no. 4, 457-471, 494. (I. D. Macdonald) **81b:20027** 20F10 (03D40, 16A06)
- Romanov, A. A. Matrix method for determination of temporal networks. (Russian) *Ékonom. i Mat. Metody* 16 (1980), no. 3, 586-588. (M. V. Lomonosov) **81i:90115** 90B35
- Romanov, A. M. The shortest disjunctive normal forms for products of Boolean functions. (Russian) *Diskret. Analiz No. 32 Metody Diskret. Analiza v Sintez Upravl. Sistem* (1978), 52-65, 96. (Author's summary) **81b:94071** 94C10 (03G05)
- Romanov, A. S. Lattice operators in L_p spaces. (Russian) *Sibirsk. Mat. Ž.* 21 (1980), no. 1, 220-223, 240. (Ju. A. Abramovich) **81i:47036** 47B38 (46E30)
- Romanov, A. V. The Neumann method of boundary value problems for the Helmholtz equation. (Russian) *Dokl. Akad. Nauk SSSR* 251 (1980), no. 2, 288-291. (A. A. Arsen'ev) **81k:35038** 35J05 (35C10)
- Romanov, N. P. (with Postnikov, A. G.) A simplification of A. Selberg's elementary proof of the asymptotic law of distribution of prime numbers. *Twelve papers in logic and algebra*, pp. 75-87, *Amer. Math. Soc. Transl.*, 113, *Amer. Math. Soc., Providence, R.I.*, 1979. (See **80m:00006**) 10H15
- Romanov, V. G. Inverse problems for first-order hyperbolic systems. (Russian) *Proceedings of an All-Union Conference on Partial Differential Equations* (Moscow State Univ., Moscow, 1976) (Russian), pp. 208-211, *Moskov. Gos. Univ., Meh.-Mat. Fakul'tet*, Moscow, 1978. (See **80f:35002**) 35L40
- (with Muhometov, R. G.) On the problem of finding an isotropic Riemannian metric in an n -dimensional space. (Russian) *Dokl. Akad. Nauk SSSR* 243 (1978), no. 1, 41-44. (J. Szenthe) **81a:53059** 53C65 (53C21)
- Inverse problems and energy inequalities. *Inverse and improperly posed problems in differential equations* (Proc. Conf., Math. Numer. Methods, Halle, 1979), pp. 215-221, *Math. Research*, 1, *Akademie-Verlag, Berlin*, 1979. (Ja. A. Roitberg) **81g:35115** 35R30
- (with Muhometov, R. G.) Correction to: "On the problem of finding an isotropic Riemannian metric in an n -dimensional space" [Dokl. Akad. Nauk SSSR 243 (1978), no. 1, 41-44; MR 81a:53059] (Russian) *Dokl. Akad. Nauk SSSR* 245 (1979), no. 2, 280. (Editors) **81m:53070** 53C65
- Romanov, V. N. (with Švarc, A. S.) Anomalies and elliptic operators. (Russian. English summary) *Teoret. Mat. Fiz.* 41 (1979), no. 2, 190-204. (B. N. Frolov) **81g:81057** 81E10 (47F05)
- Romanova, S. E. An economical method of solving the Laplace difference equation on rectangular domains. (Russian) *Dokl. Akad. Nauk SSSR* 252 (1980), no. 1, 48-51. (G. I. Sulhanisvili) **81k:65116** 65N20 (39A12)
- Romanovska, D. A. See Romanovska, D. A.
- Romanovskii, A. V. On theorems of Feit and Itô on Zassenhaus groups. (Russian. English summary) *Dokl. Akad. Nauk BSSR* 22 (1978), no. 4, 293-295, 379. (Author's summary) **81g:20046** 20D25
- Romanovskii, I. V. See Operations research and statistical simulation, **81e:65002**
- Romanovskii, Ju. M. (with Vasil'ev, V. A.; Jahnov, V. G.) Autowave processes in distributed kinetic systems. *Uspehi Fiz. Nauk* 128 (1979), no. 4, 625-666 (Russian); translated as *Soviet Phys. Uspekhi* 22 (1979), no. 8, 615-639 (1980). (Authors' summary) **81f:82046** 82A99 (92A09)
- Romanovskii, N. S. (with Remeslennikov, V. N.) Algorithmic problems for solvable groups. *Word problems, II* (Conf. on Decision Problems in Algebra, Oxford, 1976), pp. 337-346, *Studies in Logic and Foundations of Math.*, 95, *North-Holland, Amsterdam*, 1980. (M. M. Richter) **81k:20044** 20F10 (03D40)
- The elementary theory of an almost polycyclic group. (Russian) *Mat. Sb. (N.S.)* 111(153) (1980), no. 1, 135-143, 160. (O. V. Belegradskii) **81d:03035** 03C60 (03D35, 20A15)
- Romanovskii, V. Ju. Solvability of the equivalence of linear unary recursive schemes with individual constants. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A No. 1* (1980), 72-75, 96. (Author's summary) **81d:68060** 68C30
- Romanovskii, Yu. M. See Romanovskii, Ju. M.
- Romanovska, Anna On some algebras connected with the theory of harmony. *Colloq. Math.* 41 (1979), no. 2, 181-185. (Evelyn Nelson) **81i:06021** 06D99
- On bisemilattices with one distributive law. *Algebra Universalis* 10 (1980), no. 1, 36-47. (J. Karásek) **81d:06004** 06A12
- Romanovska, D. A. (with Petrova, S. S.) The universal Hoëns-Wroński series. (Russian) *Ispr.-Mat. Issled. No. 24* (1979), 158-175, 387. (E. Stipančič) **81k:01023** 01A60 (40-03)
- Romanovska, Malgorzata Poisson approximation of some probability distributions. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math. Astronom. Phys.* 26 (1978), no. 12, 1023-1026 (1979). (I. Csizsar) **81j:60022** 60E15 (60F05)
- Rombold, Jean-Etienne See Pham, Frédéric, **81k:32015**
- Rombe, I. A. (with Jaglom, I. M.) Geometric representation of equations of population dynamics (the case of sex-linked characteristics). (Russian) *Geometric methods in problems of analysis and algebra* (Russian), pp. 108-113, *Jaroslavl. Gos. Univ., Jaroslavl*, 1978. (K. Smítalová) **81h:92010** 92A10 (34C05)
- Romenskii, E. I. Distribution of small deformations in a plastic medium and sliding lines. (Russian) *Ž. Prikl. Meh. i Tehn. Fiz.* 1979, no. 6, 158-163, 176. (Petr Procházka) **81h:73021** 73E15 (73C30)
- (with Blohin, A. M.) The effect of properties of a limit stationary solution on its proof. (Russian) *Izv. Sibirsk. Otdel. Akad. Nauk SSSR Ser. Tehn. Nauk* 1980, no. 3, 44-50, 146. (Authors' summary) **81j:76060** 76J99 (76F99)
- Romer, B. Deckungskapital-Rekursion und Erwartungsbarwert. (French, English and Italian summaries) *Mitt. Verein. Schweiz. Versicherungsmath.* 79 (1979), no. 1, 19-29. (Hilmar Drygas) **81g:62171** 62P05 (90A09)
- Römer, H. G-index theorem for natural operators on ALE gravitational instanton spaces. *Supergravity* (Proc. Workshop, Stony Brook, N.Y., 1979), pp. 293-299, *North-Holland, Amsterdam*, 1979. (See **81j:83001**) **83C45** (53B50, 58G10)
- Romig, William (with Bodin, Lawrence D.; Golden, Bruce L.; Schuster, Allan D.) A model for the blocking of trains. Special issue: Transportation supply models (Papers, Internat. Sympos. Travel Supply Models, Univ. Montréal, Montréal, 1977). *Transportation Res. Part B* 14 (1980), no. 1-2, 115-120. (Authors' summary) **81a:90112** 90C08 (90B10, 90B30, 90B35)
- Römisch, Werner (with Schulze, Reinhard) Kennwertmethoden für stochastische Voltterrasche Integralgleichungen. (Russian, English and French summaries) *Wiss. Z. Humboldt-Universität Berlin Math.-Natur. Reihe* 28 (1979), no. 4, 523-533. (Seppo Heikkilä) **81m:60120** 60H20 (65U05, 93E10, 93E12)
- Romo, W. J. Asymptotic forms of radial wavefunctions and Jost functions for cutoff potentials. *J. Math. Phys.* 20 (1979), no. 6, 1210-1224. (Alexander Alenicyan) **81a:34029** 34B25 (47E05, 81C05)
- A study of the completeness properties of resonant states. *J. Math. Phys.* 21 (1980), no. 2, 311-326. (R. G. Newton) **81c:81049** 81F05 (30D99)
- Roman, Mark A. A geometric characterization of Moufang hexagons. *Invent. Math.* 57 (1980), no. 3, 227-262. (Francis Buekenhout) **81k:51011** 51E25 (05B25, 20E32)
- Ronchi, L. (with Bertero, M.; Viano, G. A.; Pasqualetti, F.; Toraldo di Francia, G.) The inverse scattering problem in the Born approximation and the number of degrees of freedom. *Optica Acta* 27 (1980), no. 8, 1011-1024. (Authors' summary) **81g:78021** 78A45 (35P25, 68G10)
- Ronchi Della Rocca, S. (with Dezanzi-Ciancaglini, M.; Saitta, Lorenza) Complexity of λ -term reductions. (French summary) *RAIRO Inform. Théor.* 13 (1979), no. 3, 257-287. (Authors' summary) **81j:68016** 68B05 (03B40, 03D15, 03F05)
- Rondeaux, Christiane Classes de Schatten d'opérateurs pseudo-différentiels. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 15, A689-A692. (Rémi Vaillancourt) **81f:47052** 47G05 (35S05)
- Rosen, Joshua Accounting applications—introduction. *Management Sci.* 26 (1980), no. 8, 823-825. (Editors) **81j:90015** 90A09
- Ronka-Chamielewicz, Wanda An approximation of a random process by elementary random processes. (Polish. Russian and English summaries) *Przegląd Statyst.* 26 (1979), no. 1-2, 135-144 (1980). (Author's summary) **81m:60094** 60G99 (41A99)
- Ronkin, A. L. Quasipolynomials. (Russian) *Funktsional. Anal. i Prilozhen.* 12 (1978), no. 4, 93-94. (Z. Rubinstein) **81j:30013** 30C10

- Quasipolynomial sets of zeros. (Russian) *Teor. Funkcii Funkcional. Anal. i Prilozhen.* No. 32 (1979), 69–70, iv. (Author's summary) **81a:32002** 32A15
- Theorem on division of quasipolynomials. (Russian) *Teor. Funkcii Funkcional. Anal. i Prilozhen.* No. 34 (1980), 104–111, iv. (J. R. Shackell) **81h:32006** 32A30 (30D20)
- Runkle, L. I. (with Agranovich, P. Z.) Functions of completely regular growth of several variables. (Russian) *Mathematical analysis and probability theory* (Russian), pp. 3–6, 204, "Naukova Dumka", Kiev, 1978. (Ju. E. Hohllov) **81k:32005** 32A15
- Continuation of a function of finite order that is holomorphic on the set of zeros of a polynomial of two variables. (Russian) *Teor. Funkcii Funkcional. Anal. i Prilozhen.* No. 32 (1979), 70–77, iv. (A. I. Heifich) **81d:32003** 32A15
- Ronne, Christian Graphes homogènes et ultrahomogènes. *Bull. Soc. Math. Belg.* **28** (1976), no. 1, 37–42. (Author's introduction) **81c:05086** 05C99 (05C75)
- Sur les groupes transitifs dont les involutions fixent 0 ou 2 points. *Acad. Roy. Belg. Bull. Cl. Sci.* (5) **66** (1980), no. 1, 10–13. (J. L. Brenner) **81j:20005** 20B10
- Rosin, N. L. (with Puhov, G. E.) An implicit method of high accuracy for the integration of differential equations. (Russian) *Dokl. Akad. Nauk SSSR* **251** (1980), no. 3, 554–557. (K. Vinnik) **81k:65003** 65L05
- Rosito, V. A. Determination of the initial values of the solutions of nonlinear boundary value problems by the method of continuation of the solution with respect to the parameter. (Russian) *Ukrain. Mat. Ž.* **32** (1980), no. 1, 128–133, 144. (O. A. Kastrica) **81c:34008** 34A10
- Rossmann, A. (with Dumont-Lepage, M. Cl.; Gani, N.; Gazeau, J. P.) Spectrum of potentials $gr^{-1/2+2}$ via $SL(2, \mathbb{R})$ acting on quaternions. *J. Phys. A* **13** (1980), no. 4, 1243–1257. (M. Breitenacker) **81h:81013** 81C05 (22E70, 34B25)
- de Ros, M. (with van Holten, J. W.; de Wit, B.; van Proeyen, A.) Chiral superfields in $N=2$ supergravity. *Nuclear Phys. B* **173** (1980), no. 1, 175–188. (Authors' summary) **81j:83046** 83E99
- van Ros, A. C. M. \star Non-Archimedean functional analysis. Monographs and Textbooks in Pure and Applied Math., 51. Marcel Dekker, Inc., New York-Basel, 1978. x+404 pp. ISBN 0-8247-6556-7 (L. Narici) **81a:46004** 46P05 (46-02)
- Roosman, H. H. (with Wyld, H. W.; Holloway, L. E.) New method for the Hamiltonian formulation for lattice spin systems. *Phys. Rev. D* (3) **21** (1980), no. 6, 1557–1563. (Authors' summary) **81a:82055** 82A67
- Roos, Björn (with Taylor, Peter R.; Siegbahn, Per E. M.) A complete active space SCF method (CASSCF) using a density matrix formulated super-CI approach. *Chem. Phys.* **46** (1980), no. 2, 157–173. (From the summary) **81d:81121** 81G55
- Roos, Cornelis On metric and metric association schemes. *Delft Progr. Rep.* **4** (1979), no. 4, 191–220. (F. J. MacWilliams) **81h:94020** 94B05
- On the structure of convolutional and cyclic convolutional codes. *IEEE Trans. Inform. Theory* **25** (1979), no. 6, 676–683. (Philippe Piret) **81d:94023** 94B10
- Some results on t -constant codes. *Delft Progr. Rep.* **5** (1980), no. 1, 3–13. (E. F. Assmus, Jr.) **81m:94022** 94B25 (05B05)
- An alternative proof of the Feit-Higman theorem on generalized polygons. *Delft Progr. Rep.* **5** (1980), no. 2, 67–77. (Norman Biggs) **81j:05049** 05B99 (05C99)
- Roos, Guy Procédure de recollement de noyaux de formules intégrales: intégration partielle dans la formule de Cauchy-Fantappiè. *Colloque d'Analyse Harmonique et Complexe, 7 pp.* (not consecutively pagged), Univ. Aix-Marseille I, Marseille, 1977. (Harold P. Boas) **81d:32008** 32A25
- Roos, H. KMS condition in a Schrödinger picture of the dynamics. *Phys. A* **100** (1980), no. 1, 183–195. (H. Araki) **81a:81044** 81D99 (46L60, 82A15)
- Roos, Hans-Görg Die asymptotische Lösung einer parabolischen Differentialgleichung in der Umgebung eines kritischen Punktes. *Beiträge Anal. No. 14* (1979), 117–125. (M. Bironi) **81c:35005** 35B25 (35K10)
- Roos, Jan-Erik Sur l'algèbre Ext de Yoneda d'un anneau local de Golod. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **286** (1978), no. 1, A9–A12. (Author's summary) **81j:13006** 13D99 (18G99)
- Relations between Poincaré-Betti series of loop spaces and of local rings. *Séminaire d'Algèbre Paul Dubreil 31ème année* (Paris, 1977–1978), pp. 285–322, *Lecture Notes in Math.*, 740, Springer, Berlin, 1979. (J. Stasheff) **81j:55019** 55U99 (13H05, 55P35, 57T25)
- Roos, Matts (with James, Frederick) Errors on ratios of small numbers of events. *Nuclear Phys. B* **172** (1980), no. 2-3, 475–480. (Authors' summary) **81h:81176** 81G99
- Rootzen, Holger Limit distributions for the error in approximations of stochastic integrals. *Ann. Probab.* **8** (1980), no. 2, 241–251. (Ju. M. Kabanov) **81e:60066** 60H05 (60F17)
- Ropelewski, Stanislaw Properties of bounded orthogonal spline bases. *Approximation theory* (Papers, Vth Semester, Stefan Banach Internat. Math. Center, Warsaw, 1975), pp. 197–205, *Banach Center Publ.*, 4, PWN, Warsaw, 1979. (E. Neuman) **81b:41021** 41A15 (42C10)
- Roque, Diego R. A note on: "Queueing models with lane selection: a new class of problems" [Oper. Res. **22** (1974), no. 2, 331–339; MR **53** #6793a] by B. L. Schwartz. *Oper. Res.* **28** (1980), no. 2, 419–420. (Editors) **81d:60106** 60K25 (90B22)
- Roque, Peter Altes und Neues aus der Diophantischen Geometrie. *Jbch. Heidelberger Akad. Wiss.* **1979**, 111–129 (1980). (D. J. Lewis) **81g:14001** 14-01 (10Bxx, 14G05)
- Rorres, Chris Local stability of a population with density-dependent fertility. *Theoret. Population Biol.* **16** (1979), no. 3, 283–300. (J. N. Kapur) **81a:92016** 92A15
- (with Fair, Wyman) Optimal age-specific harvesting policy for a continuous time-population model. *Modeling and differential equations in biology* (Conf., Southern Illinois Univ., Carbondale, Ill., 1978), pp. 239–254, *Lecture Notes in Pure and Appl. Math.*, 58, Dekker, New York, 1980. (Authors' introduction) **81m:90040** 90A30 (90C05, 92A15)
- Ros, A. A. (with Jarulek, V. E.; Bagaev, A. P.) Construction of question-answer systems for automatic control systems. (Russian) *Avtomat. Sistemy Upravleniya i Priboiy Avtomat. No. 54* (1980), 103–112, iv. (Authors' summary) **81j:93006** 93A99 (94A50)
- Ros, M. (with Moreau, Jean-Jacques) Tenseurs de distributions dérivées secondes sur un ouvert de \mathbb{R}^n . *Trouvaux Sémin. Anal. Convexe* **9** (1979), no. 1, Exp. No. 2, 5 pp. (W. Kecs) **81h:46043** 46F99 (73K10)
- Rosa, Alexander On generalized Room squares. (French summary) *Problèmes combinatoires et théorie des graphes* (Colloq. Internat. CNRS, Univ. Orsay, Orsay, 1976), pp. 353–358, *Colloques Internat. CNRS*, 260, CNRS, Paris, 1978. (Author's summary)
- 81h:05028** 05B15
- (with Ganter, B.; Mathon, R.) A complete census of $(10, 3, 2)$ -block designs and of Mendelsohn triple systems of order ten. I. Mendelsohn triple systems without repeated blocks. *Proceedings of the Seventh Manitoba Conference on Numerical Mathematics and Computing* (Univ. Manitoba, Winnipeg, Man., 1977), pp. 383–398, *Congress. Numer.*, **XX**, *Utilitas Math.*, Winnipeg, Man., 1978. (Luc Teirlinck) **81h:05028a** 05B05 (05B15)
- (with Ganter, B.; Mathon, R.) A complete census of $(10, 3, 2)$ -block designs and of Mendelsohn triple systems of order ten. II. Mendelsohn triple systems with repeated blocks. *Proceedings of the Eighth Manitoba Conference on Numerical Mathematics and Computing* (Univ. Manitoba, Winnipeg, Man., 1978), pp. 181–204, *Congress. Numer.*, **XXII**, *Utilitas Math.*, Winnipeg, Man., 1979. (Luc Teirlinck) **81h:05028b** 05B05 (05B15)
- (with Mendelsohn, Eric) On some properties of 1-factorizations of complete graphs. *Proceedings of the Tenth Southeastern Conference on Combinatorics, Graph Theory and Computing* (Florida Atlantic Univ., Boca Raton, Fla., 1979), pp. 739–752, *Congress. Numer.*, **XXIII–XXIV**, *Utilitas Math.*, Winnipeg, Man., 1979. (W. D. Wallis) **81c:05075** 05C70 (05B30)
- Generalized Howell designs. *Second International Conference on Combinatorial Mathematics* (New York, 1978), pp. 484–489, *Ann. New York Acad. Sci.*, **319**, New York Acad. Sci., New York, 1979. (Stephen H. Y. Hung) **81j:05033** 05B15
- (with Phelps, K. T.) 2-chromatic Steiner quadruple systems. *European J. Combin.* **1** (1980), no. 3, 253–258. (H. Hanani) **81m:05028** 05B05 (51E10)
- Rosati, Francesco (with Ossicini, Alessandro) The convergence of hyper-Gaussian functionals. (Italian. French summary) *Rend. Mat.* (6) **11** (1978), no. 1, 97–108. (B. Rodriguez-Salinas) **81a:41046** 41A55 (65D32)
- (with Ossicini, Alessandro) Comparison theorems for the zeros of s -orthogonal polynomials. (Italian. French summary) *Calcolo* **16** (1979), no. 4, 371–381 (1980). (F. M. Arscott) **81m:33009** 33A65 (41A10, 42C15)
- Rosati, Luigi Antonio (with Gherardelli, Francesco; Tomassini, Giuseppe) \star Lezioni di geometria. Vol. primo. (Italian) [Lectures in geometry. Vol. I] Casa Editrice Dat. Antonio Milani (CEDAM), Padua, 1978. vii+276 pp. (William F. Orr) **81c:51001** 51-01
- Rosati, M. (with Bulgarelli, U.) Numerical analysis of simulation models for shallow waters. (Italian. English summary) *Calcolo* **16** (1979), no. 2, 203–237. (Alberto Valli) **81g:76010** 76B15
- Rosati, Mario On a generalization of the Siegel-Conforto symplectic modular group $\Gamma(n, \Delta)$. (Italian. English summary) *Rend. Sem. Mat. Univ. Padova* **60** (1978), 229–236 (1979). (G. van der Geer) **81m:10049** 10D20
- Rosay, Jean-Pierre Sur une caractérisation de la boule parmi les domaines de \mathbb{C}^n par son groupe d'automorphismes. (English summary) *Ann. Inst. Fourier (Grenoble)* **29** (1979), no. 4, ix, 91–97. (D. N. Ahiezer) **81a:32016** 32F15 (32M05)
- Rosberg, Zvi A positive recurrence criterion associated with multidimensional queueing processes. *J. Appl. Probab.* **17** (1980), no. 3, 790–801. (Anthony G. Pakes) **81j:60077** 60J10 (60K30)
- Rosca, Ioan (with Dincă, George) A variational method for nonlinear operators. *Rev. Roumaine Math. Pures Appl.* **25** (1980), no. 4, 543–572. (M. Bironi) **81g:47065** 47H15 (49A27)
- Rosca, Radu (with Morvan, Jean-Marie) Variétés lorentziennes structurées par une connexion conforme plate. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **286** (1978), no. 11, A519–A522. (Authors' summary) **81c:53049** 53C50
- (with Arca, Giuseppe; Caddeo, Renzo) Variétés para-kähleriennes possédant la propriété circulaire. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **286** (1978), no. 24, A1209–A1212. (Authors' summary) **81c:53044** 53C50
- Espaces-temps possédant la propriété de Killing. *Ann. Inst. H. Poincaré Sect. A (N.S.)* **30** (1979), no. 4, 333–337. (J. R. Vanstone) **81j:53051** 53C50 (83C20)
- (with Buchner, K.) Spatial submanifolds structured by a conformal parallel flat connection in an even-dimensional Minkowski space. *Tensor (N.S.)* **33** (1979), no. 3, 300–306. (A. Wyler) **81g:53047** 53C42 (53A30)
- (with Arca, Giuseppe) k -structures de contact isotropes sur une variété lorentzienne. (Italian summary) *Boll. Un. Mat. Ital. A* (5) **17** (1980), no. 2, 260–266. (F. J. Flaherty) **81g:53048** 53C50 (83C40)
- Sous-variétés pseudo-minimales et minimales d'une variété pseudo-riemannienne structurée par une connexion spin-euclidienne. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **290** (1980), no. 7, A331–A333. (Authors' summary) **81a:53057** 53C50
- Variétés lorentziennes à structure sasakienne et admettant un champ vectoriel isotrope Φ -quasi-concircular. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **291** (1980), no. 1, A45–A47. (Authors' summary) **81j:53047** 53C25
- (with Buchner, K.) Erzeugung von Gravitationswellen durch elektromagnetische Strahlung. (English summary) *J. Phys. A* **13** (1980), no. 10, L371–L374. (Authors' summary) **81h:83017** 83C35 (53B50)
- (with Arca, Giuseppe) On space-times having the gradient property. *Tensor (N.S.)* **34** (1980), no. 1, 71–76. (C. B. Collins) **81c:83031** 83C99 (53B30)
- Ročin, V. O. An approach to the solution of partially integral problems of linear programming. (Russian) *Processing of software and hardware for automatic control systems* (Russian), pp. 39–43, *Akad. Nauk Ukrain. SSR, Inst. Kibernet.*, Kiev, 1978. (From the text) **81h:90105** 90C05
- (with Sergienko, I. V.) The approximate solution of some mathematical programming problems with a special structure of the matrix of conditions. (Russian. English summary) *Kibernetika (Kiev)* **1978**, no. 6, 63–66. (M. Vlach) **81h:90137** 90C30
- Ročinskawski, K. Group-theoretical arguments on the Landau theory of second-order phase transitions applied to the phase transitions in some liquid crystals. *Acta Phys. Polon. A* **56** (1979), no. 6, 891–909. (Author's summary) **81c:82011** 82A25
- Ročulec, Marcel N. Algèbres avec radical, associées aux systèmes d'équations aux dérivées partielles, itérées. (Romanian summary) *Bul. Inst. Politehn. București Ser. Mec.* **41** (1979), no. 1, 3–12. (Manfred W. Kracht) **81j:35019** 35C99 (30G35, 35G99)
- Rose, Alan Sur certaines tautologies sans constantes qui possèdent des variables de trois sortes. *C. R. Acad. Sci. Paris Sér. A-B* **286** (1978), no. 20, A847–A848. (Author's summary) **81c:03004** 03B05
- Many-valued propositional calculi without constants. *Proceedings of the Ninth*

- International Symposium on Multiple-Valued Logic* (Bath, 1979), pp. 128-134, *IEEE, Long Beach, Calif.*, 1979. (Alasdair Urquhart) **81f:03033** 03B50
- Ross, Bruce I.** Prime quantifier eliminable rings. *J. London Math. Soc.* (2) **21** (1980), no. 2, 257-262. (John Coates) **81g:03034** 03C10 (16A12)
- On the model theory of finite-dimensional algebras. *Proc. London Math. Soc.* (3) **40** (1980), no. 1, 21-39. (Leonard Lipshitz) **81a:03033** 03C60 (03B25, 03C35, 17A99)
- Ross, Donald J.** Matrix identities of the fast Fourier transform. *Linear Algebra Appl.* **29** (1980), 423-443. (C. L. Liu) **81j:42019** 42A38 (65F99, 65T05, 94A11)
- (with Bank, Randolph L.) Parameter selection for Newton-like methods applicable to nonlinear partial differential equations. *SIAM J. Numer. Anal.* **17** (1980), no. 6, 806-822. (W. F. Ames) **81m:65071** 65H10 (65N30)
- Ross, Harvey A.** (with Bender, Carl M.; Cooper, Fred; Guralnik, Gerald; Sharp, David H.) Strong coupling expansion for classical statistical dynamics. *J. Statist. Phys.* **22** (1980), no. 6, 647-660. (B. Derrida) **81h:82003** 82A05 (34F05)
- Ross, Michael R.** (with Haigh, John) Evolutionary game auctions. *J. Theoret. Biol.* **85** (1980), no. 2, 381-397. (Authors' summary) **81j:90155** 90D45 (92A05)
- Rosenbly, James E.** (with Lennox, John C.) Soluble products of polycyclic groups. *Math. Z.* **170** (1980), no. 2, 153-154. (Editors) **81a:20047** 20F99
- Rosenbruch, Robert D.** (with Pelletier, Joan Wick) The category of Banach spaces in sheaves. *Cahiers Topologie Géom. Différentielle* **20** (1979), no. 4, 353-372. (J. B. Cooper) **81c:46055** 46M20 (18B99, 18F20)
- On algebras defined by operations and equations in a topos. *J. Pure Appl. Algebra* **17** (1980), no. 2, 203-221. (Joan Tofan) **81d:18011** 18B25 (03G30, 08C05)
- Roselle, D. P.** (with Dymacek, Wayne M.) Circular permutations by number of rises and successions. *J. Combin. Theory Ser. A* **25** (1978), no. 2, 196-201. (From the introduction) **81i:05008** 05A05
- (with Dymacek, Wayne M.) Cyclic designs and uniformly deep families. *J. Combin. Theory Ser. A* **28** (1980), no. 2, 130-139. (Derek Smith) **81i:05043** 05B30
- Rosenman, Joseph J.** Integral bounds for the strain energy in terms of surface tractions or displacements and body forces in finite elastostatics. *Transactions of the Twenty-Fifth Conference of Army Mathematicians* (Johns Hopkins Univ., Baltimore, Md., 1979), pp. 447-454. *ARO Rep.* **80**, 1, U. S. Army Res. Office, Research Triangle Park, N.C., 1980. (Authors' summary) **81j:73024** 73G05
- (with Breuer, Shlomo) A bound on the strain energy for the traction problem in finite elasticity with localized nonzero surface data. (German summary) *J. Elasticity* **10** (1980), no. 1, 11-22. (Authors' summary) **81j:73013** 73C50
- Rosens, Barry K.** (with Ehrig, Hartmut) Decomposition of graph grammar productions and derivatives. *Graph-grammars and their application to computer science and biology* (Internat. Workshop, Bad Honnef, 1978), pp. 192-205. *Lecture Notes in Comput. Sci.*, **73**, Springer, Berlin, 1979. (Authors' summary) **81c:68095** 68F05 (68D37)
- Monoids for rapid data flow analysis. *SIAM J. Comput.* **9** (1980), no. 1, 159-196. (Fabrizio Luccio) **81h:68007** 68B05
- (with Ehrig, Hartmut) The mathematics of record handling. *SIAM J. Comput.* **9** (1980), no. 3, 441-469. (W. W. Armstrong) **81j:68031** 68B15 (68E10)
- Rosen, Bengt** A tool for derivation of asymptotic results for sampling and occupancy problems, illustrated by its application to some general capture-recapture sampling problems. *Proceedings of the Second Prague Symposium on Asymptotic Statistics* (Hradec Králové, 1978), pp. 67-79. North-Holland, Amsterdam, 1979. (Jon Stene) **81h:62021** 62D05 (60F05, 60G40)
- Rosen, Gerald** Space-time metrical fluctuations induced by cosmic turbulence. (Italian and Russian summaries) *Nuovo Cimento B* (11) **57** (1980), no. 1, 125-130. (Authors' summary) **81i:83059** 83F05
- Restricted invariance of the Navier-Stokes equation. *Phys. Rev. A* (3) **22** (1980), no. 1, 313-314. (Authors' summary) **81k:76018** 76D05 (35Q10)
- Rosen, Harvey** Connected projections of blocking sets of $J^n \times M$. *Proc. Amer. Math. Soc.* **79** (1980), no. 2, 335-337. (V. Kannan) **81j:54010** 54C15 (54C08, 54D05)
- Rosen, Jay S.** (with Ellis, Richard S.) Asymptotic expansions of Gaussian integrals. *Bull. Amer. Math. Soc. (N.S.)* **3** (1980), no. 1, part 1, 705-709. (S. R. S. Varadhan) **81k:60046** 60G15
- (with Ellis, Richard S.; Newman, Charles M.) Limit theorems for sums of dependent random variables occurring in statistical mechanics. II. Conditioning, multiple phases, and metastability. *Z. Wahrsch. Verw. Gebiete* **51** (1980), no. 2, 153-169. (D. Szász) **81g:62003** 82A05 (60F05)
- Rosen, Joe** Symmetry and conservation: inverse Noether's theorem and general formalism. *J. Phys. A* **13** (1980), no. 3, 803-813. (Benjamin Plybon) **81i:81022** 81C99 (49H05, 70H30)
- Rosen, Kenneth H.** Lattice points in four-dimensional tetrahedra and a conjecture of Rademacher. *J. Reine Angew. Math.* **307/308** (1979), 264-275. (Editors) **81m:10092** 10J25 (10E05)
- On the parity of the number of lattice points in certain tetrahedra. *J. Reine Angew. Math.* **307/308** (1979), 276-278. (From the introduction) **81m:10093** 10J25
- Rosen, Nathan** Can quantum-mechanical description of physical reality be considered complete? *Albert Einstein: his influence on physics, philosophy and politics*, pp. 57-67. Vieweg, Braunschweig, 1979. (See **81f:01039**) 01A70
- Erratum: "Bimetric gravitation theory on a cosmological basis" [Gen. Relativity Gravitation **9** (1978), no. 4, 339-351; MR **57** #11634]. *Gen. Relativity Gravitation* **12** (1980), no. 3, 265. (Editors) **81i:83049** 83D05
- Bimetric general relativity and cosmology. *Gen. Relativity Gravitation* **12** (1980), no. 7, 493-510. (Brian O. J. Tupper) **81m:83041** 83D05 (83F05)
- (with Szamosi, G.) Classical particles with unusual properties. *Nuovo Cimento B* (11) **56** (1980), no. 2, 313-323. (Authors' summary) **81d:81143** 81M05 (49H05, 83A05)
- Rosen, Robert** Bifurcations and biological observables. *Bifurcation theory and applications in scientific disciplines* (Papers, Conf., New York, 1977), pp. 178-187. *Ann. New York Acad. Sci.*, **316**, New York Acad. Sci., New York, 1979. (C. P. Bruter) **81b:92002** 92A05 (58F40)
- Protein folding: a prototype for control of complex systems. *Internat. J. Systems Sci.* **11** (1980), no. 5, 527-540. (Robert J. Mulholland) **81g:92013** 92A09 (92A10, 92A10)
- Rosenbaum P., M.** (with Luehr, C. F.) Gravitation as an internal gauge theory of the Poincaré group. *J. Math. Phys.* **21** (1980), no. 6, 1432-1438. (B. N. Frolow) **81h:83037** 83D05 (55R10, 57S30, 81E10)
- Rosenberg, Alex** (with Choi, Man Duen; Lam, Tsit Yuen; Reznick, Bruce) Sums of squares in some integral domains. *J. Algebra* **65** (1980), no. 1, 234-256. (Manfred Knebusch) **81h:10028** 10C04 (12D15, 13B99)
- Rosenberg, Arnold L.** (with Miller, Raymond E.; Pippenger, Nicholas; Snyder, Lawrence) Optimal 2,3-trees. Preliminary version. *Proceedings of a Conference on Theoretical Computer Science* (Univ. Waterloo, Waterloo, Ont., 1977), pp. 30-35. Univ. Waterloo, Waterloo, Ont., 1978. (Authors' summary) **81h:68058** 68E10
- (with Wood, Derick; Galil, Zvi) Storage representations for treelike data structures. *Conference Record of the Eleventh Annual ACM Symposium on Theory of Computing* (Atlanta, Ga., 1979), pp. 99-107. *ACM, New York*, 1979. (Authors' summary) **81d:68036** 68B15 (68E05)
- (with Ottmann, Th.; Six, H.-W.; Wood, Derick) Node-visit optimal 1-2 brother trees. *Theoretical computer science* (Fourth GI Conf., Aachen, 1979), pp. 213-221. *Lecture Notes in Comput. Sci.*, **67**, Springer, Berlin, 1979. (Authors' summary) **81k:68047** 68E10
- Profile numbers. *Fibonacci Quart.* **17** (1979), no. 3, 259-264. (E. M. Reingold) **81c:10015** 10A35 (68E10)
- Encoding data structures in trees. *J. Assoc. Comput. Mach.* **26** (1979), no. 4, 668-689. (Yasuyoshi Inagaki) **81h:68014** 68B15 (68E10)
- (with Wood, Derick; Galil, Zvi) Storage representations for tree-like data structures. *Math. Systems Theory* **13** (1979/80), no. 2, 105-130. (J. Paredaens) **81c:68051** 68E10 (68B15)
- (with Lipton, Richard J.; Yao, Andrew Chi Chih) External hashing schemes for collections of data structures. *J. Assoc. Comput. Mach.* **27** (1980), no. 1, 81-95. (Authors' summary) **81g:68127** 68H05 (68B15)
- (with Stockmeyer, Larry J.; Snyder, Lawrence) Uniform data encodings. *Theoret. Comput. Sci.* **11** (1980), no. 2, 145-165. (Authors' summary) **81h:68059** 68E10
- Rosenberg, Barr** (with Carlson, Daryl) A simple approximation of the sampling distribution of least absolute residuals regression estimates. Computations for least absolute values estimation. *Comm. Statist. B—Simulation Comput.* **6** (1977), no. 4, 421-437. (See **81h:62127**) 62J02
- Rosenberg, Ivo G.** (with Martin, L.; Reischer, C.) Completeness problems for switching circuits constructed from delayed gates. *Proceedings of the Eighth International Symposium on Multiple-Valued Logic* (Rosemont, Ill., 1978), pp. 142-148. *IEEE, Long Beach, Calif.*, 1978. (Authors' summary) **81h:94069** 94C10
- A generalization of Hausdorff's independent sets. *An. Univ. Timişoara Ser. Ştiinţ. Mat.* **16** (1978), no. 1, 77-80 (1979). (From the text) **81a:05003** 05A05
- (with Deza, M.) Cardinalités des sommets et d'arêtes d'hypergraphes satisfaisant à certaines conditions sur l'intersection d'arêtes. *Colloque Mathématiques Discretées: Codes et Hypergraphes* (Brussels, 1978). *Cahiers Centre Études Rech. Opér.* **20** (1978), no. 3-4, 279-285. (Peter Frank) **81a:05102** 05C65
- Structural rigidity of bar & joint and cabled frameworks. *Proceedings of the Tenth Southeastern Conference on Combinatorics, Graph Theory and Computing* (Florida Atlantic Univ., Boca Raton, Fla., 1979), pp. 843-848. *Congress. Numer.*, **XXIII-XXIV**, Utilitas Math., Winnipeg, Man., 1979. (B. G. Roth) **81c:05021** 51F99 (52A25, 70B10, 73K05)
- (with Deza, M.) Generalized intersection patterns and two-symbol balanced arrays. *Linear Algebra Appl.* **30** (1980), 9-40. (J. E. Graver) **81g:05039** 05B30
- See also *Combinatorics*, **81h:05001a** and *Combinatorics*, **81h:05001b**
- Rosenberg, Jonathan** Realization of square-integrable representations of unimodular Lie groups on L^2 -cohomology spaces. *Trans. Amer. Math. Soc.* **261** (1980), no. 1, 1-32. (J. H. Rawnsley) **81k:22012** 22E45 (22E25)
- Rosenberg, Ronald C.** (with Andry, A. N., Jr.) An efficient algorithm for obtaining the reduced connection equations for a class of dynamic systems. *Optimization techniques* (Proc. Ninth IFIP Conf., Warsaw, 1979), Part 2, pp. 250-255. *Lecture Notes in Control and Information Sci.*, **23**, Springer, Berlin, 1980. (See **81j:49011b**) 68C25
- (with Moultrie, Benjamin) Basis order for bond graph junction structures. *IEEE Trans. Circuits and Systems* **27** (1980), no. 10, 909-920. (Authors' summary) **81h:94043** 94C15
- Rosenberger, Gerhard** Von Untergruppen der Triangel-Gruppen. *Illinois J. Math.* **22** (1978), no. 3, 404-413. (From the introduction) **81g:20092** 20H10
- Applications of Nielsen's reduction method to the solution of combinatorial problems in group theory: a survey. *Homological group theory* (Proc. Sympos., Durham, 1977), pp. 339-358. *London Math. Soc. Lecture Note Ser.*, **36**, Cambridge Univ. Press, Cambridge, 1979. (D. L. Johnson) **81i:20039** 20F05 (57M05)
- (with Kern-Isbemer, Gabriele) Über Diskretheitsbedingungen und die Diophantische Gleichung $ax^2 + by^2 + cz^2 = dxyz$. *Arch. Math. (Basel)* **34** (1980), no. 6, 481-493. (Harvey Cohn) **81m:20064** 20H10 (10B10, 10D07)
- Gleichungen in freien Produkten mit Amalgam. *Math. Z.* **173** (1980), no. 1, 1-11. (S. Andreadakis) **81k:20038** 20E06 (20F28)
- Rosenblatt, S.** (with Davis, Stephen H.) A quasiperiodic Mathieu-Hill equation. *SIAM J. Appl. Math.* **38** (1980), no. 1, 139-155. (F. Brauer) **81h:34027** 34C15
- (with Cohen, Donald S.) Periodically perturbed bifurcation. I. Simple bifurcation. *Stud. Appl. Math.* **63** (1980), no. 1, 1-23. (K. R. Schneider) **81h:34050** 34E05 (34C25)
- Rosenblatt, Joseph** (with del Junco, Andrés) Counterexamples in ergodic theory and number theory. *Math. Ann.* **245** (1979), no. 3, 185-197. (Gérard Rauzy) **81h:10042** 10K10 (28D05)
- A distal property of groups and the growth of connected locally compact groups. *Mathematika* **26** (1979), no. 1, 94-98. (Herbert Abels) **81c:22014** 22D05 (54H15)
- Strongly equivalent invariant measures. *Math. Proc. Cambridge Philos. Soc.* **88** (1980), no. 1, 33-43. (Annie Millet) **81c:28013** 28D10 (28D15)
- Rosenblatt, Murray** (with Helland, K. N.; Li, K. S.) Bispectra and energy transfer in grid-generated turbulence. *Developments in statistics*, Vol. 2, pp. 123-155. *Academic Press, New York*, 1979. (J. L. Lumley) **81h:76037** 76F99
- Global measures of deviation for kernel and nearest neighbor density estimates. *Smoothing techniques for curve estimation* (Proc. Workshop, Heidelberg, 1979), pp. 181-190. *Lecture Notes in Math.*, **757**, Springer, Berlin, 1979. (Luc P. Devroye) **81g:62076** 62G05
- Some limit theorems for partial sums of quadratic forms in stationary Gaussian

- variables. *Z. Wahrsch. Verw. Gebiete* 49 (1979), no. 2, 125-132. (T.-C. Sun) **81a:60036** 60F05 (60G10)
- Some limit theorems for partial sums of stationary sequences. *Multivariate analysis, V (Proc. Fifth Internat. Sympos., Univ. Pittsburgh, Pittsburgh, Pa., 1978)*, pp. 239-248, North-Holland, Amsterdam, 1980. (Hiroshi Negishi) **81i:60036** 60F05
- Linear processes and bispectra. *J. Appl. Probab.* 17 (1980), no. 1, 265-270. (B. Picinbono) **81d:60051** 60G25 (62M20)
- Erratum: "Asymptotics and representation of cubic splines" [*J. Approx. Theory* 17 (1976), no. 4, 332-343; MR 54 #5682]. *J. Approx. Theory* 28 (1980), no. 2, 184. (Editors) **81d:41006** 41A15
- Rosenblatt-Roth, Mila** The asymptotical study of the measure of a minimal set in information theory. (French summary) *Information theory (Proc. Internat. CNRS Colloq., Cachan, 1977)* (French), pp. 473-484, Colloques Internat. CNRS, 276, CNRS, Paris, 1978. (Prem Nath) **81k:94015** 94A15
- Rosenbloom, P. C.** Inequalities for moments and means. *J. Approx. Theory* 23 (1978), no. 4, 335-353. (Author's introduction) **81j:44006** 44A15 (26D99)
- Rosenblum, Daniel M.** (with Wendell, Richard E.) Further results on the minimization of a nonseparable objective function subject to disjoint constraints. *Oper. Res.* 28 (1980), no. 5, 1222-1226. (Authors' summary) **81i:90135** 90C08
- Rosenblum, Marvin** (with Rovnyak, James) Change of variables formulas with Cayley inner functions. *Topics in functional analysis (essays dedicated to M. G. Krein on the occasion of his 70th birthday)*, pp. 283-320, *Advances in Math., Suppl. Studies*, 3, Academic Press, New York, 1978. (C. Carton-Lebrun) **81d:30053** 30D50 (42C15, 44A15)
- A corona theorem for countably many functions. *Integral Equations Operator Theory* 3 (1980), no. 1, 125-137. (T. W. Gamelin) **81e:46034** 46J15 (30D55, 47A99)
- Rosenbluth, M. N.** (with Rochester, A. B.; White, R. B.) Statistical description of stochastic orbits in a tokamak. *J. Physique* 41 (1980), no. 4 Colloq. C-3, C3-351-C3-358. (Authors' summary) **81f:76055** 76X05 (58F13)
- Rosenblum, Steven I.** (with Goldstein, Jerome A.) Energy decay and partition for dissipative wave equations. *J. Differential Equations* 36 (1980), no. 1, 66-73. (James T. Sandefur) **81e:34044** 34G10 (47A50, 81C10)
- Rosendahl, Manfred** (with Mankwald, Karl Peter) Analysis of programs by reduction of their structure. *Graph-grammars and their application to computer science and biology (Internat. Workshop, Bad Honnef, 1978)*, pp. 409-417, *Lecture Notes in Comput. Sci.*, 73, Springer, Berlin, 1979. (Carlo Montangero) **81i:68025** 68B10 (68F05)
- Rosenfeld, Azriel** Image processing and recognition. *Advances in computers*, Vol. 18, pp. 1-57, Academic Press, New York, 1979. (See **81f:68004**) 68G10
- (with Wu, Angela) Cellular graph automata. *Graph-grammars and their application to computer science and biology (Internat. Workshop, Bad Honnef, 1978)*, pp. 464-475, *Lecture Notes in Comput. Sci.*, 73, Springer, Berlin, 1979. (Authors' summary) **81e:68041** 68D20 (68F10)
- (with Wu, Angela) Cellular graph automata. I. Basic concepts, graph property measurement, closure properties. *Inform. and Control* 42 (1979), no. 3, 305-329. (Roland Vollmar) **81e:68042a** 68D20 (68C25)
- (with Wu, Angela) Cellular graph automata. II. Graph and subgraph isomorphism, graph structure recognition. *Inform. and Control* 42 (1979), no. 3, 330-353. (Roland Vollmar) **81e:68042b** 68D20 (68E10)
- Rosenfeld, Gerald** (with Antman, Stuart S.) Corrections and additions: "Global behavior of buckled states of nonlinearly elastic rods" [*SIAM Rev.* 20 (1978), no. 3, 513-566; MR 58 #14107]. *SIAM Rev.* 22 (1980), no. 2, 186-187. (M. O. Basilevili) **81m:73042** 73H05 (73K05)
- Rosenfield, A. R.** (with Lin, I. H.; Hirth, J. P.) *J* integral analysis of stable crack growth. *Internat. J. Fracture* 16 (1980), no. 1, R11-R14. (Authors' summary) **81d:73083** 73M05
- Rosenkrantz, Roger D.** The Copernican revelation. *Foundations and applications of decision theory (Papers, Internat. Workshop, Univ. Western Ontario, London, Ont., 1975)*, Vol. 1, pp. 399-426, *Univ. Western Ontario Series in Philos. Sci.*, 13, Reidel, Dordrecht, 1978. (N. Swerdlow) **81m:01010** 01A40 (70-03)
- Suppes on probability, utility, and decision theory. *Patrick Suppes*, pp. 111-129, *Profiles, I. Reidel, Dordrecht*, 1979. (See **80m:01040**) 62C05
- Bayesian theory appraisal: a reply to Seidenfeld. *Theory and Decision* 11 (1979), no. 4, 441-451. (D. V. Lindley) **81b:62006** 62A15
- Rosenkrantz, Walter A.** (with Sawyer, Stanley) *L*^p estimates for stopping times of Bessel processes. *Z. Wahrsch. Verw. Gebiete* 41 (1977), no. 2, 145-151. (S. R. S. Varadhan) **81m:60148** 60J65
- (with Dorea, C. C. Y.) Limit theorems for Markov processes via a variant of the Trotter-Kato theorem. *J. Appl. Probab.* 17 (1980), no. 3, 704-715. (Andrew D. Barbour) **81b:60041** 60F17 (60J60)
- On the accuracy of Kingman's heavy traffic approximation in the theory of queues. *Z. Wahrsch. Verw. Gebiete* 51 (1980), no. 1, 115-121. (Douglas P. Kennedy) **81d:60109** 60K25 (60F05)
- Rosenlicht, Maxwell** On the value group of a differential valuation. *Amer. J. Math.* 101 (1979), no. 1, 258-266. (J. L. Johnson) **81b:12030** 12H05
- Rosenlund, Stig L.** The random order service *G/M/m* queue. *Naval Res. Logist. Quart.* 27 (1980), no. 2, 207-215. (Brian Conolly) **81i:60096** 60K25
- Rosensteel, G.** (with Ihrig, E.) Geometric quantization of the CM(3) model. *Ann. Physics* 121 (1979), no. 1-2, 113-130. (J. Blackman) **81m:81075** 81G30 (58F06, 81G20)
- (with Rowe, D. J.) On the algebraic formulation of collective models. I. The mass quadrupole collective model. *Ann. Physics* 123 (1979), no. 1, 36-60. (N. Mukunda) **81a:81109** 81G35 (22E70, 58F06, 81C40)
- A recursion formula for *sp*(3, R) matrix elements. *J. Math. Phys.* 21 (1980), no. 4, 924-927. (J. F. Cornwell) **81f:17005** 17B15 (81C40)
- Rosenstein, Joseph G.** (with Manaster, Alfred B.) Two-dimensional partial orderings: recursive model theory. *J. Symbolic Logic* 45 (1980), no. 1, 121-132. (Egon Börger) **81d:03047a** 03D45 (03C15, 03C65, 06A10)
- (with Manaster, Alfred B.) Two-dimensional partial orderings: undecidability. *J. Symbolic Logic* 45 (1980), no. 1, 133-143. (Egon Börger) **81d:03047b** 03D45 (03D35, 06A10)
- Rosenstiel, Pierre** Les graphes d'entrelacement d'un graphe. (English summary)
- Problèmes combinatoires et théorie des graphes (Colloq. Internat. CNRS, Univ. Orsay, Orsay, 1976)*, pp. 359-362, *Colloques Internat. CNRS*, 260, CNRS, Paris, 1978. (See **80e:05005**) 05C99
- Rosenthal, Arnie** Optimal mass production. *Discrete Appl. Math.* 2 (1980), no. 2, 167-170. (Author's summary) **81e:68034** 68C05 (90C39)
- Rosenthal, Erik J.** A Jordan form for certain infinite-dimensional operators. *Acta Sci. Math. (Szeged)* 41 (1979), no. 3-4, 365-374. (John P. Daughtry) **81a:47018** 47A65 (47A15)
- Rosenthal, H.** (with Loist, O.) Risikominimierung bei der Portfolioplanung unter besonderer Berücksichtigung singulärer Kovarianzmatrizen. (English summary) *Z. Oper. Res. Ser. A-B* 24 (1980), no. 3, A107-A124. (Authors' summary) **81d:90013** 90A09 (62P05)
- Rosenthal, Haskell P.** On a theorem of J. L. Krivine concerning block finite representability of *l*^p in general Banach spaces. *J. Funct. Anal.* 28 (1978), no. 2, 197-225. (Y. Benyamini) **81d:46020** 46B25 (46B20)
- Subspaces of *l*^p which do not contain *l*^p isomorphically. *Séminaire d'Analyse Fonctionnelle* (1978-1979), Exp. No. 28, 9 pp., *École Polytech., Palaiseau*, 1979. (P. Saphar) **81c:46017** 46E15 (46B20)
- Rosenthal, John** (with Plotkin, J. M.) Some asymptotic methods in combinatorics. *J. Austral. Math. Soc. Ser. A* 28 (1979), no. 4, 452-460. (Edward A. Bender) **81f:05014** 05A15
- (with Ash, Chris) Some theories associated with algebraically closed fields. *J. Symbolic Logic* 45 (1980), no. 2, 359-362. (Piero Mangani) **81e:03030** 03C60 (03D35, 12H05, 12L05)
- Rosenthal, Peter** (with Longstaff, W. E.) On two questions of Halmos concerning subspace lattices. *Proc. Amer. Math. Soc.* 75 (1979), no. 1, 85-86. (Robert L. Moore) **81a:47009** 47A15
- (with Nordgren, E. A.; Radjabipour, Mehdi; Radjavi, Heydar) On invariant operator ranges. *Trans. Amer. Math. Soc.* 251 (1979), 389-398. (E. Gerlach) **81c:47010** 47A15 (47A05, 47D25)
- (with Hadwin, Donald W.; Nordgren, E. A.; Radjavi, Heydar) An operator not satisfying Lomonosov's hypothesis. *J. Funct. Anal.* 38 (1980), no. 3, 410-415. (Hong W. Kim) **81m:47013** 47A15
- Rosenthal, Robert W.** Arbitration of two-party disputes under uncertainty. *Rev. Econom. Stud.* 45 (1978), no. 3, 595-604. (From the introduction) **81b:90158** 90D05 (90D35)
- (with Landau, Henry J.) A game-theoretic analysis of bargaining with reputations. *J. Math. Psych.* 20 (1979), no. 3, 233-255. (O. N. Bondareva) **81e:90125** 90D30 (90D35)
- New equilibria for noncooperative two-person games. *J. Math. Sociol.* 7 (1980), no. 1, 15-26. (Ferenc Forgó) **81g:90097** 90D05
- Congestion tolls: equilibrium and optimality. *Naval Res. Logist. Quart.* 27 (1980), no. 2, 231-232. (Author's summary) **81g:90051** 90B20
- Rosicky, Franz** (with Mark, Franz) Analytical relativistic Hartree-Fock equations within scalar basis sets. *Chem. Phys. Lett.* 74 (1980), no. 3, 562-567. (Authors' summary) **81i:81118** 81G55
- Rosický, Jiří** Extensions of functors and their applications. *Cahiers Topologie Géom. Différentielle* 19 (1978), no. 2, 179-220. (H.-B. Brinkmann) **81c:18012** 18D05
- Rosina, M.** (with Fonda, L.; Mankó-Boršnik, N.) The decay of coherent rotational states subject to random quantum measurements. *Nuovo Cimento A* (11) 56 (1980), no. 2, 229-235. (Authors' summary) **81e:81063** 81D99
- Rosinger, E. E.** (with Ben-Tal, Aharon; Ben-Israel, Adi) A Helly-type theorem and semi-infinite programming. *Constructive approaches to mathematical models (Proc. Conf. in honor of R. J. Duffin, Pittsburgh, Pa., 1978)*, pp. 127-135, Academic Press, New York, 1979. (W. Scharotek) **81g:90071** 90C25 (52A35)
- Stability and convergence for nonlinear difference schemes are equivalent. *J. Int. Math. Appl.* 26 (1980), no. 2, 143-149. (Muri M. Gupta) **81m:65151** 65M10
- Rosinski, Jan** (with Suchanek, Zdzisław) A Gaussian random integral of vector-valued functions. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math. Astronom. Phys.* 26 (1978), no. 5, 437-440. (Authors' summary) **81b:60078** 60H05 (60G57)
- Some remarks on the central limit theorem in Banach spaces. *Mathematical statistics and probability theory (Proc. Sixth Internat. Conf., Wista, 1978)*, pp. 342-347, *Lecture Notes in Statist.*, 2, Springer, New York, 1980. (Evarist Giné) **81i:60012** 60B12
- Remarks on Banach spaces of stable type. *Probab. Math. Statist.* 1 (1980), no. 1, 67-71. (Gilles Pisier) **81m:60012** 60B12 (46B20)
- See also **Mathematical statistics and probability theory**, **81g:62006**
- Rösler, Uwe** Eine Mischungseigenschaft von Zufallsvariablen. *Z. Wahrsch. Verw. Gebiete* 37 (1976/77), no. 4, 329-340. (Author's review (Zbl 349:60023)) **81k:60036** 60F05 (60F20)
- The tail ϕ -field of time-homogeneous one-dimensional diffusion processes. *Am. Probab. T.* 7 (1979), no. 5, 847-857. (Walter A. Rosenkrantz) **81e:60086** 60J60 (60F20)
- Rosjakov, G. S.** (with Nikulin, G. Z.; Pirumov, U. G.; Pletkina, L. V.) Three-dimensional flows of a gas in jets. (Russian) *Numerical methods in continuum mechanics. Vychisl. Metody i Programirovanie* No. 30 (1979), 30-74. (From the text) **81a:76032** 76J99 (65N05, 76B10)
- Rosner, B.** (with Donner, Allan; Hennekens, C. H.) Significance testing of interclass correlations from familial data. (French summary) *Biometrics* 35 (1979), no. 2, 461-471. (Authors' summary) **81i:62104** 62H20 (62P10)
- Rosolini, Giuseppe** Semilattices and frames in a topos. (Italian. English summary) *Ric. Mat. Univ. Parma* (4) 4 (1978), 369-384 (1979). (From the introduction) **81i:03183** 03G30 (06A12, 18B25)
- On lattice extensions. (Italian summary) *Boll. Un. Mat. Ital. A* (5) 17 (1980), no. 2, 274-279. (F. M. Yaqub) **81i:06005** 06B99 (06E99)
- Rosolok, S. K.** Purely correct modules. (Russian) *Uspehi Mat. Nauk* 33 (1978), no. 3(201), 176. (From the text) **81i:16049** 16A64
- Rosquist, Kjell** Global rotation. *Gen. Relativity Gravitation* 12 (1980), no. 8, 649-664. (M. A. H. MacCallum) **81j:83048** 83F05 (53C80, 83C20)
- Ross, Bertram** (with Northover, Francis H.) Fractional calculus and derivatives of complex order. *Bull. Malaysian Math. Soc. (2)* 2 (1979), no. 2, 111-117. (R. Bittner) **81d:44000** 44A40 (26A33)

- (with Northover, Francis H.) Application of derivatives of complex order in the theory of operators of fractional order $d^{1/2}/dx^{1/2}$. (Russian) *Differentsial'nye Uravneniya* 15 (1979), no. 11, 1987-1992, 2108. (S. G. Samko) **81g:34013** 34A25 (26A33)
- A speculative note on the social forces that stimulated Cauchy to develop rigor. *Ganita Bhārati* 1 (1979), no. 3-4, 29-30. (Umberto Bottazzini) **81h:01009** 01A55 (00A25, 01A80)
- The use of fractional calculus in obtaining Legendre functions of arbitrary index. *Publ. Math. Debrecen* 26 (1979), no. 3-4, 183-186. (Thomas J. Ouler) **81h:33013** 33A45 (26A33)
- The evaluation of a limit of an indeterminate form. *Indian J. Pure Appl. Math.* 11 (1980), no. 7, 854-855. (R. Bittner) **81h:26005** 26A33 (44A10)
- Ross, Dennis K. A fiber bundle model of the gravitational field. *Supergravity (Proc. Workshop, Stony Brook, N.Y., 1979)*, pp. 155-162, North-Holland, Amsterdam, 1979. (See **81j:83001**) **83E99** (53B50)
- Exact solution of Einstein's equations representing a spinning mass. *Lett. Nuovo Cimento* 2 (1980), no. 17, 566-568. (Basilis K. Xanthopoulos) **81i:83015** 83C15
- Ross, Dieter K. (with Mahajan, Arvind) An inequality for the ratio of two quadratic forms. *Univ. Beograd. Publ. Elektrotehn. Fak. Ser. Mat. Fiz.* No. 634-677 (1979), 72-73. (William N. Everitt) **81g:26015** 26D20
- Inequalities and identities for $y_n^2 - y_{n-1}y_{n+1}$. *Aequationes Math.* 20 (1980), no. 1, 23-32. (R. C. Varma) **81d:33008** 33A65 (39A99, 39C05)
- Ross, G. (with Fiddy, M. A.; Nieto-Vesperinas, M.; Wheeler, M. W. L.) The phase problem in scattering phenomena: a zero of entire functions and their significance. *Proc. Roy. Soc. London Ser. A* 360 (1978), no. 1700, 25-45. (Authors' summary) **81h:78028** 78A45
- (with Fiddy, M. A.; Moezzi, H.) The solution to the inverse scattering problem, based on fast zero location from two measurements. (French and German summaries) *Optica Acta* 27 (1980), no. 10, 1433-1444. (Brian DeFazio) **81k:78015** 78A45 (35A25, 68G10)
- Ross, G. Terry (with Soland, Richard M.) A multicriteria approach to the location of public facilities. *European J. Oper. Res.* 4 (1980), no. 5, 307-321. (Authors' summary) **81g:90047** 90B05 (90C31)
- (with Soland, Richard M.; Zoltners, Andris A.) The bounded interval generalized assignment model. *Naval Res. Logist. Quart.* 27 (1980), no. 4, 625-633. (Authors' summary) **81m:90063** 90B35
- Ross, Jeffrey A. (with Brualdi, Richard A.) On Ryser's maximum term rank formula. *Linear Algebra Appl.* 29 (1980), 33-38. (O. Tausky-Todd) **81e:15006** 15A48 (05B20, 15A36)
- (with Brualdi, Richard A.) On the exponent of a primitive, nearly reducible matrix. *Math. Oper. Res.* 5 (1980), no. 2, 229-241. (R. A. Mena) **81f:15030** 15A48 (05C20)
- Ross, Kenneth A. (with Hewitt, Edwin) ★Abstract harmonic analysis. Vol. I. Structure of topological groups, integration theory, group representations. Second edition. *Grundlehren der Mathematischen Wissenschaften [Fundamental Principles of Mathematical Sciences]*, 115. Springer-Verlag, Berlin-New York, 1979. ix + 519 pp. ISBN 3-540-09434-2 (Editors) **81k:43001** 43-02 (22-01)
- ★Elementary analysis: the theory of calculus. Undergraduate Texts in Mathematics. Springer-Verlag, New York-Heidelberg, 1980. viii + 264 pp. ISBN 0-387-90459-X (William Eames) **81a:26001** 26-01
- Ross, Sheldon M. (with Schechtman, Jack) On the first time a separately maintained parallel system has been down for a fixed time. *Naval Res. Logist. Quart.* 26 (1979), no. 2, 285-290. (Mark Brown) **81e:60096** 60K10 (90B25)
- (with Derman, C.; Lieberman, G. J.) On the optimal assignment of servers and a repairman. *J. Appl. Probab.* 17 (1980), no. 2, 577-581. (N. U. Prabhu) **81f:60128** 60K25 (90B22)
- (with Shahshahani, Mehrdad; Weiss, Gideon) On the number of component failures in systems whose component lives are exchangeable. *Math. Oper. Res.* 5 (1980), no. 3, 358-365. (Authors' summary) **81j:90055** 90B25
- A random graph. *J. Appl. Probab.* 18 (1981), no. 1, 309-315. (G. R. Grimmett) **81m:05124** 05C99 (60C05, 60K99)
- Ross, Shepley L. ★Introduction to ordinary differential equations. Third edition. John Wiley & Sons, New York-Chichester-Brisbane, 1980. vii + 503 pp. ISBN 0-471-03295-6 (Editors) **81a:34001** 34-01
- Ross, Stephen A. (with Spatt, Chester S.) Present values and internal rates of return. *J. Econom. Theory* 23 (1980), no. 1, 66-81. (Edwin Burmeister) **81m:90022** 90A09
- Rossini, Franco (with Ferrero, Oscar) Polynomial approximations of definite functions by means of differential equations. (Italian. English summary) *Rend. Sem. Mat. Univ. Politec. Torino* 37 (1979), no. 1, 129-138. (J. Peetre) **81b:65018** 65D20 (41-04, 41A10)
- Rosberg, H.-J. Limit theorems for identically distributed summands assuming the convergence of the distribution functions on a half axis. (Russian summary) *Teor. Veroyatnost. i Primenen.* 24 (1979), no. 4, 692-709. (M. Sreehan) **81f:60037** 60F05 (60E07)
- Romer, J. Barkley An iterative algorithm for calculating potentials near two parallel plates of equal width. II. *Transactions of the Twenty-Fifth Conference of Army Mathematicians (Johns Hopkins Univ., Baltimore, Md., 1979)*, pp. 215-265, ARO Rep. 80, 1, U. S. Army Res. Office, Research Triangle Park, N.C., 1980. (Author's summary) **81f:78007** 78A30 (65E05, 78A55)
- Rosini, Aldo (with Galletti, Carlo) Remarks on the positional analysis of the articulated quadrilateral. (Italian. English and French summaries) *Atti Accad. Ligure Sci. Lett.* 36 (1979), 144-150. (O. Bottema) **81m:70003** 70B15 (51N05)
- Rosini, Anna Maria (with Sambucetti, Patrizia) On the compactness of L^p spaces. (Italian. English summary) *Boll. Un. Mat. Ital. B* (5) 16 (1979), no. 3, 972-988. (Richard A. Alò) **81h:46053** 46E40 (46B25)
- Rosini, Carla Artificial selection through assortative mating. *Third Symposium on Operations Research (Univ. Mannheim, Mannheim, 1978)*, Section 5, pp. 477-486. *Operations Research Verfahren*, 35, Hain, Meisenheim, 1979. (From the introduction) **81a:92007** 92A10
- Rosini, Edda (with Lazzarotti, Paolo; Zanasi, Riccardo) A proof of Pitzer's theorem for abelian groups and its application to two-electron integral transformation. *Chem. Phys. Lett.* 75 (1980), no. 2, 392-394. (John J. Sullivan) **81k:11110** 81G40 (20K27)
- Rossi, Guido Antonio More on the birth and death stochastic process. (Italian. English summary) *Ric. Mat. Sci. Econom. Social.* 2 (1979), no. 1, 53-60. (Vincenzo Capasso) **81i:60078** 60J80 (92A15)
- Rossi, Hugo (with Morrow, James A.) Canonical embeddings. *Trans. Amer. Math. Soc.* 261 (1980), no. 2, 547-565. (C. Bănică) **81m:32033** 32J25 (14H99)
- Holomorphic actions of $Sp(n, \mathbb{R})$ with noncompact isotropy groups. *Trans. Amer. Math. Soc.* 263 (1981), no. 1, 207-230. (H. D. Fegan) **81k:22007** 22E30 (32N10)
- Rossi, Paolo (with Jackiw, R.) Stability and bifurcation in Yang-Mills theory. *Phys. Rev. D* (3) 21 (1980), no. 2, 426-445. (Judith M. Arms) **81a:81054** 81E10 (35B32, 58F14)
- Rossi, Peter E. The cost of search and rational random behavior. *Econom. Lett.* 3 (1979), no. 1, 5-8. (Authors' summary) **81a:90016** 90A12
- Rossi, U. (with di Vita, P.) A modal approach to propagation in graded optical fibres. (French summary) *Optica Acta* 27 (1980), no. 8, 1117-1125. (Authors' summary) **81g:78006** 78A10 (78A55)
- Rossy, Peter J. (with Karplus, Martin) Generalized perturbed Hartree-Fock theory. *J. Chem. Phys.* 72 (1980), no. 11, 6085-6101. (Authors' summary) **81d:81026** 81C12
- Rössler, Jaime (with Martinez, Gaston) Short-range order effects on the electronic properties of a binary linear chain. *Phys. Rev. B* (3) 21 (1980), no. 12, 5511-5520. (Authors' summary) **81d:82039** 82A42 (82A60)
- Rösner, Otto E. Continuous chaos—four prototype equations. *Bifurcation theory and applications in scientific disciplines (Papers, Conf., New York, 1977)*, pp. 376-392, Ann. New York Acad. Sci., 316, New York Acad. Sci., New York, 1979. (Michael J. Field) **81h:58042** 58F13 (58F15)
- Chaotic oscillations: an example of hyperchaos. *Nonlinear oscillations in biology (Proc. Tenth Summer Sem. Appl. Math., Univ. Utah, Salt Lake City, Utah, 1978)*, pp. 141-156, *Lectures in Appl. Math.*, 17, Amer. Math. Soc., Providence, R.I., 1979. (P. J. Holmes) **81e:58048** 58F13 (34C99, 92A09)
- Chaos. *Structural stability in physics (Proc. Internat. Symposia Appl. Catastrophe Theory and Topological Concepts in Phys., Inst. Inform. Sci., Univ. Tübingen, Tübingen, 1978)*, pp. 290-309, *Springer Ser. in Synergetics*, 4, Springer, Berlin, 1979. (Michael J. Field) **81g:58025** 58F13 (58F15, 76F99)
- An equation for hyperchaos. *Phys. Lett. A* 71 (1979), no. 2-3, 155-157. (F. Visentin) **81j:58057** 58F13
- Rossmann, H. (with Warmuth, Walter) Eine Unschärferelation für diskrete Verteilungen. (English and Russian summaries) *Math. Operationsforsch. Statist. Ser. Statist.* 10 (1979), no. 1, 173-178. (Olav Kallenberg) **81e:60014** 60E05 (62E15)
- Rossmann, Wulf Kirillov's character formula for reductive Lie groups. *Invent. Math.* 48 (1978), no. 3, 207-220. (Eugene Gutkin) **81g:22012** 22E30 (22E45)
- The structure of semisimple symmetric spaces. *Canad. J. Math.* 31 (1979), no. 1, 157-180. (Rolf Sulanke) **81i:53042** 53C35 (22E46)
- Limit characters of reductive Lie groups. *Invent. Math.* 61 (1980), no. 1, 53-66. (J. Smidt) **81m:22021** 22E45 (22E30)
- van Rossum, H. Orthogonal expansions in indefinite inner product spaces. *Padé approximation and its applications (Proc. Conf., Univ. Antwerp, Antwerp, 1979)*, pp. 172-183, *Lecture Notes in Math.*, 765, Springer, Berlin, 1979. (J. P. Singhal) **81h:41009** 41A10 (33A65, 41A20)
- Rost, Georg Über Kegelschnittbüschel mit gegebenen metrischen Eigenschaften. *Boyer. Akad. Wiss. Math.-Natur. Kl. Sitzungsber.* 1978, 53-69 (1979). (P. Scherk) **81a:51010** 51N20
- Rostanin, N. B. (with Lizarev, A. D.) Natural frequencies of oscillations of very thin spherical shells. (Russian) *Calculation of three-dimensional constructions*, No. 18 (Russian), pp. 139-153, 167, "Stroizdat", Moscow, 1979. (R. Kodnár) **81d:73009** 73L20
- (with Lizarev, A. D.) Asymptotic behavior of associated Legendre functions in neighborhoods of integer degrees. (Russian. English summary) *Vesci Akad. Nauk BSSR Ser. Fiz.-Mat. Nauk* 5 (1979), no. 5, 118-121, 143. (E. Riekstins) **81a:33014** 33A45
- Rops, Radu On the partition function of a Riemannian manifold with boundary. *Rev. Roumaine Math. Pures Appl.* 25 (1980), no. 2, 265-269. (V. I. Oikler) **81i:58051** 58G25 (53C20)
- Rota, Gian-Carlo (with Ellerman, David P.) A measure-theoretic approach to logical quantification. *Rend. Sem. Mat. Univ. Padova* 59 (1978), 227-246 (1979). (F. Speranza) **81c:03017** 03C90 (03B05, 03B10, 03G25, 28-XX)
- (with Joni, S. A.) Coalgebras and bialgebras in combinatorics. *Stud. Appl. Math.* 61 (1979), no. 2, 93-139. (R. W. Quackenbush) **81e:05002** 05A10 (16A24)
- (with Sagan, Bruce) Congruences derived from group action. *European J. Combin.* 1 (1980), no. 1, 67-76. (Hugo S. Sun) **81g:05018** 05A15 (20B99)
- See also *History of computing in the twentieth century*, **81i:68002**
- Rotar, V. I. Limit theorems for polynomial forms. *J. Multivariate Anal.* 9 (1979), no. 4, 511-530. (V. L. Girko) **81m:60039** 60F05 (62H10)
- Rotem, D. (with Matthews, D.; Bretholz, E.) Self-organizing doubly linked lists. *Internat. J. Comput. Math.* 8 (1980), no. 2, 99-106. (Clement T. Yu) **81h:68096** 68H05
- Roth, Alvin E. An impossibility result concerning n-person bargaining games. *Internat. J. Game Theory* 8 (1979), no. 3, 129-142. (M. Maschler) **81k:90115** 90D12
- The Nash solution as a model of rational bargaining. *Extremal methods and systems analysis (Internat. Sympos., Univ. Texas, Austin, Tex., 1977)*, pp. 306-311, *Lecture Notes in Econom. and Math. Systems*, 174, Springer, Berlin, 1980. (V. N. Kurkov) **81h:90145** 90D12
- Values for games without sidepayments: some difficulties with current concepts. With a comment by John C. Harsanyi. *Econometrica* 48 (1980), no. 2, 457-465, 477. (O. N. Bondareva) **81j:90145** 90D12
- Roth, B. (with Bottema, Oene) ★Theoretical kinematics. North-Holland Series in Applied Mathematics and Mechanics, 24. North-Holland Publishing Co., Amsterdam-New York, 1979. xiv + 558 pp. ISBN 0-444-85124-0 (Robert Connelly) **81c:70001** 70-02 (51Nxx, 53A17, 70B99)
- Roth, David N. (with Carlson, John W.) Čech closure spaces. *Kyungpook Math. J.* 20 (1980), no. 1, 11-30. (H. L. Bentley) **81i:54002** 54A05 (15A36, 54E17)
- Roth, J. Paul ★Computer logic, testing and verification. *Digital System Design Series*. Computer Science Press, Rockville, Md., 1980. xx + 176 pp. ISBN 0-914894-62-5 (From

- the publisher) **81a:69002** 68-01 (94C05)
- Roth, K. F.** On irregularities of distribution. III. *Acta Arith.* **35** (1979), no. 4, 373-384. (L. Kuipers) **81a:10065** 10K30
- Roth, Laura M.** Analyticity in liquid metals. *Phys. Rev. B* **3** (2) (1980), no. 6, 2793-2802. (P. Rudra) **81k:82051** 82A65
- rosenblatt-Roth, Milli** See **Rosenblatt-Roth, Milli**
- Rothaus, O. S.** Automorphisms of Siegel domains. *Amer. J. Math.* **101** (1979), no. 5, 1167-1179. (J. Dorfmeister) **81k:32062** 32M99 (32M05)
- Logarithmic Sobolev inequalities and the spectrum of Sturm-Liouville operators. *J. Funct. Anal.* **39** (1980), no. 1, 42-56. (Jean-Pierre Eckmann) **81m:34025** 34B25 (46E35)
- Rothblum, Uriel G.** (with Denardo, Eric V.) Optimal stopping, exponential utility, and linear programming. *Math. Programming* **16** (1979), no. 2, 228-244. (J. A. E. van Nunen) **81h:90148** 90C40 (60G40)
- Bounds on the indices of the spectral-circle eigenvalues of a nonnegative matrix. *Linear Algebra Appl.* **29** (1980), 445-450. (Paul R. Beesack) **81h:15022** 15A48 (15A18, 15A45)
- (with Schneider, Hans) Characterizations of optimal scalings of matrices. *Math. Programming* **19** (1980), no. 2, 121-136. (M. Z. Nashed) **81j:65064** 65F35 (15A12)
- Rothe, F.** (with de Mottoni, Piero) A simple system of reaction-diffusion equations describing morphogenesis: asymptotic behavior. *Ann. Mat. Pura Appl.* (4) **122** (1979), 141-157. (P. C. Fife) **81f:35067** 35K55 (35B40, 92A05)
- (with de Mottoni, Piero) Convergence to homogeneous equilibrium state for generalized Volterra-Lotka systems with diffusion. *SIAM J. Appl. Math.* **37** (1979), no. 3, 648-663. (J. W. Jerome) **81h:72008** 92A15 (35B40, 35K60)
- (with de Mottoni, Piero) A singular perturbation analysis for a reaction-diffusion system describing pattern formation. *Stud. Appl. Math.* **63** (1980), no. 3, 227-247. (J. Smoller) **81m:35072** 35K55 (80A20, 92A09)
- Rothe, Heinz J.** (with Bender, Iring; Gromes, Dieter) Solutions of Yang-Mills equations with static q -number sources in a semiclassical treatment. *Z. Phys. C* **5** (1980), no. 2, 151-154. (Authors' summary) **81d:81099** 81G05 (81E10)
- Rothe, K. D.** (with Swieca, J. A.) Fractional winding numbers and the U(1) problem. *Nuclear Phys. B* **168** (1980), no. 3-4, 454-464. (Authors' summary) **81e:81104** 81E99
- Rothberg, Melvin** Homotopy type of G -spheres. *Algebraic topology, Aarhus 1978* (Proc. Sympos., Univ. Aarhus, Aarhus, 1978), pp. 573-590. *Lecture Notes in Math.*, **763**, Springer, Berlin, 1979. (Czes Kosniowski) **81e:57044** 57S17 (55P15)
- (with Sondow, J.) Nonlinear smooth representations of compact Lie groups. *Pacific J. Math.* **84** (1979), no. 2, 427-444. (Czes Kosniowski) **81d:57033** 57S15
- (with Dovermann, Karl Heinz) An equivariant surgery sequence and equivariant diffeomorphism and homeomorphism classification (a survey). *Topology Symposium, Siegen 1979* (Proc. Sympos., Univ. Siegen, Siegen, 1979), pp. 257-280. *Lecture Notes in Math.*, **788**, Springer, Berlin, 1980. (Czes Kosniowski) **81m:57024** 57R67 (57S17)
- Rothberg, Ronald I.** ★Linear programming. *North-Holland, New York-Oxford*, 1979. viii + 359 pp. ISBN 0-444-00325-8 (R. Pfaffenberger) **81h:90089** 90C05
- Rothert, H.** Large elastic deformations of shell structures. (German and Russian summaries) Special issue on large elastic deformation of discrete systems (Lectures, Eurochem 69' Internat. Colloq., Balatonszemes, 1977). *Acta Tech. Acad. Sci. Hungar.* **87** (1978), no. 1-2, 155-163 (1979). (Author's summary) **81h:73031** 73K15 (73G05)
- (with Zastrau, B.) Parameterstudien zum Tragverhalten flacher Schalen. *Z. Angew. Math. Mech.* **59** (1979), no. 5, T209-T210. (From the text) **81j:73072** 73L99 (53C45)
- Rothery, P.** A nonparametric measure of intraclass correlation. *Biometrika* **66** (1979), no. 3, 629-639. (G. E. Noether) **81e:62044** 62G05 (62G10)
- Rothkopf, Michael H.** (with Oren, Shmuel S.) A closure approximation for the nonstationary $M/M/s$ queue. *Management Sci.* **25** (1979/80), no. 6, 522-534. (B. W. Stuck) **81e:60101** 60K25
- Rothman, Edward D.** (with Templeton, Alan R.) Evolution and fine-grained environmental runs. *Foundations and applications of decision theory* (Papers, Internat. Workshop, Univ. Western Ontario, London, Ont., 1975), Vol. II, pp. 131-183. *Univ. Western Ontario Series in Philos. Sci.*, **13**, Reidel, Dordrecht, 1978. (Susan Wilson) **81g:92022** 92A17 (90A05)
- Rothschild, Bruce L.** (with Deuber, Walter) Categories without the Ramsey property. *Combinatorics* (Proc. Fifth Hungarian Colloq., Keszthely, 1976), Vol. I, pp. 225-249. *Colloq. Math. Soc. János Bolyai*, **18**, North-Holland, Amsterdam, 1978. (Jaroslav Nešetřil) **81h:05081** 05C55 (18A99)
- (with Bruen, A. A.) Characterizing subspaces. *Proceedings of the Tenth Southeastern Conference on Combinatorics, Graph Theory and Computing* (Florida Atlantic Univ., Boca Raton, Fla., 1979), pp. 199-210. *Congress. Numer.*, **XXIII-XXIV**, Utilitas Math., Winnipeg, Man., 1979. (Harold N. Ward) **81g:05036** 05B25
- (with Bruen, A. A.; van Lint, J. H.) On characterizing subspaces. *J. Combin. Theory Ser. A* **29** (1980), no. 2, 257-260. (R. C. Mullin) **81i:05039** 05B25 (94B15)
- Rothschild, Linda Preiss** Local solvability of left invariant differential operators on the Heisenberg group. *Proc. Amer. Math. Soc.* **74** (1979), no. 2, 383-388. (Aroldo Kaplan) **81i:22006** 22E27 (35H05, 58G05)
- Rothstein, J.** (with Moshell, J. M.) Bus automata and immediate languages. *Inform. and Control* **40** (1979), no. 1, 88-121. (E. Ikaunika) **81h:68066** 68D20 (68F05)
- Rothstein, Stuart M.** (with King, Frederick W.) Local scaled Schrödinger relations and the virial theorem. *Phys. Rev. A* (3) **21** (1980), no. 5, 1378-1380. (F. C. Auluck) **81c:81009** 81C05 (81G55)
- Rothwell, W. P.** (with Suwelack, D.; Waugh, J. S.) Slow molecular motion detected in the NMR spectra of rotating solids. *J. Chem. Phys.* **73** (1980), no. 6, 2559-2569. (Authors' summary) **81h:81174** 81G55
- Rotkiewicz, A.** The solution of W. Sierpiński's problem. (Italian. English summary) *Rend. Circ. Mat. Palermo* (2) **28** (1979), no. 1, 62-64. (B. Garrison) **81g:10008** 10A15 (10A25)
- (with Van der Poorten, Alfred J.) On strong pseudoprimes in arithmetic progressions. *J. Austral. Math. Soc. Ser. A* **29** (1980), no. 3, 316-321. (B. Garrison) **81h:10010** 10A25 (10A15)
- Rothmann, Christel** Komplettierung semilokaler quasiausgezeichneter Ringe. *Nagoya Math. J.* **76** (1979), 173-180. (Gerhard Pfister) **81e:13024** 13J10
- Rottmann, Richard** Vorticity dynamics of a convective swirling boundary layer. *J. Fluid Mech.* **97** (1980), no. 3, 623-640. (P. W. Duck) **81e:76020** 76C05 (76D10)
- Roumet, H.** (with Le Roux, B.) L'analyse statistique des protocoles multidimensionnels: analyse en composantes principales. (English summary) *Publ. Inst. Statist. Univ. Paris* **24** (1979), no. 1-2, 47-73. (Alain Pousse) **81h:62109** 62H25
- Rouault, Alain** (with Duby, Camille) Estimation simultanée de l'espérance et de la variance pour un processus de Galton-Watson. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **290** (1980), no. 7, A339-A341. (Authors' summary) **81a:62090** 62M05
- Roubellat, F.** (with Erschler, J.; Fontan, G.) Potentiels sur un graphe non conjonctif et analyse d'un problème d'ordonnement à moyens limités. (English summary) *RAIRO Rech. Opér.* **13** (1979), no. 4, 363-378. (Authors' summary) **81a:90097** 90B35
- (with Lasserre, J. B.) Une méthode rapide de résolution de certains programmes linéaires à structure en escalier. (English summary) *RAIRO Rech. Opér.* **14** (1980), no. 2, 171-191. (Authors' summary) **81e:90058** 90C05 (90B30)
- Roucairol, G.** (with Memmi, Gérard) Linear algebra in net theory. *Net theory and applications* (Proc. Adv. Course General Net Theory Processes Systems, Hamburg, 1979), pp. 213-223. *Lecture Notes in Comput. Sci.*, **84**, Springer, Berlin, 1980. (Tadao Murata) **81h:68089** 68D90 (15A45)
- Rouchaleau, Yves** (with Sontag, Eduardo D.) On the existence of minimal realizations of linear dynamical systems over Noetherian integral domains. *J. Comput. System Sci.* **11** (1979), no. 1, 65-75. (Authors' summary) **81h:93014** 93B15
- Rouche, Nicolas** (with Habets, Patrick; Laloy, Michel) ★Правильный метод Ляпунова в теории устойчивости. (Russian) [Stability theory by Ljapunov's direct method] Translated from the English by V. N. Rubanovskii, V. S. Sergeev and S. Ja. Stepanov. Edited by V. V. Rumjancev. "Mir", Moscow, 1980. 302 pp. (Editors) **81f:34005** 34D20 (93D05)
- Rougeé, P.** Formulation lagrangienne intrinsèque en mécanique des milieux continus. (English summary) *J. Mécanique* **19** (1980), no. 1, 7-32. (Xanthippi Markenscoff) **81j:73005** 73B05 (53C80, 58E30, 73B30)
- Rouhani, S.** The central charge in the supersymmetric CP^{n-1} model. *Nuclear Phys. B* **160** (1980), no. 5-6, 430-444. (Author's summary) **81h:81104** 81E99 (58F06, 81G20)
- Roulet, R.** (with Caroli, B.; Caroli, C.; Gouyet, J. F.) A WKB treatment of diffusion in a multidimensional bistable potential. *J. Statist. Phys.* **22** (1980), no. 5, 515-536. (Authors' summary) **81f:80004** 80A20 (82A35)
- (with Caroli, B.; Caroli, C.) Growth of fluctuations from a marginal equilibrium. *Phys. A* **101** (1980), no. 2-3, 581-587. (Authors' summary) **81d:82001** 82A05 (82A35)
- Roulier, John A.** (with Myers, Diane-Claire) Markov-type inequalities and the degree of convex spline interpolation. *J. Approx. Theory* **28** (1980), no. 3, 267-272. (Eli Passow) **81e:41025** 41A17 (41A05)
- Rounds, William C.** (with Gourlay, John S.; Statman, Richard) On properties preserved by contractions of concurrent systems. *Semantics of concurrent computation* (Proc. Internat. Sympos., Edean, 1979), pp. 51-65. *Lecture Notes in Comput. Sci.*, **70**, Springer, Berlin, 1979. (Authors' summary) **81i:68015** 68B05
- Rourke, Colin** (with Fenn, Roger) Nice spines of 3-manifolds. *Topology of low-dimensional manifolds* (Proc. Second Sussex Conf., Chelwood Gate, 1977), pp. 31-36. *Lecture Notes in Math.*, **722**, Springer, Berlin, 1979. (G. Peter Scott) **81e:57010** 57N10
- Presentations and the trivial group. *Topology of low-dimensional manifolds* (Proc. Second Sussex Conf., Chelwood Gate, 1977), pp. 134-143. *Lecture Notes in Math.*, **722**, Springer, Berlin, 1979. (Wilbur Whitten) **81a:57001** 57M05 (20E99)
- Roush, Fred W.** (with Kim, Ki Hang) Quasivarieties of binary relations. *Acta Sci. Math. (Szeged)* **40** (1978), no. 1-2, 89-91. (Editors) **81e:08012** 08C15 (04A05, 08A02)
- (with Kim, Ki Hang) On groups defined by commutators. *Proc. Amer. Math. Soc.* **71** (1978), no. 1, 15-18. (Authors' summary) **81e:20064** 20L10
- (with Kim, Ki Hang; Rogers, Douglas G.) Similarity relations and semiorders. *Proceedings of the Tenth Southeastern Conference on Combinatorics, Graph Theory and Computing* (Florida Atlantic Univ., Boca Raton, Fla., 1979), pp. 577-594. *Congress. Numer.*, **XXIII-XXIV**, Utilitas Math., Winnipeg, Man., 1979. (Colin J. H. McDiarmid) **81i:05013** 05A15
- (with Kim, Ki Hang) Schützenberger's monoids. *Acta Cybernet.* **4** (1978/79), no. 3, 269-272. (Donald W. Miller) **81g:20114** 20M10
- (with Kim, Ki Hang) Clifford inverse semigroups and Boolean matrices. *Proceedings of the Conference on Semigroups in Honor of Alfred H. Clifford* (Tulane Univ., New Orleans, La., 1978), pp. 164-187. *Tulane Univ., New Orleans, La.*, 1979. (S. Lajos) **81g:20113** 20M10 (15A33, 15A66)
- (with Denes, J.; Kim, Ki Hang) The commutator subsemigroup of semigroup of binary relations. *Proceedings of the Conference on Semigroups in Honor of Alfred H. Clifford* (Tulane Univ., New Orleans, La., 1978), pp. 222-236. *Tulane Univ., New Orleans, La.*, 1979. (K. D. Magill, Jr.) **81f:20099** 20M99 (15A33)
- (with Kim, Ki Hang) Some results on decidability of shift equivalence. *J. Combin. Inform. System Sci.* **4** (1979), no. 2, 123-146. (Frederick R. Marotto) **81m:58064** 58F20 (15A36, 54H20)
- (with Kim, Ki Hang) ★Mathematics for social scientists. With a foreword by R. Duncan Luce. *Elsevier, New York*, 1980. xiv + 277 pp. ISBN 0-444-99066-6 (R. H. Alkin) **81e:00003** 00A06 (00A69, 92-01)
- (with Kim, Ki Hang) Enumeration of certain words. *Acta Cybernet.* **4**, no. 4, 383-387 (1980). (P. G. Trotter) **81h:20073** 20M05 (05A15)
- (with Kim, Ki Hang) Regular rings and distributive lattices. *Comm. Algebra* **1** (1980), no. 13, 1283-1290. (Stuart A. Steinberg) **81g:16017** 16A30 (06D05)
- (with Kim, Ki Hang) Generalized fuzzy matrices. *Fuzzy Sets and Systems* **4** (1980), no. 3, 293-315. (Authors' summary) **81i:15027** 15A99 (03E72, 94D05)
- (with Kim, Ki Hang) Preferences on subsets. *J. Math. Psych.* **21** (1980), no. 3, 279-282. (Anjan Mukherji) **81k:90010** 90A06 (06A10, 90A10)
- (with Brüning, Jochen; Kim, Ki Hang) On a conjecture of S. V. Phadke and N. K. Thakare: "Generalized inverses and operator equations" [Linear Algebra Appl. **23** (1979), 191-199; MR 80b:47017]. *Linear Algebra Appl.* **32** (1980), 113-114. (Authors' summary) **81e:47004** 47A05
- (with Kim, Ki Hang) Special domains and nonmanipulability. *Math. Social Sci.* **1** (1980/81), no. 1, 85-92. (Peter H. Farquhar) **81h:90014** 90A08
- (with Gibson, Richard G.; Kellum, Kenneth R.) Darboux retracts. *Proc. Amer. Math. Soc.* **79** (1980), no. 3, 491-494. (J. Dugundji) **81f:54008** 54C08 (54C15, 54C20)
- (with Kim, Ki Hang) The average rank of a product of transformations. *Semigroup Forum* **19** (1980), no. 1, 79-85. (Eugene M. Norris) **81i:20095** 20M20 (05A10)

- (with Kim, Ki Hang) Ternary semigroups associative on each pair of factors. *Simon Stein* 54 (1980), no. 2, 65-74. (Ferenc Fenyes) **81i:20105** 20N10 (17A40, 90A08)
- Roumarie, Robert** (with Dumortier, Freddy) Étude locale des champs de vecteurs à paramètres. (English summary) *Journées Singulières de Dijon (Univ. Dijon, Dijon, 1978)*, pp. 3, 7-42, *Asérisque*, 59-60, Soc. Math. France, Paris, 1978. (C. S. Hartzman) **81i:58029** 58F14 (34D99, 57R45, 58F10)
- (with Rodrigues, Paulo R.) Sur l'existence de séparatrices pour les germes de difféomorphismes du plan. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 286 (1978), no. 11, A503-A506. (Authors' summary) **81i:58045** 58F19 (57R25, 58C40)
- (with Dumortier, Freddy) Smooth linearization of germs of \mathbb{R}^2 -actions and holomorphic vector fields. (French summary) *Ann. Inst. Fourier (Grenoble)* 30 (1980), no. 1, v, 31-64. (Martin Golubitsky) **81i:58060** 58F99 (34C20, 58C27)
- Roussas, George G.** (with Akritas, Michael G.) Asymptotic expansion of the log-likelihood function based on stopping times defined on a Markov process. *Ann. Inst. Statist. Math.* 31 (1979), no. 1, 21-38. (René Flaviog) **81i:62016** 62E20 (62M02)
- (with Akritas, Michael G.) Asymptotic inference in continuous time semi-Markov processes. *Scand. J. Statist.* 7 (1980), no. 2, 73-79. (Rashid Ahmad) **81i:62118** 62M02 (62M05)
- Roussas, C. C.** (with Sheehan, J.) A class of Ramsey problems involving trees. *J. London Math. Soc.* (2) 18 (1978), no. 3, 392-396. (Stefan A. Burr) **81i:05103** 05C55
- (with Faudree, R. J.; Schelp, R. H.; Schuster, S.) Panaraborel graphs. *Israel J. Math.* 35 (1980), no. 3, 177-185. (K. B. Reid) **81i:05053** 05C05 (05C35)
- (with Faudree, R. J.; Schelp, R. H.) All triangle-graph Ramsey numbers for connected graphs of order six. *J. Graph Theory* 4 (1980), no. 3, 293-300. (J. E. Graver) **81i:05102** 05C55
- Roussas, Christiane** Topos theory and complex analysis. *Applications of sheaves (Proc. Res. Sympos. Appl. Sheaf Theory to Logic, Algebra and Anal., Univ. Durham, Durham, 1977)*, pp. 623-659, *Lecture Notes in Math.*, 753, Springer, Berlin, 1979. (M. L. Laplaza) **81i:32014** 32B99 (03C90)
- Complex structures on topoi. *Topos theoretic methods in geometry*, pp. 196-210, *Various Publ. Ser.*, 30, Mat. Inst., Aarhus Univ., Aarhus, 1979. (Ngô Van Quê) **81i:53001** 53-02 (03G30, 18B25, 58-02)
- Roussas, J.** (with Bress, E.; Charnes, A.; Cole Eckels, D.; Hitt, S.; Lyders, R.; Russell, K. G.; Schoeman, M.) Costs and their assessment to users of a medical library: a game-theoretic method for allocating joint fixed costs. *Applied game theory (Proc. Conf., Inst. Adv. Stud., Vienna, 1978)*, pp. 334-351, *IHS-Studies*, 1, Physica, Würzburg, 1979. (Authors' summary) **81i:90130** 90D45 (68H05)
- Roussas, Romy** An alternative definition for the covariance algebra of an extended covariant system. *Bull. Soc. Math. Belg.* 30 (1978), no. 1, 45-59. (Uffe Haagerup) **81i:46081** 46L10
- Construction of a left Hilbert algebra with respect to a Minkowski form. *Rep. Math. Phys.* 14 (1978), no. 3, 321-323. (Uffe Haagerup) **81i:46067** 46K15
- Un système d'induction pour des groupes topologiques. (English summary) *Bull. Soc. Math. Belg. Sér. B* 31 (1979), no. 2, 191-195. (Jonathan M. Rosenberg) **81i:22008** 22D30
- Le commutant d'une algèbre de covariance. *Rev. Roumaine Math. Pures Appl.* 25 (1980), no. 3, 445-471. (Trond Digernes) **81i:46095** 46L55
- Roussas-Eggle, Jacques** Sur un théorème d'équidistribution forte. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 286 (1978), no. 12, A567-A569. (Authors' summary) **81i:10040** 10K99 (40A30)
- Roussignol, M.** (with Coccozza, Christiane) Théorèmes ergodiques pour un processus de naissance et mort sur la droite réelle. (English summary) *Ann. Inst. H. Poincaré Sect. B (N.S.)* 16 (1980), no. 1, 75-85. (H. Kesten) **81i:60177** 60K35
- Routley, Richard** Lewis's calculus of ordinary inference (as amended 1920 and 1977). *Polish Acad. Sci. Inst. Philos. Sociol. Bull. Sect. Logic* 7 (1978), no. 1, 4-11. **81i:03026** 03B45
- Repairing proofs of Arrow's general impossibility theorem and enlarging the scope of the theorem. *Notre Dame J. Formal Logic* 20 (1979), no. 4, 879-890. (J. H. Blau) **81i:90013** 90A08
- Alternative semantics for quantified first degree relevant logic. *Studia Logica* 38 (1979), no. 2, 211-231. (Robert P. McCarthy) **81i:03020** 03B45
- Problems and solutions in the semantics of quantified relevant logics. I. *Mathematical logic in Latin America (Proc. IV Latin Amer. Sympos. Math. Logic, Santiago, 1978)*, pp. 305-340, *Studies in Logic and Foundations of Math.*, 99, North-Holland, Amsterdam, 1980. (Garrel Pottinger) **81i:03041** 03B45
- The choice of logical foundations: nonclassical choices and the ultralogical choice. *Studia Logica* 39 (1980), no. 1, 77-98. (Paul Ernest) **81i:03010** 03A05 (03B99)
- See also Brady, Ross T. **81i:03013**
- Rouvière, F.** Invariant differential equations on certain semisimple Lie groups. *Trans. Amer. Math. Soc.* 243 (1978), 97-114. (Authors' introduction) **81i:22013** 22E30 (58G35)
- Rouvière, Dennis H.** (with Balaban, Alexandru T.) Chemical applications of graph theory. *Applications of graph theory*, pp. 177-221, Academic Press, London, 1979. (See **81i:05050**) 80A30 (05C30, 05C99, 92A40)
- Roux, A. Y.** Vanishing viscosity method for a quasilinear first order equation with boundary conditions. *Numerical analysis of singular perturbation problems (Proc. Conf. Math. Inst., Catholic Univ., Nijmegen, 1978)*, pp. 493-499, Academic Press, London, 1979. (Authors' summary) **81i:65131** 65P05
- (with Bardos, Claude; Nédélec, J.-C.) First order quasilinear equations with boundary conditions. *Comm. Partial Differential Equations* 4 (1979), no. 9, 1017-1034. (Sadakazu Aizawa) **81i:35052** 35L65 (35F30)
- Stabilité numérique de modèles océaniques non linéaires. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 19, A885-A888. (Authors' summary) **81i:35117** 35Q20 (65P05)
- Roux, B.** See Le Roux, B.
- Roux, Bernard** (with Bontoux, Patrick; Ta Phuoc Loc; Daube, O.) Optimisation of Hermitian methods for Navier-Stokes equations in the vorticity and stream-function formulation. *Approximation methods for Navier-Stokes problems (Proc. Sympos., Univ. Paderborn, Paderborn, 1979)*, pp. 450-468, *Lecture Notes in Math.*, 771, Springer, Berlin, 1980. (P. C. Jain) **81i:76028** 76D05 (65P05)
- (with Bontoux, Patrick; Gilly, Bernard) Analysis of the effect of boundary conditions on numerical stability of solutions of Navier-Stokes equations. *J. Comput. Phys.* 36 (1980), no. 3, 417-427. (William H. H. Banks) **81i:76094** 76R10 (65P05, 76D05)
- Roux, C. Z.** A dynamic stochastic model for animal growth. *Mathematical modelling in biology and ecology (Proc. Sympos., Pretoria, 1979)*, pp. 117-127, *Lecture Notes in Biomath.*, 33, Springer, Berlin, 1980. (See **81i:92001**) 92A09
- Roux, Delfina** (with Zanco, Clemente) Quasiconvex mappings: strong and weak convergence to a fixed point of the sequence of iterates. (Italian summary) *Matematiche (Catania)* 32 (1977), no. 2, 307-315. (B. E. Rhoades) **81i:47061** 47H10
- (with Zanco, Clemente) Kannan maps in normed spaces. (Italian summary) *Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur.* (8) 65 (1978), no. 6, 252-258 (1979). (J. Kolomý) **81i:47062** 47H10 (47H15)
- (with Maluta, Elisabetta) Contractive Kannan maps in compact spaces. *Rio. Mat. Univ. Parma* (4) 5 (1979), part 1, 141-145 (1980). (Silvio Massa) **81i:54038** 54H25 (47H10)
- le Roux, H. J.** (with Heyman, G. A. P.) A question on the characterization of certain upper radical classes. (Italian summary) *Boll. Un. Mat. Ital. A* (5) 17 (1980), no. 1, 67-72. (N. Divinsky) **81i:16010** 16A21
- (with Heyman, G. A. P.) On upper and complementary radicals. *Math. Japon.* 25 (1980), no. 3, 327-332. (Terry L. Jenkins) **81i:16006** 16A12 (16A21)
- le Roux, Marie-Noëlle** See Le Roux, Marie-Noëlle
- Rouzel, Bernard** Sur les courbes isotropes, pseudo-isotropes et les surfaces isotropes d'un espace temps de Minkowski M^4 . *Rend. Sem. Fac. Sci. Univ. Cagliari* 49 (1979), no. 3-4, 571-584. (Lieven Vanhecke) **81i:53017** 53A35 (83A05)
- Rovba, E. A.** A direct method in rational approximation. (Russian. English summary) *Dokl. Akad. Nauk BSSR* 23 (1979), no. 11, 968-971, 1052. (B. D. Donevskii) **81i:41040** 41A20
- Rovenko, Eugen** On some examples of fuzzy topological structures defined by adding neighborhoods. (Romanian. English summary) *Stud. Cerc. Mat.* 32 (1980), no. 3, 345-352. (Authors' summary) **81i:03063** 03E72 (54A40)
- Rovinsky, Robert B.** (with Shoemaker, Christine A.; Todd, Michael J.) Determining optimal use of resources among regional producers under differing levels of cooperation. *Oper. Res.* 28 (1980), no. 4, 859-866. (Authors' summary) **81i:90022** 90A11
- Rovnyak, James** (with Rosenblum, Marvin) Change of variables formulas with Cayley inner functions. *Topics in functional analysis (Essays dedicated to M. G. Krein on the occasion of his 70th birthday)*, pp. 283-320, *Advances in Math., Suppl. Studies*, 3, Academic Press, New York, 1978. (C. Carton-Lebrun) **81i:30053** 30D50 (42C15, 44A15)
- Rowe, D. J.** (with Rosensteel, G.) On the algebraic formulation of collective models. I. The mass quadrupole collective model. *Ann. Physics* 123 (1979), no. 1, 36-60. (N. Mukunda) **81i:81109** 81G35 (22E70, 58F06, 81C40)
- (with Ryman, A. G.) Coherent-state representation of many-fermion quantum mechanics. *Phys. Rev. Lett.* 45 (1980), no. 6, 406-409. (Authors' summary) **81i:81176** 81Hxx
- Rowe, E. G. P.** Consequences of a singular gauge transformation. (Italian summary) *Nuovo Cimento A* (11) 56 (1980), no. 1, 16-20. (H. Rund) **81i:81066** 81E99 (58A30)
- Rowen, Louis Halle** (with Herstein, I. N.) Rings radical over P.I. subrings. *Rend. Sem. Mat. Univ. Padova* 59 (1978), 51-55 (1979). (B. J. Gardner) **81i:16028** 16A38
- Invariant subgroups of rings with involution. *Comm. Algebra* 7 (1979), no. 18, 2007-2025. (M. Chacron) **81i:16014** 16A28
- (with Amitsur, S. A.; Tignol, Jean-Pierre) Division algebras of degree 4 and 8 with involution. *Israel J. Math.* 33 (1979), no. 2, 133-148. (B. Fein) **81i:16029** 16A39 (16A28)
- Central simple algebras with involution viewed through centralizers. *J. Algebra* 63 (1980), no. 1, 41-55. (Charles Lanski) **81i:16011** 16A28 (16A40)
- Rowicki, Andrzej** On optimal preemptive scheduling of independent tasks for multiprocessor systems. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math. Astronom. Phys.* 26 (1978), no. 7, 643-650. (From the introduction) **81i:68051a** 68C15 (90B35)
- On the optimal preemptive scheduling for multiprocessor system. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math. Astronom. Phys.* 26 (1978), no. 7, 651-660. (From the text) **81i:68051b** 68C15 (90B35)
- Rowland, John H.** (with Davis, Philip J.) On the use of transcendental for program testing. *J. Assoc. Comput. Mach.* 28 (1981), no. 1, 181-190. (Authors' summary) **81i:68022** 68B10 (10F99)
- Rowlands, G.** Time recurrent behaviour in the nonlinear Schrödinger equation. *J. Phys. A* 13 (1980), no. 7, 2395-2399. (Authors' summary) **81i:81034** 81C05
- Charged particle orbits in helical magnetic fields. *J. Phys. A* 13 (1980), no. 8, 2839-2845. (Authors' summary) **81i:78008** 78A35 (76X05)
- Rowlett, Russell J.** Bordism of metacyclic group actions. *Michigan Math. J.* 27 (1980), no. 2, 223-233. (P. S. Landweber) **81i:57019** 57R85 (57R77)
- Rowley, Brian** Wiener-Hopf factorization of operator polynomials. *Integral Equations Operator Theory* 3 (1980), no. 3, 437-462. (K. S. Mamedov) **81i:47023** 47A68
- Rowley, Peter** Finite groups admitting an automorphism of prime order whose fixed point set is a 3-group. *Quart. J. Math. Oxford Ser. (2)* 31 (1980), no. 121, 81-96. (Richard Davitt) **81i:20050** 20D45 (20D10)
- Roxin, E. O.** Feedback strategies with finite memory in differential games. *J. Optim. Theory Appl.* 27 (1979), no. 1, 127-134. (Authors' summary) **81i:90224** 90D25
- Roy, A. B.** (with Sarkar, Rina) On the genetic information and evolution of DNA. *Proceedings of the First International Conference on Mathematical Modeling (St. Louis, Mo., 1977)*, Vol. II, pp. 1007-1015, Univ. Missouri-Rolla, Rolla, Mo., 1977. (Authors' summary) **81i:92025** 92A10
- (with Dutta, Bhaskar) Mathematical model of drug tolerance in certain controlled cellular system with time lag. *Proceedings of the Second International Conference on Mathematical Modeling (St. Louis, Mo., 1979)*, Vol. I, pp. 857-866, Univ. Missouri-Rolla, Rolla, Mo., 1980. (Authors' summary) **81i:92017** 92A09
- Roy, A. K.** Convex functions on the dual ball of a complex Lindenstrauss space. *J. London Math. Soc.* (2) 20 (1979), no. 3, 529-540. (Wolfgang Lusky) **81i:46026** 46B20 (46A55)

- (with Ellis, A. J.) Dilated sets and characterizations of simplexes. *Incent. Math.* 56 (1980), no. 2, 101-108. (R. D. Bourgin) **81c:46008** 46A55
- Roy, Archie E.** ★Orbital motion. *Halsted Press [John Wiley & Sons], New York*, 1978. xiv + 489 pp. ISBN 0-470-99251-4 (Zbl 393:70008) **81j:70012** 70F15 (70M05, 85A30)
- Empirical stability criteria in the many-body problem. *Instabilities in dynamical systems* (Proc. NATO Adv. Study Inst., Cortina d'Ampezzo, 1978), pp. 177-210. NATO Adv. Study Inst. Ser. C: Math. and Phys. Sci., 47, Reidel, Dordrecht, 1979. (From the summary) **81a:70015** 70F10
- Roy, B.** (with Vincke, Philippe) Systèmes relationnels de préférences en présence de critères multiples avec seuils. (English summary) *Cahiers Centre Études Rech. Opér.* 22 (1980), no. 1, 23-38. (C. Harvey) **81h:90009** 90A06
- Roy, C. L.** (with Mahapatra, P. K.) Stark ladders via evolution operator. *Lett. Nuovo Cimento* (2) 27 (1980), no. 4, 117-121. (From the text) **81e:82055** 82A60
- Roy, Dipsa** On axiomatic characterisation of second order information improvement. *J. Combin. Inform. System Sci.* 5 (1980), no. 2, 107-111. (Author's summary) **81m:94017** 94A17
- Roy, G. K.** (with Chakrabarti, B. K.; Sinha, S. K.) Phonon modes in a disordered lattice. (German summary) *Phys. Status Solidi (B)* 99 (1980), no. 1, 291-303. (Authors' summary) **81d:82032** 82A42 (81Hxx)
- Roy, Jagabrata** (with Bagchi, Arunabha) Bounds on cost ratios of optimal trees. *Proceedings of the Symposium on Graph Theory* (Indian Statist. Inst., Calcutta, 1976), pp. 84-89. ISI Lecture Notes, 4, Macmillan of India, New Delhi, 1979. (Authors' summary) **81a:68065** 68E10 (90A12)
- (with Adhikari, A. K.; Sengupta, S.) Estimates of parameters of grain-size distribution from weight frequencies. *J. Internat. Assoc. Math. Geol.* 12 (1980), no. 3, 247-265. (Authors' summary) **81m:62042** 62F10 (62P99, 86A99)
- coate-Roy, Marie-Françoise** See **Coate-Roy, Marie-Françoise**
- Roy, Problr** (with Mitra, P.) Dynamical symmetry breakdown in two-dimensional quantum chromodynamics. I. Massless quarks. *Phys. Rev. D* (3) 21 (1980), no. 2, 511-520. (Authors' summary) **81d:8102a** 81G05 (81D20, 81E99)
- (with Mitra, P.) Dynamical symmetry breakdown in two-dimensional quantum chromodynamics. II. Boson representation and light quarks. *Phys. Rev. D* (3) 21 (1980), no. 2, 521-530. (Authors' summary) **81d:8102b** 81G05
- (with Mitra, P.) Dynamical symmetry breakdown in two-dimensional quantum chromodynamics. III. The physical space. *Phys. Rev. D* (3) 21 (1980), no. 10, 2926-2933. (Authors' summary) **81d:8102c** 81G05
- Roy, S.** (with Sinha, D. K.) Mathematical model of an ecological resource problem. *Proceedings of the First International Conference on Mathematical Modeling* (St. Louis, Mo., 1977), Vol. IV, pp. 2147-2155. Univ. Missouri-Rolla, Rolla, Mo., 1977. (Authors' summary) **81j:90037** 90A30 (92A17)
- On an aspect of optimal resource depletion. *Acta Cienc. Indica* 5 (1979), no. 2, 87-92. (From the text) **81d:90021** 90A11 (90A30, 90B10)
- Roy, S. R.** (with Prakash, S.) An inhomogeneous magnetohydrostatic universe. *J. Phys. A* 13 (1980), no. 12, 3773-3777. (Authors' summary) **81m:83048** 83F05
- Roy, Sharmistha B.** (with Kalita, S.; Bala, L. M.) On the Schrödinger equation for a perturbation problem. *Lett. Nuovo Cimento* (2) 27 (1980), no. 10, 313-317. (From the text) **81d:81024** 81C12 (81K05)
- Roy, T.** (with Roy Chowdhury, A.; Banerjee, R. S.) A soliton perturbation scheme for 3×3 inverse scattering transform. *Acta Phys. Polon. A* 56 (1979), no. 6, 729-734. (Brian DeFazio) **81e:35009** 35A25 (35Q20, 76Q05, 82A45)
- (with Roy Chowdhury, A.) Perturbation theory at large order in more than one coupling constant for a field theory with fermions. *Hadronic J.* 3 (1979/80), no. 3, 1039-1047. (Authors' summary) **81g:81072** 81E99
- (with Roy Chowdhury, A. N.) Prolongation structure for Langmuir solitons. *J. Math. Phys.* 20 (1979), no. 7, 1559-1561. (Authors' summary) **81m:35130** 35Q20 (58A20, 76W05)
- (with Roy Chowdhury, A.) Prolongation structure and inverse scattering formalism for super symmetric sine-Gordon equation in ordinary space time variable. *Progr. Theoret. Phys.* 62 (1979), no. 6, 1790-1791. (William Symes) **81d:35003** 35A25 (58A15, 81F99)
- (with Roy Chowdhury, A.) Prolongation structure and inverse scattering formalism for the supersymmetric sine-Gordon equation in ordinary space-time variables. *Acta Phys. Austriaca* 52 (1980), no. 2, 157-160. (F. A. E. Pirani) **81j:58011** 58A20 (35Q20, 81C05)
- (with Khan, T. P.; Roychowdhury, R. K.; De, S.) Explosive instabilities in nonlinear perturbation. *J. Phys. A* 13 (1980), no. 4, 1443-1454. (Authors' summary) **81a:82022** 82A25
- van Roy, Tony J.** See **Van Roy, Tony J.**
- Roychowdhury, R. K.** Generalized Fourier series and nonlinear oscillator. *Indian J. Pure Appl. Math.* 10 (1979), no. 9, 1127-1133. (G. Bojadjiev) **81d:34030** 34C15
- Roy Chowdhury, A.** (with Banerjee, R. S.; Roy, T.) A soliton perturbation scheme for 3×3 inverse scattering transform. *Acta Phys. Polon. A* 56 (1979), no. 6, 729-734. (Brian DeFazio) **81e:35009** 35A25 (35Q20, 76Q05, 82A45)
- A nonlinear operator equation with constraint: the Heisenberg spin chain. *Hadronic J.* 3 (1979/80), no. 2, 824-831. (Author's summary) **81a:82054** 82A67
- (with Roy, T.) Perturbation theory at large order in more than one coupling constant for a field theory with fermions. *Hadronic J.* 3 (1979/80), no. 3, 1039-1047. (Authors' summary) **81g:81072** 81E99
- Some semiclassical results in a one-dimensional field theory. *Hadronic J.* 3 (1979/80), no. 6, 1565-1574. (Author's summary) **81m:81031** 81C99 (81E99)
- (with Roy, T.) Prolongation structure and inverse scattering formalism for super symmetric sine-Gordon equation in ordinary space time variable. *Progr. Theoret. Phys.* 62 (1979), no. 6, 1790-1791. (William Symes) **81d:35003** 35A25 (58A15, 81F99)
- (with Roy, T.) Prolongation structure and inverse scattering formalism for the supersymmetric sine-Gordon equation in ordinary space-time variables. *Acta Phys. Austriaca* 52 (1980), no. 2, 157-160. (F. A. E. Pirani) **81j:58011** 58A20 (35Q20, 81C05)
- Inverse scattering equations for $g\psi^4$ theory in two dimensions. *J. Phys. A* 13 (1980), no. 11, L387. (From the text) **81l:35150** 35Q20 (35A25, 81F99)
- Roy Chowdhury, A. N.** (with Roy, T.) Prolongation structure for Langmuir solitons. *J. Math. Phys.* 20 (1979), no. 7, 1559-1561. (Authors' summary) **81m:35130** 35Q20 (58A20, 76W05)
- Roychowdhury, R. K.** (with Khan, T. P.; De, S.; Roy, T.) Explosive instabilities in nonlinear perturbation. *J. Phys. A* 13 (1980), no. 4, 1443-1454. (Authors' summary) **81a:82022** 82A25
- Royer, Gilles** (with Ledrappier, François) Croissance exponentielle de certains produits aléatoires de matrices. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 11, A513-A514. (Authors' summary) **81f:60095** 60J15 (60B15)
- Royster, David C.** Involutions fixing the disjoint union of two projective spaces. *Indiana Univ. Math. J.* 29 (1980), no. 2, 267-276. (J. W. Vick) **81i:57034** 57R85
- Stabilizations of periodic maps on manifolds. *Michigan Math. J.* 27 (1980), no. 2, 235-245. (J. M. Boardman) **81g:57020** 57R85
- Rozanov, Ju. A.** Stochastic Markovian fields. *Developments in statistics*, Vol. 2, pp. 203-234. Academic Press, New York, 1979. (Loren D. Pitt) **81h:60054** 60G25 (60G60)
- Rózański, Roman** $G_{1,-1}$ -minimax estimation of the parameters of a distribution of exponential type. (Polish) *Mat. Stos.* (3) 13 (1978), 59-66. (J. K. Baksaal) **81h:62013** 62C20
- Rózański, I. D.** See **Gernik, F.**, **81a:01035**
- Rozdestvenskiĭ, B. L.** Ideal problems of hydrodynamics spectral properties of flows of a viscous fluid and their connection with turbulence. (Russian) *Proceedings of an All-Union Conference on Partial Differential Equations* (Moscow State Univ., Moscow, 1976) (Russian), pp. 205-208. *Moskov. Gos. Univ., Meh.-Mat. Fakul'tet*, Moscow, 1978. (See **80f:35002** 35Q20 (76F99))
- (with Prîmak, V. G.; Simakin, I. N.) Numerical modeling of one-dimensional turbulence. (Russian. English summary) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 168* (1979), 27 pp. (Authors' summary) **81k:76033** 76F99
- (with Kartavov, A. P.) ★Обыкновенные дифференциальные уравнения и основы вариационного исчисления. (Russian) [Ordinary differential equations and the foundations of the calculus of variations] Second edition, revised and supplemented. "Nauka", Moscow, 1980. 288 pp. (Publisher's description) **81h:34001** 34-01 (49-01)
- See also **Birthday: Rozdestvenskiĭ, B. L.**, **81a:01029**
- Rozdestvenskiĭ, V. V.** Forced oscillations of an oscillator with dry friction. *Izv. Akad. Nauk SSSR Meh. Teor. Tverd. Tela* 14 (1979), no. 6, 21-26. (Russian); translated as *Mech. Solids* 14 (1979), no. 6, 17-21. (P. J. Holmes) **81h:34041** 34C15 (58F11, 58F13)
- Rode, K.** See **Roger, Claude**
- Rozema, Edward** Estimating the error in the trapezoidal rule. *Amer. Math. Monthly* 87 (1980), no. 2, 124-128. (David K. Kahaner) **81f:65022** 65D30
- Rosen, V. V.** P-extension of games with quasiordered outcomes. (Russian) *Mathematical models of behavior* (Russian), pp. 100-115, 126. *Saratov. Gos. Univ., Saratov*, 1978. (Author's introduction) **81f:90124** 90D10 (06A99)
- Rosenberg, Grzegorz** (with Ehrenfeucht, Andrzej) On the structure of polynomially bounded DOL systems. *Fund. Inform.* (4) 2 (1978/79), no. 2, 187-197. (K. P. Lee) **81f:68090** 68F10 (92A05)
- A systematic approach to formal language theory through parallel rewriting. *Automata, languages and programming* (Sixth Colloq., Graz, 1979), pp. 471-478. *Lecture Notes in Comput. Sci.*, 71, Springer, Berlin, 1979. (From the introduction) **81e:68094** 68F05
- (with Vermeir, D.) Extending the notion of finite index. *Automata, languages and programming* (Sixth Colloq., Graz, 1979), pp. 479-488. *Lecture Notes in Comput. Sci.*, 71, Springer, Berlin, 1979. (From the introduction) **81e:68104** 68F10
- (with Ehrenfeucht, Andrzej) A result on the structure of ETOL languages. *Fund. Control Engng.* 4 (1979), no. 4, 165-171. (Authors' summary) **81c:68057** 68F05
- (with Engelfriet, Joost) Equality languages and fixed point languages. *Inform. and Control* 43 (1979), no. 1, 20-49. (Jan van Leeuwen) **81h:68067** 68F05
- (with Vermeir, D.) On recursion in ETOL systems. *J. Comput. System Sci.* 19 (1979), no. 2, 179-196. (John P. Helm) **81f:68083** 68F05
- (with Ehrenfeucht, Andrzej; Vermeir, D.) On ETOL systems with rank. *J. Comput. System Sci.* 19 (1979), no. 3, 237-255. (Authors' summary) **81a:68081** 68F05
- (with Maurer, Hermann A.; Salomaa, Arto; Wood, Derrick) Pure interpretations of EOL forms. (French summary) *RAIRO Inform. Théor.* 13 (1979), no. 4, 347-362. (Branislav Rován) **81h:68073** 68F05
- (with Janssens, D.) Node-label controlled graph grammars (extended abstract). *Mathematical foundations of computer science*, 1980 (Proc. Ninth Sympos., Rydym, 1980), pp. 334-347. *Lecture Notes in Comput. Sci.*, 88, Springer, Berlin, 1980. (See **81k:68003**) 68F05
- Some recent developments in formal language theory. *Proceedings of the International Congress of Mathematicians* (Helsinki, 1978), pp. 973-978. *Acad. Sci. Fennica, Helsinki*, 1980. (From the text) **81b:68097** 68F05
- (with Wood, Derrick) Context-free grammars with selective rewriting. *Acta Inform.* 13 (1980), no. 3, 257-268. (Joffroy Beauquier) **81g:68111** 68F05
- (with Ehrenfeucht, Andrzej; Verraedt, R.) Many-to-one simulation in EOL forms is decidable. *Discrete Appl. Math.* 2 (1980), no. 1, 73-76. (From the introduction) **81h:68065** 68F05 (03D05)
- (with Kleijn, H. C. M.) A study in parallel rewriting systems. *Inform. and Control* 44 (1980), no. 2, 134-163. (Authors' summary) **81h:68093** 68F05
- (with Ehrenfeucht, Andrzej) On the emptiness of the intersection of two DOL languages problem. *Inform. Process. Lett.* 10 (1980), no. 4-5, 223-225. (From the introduction) **81h:68066** 68F05 (03D35)
- (with Janssens, D.) On the structure of node-label-controlled graph languages. *Inform. Sci.* 20 (1980), no. 3, 191-216. (Ronald E. Prather) **81f:68084a** 68F05 (68E10)
- (with Janssens, D.) Restrictions, extensions, and variations of NLC grammars. *Inform. Sci.* 20 (1980), no. 3, 217-244. (Ronald E. Prather) **81f:68084b** 68F05 (68E10)
- (with Engelfriet, Joost) Fixed point languages, equality languages, and representation of recursively enumerable languages. *J. Assoc. Comput. Mach.* 27 (1980), no. 3, 499-518. (Authors' summary) **81f:68081** 68F05 (03D05)
- (with Ehrenfeucht, Andrzej) The sequence equivalence problem is decidable for OS systems. *J. Assoc. Comput. Mach.* 27 (1980), no. 4, 656-663. (Authors' summary)

- 81k:60057** 68F05
(with Ehrenfeucht, Andrzej) On a bound for the DOL sequence equivalence problem. *Theoret. Comput. Sci.* 12 (1980), no. 3, 339-342. (Authors' summary) **81m:60058** 68F05
(with Maurer, Hermann A.) Sub context-free L forms. *Internat. J. Comput. Math.* 9 (1981), no. 1, 25-41. (Authors' summary) **81m:60060** 68F05
See also Graph-grammars and their application to computer science and biology. **81z:60005**
- Rosenblat, G. M.** Stabilization of unstable second-order systems. *Avtomat. i Telemekh.* 1979, no. 10, 19-26 (Russian. English summary); translated as *Automat. Remote Control* 40 (1979), no. 10, part 1, 1415-1422 (1980). (Author's summary) **81b:93057** 93D99 (93C05)
- Rosenblit, P. Ja.** ★Статистическое оценивание характеристик надежности и эффективности сложных систем. (Russian) [Statistical estimation of the characteristics of reliability and efficiency in complex systems] "Zinatne", Riga, 1979. 276 pp. (errata). (A. Balogh) **81g:62167** 62N05 (90B25)
- Rosenblum, G. V.** Asymptotic behavior of the eigenvalues for some two-dimensional spectral problems. (Russian) *Boundary value problems. Spectral theory* (Russian), pp. 188-203, 245, *Probl. Mat. Anal.*, 7, Leningrad. Univ., Leningrad, 1979. (J. S. Joel) **81a:35075** 35P05 (58G25)
Fundamental solution and spectral asymptotics for systems with turning points. (Russian) *Scattering theory. Theory of oscillations* (Russian), pp. 122-128, 186, *Probl. Mat. Fiz.*, 3, Leningrad. Univ., Leningrad, 1979. (A. Devinatz) **81b:34033** 34B25 (34E20)
Spectral asymptotic behavior of elliptic systems. (Russian) *Boundary value problems of mathematical physics and related questions in the theory of functions*, 12. *Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 96 (1980), 255-271, 311-312. (Alan Weinstein) **81k:35123** 35P20 (47F05, 58G15)
- Rosenblum, M. Ju.** (with Abramov, S. A.) Approximate calculation of the first term of the Taylor expansion at 1 of the canonical L-function of Weil curves. (Russian) *Mat. Zametki* 26 (1979), no. 6, 913-920, 973. (Neal Koblitz) **81e:14015** 14G25 (14K07)
- Rosenbush, P. Ja.** See **Rosenblit, P. Ja.**
- Rosenfeld, B. A.** The works on geometry of Duncan Sommerville (in commemoration of his one-hundredth birthday). (Russian) *Istor.-Mat. Issled.* No. 24 (1979), 247-257, 388. (Daniel Coray) **81a:01040** 01A70 (51-03)
- Rosenfeld, B. I.** On cohomology of the smooth differential operators on a manifold. *Topology (Proc. Fourth Colloq., Budapest, 1978)*, Vol. II, pp. 1043-1044, *Colloq. Math. Soc. János Bolyai*, 23, North-Holland, Amsterdam, 1980. (Editors) **81k:57039** 57R99
- Rosenfeld, T. K.** (with Silaev, V. N.) Boolean equations and decomposition of Boolean functions. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* 1979, no. 1, 119-126, 220 (Russian); translated as *Engng. Cybernetics* 17 (1979), no. 1, 85-92 (1980). (Authors' summary) **81a:94064** 94C10
- Ruest, I. G.** Stability of some integral manifolds in a three-dimensional dynamical system. (Russian) *Theory of stability and its applications* (Russian), pp. 128-136, 300, "Nauka" Sibsk. Otdel., Novosibirsk, 1979. (Ju. E. Glikh) **81m:58045** 58F10 (34C35, 58F14)
- Rohdestvenskii, V. V.** See **Rohdestvenskii, V. V.**
- Rohkash, A. N.** See **Rohkash, A. N.**
- Rozin, L. A.** ★Метод конечных элементов в применении к упругим системам. (Russian) [Application of the finite element technique to elastic systems] "Stroitelst.", Moscow, 1977. 128 pp. (Publisher's description) **81k:73050** 73K25 (65N30)
- Rozins, M. G.** (with Solon, B. Ja.) Weakly semireversible sets. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1979, no. 12, 48-50. (G. N. Kobzev) **81d:03046** 03D25
- Rohkash, A. N.** (with Entov, V. M.; Kestenboim, H. S.; Šarčević, L. I.) Dynamic equilibrium shape of a film of viscous or viscoelastic liquid. *Izv. Akad. Nauk SSSR Meh. Židk. Gaza* 1980, no. 2, 9-18 (Russian); translated as *Fluid Dynamics* 15 (1980), no. 2, 181-189. (Authors' summary) **81j:76031** 76D99 (76A10)
- Rohkash, V. I.** See *Differential equations with deviating argument*, **81m:34084**
- Rozov, N. H.** (with Mišenko, E. F.) Some questions of the theory of relaxation oscillations. (Russian) *Asymptotic methods in the theory of nonlinear oscillations (Proc. All-Union Conf. Asymptotic Methods in Nonlinear Mech., Katsiveli, 1977)* (Russian), pp. 113-120, 274-275, "Naukova Dumka", Kiev, 1979. (W. S. Loud) **81k:34064** 34E15 (34C15)
(with Rahimberdiev, M. I.) Localization of a spectrum of a linear system of ordinary differential equations. (Russian. Kazakh summary) *Izv. Akad. Nauk Kazah. SSR Ser. Fiz.-Mat.* 1980, no. 1, 73-76, 94. (R. C. Gilbert) **81b:34055** 34D05
- Rozovskii, B. L.** (with Krylov, N. V.) Stochastic evolution equations. (Russian) *Current problems in mathematics*, Vol. 14 (Russian), pp. 71-147, 256, *Akad. Nauk SSSR, Vsesojuz. Inst. Nauchn. i Tehn. Informacii, Moscow*, 1979. (Jean Mémmin) **81m:60116** 60H15 (35R60, 58D25, 60H10)
- Rozovskii, L. V.** The asymptotic behavior of the remainder term in the central limit theorem. (Russian. English summary) *Teor. Veroyatnost. i Primenen.* 23 (1978), no. 1, 109-119. (Author's summary) **81k:60034** 60F05
- Rüssa, P.** Linear matrix equations and Kronecker products. *Proceedings of the Fourth Symposium on Basic Problems of Numerical Mathematics (Pleš, 1978)*, pp. 153-162, Charles Univ., Prague, 1978. (Harald K. Wimmer) **81d:15005** 15A24 (65F99)
See also Numerical methods, **81j:65008**
- Rosival, Miroslav** Some remarks on the school of V. Doležal. (Czech) *Science in Czechoslovakia*, 1918-1952 (Czech), pp. 79-81, *Prace Děl. Přirod. Věd*, 11, ČSAV, Prague, 1979. (See **81j:01032**) 01A60
- Rozzi, Tullio E.** (with in't Veld, Gerard H.) Variational treatment of the diffraction at the facet of d.h. lasers and of dielectric millimeter wave antennas. *IEEE Trans. Microwave Theory Tech.* 28 (1980), no. 2, 61-73. (Authors' summary) **81b:78007** 78A45 (49G05, 78A50)
- Rubin, Hay Rubin** See **Djani Hay Rubin**
- Rubakov, V. A.** (with Lapčinskii, V. G.) Canonical quantization of gravity and quantum field theory in curved space-time. *Acta Phys. Polon. B* 10 (1979), no. 12, 1041-1048. (Authors' summary) **81b:83005** 83C45 (58A10, 81M05)
(with Krasnikov, N. V.; Tokarev, V. F.) Fermion-number nonconservation and instantons. *Jadernaja Fiz.* 29 (1979), no. 4, 1127-1134 (Russian); translated as *Soviet J. Nuclear Phys.* 29 (1979), no. 4, 581-584. (Authors' summary) **81d:81079** 81E99 (81G25)
- Canonical quantization of gravity and a problem of scattering. *Gen. Relativity Gravitation* 12 (1980), no. 8, 585-596. (Marc Henneaux) **81i:83028** 83C45 (53C80)
(with Krasnikov, N. V.; Matveev, V. A.; Tavelidze, A. N.; Tokarev, V. F.) Double- ϕ vacuum structure and the functional integral in the Schwinger model. *Phys. Lett. B* 97 (1980), no. 1, 103-106. (Authors' summary) **81j:81049** 81E99 (81C35)
(with Lapčinskii, V. G.) Spontaneous symmetry breaking in Friedmann's open universe. (Russian. English summary) *Teor. Mat. Fiz.* 42 (1980), no. 1, 37-44. (N. V. Micevič) **81c:83041** 83F05 (83C99)
- Rubafskii, G. B.** Priority service of "long" calls in multichannel system. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* 1979, no. 4, 106-113, 220 (Russian); translated as *Engng. Cybernetics* 17 (1979), no. 4, 93-98 (1980). (C. M. Woodside) **81m:90054** 90B22 (90B35)
- Ruban, A. I.** (with Syčev, V. V.) Asymptotic theory of laminar boundary layer separation in an incompressible fluid. (Russian. English summary) *Adv. in Mech.* 2 (1979), no. 4, 57-95. (Authors' summary) **81g:76043** 76D15
Identification of stochastic plants using nonparametric approach. *Avtomat. i Telemekh.* 1979, no. 11, 106-118 (Russian. English summary); translated as *Automat. Remote Control* 40 (1979), no. 11, part 2, 1642-1652 (1980). (Author's summary) **81e:93090** 93E12 (62G05)
- Ruban, V. I.** Diameters of sets in spaces of periodic functions. (Russian) *Dokl. Akad. Nauk SSSR* 255 (1980), no. 1, 34-35. (Hans-Jürgen Albrand) **81m:41020** 41A30 (42A10)
- Rubasnovskii, V. N.** (with Rumjancev, V. V.) The stability of motion for complex mechanical systems. (Russian. English summary) *Adv. in Mech.* 2 (1979), no. 2, 53-79. (V. Topenčarov) **81c:70018** 70K20 (34D20, 93D99)
See also *Rouche, Nicolas*; et al., **81f:34055**
- Rubčinskii, A. M.** (with Vinogradskaja, T. M.) Logical forms of binary relations in a criterion space. (Russian) *Dokl. Akad. Nauk SSSR* 251 (1980), no. 2, 300-304. (M. Vlach) **81k:90014** 90A08
- Rubcov, M. I.** (with Četyrkina, N. V.) The cross ambiguity function of a linear FM signal reflected from an extended target. *Radioelektr. i Elektron.* 24 (1979), no. 4, 751-758 (Russian); translated as *Radio Engng. Electron. Phys.* 24 (1979), no. 4, 69-75. (Authors' summary) **81a:94019** 94A12
- Rubel, Lee A.** (with Kennel, C. W.) Exterior functions and strictly continuous homomorphisms in the algebra of bounded analytic functions. *Hiroshima Math. J.* 9 (1979), no. 3, 595-599. (B. Korenblum) **81f:46064** 46J15
Convolution cut-down in some radical convolution algebras. *Pacific J. Math.* 82 (1979), no. 2, 523-525. (Ernst Kötzmann) **81c:30004** 43A15
(with Stolarsky, Kenneth B.) Subseries of the power series for e^z . *Amer. Math. Monthly* 87 (1980), no. 5, 371-376. (S. K. Bajpai) **81g:30086** 30B50
(with Schinzel, A.; Tverberg, Helge) On difference polynomials and hereditarily irreducible polynomials. *J. Number Theory* 12 (1980), no. 2, 230-235. (Winfried Müller) **81i:12024** 12D05 (12E10, 39A10)
- Ruben, Harold** The volume of an isotropic random parallelepiped. *J. Appl. Probab.* 16 (1979), no. 1, 84-94. (Pamela J. Dichomides) **81a:60020** 60D05 (62H10)
(with Miles, R. E.) A canonical decomposition of the probability measure of sets of isotropic random points in \mathbb{R}^n . *J. Multivariate Anal.* 10 (1980), no. 1, 1-18. (A. W. Davis) **81g:62040** 62E20 (52A22, 60D05, 62H10)
- Rubinfeld, Lester A.** (with Amazigo, John C.) ★Advanced calculus and its applications to the engineering and physical sciences. *John Wiley & Sons, Inc., New York*, 1980. viii + 407 pp. ISBN 0-471-04934-4 (Editors) **81h:26001** 26-01
- Rubenthaler, Hubert** Une série dégénérée de représentations de $SL_2(\mathbb{R})$. *Analyse harmonique sur les groupes de Lie (Sémin. Nancy-Strasbourg 1976-1978)*, II, pp. 427-459, *Lecture Notes in Math.*, 739, Springer, Berlin, 1979. (Stephen Gelbart) **81f:22033** 22E50
- Ruberti, A.** (with Isidori, A.) State-space representation versus realization in system theory. *J. Franklin Inst.* 309 (1980), no. 5, 281-286. (Authors' summary) **81d:93017** 93B15
See also Recent developments in variable structure systems, economics and biology, **81f:90002**
- Rubi, J. M.** (with Jou, D.) Heat fluctuations and a generalized Gibbs equation. *Phys. Lett. A* 72 (1979), no. 2, 78-80. (Authors' summary) **81i:82037** 82A35
(with Jou, D.; Casas-Vazquez, J.) Hydrodynamic fluctuations in extended irreversible thermodynamics. *Phys. A* 101 (1980), no. 2-3, 588-598. (Authors' summary) **81d:82025** 82A35 (82A50)
- Rubin, David S.** (with Matheis, T. H.) A survey and comparison of methods for finding all vertices of convex polyhedral sets. *Math. Oper. Res.* 5 (1980), no. 2, 167-185. (K. G. Murty) **81e:90059** 90C05 (52A25)
- Rubin, Donald B.** (with Dempster, A. P.; Laird, Nan M.) Iteratively reweighted least squares for linear regression when errors are normal/independent distributed. *Multivariate analysis, V (Proc. Fifth Internat. Sympos., Univ. Pittsburgh, Pittsburgh, Pa., 1978)*, pp. 35-57, North-Holland, Amsterdam, 1980. (Colin L. Mallows) **81e:62033** 62F35 (62J05)
See also *Bass, D.*, **81m:62009**
- Rubin, Frank** Arithmetic stream coding using fixed precision registers. *IEEE Trans. Inform. Theory* 25 (1979), no. 6, 672-675. (Authors' summary) **81a:94028** 94A29
- Rubin, Herman** (with Ghorai, Jugal) Computational procedure for maximum penalized likelihood estimate. *J. Statist. Comput. Simulation* 10 (1979/80), no. 1, 65-78. (Jeffrey Simonoff) **81e:62043** 62G05 (65U05)
- Rubin, Vitalie** (with Vitale, Richard A.) Asymptotic distribution of symmetric statistics. *Ann. Statist.* 8 (1980), no. 1, 165-170. (J. S. Rao) **81a:62018** 62E20
- Rubin, Ishak** Access-control disciplines for multi-access communication channels: reservation and TDMA schemes. *IEEE Trans. Inform. Theory* 25 (1979), no. 5, 516-536. (From the summary) **81c:68025** 68C15 (94A40)
- Rubin, Leonard R.** Noncompact hereditarily strongly infinite-dimensional spaces. *Proc. Amer. Math. Soc.* 79 (1980), no. 1, 153-154. (John J. Walsh) **81b:54033** 54F45
- Rubin, Mark A.** (with Freund, Peter G. O.) Dynamics of dimensional reduction. *Phys. Lett. B* 97 (1980), no. 2, 233-235. (Authors' summary) **81j:83043** 83E99
- Rubin, Matityahu** On the automorphism groups of countable Boolean algebras. *Israel J. Math.* 35 (1980), no. 1-2, 151-170. (D. Monk) **81g:03039** 03C60 (06E05)
(with Shelah, Saharon) On the elementary equivalence of automorphism groups of Boolean algebras; downward Skolem-Löwenheim theorems and compactness of related

- quantifiers. *J. Symbolic Logic* 45 (1980), no. 2, 265–283. (Martin Weese) **81k:03078**
03C80 (03C85, 03G05, 06E05)
- Rubin, Norman** (with Harrison, Malcolm C.) Another generalization of resolution. *J. Assoc. Comput. Mach.* 25 (1978), no. 3, 341–351. (Authors' summary) **81f:68112**
68G15
- Rubin, Robert J.** (with Weiss, George H.) Internal configurations of span-constrained random walks. *J. Statist. Phys.* 22 (1980), no. 1, 97–109. (J. Gillis) **81m:60135** 60J15
(82A05, 82A70)
- Rubín, S. G.** (with Davis, R. T.) Non-Navier-Stokes viscous flow computations. Special issue: computers in aerodynamics. *Comput. & Fluids* 8 (1980), no. 1, 101–131. (Authors' summary) **81d:76043** 76D99
- Rubini, F.** (with Napolitano, Michele; Vacca, G.) A fourth-order-accurate direct and inverse Cauchy integral solver. *Comput. & Fluids* 8 (1980), no. 4, 435–441. (C. Dagnino) **81j:65046** 65D30
- Rubinov, A. M.** A problem of F. Terpe and J. Flachsmeyer. (Russian) *Uspehi Mat. Nauk* 34 (1979), no. 4(208), 188. (EDITORS) **81g:54023** 54D45 (47D07, 54C30, 54C40)
- Rubini, E. J.** Choosing preferable strategies in a simple differential game of piecewise-programmed pursuit. *Automat. i Telemekh.* 1978, no. 10, 48–54. (Russian. English summary); translated as *Automat. Remote Control* 39 (1978), no. 10, part 1, 1443–1449 (1979). (Author's summary) **81a:90168** 90D25
- Rubinov, S. I.** Age-structured equations in the theory of cell populations. *Studies in mathematical biology, Part II*, pp. 389–410, *MAA Studies in Math.*, 16, Math. Assoc. America, Washington, D.C., 1978. (See **80m:92006**) 92A15
- Rubinshtein, M. I.** See **Rubinshtein, M. I.**
- Rubinshtein, A. I.** Parseval's identity for functions defined on a zero-dimensional group. (Russian) *Uspehi Mat. Nauk* 35 (1980), no. 4(214), 207–208. (W. R. Wade) **81j:43019** 43A75
- Rubinshtein, Ariel** An optimal conviction policy for offenses that may have been committed by accident. *Applied game theory (Proc. Conf., Inst. Adv. Stud., Vienna, 1978)*, pp. 406–413, *IHS—Studies*, 1, Physica, Würzburg, 1979. (Author's summary) **81d:90134** 90D45
- Strong perfect equilibrium in supergames. *Internat. J. Game Theory* 9 (1980), no. 1, 1–12. (Author's summary) **81g:90104** 90D12
- Ranking the participants in a tournament. *SIAM J. Appl. Math.* 38 (1980), no. 1, 108–111. (J. W. Moon) **81j:05052** 05C20
- Rubinshtein, Eliezer** (with Feigin, Paul D.) Equivalent descriptions of perturbed Markov processes. *Stochastic Process. Appl.* 9 (1979), no. 3, 261–272. (Esa Nummelin) **81d:60072** 60J27
- Rubinshtein, J. H.** Dehn's lemma and handle decompositions of some 4-manifolds. *Pacific J. Math.* 86 (1980), no. 2, 565–569. (W. D. Neumann) **81m:57011** 57N99 (57M25, 57R65)
- Rubinshtein, M. I.** (with Čerkašin, A. M.) Discrete problem of optimal resource allocation in activity networks. *Automat. i Telemekh.* 1980, no. 1, 146–152. (Russian. English summary); translated as *Automat. Remote Control* 41 (1980), no. 1, part 2, 116–122. (Authors' summary) **81h:90000** 90B35 (90B05)
- Rubinshtein, Sergio** (with Ley Koo, E.) The hydrogen atom inside boxes with paraboloidal surfaces. *J. Chem. Phys.* 73 (1980), no. 2, 887–893. (Authors' summary) **81e:81029** 81C05 (81G45)
- Rubinshtein, Zalman** (with Weit, Yitzhak) An extremal problem of the Markov-Bernstein type for lacunary polynomials. *J. Approx. Theory* 27 (1979), no. 3, 227–233. (R. Vermes) **81j:30018** 30C15 (41A17)
- On a problem of J. L. Walsh. *Applicable Anal.* 10 (1980), no. 2, 131–135. (Thomas McCoy) **81e:30014** 30C15
- Some properties of two analytic functions associated with complex polynomials. *J. Math. Anal. Appl.* 74 (1980), no. 2, 464–474. (R. Vermes) **81j:30019** 30C15
- Norm estimates relating polynomials and their derivatives. *Proc. Amer. Math. Soc.* 80 (1980), no. 1, 78–82. (Paul Nevai) **81f:41016** 41A17 (26D10, 30C10)
- Rubio, Baldomero** The maximal function and derivation of integrals in a space of locally integrable functions. *Collect. Math.* 29 (1978), no. 3, 173–176. (W. R. Madych) **81d:42019** 42B25 (28A15)
- (with de Guzmán, Miguel) ★Integración: teoría y técnicas. (Spanish) [Integration: theory and technique] *Editorial Alhambra, S.A., Madrid*, 1979. x + 171 pp. ISBN 84-205-0631-1 (S. Foglio) **81j:28001** 28-01 (46-01)
- merino Rubio, J.** See **Merino Rubio, J.**
- Rubio, J. E.** On optimal control problems in Hilbert spaces: the case of the unbounded controls. With discussion. *Recent theoretical developments in control (Proc. Conf., Univ. Leicester, Leicester, 1976)*, pp. 241–254, *Academic Press, London*, 1978. (M. B. Suryanarayana) **81a:49005** 49A27
- Solution of nonlinear optimal control problems in Hilbert spaces by means of linear programming techniques. *J. Optim. Theory Appl.* 30 (1980), no. 4, 643–661. (P. P. Zabrejko) **81f:49029** 49C99 (90C48, 93C25)
- Rubio de Francia, José L.** On the convergence of double Fourier series. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math.* 27 (1979), no. 5, 349–354. (Satoru Igari) **81c:42023** 42B05 (43A50)
- Continuity and pointwise convergence of operators in vector-valued L^p spaces. (Italian summary) *Boll. Un. Mat. Ital. B* (5) 17 (1980), no. 2, 650–660. (Richard Bagby) **81m:47045** 47B38
- Vector-valued inequalities for operators in L^p -spaces. *Bull. London Math. Soc.* 12 (1980), no. 3, 211–215. (M. Jodeit, Jr.) **81j:42024** 42B25 (26D15, 47B38)
- Vector-valued inequalities for Fourier series. *Proc. Amer. Math. Soc.* 78 (1980), no. 4, 525–528. (B. Muckenhoupt) **81d:42007** 42A20
- The space of convergence in measure and its dual. (Spanish. English summary) *Rev. Real Acad. Cienc. Exact. Fis. Natur. Madrid* 74 (1980), no. 2, 267–282. (Richard Becker) **81k:46026** 46E30 (28A20)
- Rubik, František** Simultaneous channels decomposable into memoryless components. I. *Kybernetika (Prague)* 15 (1979), no. 4, 316–327. (Indar Jeet Taneja) **81g:94018a** 94A24 (94A40)
- Simultaneous channels decomposable into memoryless components. II. *Kybernetika (Prague)* 15 (1979), no. 5, 376–387. (Indar Jeet Taneja) **81g:94018b** 94A24 (94A40)
- On the quadratic derivation of exponential probabilities. (Czech summary) With a loose Russian summary. *Apl. Mat.* 25 (1980), no. 4, 267–272. (M. Hušková) **81k:62025** 62E99 (62F99)
- Rubtsor, M. I.** See **Rubcov, M. I.**
- Ruch, Ernst** (with Gutman, Ivan) The branching extent of graphs. *J. Combin. Inform. System Sci.* 4 (1979), no. 4, 285–295. (A. C. Liu) **81i:05107** 05C75
- (with Hässelbarth, W.; Klein, D. J.; Seligman, Thomas H.) Bilateral classes: a new class concept of group theory. *Proceedings of Bremer Konferenz zur Chemie (Univ. Bremen, Bremen, 1978)*, Part II. *Match No. 7* (1979), 341–348. (Louis Solomon) **81b:20031** 20F99 (81G50)
- (with Schraner, Rudolf; Seligman, Thomas H.) Generalization of a theorem by Hardy, Littlewood, and Pólya. *J. Math. Anal. Appl.* 76 (1980), no. 1, 222–229. (Jacques Dubois) **81m:26015** 26D15 (15A51, 47B38)
- (with Hässelbarth, W.; Klein, D. J.; Seligman, Thomas H.) Bilateral classes. *J. Math. Phys.* 21 (1980), no. 5, 951–953. (Louis Solomon) **81j:20003** 20A05
- Ruchert, Hartmut** Ein Eindeutigkeitssatz für Flächen konstanter mittlerer Krümmung. *Arch. Math. (Basel)* 33 (1979/80), no. 1, 91–104. (R. Osserman) **81a:53008** 53A10 (49F99, 58E12)
- Ruchi, René** Twisted Hopf algebras. *Comment. Math. Helv.* 54 (1979), no. 4, 659–682. (Mitsuhiro Takeuchi) **81c:16012** 16A24 (17B35, 17B45)
- Ružičkii, V. S.** On the investigation of dynamical properties of nonlinear systems. (Russian) *Asymptotic methods in systems theory*, No. 9 (Russian), pp. 143–162, *Irkutsk Gos. Univ., Irkutsk*, 1976. (From the text) **81h:93031** 93C10
- Solution of a problem of aerodynamics. (Russian) *Proceedings of a Seminar on Differential Equations*, No. 3 (Russian), pp. 58–66, 146, *Kuibyshev Gos. Univ., Kuibyshev*, 1977. (Author's summary) **81c:76029** 76G99
- On the theory of constructing estimates of solutions of nonlinear differential equations of perturbed motion using comparison functions. (Russian) *Theory of stability and its applications (Russian)*, pp. 142–150, 301, "Nauka" *Sibirsk. Otdel., Novosibirsk*, 1979. (J. D. Kečkić) **81m:34010** 34A45
- Ruckelshausen, W.** Ober Nachbarn von $M_3 + N_3$. *Contributions to general algebra (Proc. Klagenfurt Conf., Klagenfurt, 1978)*, pp. 291–329, *Heyn, Klagenfurt*, 1979. (K. A. Baker) **81f:06010** 06B20
- Ruckie, William H.** The bounded consistency theorem. *Amer. Math. Monthly* 86 (1979), no. 7, 566–571. (From the introduction) **81j:40006** 40C05
- Rudakov, K. V.** Correctness of recognition algorithms of potential function type. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 20 (1980), no. 3, 737–744, 814. (V. Ju. Trahtman) **81k:68009** 68G10
- Rudakov, S. A.** Construction of the M_2 summability method for a bounded sequence with respect to a given core. (Russian) *Studies in functional analysis (Russian)*, pp. 87–98, *Ural Gos. Univ., Sverdlovsk*, 1978. (L. Loone) **81d:40006** 40C99 (40D25)
- Rudakov, V. P.** The method of induced properties in the theory of implicit differential-operator equations of retarded type. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1980, no. 5, 42–46. (Tadeusz Dłotko) **81m:34112** 34K30
- Rudeanu, Sergiu** (with Căzănescu, Virgil Emil) Independent sets and kernels in graphs and hypergraphs. *Ann. Fac. Sci. Univ. Nat. Zaire (Kinshasa) Sect. Math.-Phys.* 4 (1978), no. 1, 37–66. (Ioan Tomescu) **81k:05078** 05C65 (05C20, 90C09)
- Injectivity domains of Boolean transformations. *Rev. Roumaine Math. Pures Appl.* 23 (1978), no. 1, 113–119. (Author's summary) **81e:06024** 06E99 (94C10)
- (with Gilezan, Koriolan) Interpolation formulas over finite sets. *Publ. Inst. Math. (Beograd) (N.S.)* 25(39) (1979), 45–49. (Authors' summary) **81b:94064** 94C10
- Fix points of lattice and Boolean transformation. *An. Ştiinţ. Univ. "Al. I. Cuza" Iaşi Sect. I a Mat. (N.S.)* 26 (1980), no. 1, 147–153. (Dietmar Dorninger) **81i:06007** 06B05 (06E05)
- (with Meltzer, R. A.) Generalized inverses of Boolean functions. *Rev. Roumaine Math. Pures Appl.* 25 (1980), no. 6, 891–897. (A. Thayse) **81m:06036** 06E99 (03G05, 94C10)
- Rudenko, A. A.** (with Maiorov, S. A.; Šipilin, A. V.) A numerical method for solving systems of equations for the potential and charge carrier in semiconductor. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 20 (1980), no. 1, 112–120, 261. (G. Adam) **81j:78021** 78A55 (65N20, 82A65)
- Rudenko, I. M.** (with Andriulevskii, N. M.; Šcedrin, B. M.) A program for finding the global minimum of a single variable function. (Russian. English summary) *Numerical analysis (Russian)*, pp. 37–42, 81, *Comp. Center Universities, Budapest*, 1978. (Authors' summary) **81a:65058** 65K10
- Rudenko, T. V.** Optimizing translator for metasyntax language. (Russian) *Vychisl. Tehn. i Voprosy Kibernet. No. 16* (1979), 7–20, 222. (V. N. Agafonov) **81h:68081** 68F20
- Rudenko, V. A.** Topological groups with a minimality condition for noncomplementable subgroups. (Russian) *Ural Gos. Univ. Mat. Zap.* 11 (1979), no. 3 *Issled. po Sochinen. Algebre*, 152–157, 212–213. (M. I. Kabenjuk) **81j:22004** 22D05
- Rudenko, V. N.** (with Panov, V. I.) Self-pumped parametric sensor of small forces. *Radioelektr. i Elektronika* 24 (1979), no. 5, 1036–1043 (Russian); translated as *Radio Engng. Electron. Phys.* 24 (1979), no. 5, 105–112 (1980). (Authors' summary) **81e:78042** 78A55 (78A25)
- Rudenskaja, O. G.** Upper bound of the number of edges of a homogeneous connected hypergraph with a given diameter. *Kibernetika (Kiev)* 1979, no. 4, 146 (Russian); translated as *Cybernetics* 15 (1979), no. 4, 598–599 (1980). (From the introduction) **81f:05129** 05C65
- Ruderfer, V. I.** Zeros of the solutions of a linear analytic partial differential equation of arbitrary order. (Russian) *Mat. Sb. (N.S.)* 109(151) (1979), no. 3, 432–439, 479. (J. Král) **81h:35007** 35B30 (35G99)
- Rudge, J. F.** The LQG rendezvous problem. *Recent theoretical developments in control (Proc. Conf., Univ. Leicester, Leicester, 1976)*, pp. 465–485, *Academic Press, London*, 1978. (M. Vlach) **81h:93085** 93E20
- Rüdiger, R.** (with Dietz, W.) Shearfree congruences of null geodesics and Killing tensors. *Gen. Relativity Gravitation* 12 (1980), no. 7, 545–562. (Alan Barnes) **81j:83018** 83C40 (53B20)
- Rudin, Mary Ellen** S and L spaces. *Surveys in general topology*, pp. 431–444, *Academic Press, New York*, 1980. (Eric K. van Douwen) **81d:54003** 54A25 (54A35, 54D20, 54E65)

- Rado, S. N.** (with Borizhevskii, Ju. T.) ★Управление турбулентным пограничным слоем. (Russian) [Control of turbulent boundary layer] "Vilka Skola", Kiev, 1978. 319 pp. (Vadim Komkov) **81d:76036** 76D10 (93C20)
- Rado, Walter** Peak-interpolation sets for the ball algebra. *Colloque d'Analyse Harmonique et Complexe*, 6 pp. (not consecutively pagged), Univ. Aix-Marseille I, Marseille, 1977. (Eric Amar) **81d:32010** 32A40 (32E25, 46J15)
- Some representing measures for the ball algebra. *Michigan Math. J.* **27** (1980), no. 3, 315–320. (E. L. Stout) **81m:22007** 32A35
- See also **Lasky, Wolfgang**, **81h:46028**
- Rado, V. P.** Algebras of integral p -adic representations of finite groups. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* No. 11 (1979), 904–906, 974. (A. Kulkulejs) **81h:20006** 20C10 (16A54, 20C11)
- Rado, V. V.** A finite automaton as a plant. *Automat. i Telemekh.* **1978**, no. 9, 126–135 (Russian); translated as *Automat. Remote Control* **39** (1978), no. 9, part 2, 1365–1374 (1979). (From the introduction) **81h:68079** 68D05
- (with Mihalov, G. N.) Simple interconnected graph system and extension of the practical applications of finite automata. *Automat. i Telemekh.* **1979**, no. 10, 105–122 (Russian. English summary); translated as *Automat. Remote Control* **40** (1979), no. 10, part 2, 1487–1503 (1980). (J. Paredaens) **81h:68076** 68D05
- Rado, Joseph** Mean-field theory of spin-glasses. *Phys. Rev. B* **3** (1971), no. 7, 3356–3369. (Author's summary) **81g:82057** 82A50 (82A55)
- (with Huberman, B. A.) Scaling behavior of chaotic flows. *Phys. Rev. Lett.* **45** (1980), no. 3, 154–156. (Authors' summary) **81e:82007** 82A05 (58F13, 76F99)
- Rado, Karl** (with Bennett, Colin) On Lorentz-Zygmund spaces. *Dissertationes Math. (Rozprawy Mat.)* **175** (1980), 67 pp. (Alberto Torchinsky) **81h:42020** 42B30
- Rado, J. W.** (with Rice, John R.) A note on some features of the theory of localization of deformation. *Internat. J. Solids and Structures* **16** (1980), no. 7, 597–605. (Authors' summary) **81d:73037** 73E99
- Rado, Marek** Affinely-rigid body in two dimensions. *Bull. Acad. Polon. Sci. Sér. Sci. Tech.* **29** (1979), no. 4, 337–342. (C. Marchal) **81h:70004** 70E99 (58F40)
- Rado, M. P.** (with Popov, V. N.) Analysis of the stability "in the large" of a second-order nonlinear system using an approximation of the nonlinearity by a function of relay type. (Russian) *Theory of stability and its applications* (Russian), pp. 122–128, 300. "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. (Authors' summary) **81g:93078** 93D05 (34D05)
- Rado, Daniel J.** The second centralizer of a Bernoulli shift is just its powers. *Israel J. Math.* **29** (1978), no. 2–3, 167–178. (Author's summary) **81f:28019** 28D05 (28D20)
- An example of a measure preserving map with minimal self-joinings, and applications. *J. Analyse Math.* **35** (1979), 97–122. (Andrés del Junco) **81e:28011** 28D05
- (with Feldman, Jacob; Moore, Calvin C.) Affine extensions of a Bernoulli shift. *Trans. Amer. Math. Soc.* **257** (1980), no. 1, 171–191. (Douglas Lind) **81e:28014** 28D05 (22D40)
- Rado, H.** Zur Approximation infiner linearer Optimalprobleme. *Z. Angew. Math. Mech.* **59** (1979), no. 9, 486–487. (Author's summary) **81f:90133** 90C08 (47H17)
- Rado, Luther D.** (with Dasgupta, Sumit; Hartmann, Carlos R. P.) Dual-mode logic for function-independent fault testing. *IEEE Trans. Comput.* **29** (1980), no. 11, 1025–1029. (Authors' summary) **81h:94032** 94C10
- Rado, N.** (with Chandrasekhar, B. C.) MHD flow through a channel of varying gap. *Indian J. Pure Appl. Math.* **11** (1980), no. 8, 1105–1123. (E. G. Broadbent) **81h:76035** 76W05 (35J25, 76Z05)
- Rado, Z. B.** (with Kaniauskas, J.; Šimonis, V. Č.) On finding algebraic expressions for fractional parentage coefficients. (Russian. Lithuanian and English summaries) *Litovsk. Fiz. Sb.* **19** (1979), no. 5, 637–648, 741. (K. Kumar) **81h:81101** 81G30
- Rado, H.** Symmetry breaking patterns for unitary and orthogonal groups. *First Workshop on Grand Unification* (Univ. New Hampshire, Durham, N.H., 1980), pp. 23–32, *Lie Groups: Hist., Frontiers and Appl., XI, Math Sci Press, Brookline, Mass.*, 1980. (See **81j:81066**) **81G05** (22E70, 58F35)
- (with Buccella, F.; Savoy, C. A.) Spontaneous symmetry breaking of $SU(n)$. *Nuclear Phys. B* **169** (1980), no. 1–2, 68–76. (A. O. Barut) **81m:81071** 81G20 (22E70, 81D20)
- Rado, David** Dynamical systems with turbulent behavior. *Mathematical problems in theoretical physics* (Proc. Internat. Conf., Univ. Rome, Rome, 1977), pp. 341–360, *Lecture Notes in Phys.*, **80**, Springer, Berlin, 1978. (L. A. Bunimovich) **81e:58032** 58F11 (28D99, 58F14, 58F40, 92A17)
- Turbulent behavior in differentiable dynamical systems. *Proceedings of the Eleventh Brazilian Mathematical Colloquium* (Poços de Caldas, 1977), Vol. II (Portuguese), pp. 579–591, *Inst. Mat. Pura Apl., Rio de Janeiro*, 1978. (Ju. E. Gliklikh) **81j:58064** 58F15 (34C35, 58F13)
- Ergodic theory of differentiable dynamical systems. *Inst. Hautes Études Sci. Publ. Math.* **50** (1979), 27–58. (L. A. Bunimovich) **81f:58031** 58F18 (58F15, 60G99, 82A05)
- Recent results on differentiable dynamical systems. *Mathematical problems in theoretical physics* (Proc. Internat. Conf. Math. Phys., Lausanne, 1979), pp. 311–315, *Lecture Notes in Phys.*, **116**, Springer, Berlin, 1980. (M. C. Irwin) **81j:58053** 58F11 (34C35, 70G99)
- Rado, W.** Spaces of compact operators on Banach spaces. *Special topics of applied mathematics* (Proc. Sem., Ges. Math. Dattencarb., Bonn, 1979), pp. 57–70, North-Holland, Amsterdam, 1980. (J. R. Holub) **81m:47059** 47D15 (46A32)
- Raf, Bernhard** (with Hess, Peter) On a superlinear elliptic boundary value problem. *Math. Z.* **164** (1978), no. 1, 9–14. (P. W. Bates) **81h:35020** 35J65 (47H15)
- Raf, A.** (with Oliver, J.) A characterisation of certain optimal collocation points for numerical differentiation. *BIT* **20** (1980), no. 3, 385–388. (Authors' summary) **81h:65023** 65D25
- Rafail, Remo** See **Physics and astrophysics of neutron stars and black holes**, **81k:83004**
- Riget, Gabriel** (with Benveniste, Albert; Goursat, Maurice) Robust identification of a nonminimum phase system: blind adjustment of a linear equalizer in data communications. *IEEE Trans. Automat. Control* **25** (1980), no. 3, 385–399. (Authors' summary) **81j:93116** 93E12
- Rigert, G. J.** (with Herrera, L.; Jiménez, J.) Evolution of radiating fluid spheres in general relativity. *Phys. Rev. D* **3** (1980), no. 10, 2305–2316. (Authors' summary) **81j:83047** 83F05 (83C20)
- New rational approximants for one-dimensional and quasi-one-dimensional Landau-Ginzburg systems. *Phys. Rev. B* **23** (1981), no. 3, 1349–1356. (Author's summary) **81m:81086** 81J05
- Riguet, Tommaso** On the integration of a quasilinear hyperbolic system of two equations with two independent completely exceptional variables. (Italian. English summary) *Riv. Mat. Univ. Parma* **4** (5) (1979), part 1, 415–426 (1980). (Piero de Mottoni) **81j:35074** 35L45 (35L60, 76G10, 81E99)
- Interaction between a discontinuity wave and a shock wave: critical time for the fastest transmitted wave, example of the polytropic fluid. *Applicable Anal.* **11** (1980), no. 2, 103–112. (Alan Jeffrey) **81m:35090** 35L67 (76L05)
- Rigby, Wilson J.** (with Mittel, Glenn E.; Clancy, Steven J.) On transfer function representations for homogeneous nonlinear systems. *Proceedings of the 1978 IEEE Conference on Decision and Control including the 17th Symposium on Adaptive Processes* (San Diego, Calif., 1979), pp. 161–169, IEEE, New York, 1979. (Roger Brockett) **81a:93040** 93C10
- (with Clancy, Steven J.) A note on the identification of discrete-time polynomial systems. *IEEE Trans. Automat. Control* **24** (1979), no. 6, 975–978. (Authors' summary) **81h:93041** 93C55
- Rub, Ernst A.** (with Min-Oo) Comparison theorems for compact symmetric spaces. *Ann. Sci. École Norm. Sup. (4)* **12** (1979), no. 3, 335–353. (Karsten Grove) **81e:53027** 53C20 (53C35)
- Rube, Axel** Implementation aspects of band Lanczos algorithms for computation of eigenvalues of large sparse symmetric matrices. *Math. Comp.* **33** (1979), no. 146, 680–687. (S. F. McCormick) **81h:65034** 65F15
- (with Kågström, Bo) An algorithm for numerical computation of the Jordan normal form of a complex matrix. *ACM Trans. Math. Software* **6** (1980), no. 3, 398–419. (Petr Liebi) **81m:65054** 65F15 (15A21)
- Rühl, W.** (with Kupsch, J.) On the quantization of hydrodynamics. *Fortschr. Phys.* **27** (1979), no. 11–12, 581–594. (Authors' summary) **81h:81035** 81J05 (58F06, 76Y05)
- (with Lazo-Tueve, D.) Invariant forms of the Lorentz group. *Fortschr. Phys.* **28** (1980), no. 2, 99–121. (I. I. Jurik) **81g:22017** 22E43 (33A35, 81C40)
- Rubio, L. A.** The method of fictitious domains for the solution of variational-difference schemes for fourth-order elliptic equations with natural boundary conditions. (Russian) *Variational-difference methods in mathematical physics* (Proc. All-Union Conf., Novosibirsk, 1977) (Russian), pp. 45–53, Akad. Nauk SSSR Sibirsk. Otdel., Vysisl. Centr., Novosibirsk, 1978. (M. Zlamal) **81h:65097** 65N30
- Rubio, L. V.** On the question of the spectral characteristics of a vertical structure of atmospheric motions. (Russian) *Trudy Glavn. Geofiz. Observator. No. 410 Dinamika Global. Atmosf. Processov i Prognoz Pogody* (1980), 113–119, 146. (Author's summary) **81f:86001** 86A10
- Ruizgok, Th. W.** (with Darby, D.) A noncompact gauge group for the Dirac equation. *Acta Phys. Polon. B* **10** (1979), no. 11, 959–973. (Walter Wya) **81g:81040** 81D25
- (with van der Vlist, H.) On the Hamiltonian and Lagrangian formulation of classical dynamics for particles with spin. *Phys. A* **101** (1980), no. 2–3, 571–580. (Frans Conrjijn) **81g:70019** 70H99 (58F05, 81C99)
- Ruijsmaars, S. N. M.** Gauge invariance and implementability of the S -operator for spin-0 and spin- $\frac{1}{2}$ particles in time-dependent external fields. *J. Funct. Anal.* **33** (1979), no. 1, 47–57. (D. I. Olive) **81c:81031** 81E05 (47A40)
- de Ruijter, Will** Boundary layers in large scale ocean circulation. *Asymptotic analysis*, pp. 125–145, *Lecture Notes in Math.*, **711**, Springer, Berlin, 1979. (From the summary) **81h:86006** 86A05 (34E20, 76D10)
- ★On the asymptotic analysis of large-scale ocean circulation. *Mathematical Centre Tracts*, **120**, *Mathematical Centrum, Amsterdam*, 1980. iii + 116 pp. *ISBN 90-6196-193-9* (J. J. Mahony) **81h:86001** 86–02 (86A05)
- Ruiz, Vincenzo** The Green function of certain systems with diffuse constraints. (Italian) *Atti Accad. Sci. Lett. Ari Palermo Parte I* **4** (36) (1976/77), 259–276 (1978). (D. Işan) **81a:70016** 73C99 (45B05)
- cuartero Ruiz, Bienvenido** See **Cuartero Ruiz, Bienvenido**
- Ruiz, Ceferino** Complexe de Koszul du symbole d'un système différentiel extérieur. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **286** (1978), no. 1, A55–A58. (Author's summary) **81e:58007** 58A15 (58H10)
- Certaines identifications dans les espaces de jets. *Collect. Math.* **30** (1979), no. 1, 21–36. (I. Kolář) **81f:58003** 58A20
- trillas Ruiz, Enrique** See **Trillas Ruiz, Enrique**
- Ruiz-Clayson, Julio** (with Zevallos Gutierrez, Mauro) Power series solutions for the m th-order-matrix ordinary differential equation. *Quart. Appl. Math.* **37** (1979/80), no. 4, 447–450. (R. C. Varma) **81c:34004** 34A25 (34A30)
- Ruiz Salguero, Roberto** Relative subdivisions on presheaves and isomorphic simplicial homologies. (Spanish) *Rev. Colombiana Mat.* **14** (1980), no. 1, 17–42. (Marta C. Bunge) **81h:18014** 18G30
- Ruñin, P.** (with Patkós, A.) Disorder parameter approach to abelian Higgs models. *Phys. Lett. B* **88** (1979), no. 3–4, 363–366. (Authors' summary) **81a:81100** 81G25 (82A25)
- Rubnik, Andrew L.** On the estimation of a transformation parameter of a distribution given on a finite group. *Transactions of the Seventh Prague Conference on Information Theory, Statistical Decision Functions, Random Processes and of the Eighth European Meeting of Statisticians* (Tech. Univ. Prague, Prague, 1974), Vol. B, pp. 439–448, Academia, Prague, 1978. (K. Alam (Zbl 408:62022)) **81m:62048** 62F10 (62A05)
- Rukmanadachari, E.** Dusty viscous flow through the annulus between two coaxial circular cylinders. *Defence Sci. J.* **29** (1979), no. 4, 152–158. (Author's summary) **81g:76183** 76T05
- Rumér, V. G.** Control of manpower systems. (Russian summary) *Sistema Sci.* **5** (1979), no. 1, 103–118. (From the summary) **81e:93013** 93A10
- Rumelin, Werner** Stability and growth of the solution of $\dot{y} + f_y y = 0$ where f_y is a positive stationary Markov process. *Transactions of the Eighth Prague Conference on Information Theory, Statistical Decision Functions, Random Processes* (Prague, 1978), Vol. B, pp. 149–161, *Reidel, Dordrecht*, 1978. (Toshio Yamada) **81c:60076** 60H10
- Rumely, R. S.** Undecidability and definability for the theory of global fields. *Trans. Amer. Math. Soc.* **262** (1980), no. 1, 195–217. (G. Cherlin) **81m:03053** 03D35 (10N05, 12L05)

- Rumour, Hugues** Théorème d'induction de Brauer et application au calcul des caractères modulaires. *Séminaire d'Algèbre Paul Dubreil 31ème année (Paris, 1977-1978)*, pp. 25-47. *Lecture Notes in Math.* 740, Springer, Berlin, 1979. (U. Stambach) **81c:20004** 20C05 (18F30)
- Rumjancev, S. V.** (with Alifanov, O. M.) Stability of iteration methods for solving linear ill-posed problems. (Russian) *Dokl. Akad. Nauk SSSR* **248** (1979), no. 6, 1289-1291. (From the introduction) **81b:65049** 65J10 (47A50)
- One-dimensional oscillator in a noninertial frame of reference. (Russian) *Problemy Teor. Gravitacii i Élement. Čistic* No. 10 (1979), 187-193. (Z. Janković) **81a:83013** 83C35
- Rumjancev, V. V.** Some variational principles of mechanics. (Russian) *Current problems in theoretical and applied mechanics (Proc. Fourth All-Union Congress Theoret. Appl. Mech., Kiev, 1976)* (Russian), pp. 74-90, 405, "Naukova Dumka", Kiev, 1978. (L. G. Chambers) **81d:49030** 49H05 (01A60, 49-02, 70H30)
- (with Rubanovskii, V. N.) The stability of motion for complex mechanical systems. (Russian. English summary) *Adv. in Mech.* **2** (1979), no. 2, 53-79. (V. Topol'čarov) **81d:70018** 70K20 (34D20, 93D99)
- (with Ančev, Atanas) On the dynamics and stability of gyrostats. (Russian. English summary) *Adv. in Mech.* **2** (1979), no. 3, 4-45. (E. Leimanis) **81c:70004** 70E05 (70-02)
- On the influence of gyroscopic and dissipative forces on the stability of steady-state motion. *Rend. Sem. Mat. Univ. Politec. Torino* **37** (1979), no. 2, 1-6 (1980). (Ch. Silas) **81c:70010** 70E99 (70K20)
- See also Rouché, Nicolas; et al., **81f:34055**
- Rump, S. M.** (with Kaucher, E.) Small bounds for the solution of systems of linear equations. *Fundamentals of numerical computation (computer-oriented numerical analysis) (Proc. Conf., Tech. Univ. Berlin, Berlin, 1979)*, pp. 157-164, *Comput. Suppl.*, 2, Springer, Vienna, 1980. (Robert Todd Gregory) **81m:65048** 65F10 (65G10)
- Rump, Wolfgang** ★ Beiträge zur Darstellungstheorie der Zahlringe. (German) [Contributions to the representation theory of number rings] Dissertation, Universität Stuttgart, Stuttgart, 1978. Minerva-Fachserie Naturwissenschaften. Minerva Publikation, Munich, 1978. xi+68 pp. ISBN 3-597-10041-4 (Jürgen Ritter) **81c:16027** 16A64
- Rumsey, Howard, Jr.** (with Baumert, Leonard D.; McEliece, Robert J.; Rodemich, Eugene R.) A probabilistic version of Sperner's theorem. *Ars Combin.* **9** (1980), 91-100. (Charles M. Grinstead) **81j:05001** 05A05 (04A20)
- Rund, Hanno** Decompositions of connection and curvature forms. *Tensor (N.S.)* **33** (1979), no. 1, 97-108. (Akira Asada) **81h:53031** 53C05 (53C80, 81E10)
- Direction-dependent connection and curvature forms. *Abh. Math. Sem. Univ. Hamburg* **50** (1980), 188-209. (Hassan Akbar-Zadeh) **81m:53036** 53B40
- Connection and curvature forms generated by invariant variational principles. *Resuliate Math.* **3** (1980), no. 1, 74-120. (Akira Asada) **81h:53032** 53C05 (49H05, 81E10)
- Rundell, William** Determination of an unknown nonhomogeneous term in a linear partial differential equation from overspecified boundary data. *Applicable Anal.* **10** (1980), no. 3, 231-242. (V. G. Romanov) **81k:35163** 35R30
- Rung, D. C.** Meier type theorems for general boundary approach and α -porous exceptional sets. *Pacific J. Math.* **76** (1978), no. 1, 201-213. (G. Piranian) **81k:30040** 30D40
- (with Hwang, Jun Shung) Proof of a conjecture of Doob. *Proc. Amer. Math. Soc.* **75** (1979), no. 2, 231-234. (H. T. Mathews) **81k:30061** 30D99
- (with Hwang, Jun Shung) An improved estimate for the Bloch norm of functions in Doob's class. *Proc. Amer. Math. Soc.* **80** (1980), no. 3, 406-410. (V. Ganapathy Iyer) **81k:30058** 30D50
- Runger, George** Some numerical illustrations of Fisher's theory of statistical estimation. *R. A. Fisher: an appreciation*, pp. 95-100, *Lecture Notes in Statist.*, 1, Springer, New York, 1980. (See **81k:01024**) 62-03 (01A65)
- Runggaldier, Wolfgang J.** (with Di Masi, Giovanni B.) A continuous-time approximation to optimal nonlinear filtering. *Numerical techniques for stochastic systems (Conf., Gargnano, 1979)*, pp. 153-160, *North-Holland, Amsterdam*, 1980. (Tamer Başar) **81m:93075** 93E11 (60G35)
- Ruoff, D.** (with Shilleto, J.) Recursive polygons. (Italian summary) *Boll. Un. Mat. Ital. B* (5) **15** (1978), no. 3, 968-981. (Cyril W. L. Garner) **81f:51015** 51M20 (51F15)
- Ruohonen, Keijo** The inclusion problem for DOL languages. (German and Russian summaries) *Elektron. Informatsionsserb. Kybernet.* **15** (1979), no. 11, 535-548. (Author's summary) **81g:68112** 68F05 (03B25)
- The decidability of the FOL-DOL equivalence problem. *Inform. Process. Lett.* **8** (1979), no. 5, 257-260. (A. Salomaa) **81k:68063** 68F05
- On some decidability problems for HDOL systems with nonsingular Parikh matrices. *Theoret. Comput. Sci.* **9** (1979), no. 3, 377-384. (Philip W. Grant) **81h:68114** 68F05
- Hilbert's tenth problem. (Swedish. English summary) *Normat* **28** (1980), no. 4, 145-154, 180. (B. Stolt) **81m:10031** 10B99 (03D25, 10N05)
- Ruohonen, Matti** A note on Pareto optimality in mutual reinsurance. *Scand. Actuar. J.* **1979**, no. 4, 231-233. (Jean Lemaire) **81f:62153** 62P05 (90A09)
- On the probability of ruin of risk processes approximated by a diffusion process. *Scand. Actuar. J.* **1980**, no. 2, 113-120. (Jan Grandell) **81g:62172** 62P05
- Rup, Kazimierz** (with Nowak, Zbigniew) Application of the Laplace transform to the method of averaging of functional corrections. (Polish. Russian and English summaries) *Mech. Theoret. Stos.* **18** (1980), no. 1, 71-86. (Authors' summary) **81i:80005** 80A20
- Rupinska, Maria** (with Marofski, Józef) ★ Computer networks—terminology. With Polish, Russian and Czech summaries. *Państwowe Wydawnictwo Naukowe (PWN), Warsaw*, 1980. 7. pp. (loose errata). ISBN 83-01-01179-3 (From the summary) **81f:68009** 68A05 (00A20)
- Rupp, Werner** Riesz-presentation of additive and α -additive set-valued measures. *Pacific J. Math.* **84** (1979), no. 2, 445-453. (M. P. Eršov) **81i:28015** 28B20
- Ruppel, Hans** (with Brandt, Achi; Dendy, J. E., Jr.) The multigrid method for semi-implicit hydrodynamics codes. *J. Comput. Phys.* **34** (1980), no. 3, 348-370. (Christopher Caldwell) **81g:76079** 76N10 (76-04, 76C99)
- Ruppert, David** A new dynamic stochastic approximation procedure. *Ann. Statist.* **7** (1979), no. 6, 1179-1195. (Katsuji Uosaki) **81a:62088** 62L20 (62J99)
- Ruppert, Wolfgang** On semigroup compactifications of topological groups. *Proc. Roy. Irish Acad. Sect. A* **79** (1979), no. 17, 179-200. (John A. Hildebrandt) **81f:22003** 22A25
- The structure of semitopological monoids on compact connected manifolds. *Math. Z.* **170** (1980), no. 1, 15-42. (John F. Berglund) **81f:22002** 22A15
- The structure of semitopological monoids defined on compact connected 3-manifolds. *Semigroup Forum* **19** (1980), no. 3, 219-245. (John F. Berglund) **81c:22008** 22A15 (20M99)
- Ruppini, R.** Electromagnetic power deposition in a dielectric cylinder in the presence of a reflecting surface. *IEEE Trans. Microwave Theory Tech.* **27** (1979), no. 11, 910-914. (Author's summary) **81c:78002** 78A25
- Ruplys, P.** Control functions in discrete-time optimal control systems. (Russian. Lithuanian and English summaries) *Lietuv. Mat. Sb.* **19** (1979), no. 4, 167-174, 212. (M. Vlach) **81c:93057** 93C55 (90C39)
- Rus, Ioan A.** ★ Metrical fixed point theorems. *Universitatea "Babeş-Bolyai", Facultatea de Matematica, Cluj-Napoca*, 1979. ii+111 pp. (Rainald Schöneberg) **81j:54078** 54H25
- Results and problems in the metrical fixed point theory. *An. Ştiinţ. Univ. "Al. I. Cuza" Iaşi Sect. I a Mat. (N.S.)* **25** (1979), suppl., 153-160. (Rainald Schöneberg) **81k:54079** 54H25
- Approximation of common fixed point in a generalized metric space. *Anal. Numér. Theor. Approx.* **8** (1979), no. 1, 83-87. (Rainald Schöneberg) **81g:54067** 54H25
- Some remarks on the common fixed point theorems. *Mathematica (Cluj)* **21**(44) (1979), no. 1, 63-66. (S. L. Singh) **81m:54000** 54H25 (54E50)
- On the fixed points of mappings defined by a Cartesian product. III. (Romanian. English summary) *Studia Univ. Babeş-Bolyai Math.* **24** (1979), no. 2, 55-56. (Author's summary) **81f:54031** 54H25
- Rus, N.** See Rouché, Nicolas
- Rusak, Ju. B.** The Jordan structure of linear Noetherian operator-valued functions. (Russian) *Differential equations and their applications (Russian)*, pp. 130-138, 169, "Fan", Tashkent, 1979. (B. V. Logvinov) **81j:47011** 47A53
- Rusak, V. N.** Extremal estimates of the derivatives of rational functions and some questions in approximation theory. (Russian) *The theory of the approximation of functions (Proc. Internat. Conf., Kaluga, 1975)* (Russian), pp. 311-315, "Nauka", Moscow, 1977. (O. D. Gabisonija) **81h:41041** 41A20 (41A17)
- ★ Рациональные функции как аппарат приближения. (Russian) [Rational functions as approximation apparatus] *Belorus. Gos. Univ., Minsk*, 1979. 174 pp. (B. D. Donevski) **81c:41030** 41A20 (65D15)
- (with Seiko, M. A.) Approximation of singular integrals by singular integrals with polynomial density. (Russian. English summary) *Vesci Akad. Nauk BSSR Ser. Fiz.-Mat. Nauki* **1979**, no. 1, 42-50, 139-140. (R. P. Boas, Jr.) **81a:30020** 30E10 (30E20, 41A55, 44A15)
- Rusakov, S. A.** On a definition of an n -ary group. (Russian. English summary) *Dokl. Akad. Nauk BSSR* **23** (1979), no. 11, 965-967, 1052. (M. Stefănescu) **81f:20103** 20N15
- Rusakov, V. V.** (with Šarākšane, A. A.) On the nonuniqueness of the solution of the problem on steady flow about the plane wedge and circular cone. Special issue: computational methods in nonlinear fluid mechanics. *Comput. & Fluids* **8** (1980), no. 2, 243-250. (Authors' summary) **81d:76070** 76L05 (76E99)
- Ruscheweyh, Stephan** Beiträge zur Theorie und Anwendung des Hadamardproduktes. *Komplex Analysis und ihre Anwendung auf partielle Differentialgleichungen (Tagung, Martin-Luther-Universität, Halle, 1976)*, *Wiss. Beitr. Martin-Luther-Univ. Halle-Wittenberg* **M 27** (1977), 50-53. (Editors) **81j:30037** 30D05
- See also Fukui, Seichi; et al., **81g:30017**
- Ruscitti, Aldo** On maximal bipartite planar graphs. (Italian. English summary) *Boll. Un. Mat. Ital. A* (5) **15** (1978), no. 1, 147-153. (Giorgio Balconi) **81c:05036** 05C10
- The structure of the classes $F_{n,k}$ of maximal planar graphs. (Italian. English summary) *Rend. Mat.* (6) **11** (1978), no. 2, 243-269. (Giorgio Balconi) **81c:05053** 05C35 (05C10, 05C75)
- The structure of a subclass of maximal planar bipartite graphs. (Italian. English summary) *Boll. Un. Mat. Ital. B* (5) **17** (1980), no. 2, 411-424. (W. G. Brown) **81h:05061** 05C10
- Rusev, Pet' r.** Convergence and (C, 1)-summability of Laguerre series on the boundaries of their regions of convergence. (Bulgarian. English summary) *Annuaire Univ. Sofia Fac. Math. Méc.* **69** (1974/75), 79-106 (1979). (E. Stipančić) **81c:40002** 40A30 (30B30, 40G05)
- Some results about the representation of analytic functions by Laguerre series. (Russian) *C. R. Acad. Bulgare Sci.* **32** (1979), no. 5, 569-571. (C. Tanaka) **81b:30008** 30B50
- The multiplication of series in Laguerre functions of the second kind. (Russian) *C. R. Acad. Bulgare Sci.* **32** (1979), no. 7, 867-869. (C. Tanaka) **81d:30007** 30B50
- Representation of analytic functions by series in Laguerre polynomials. (Russian) *Dokl. Akad. Nauk SSSR* **249** (1979), no. 1, 57-60. (C. Tanaka) **81a:30003** 30B50
- The representation of analytic functions by means of series in Laguerre functions of the second kind. *Serdica* **5** (1979), no. 1, 60-63. (Wolfgang Luh) **81f:30002** 30B50 (33A65)
- Note on asymptotic properties of confluent hypergeometric functions. *C. R. Acad. Bulgare Sci.* **33** (1980), no. 1, 27-30. (L. J. Slater) **81c:33001** 33A30
- On the representation of analytic functions by means of confluent hypergeometric functions. *C. R. Acad. Bulgare Sci.* **33** (1980), no. 2, 155-158. (L. J. Slater) **81c:33002** 33A30
- Ruseva, L. K.** (with Petrov, R. R.) Nomographic representation of some equations with several variables. (Bulgarian. Russian and English summaries) *Godišnik Vis. Učeb. Zaved. Plovdiv Mat.* **14** (1978), no. 4, 61-72 (1979). (Authors' summary) **81f:60095** 65S05
- Rush, David E.** Content algebras. *Canad. Math. Bull.* **21** (1978), no. 3, 329-334. (J. Ohm) **81i:13006** 13B25 (13B02)
- Rusik, S. V.** (with Mirzaev, D. A.) General solution to the problem of diffraction of X rays by close-packed crystals with chaotic packing defects of the subtraction type. *Kristallografiya* **24** (1979), no. 6, 1142-1149 (Russian); translated as *Soviet Phys. Cryst.* **24** (1979), no. 6, 655-658. (Authors' summary) **81i:82056** 82A60 (78A45)
- Rusin, David J.** (with Gallian, Joseph A.) Cyclotomic polynomials and nonstandard dice. *Discrete Math.* **27** (1979), no. 3, 245-259. (G. Purdy) **81a:05014** 05A99

- Representations of metabelian groups. *J. Pure Appl. Algebra* 18 (1980), no. 3, 283–291. (I. M. Isaacs) **81j:20020** 20C15
(with Gallian, Joseph A.) Factoring groups of integers modulo n . *Math. Mag.* 53 (1980), no. 1, 33–36. (St. Schwarz) **81c:10004** 10A10
- Ruskey, Frank (with Cockayne, E. J.; Thomason, A. G.) An algorithm for the most economic link addition in a tree communications network. *Inform. Process. Lett.* 9 (1979), no. 4, 171–175. (From the introduction) **81g:94065** 94C15 (68C25)
(with Hu, T. C.) Circular cuts in a network. *Math. Oper. Res.* 5 (1980), no. 3, 422–434. (Authors' summary) **81j:90121** 90C35
On the average shape of binary trees. *SIAM J. Algebraic Discrete Methods* 1 (1980), no. 1, 43–50. (Author's summary) **81g:68096** 68E10 (05C05)
- Russ, Craig (with Barnhill, Maurice V., III) Improving the convergence of solutions to the Fredholm integral equation of the first kind. *J. Comput. Phys.* 37 (1980), no. 2, 268–273. (Hans J. Stetter) **81m:65193** 65R20
- Russ, Ion Synthesis of a suboptimal control using the sensitivity functions. (Romanian summary) *Bul. Inst. Politehn. București Ser. Electrotehn.* 39 (1977), no. 4, 55–62. (Author's summary) **81h:93012** 93B35
Application of game theory in the synthesis of reduced-sensitivity optimal control. (Romanian. English summary) *Bul. Inst. Politehn. București Ser. Electrotehn.* 41 (1979), no. 4, 77–87. (Author's summary) **81j:49035** 49D30 (90D25)
(Hans J. Stetter) **81m:65193** 65R20
- Rusnak, I. Bert (with Tan, Soo Tang) Necessary conditions for problems with higher derivative bounded state variables. *J. Optim. Theory Appl.* 26 (1978), no. 4, 601–636. (Emmanuel Nicholas Barron) **81h:49012** 49B10 (65K10)
See also Information linkage between applied mathematics and industry. **81j:93004**
- Rusakovskii, E. M. Hankel and Toeplitz matrices and the Bezoutian. I. (Russian) *Teor. Funktsii Funktsional. Anal. i Prilozhen.* No. 32 (1979), 77–82, iv. (A. Lee) **81j:15003a** 15A09 (47B35, 65F05)
Hankel and Toeplitz matrices and the Bezoutian. II. (Russian) *Teor. Funktsii Funktsional. Anal. i Prilozhen.* No. 33 (1980), 119–124, iv. (A. Lee) **81j:15003b** 15A09 (47B35, 65F05)
- Russek, Arnold (with Ong, Warren) Simple asymptotic wave function for a continuum Dirac electron. *Phys. Rev. A* (3) 17 (1978), no. 1, 120–124. (Authors' summary) **81c:81157** 81G45
- Russell, A. On certain fourth-order integral inequalities. *Proc. Roy. Soc. Edinburgh Sect. A* 83 (1979), no. 3–4, 205–211. (J. Calvert) **81j:26014** 26D15
- Russell, A. M. A commutative Banach algebra of functions of generalized variation. *Pacific J. Math.* 84 (1979), no. 2, 455–463. (V. K. Srinivasan) **81h:46055** 46J10
A commutative Banach algebra of functions of bounded variation. *Amer. Math. Monthly* 87 (1980), no. 1, 39–40. (Alan Shuchat) **81a:46062** 46J10
(with Rickard, J. A.) The effect of product differentiation on dynamic Cournot and Stackelberg stability. *Econom. Lett.* 5 (1980), no. 2, 101–107. (Authors' summary) **81j:90034** 90A16
- Russell, Bruce Correctness of the compiling process based on axiomatic semantics. *Acta Inform.* 14 (1980), no. 1, 1–20. (Author's summary) **81f:68017** 68B05 (68C01)
- Russell, D. C. (with Jakimovski, A.) On an interpolation problem for functions of several variables and spline functions. *Multivariate approximation theory (Proc. Conf., Math. Res. Inst., Oberwolfach, 1979)*, pp. 162–197. *Internat. Ser. Numer. Math.* 51, Birkhäuser, Basel, 1979. (M. Marsden) **81i:41006** 41A15 (41A63, 65D07)
(with Jakimovski, A.) On beta-duals of matrix fields. Special issue dedicated to Władysław Orlicz on the occasion of his seventy-fifth birthday. *Comment. Math. Special Issue* 2 (1979), 159–171. (W. Beckmann) **81d:40004** 40D15 (40D25, 46A45)
- Russell, David L. (with Reid, Russell M.) Water waves and problems of infinite time control. *International Symposium on Systems Optimization and Analysis (Rocquencourt, 1978)*, pp. 291–303. *Lecture Notes in Control and Information Sci.* 14, Springer, Berlin, 1979. (A. I. Perov) **81a:76009** 76B15 (49B22)
State restoration in systems of communicating processes. *IEEE Trans. Software Engng.* 6 (1980), no. 2, 183–194. (Author's summary) **81f:68029** 68B20
- Russell, K. G. (with Bres, E.; Charnes, A.; Cole Eckels, D.; Hitt, S.; Lyders, R.; Rousseau, J.; Schoeman, M.) Costs and their assessment to users of a medical library: a game-theoretic method for allocating joint fixed costs. *Applied game theory (Proc. Conf., Inst. Adv. Stud., Vienna, 1978)*, pp. 334–351. *IHS—Studies*, 1, Physica, Würzburg, 1979. (Authors' summary) **81d:90130** 90D45 (68H05)
Balancing carry-over effects in round robin tournaments. *Biometrika* 67 (1980), no. 1, 127–131. (A. W. Davis) **81j:62155** 62K10 (05B99)
Further results on the connectedness and optimality of designs of type $O:X_B$. *Comm. Statist. A—Theory Methods* 9 (1980), no. 4, 439–447. (K. R. Shah) **81f:62131** 62K05
(with Eccleston, John A.) (M, S)-optimal row-column designs. *Comm. Statist. A—Theory Methods* 9 (1980), no. 4, 449–452. (K. R. Shah) **81j:62146** 62K05
- Russell, Martin J. Automorphisms and derivations of continuous trace C^* -algebras. *J. London Math. Soc.* (2) 22 (1980), no. 1, 139–145. (Christopher Lance) **81h:46005** 46L40
- Russell, Peter Hamburger-Noether expansions and approximate roots of polynomials. *Manuscripta Math.* 31 (1980), no. 1–3, 25–95. (Maurice Mignotte) **81j:14015** 14H99
- Russell, Thomas (with Leffler, Keith; Long, John B., Jr.) Signalling: efficiency and equilibrium. *Econom. Lett.* 4 (1979/80), no. 3, 215–220. (Authors' summary) **81e:90022** 90A14
- Rüssmann, Helmut Remark on integrable Hamiltonian systems. Proceedings of the Sixth Conference on Mathematical Methods in Celestial Mechanics (Math. Forschungsinst., Oberwolfach, 1978), Part I. *Celestial Mech.* 21 (1980), no. 1, 121–125. (From the summary) **81a:70020** 70H05 (58F05)
(with Zehnder, E.) On a normal form of symmetric maps of $[0, 1]$. *Comm. Math. Phys.* 72 (1980), no. 1, 49–53. (B. Weiss) **81g:28020** 28D05 (58F20)
- Russo, G. V. (with Palamà, G.) Minimization of incompletely specified sequential machines. (French and German summaries) *Digital Process.* 6 (1980), no. 2–3, 199–206. (Authors' summary) **81h:68043** 68D15
- Russo, Giuseppe (with Pipitone, Vincenzo) Measurability of the families of nondegenerate quadrics of hyperbolic and elliptic types of the projective space P_3 . (Italian. English summary) *Atti Accad. Sci. Lett. Arti Palermo Parte I* (4) 36 (1976/77), 389–396 (1978). (L. A. Santaló) **81f:53057c** 53C65 (60D05)
(with Pipitone, Vincenzo) The measurability of the family of hyperboloids and paraboloids with hyperbolic points of the projective space P_3 . (Italian. English summary) *Atti Accad. Sci. Lett. Arti Palermo Parte I* (4) 36 (1976/77), 397–410 (1978). (L. A. Santaló) **81f:53057d** 53C65 (60D05)
(with Pipitone, Vincenzo) Measurability families of ellipses of the affine plane A_2 . (Italian) *Atti Accad. Sci. Lett. Arti Palermo Parte I* (4) 36 (1976/77), 443–444 (1978). (L. A. Santaló) **81f:53057h** 53C65 (60D05)
(with Pipitone, Vincenzo) The measurability of the families of quadrics of hyperbolic and elliptic types of the projective space P_3 . (Italian) *Atti Accad. Sci. Lett. Arti Palermo Parte I* (4) 36 (1976/77), 445–448 (1978). (L. A. Santaló) **81f:53057i** 53C65 (60D05)
(with Pipitone, Vincenzo) Sous-familles mesurables de la famille des ellipses du plan affini A_2 . (English summary) *Rend. Circ. Mat. Palermo* (2) 27 (1978), no. 3, 391–409. (L. A. Santaló) **81h:53044** 53C65 (60D05)
(with Pipitone, Vincenzo) Sur la mesure des familles de quadriques de type hyperbolique et elliptique de l'espace projectif P_3 . (English summary) *Rev. Roumaine Math. Pures Appl.* 24 (1979), no. 3, 423–432. (M. Decuypere) **81c:52005** 52A22 (53A20, 53C65, 60D05)
- Russo, Ray L. Universal continua. *Fund. Math.* 105 (1979/80), no. 1, 41–60. (József Krasinkiewicz) **81h:54031** 54F15 (54B25)
- Russo, Renzo (with Padula, Mariastaria) A note on the bifurcation of micropolar fluid motions. (Italian summary) *Boll. Un. Mat. Ital. A* (5) 17 (1980), no. 1, 85–90. (R. R. Huigol) **81c:76003** 76A05 (35B32)
- Russo, G. I. Volterra operators with imaginary components from a symmetrically-normed ideal. (Russian) *Funktsional. Anal. i Prilozhen.* 13 (1979), no. 4, 87–88. (Werner Linde) **81h:47053** 47D25
(with Mititel, A. A.) Symmetrically normed ideals weakly intermediate between γ_1 and some γ_p . (Russian) *Linear operators. Mat. Issled.* No. 54 (1980), 121–140, 168. (E. D. Gluskin) **81h:47057** 47D25 (46M35, 47B10)
Volterra operators with imaginary components from a given symmetrically normed ideal. (Russian) *Linear operators. Mat. Issled.* No. 54 (1980), 141–151, 168. (E. D. Gluskin) **81h:47058** 47D25 (47B05)
- Rust, Philip F. Continuous and Poisson-distributed costs accumulated within a stationary Markov process. *Math. Biosci.* 49 (1980), no. 3–4, 263–272. (Author's summary) **81h:62149** 62M05 (90B25, 92A15)
- Rustagi, J. S. (with Indrayan, A.) Approximate maximum likelihood estimates in regression models for grouped data. *Optimizing methods in statistics (Proc. Internat. Conf., Indian Inst. Tech., Bombay, 1977)*, pp. 301–319. *Academic Press, New York*, 1979. (Jeffrey A. Robinson) **81c:62072** 62J05
- Rusu, I. (with Vişiu, Maria; Borş, Maria; Marica, Carmen; Eftimescu, Cornelia) Central projections onto $[B_2]$. (Romanian. French summary) *Bul. Inst. Politehn. Iaşi Ser. I* 25(29) (1979), no. 1–2, 91–94. (L. Bitay) **81h:51020** 51N05
- Ruszczyński, Andrzej Feasible direction methods for stochastic programming problems. *Math. Programming* 19 (1980), no. 2, 220–229. (István Dék) **81m:65101** 65K05 (90C15, 90C30)
- Rutelli, Giovanni Integral transforms in the study of transitory phenomena of physical systems. (Italian. English summary) *Atti Accad. Sci. Lett. Arti Palermo Parte I* (4) 36 (1976/77), 311–360 (1978). (Hans-Jürgen Gieske) **81h:44001** 44–01 (44A99)
- Rüthing, Dieter (with Bähl, Edmund) Die Funktionalgleichung der Exponentialfunktion. *Praxis Math.* 22 (1980), no. 2, 37–40. (J. Aczél) **81a:39003** 39B20 (26–01)
- Rutickii, Ja. B. Operators with homogeneous kernels. (Russian) *Sibirsk. Mat. Ž.* 21 (1980), no. 1, 153–160, 238. (Ulrich Kosel) **81j:47017** 47B25 (46E99)
- Rutkauskas, Stasys The Dirichlet problem for an elliptic equation with degeneracy on a line. (Russian. Lithuanian and English summaries) *Diferencial'nye Uravneniya i Primeneniye—Trudy Sem. Protsessy Optimal. Upravleniya i Sekcija No. 24* (1979), 87–103, 109. (H. Triebel) **81h:35036** 35J70
- Ruuth, Sampo (with Ylinen, Raimo; Sinervo, Jyrki) On set theoretical and algebraic systems theory for linear differential and difference systems. Topics in systems theory. *Acta Polytech. Scand. Math. Comput. Sci. Ser. No. 31* (1979), 150–167. (J. E. Rubio) **81c:93035** 93C05 (93A05)
- Ružička, Peter (with Wiedermann, Juraj) On the lower bound for minimum comparison selection. (Slovak summary) *Appl. Mat.* 23 (1978), no. 1, 1–8. (Authors' summary) **81f:68072** 68E05 (68C25)
(with Wiedermann, Juraj) On the conjecture relating minimax and minimax complexity norms. (Slovak and Russian summaries) *Appl. Mat.* 24 (1979), no. 5, 321–325. (Jaroslav Morávek) **81h:68055** 68C25
Time and space bounds in producing certain partial orders. *Mathematical foundations of computer science, 1980 (Proc. Ninth Symp., Rydzyna, 1980)*, pp. 539–551. *Lecture Notes in Comput. Sci.*, 88, Springer, Berlin, 1980. (See **81h:68003**) 68C25 (06A10)
- Ruzmalkin, A. A. (with Ivanova, T. S.) Nonaxisymmetric solar dynamo. (Russian. English summary) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 105* (1979), 20 pp. (Authors' summary) **81h:85007** 85A15 (78A25)
(with Zel'dovich, Ja. B.) The magnetic field in a conducting fluid in two-dimensional motion. *Ž. Éksper. Teoret. Fiz.* 78 (1980), no. 3, 980–986 (Russian); translated as *Soviet Phys. JETP* 51 (1980), no. 3, 493–497. (Authors' summary) **81h:76005** 76W05
- Ružnikov, G. M. (with Hrisanov, S. M.) Stability of dynamical systems with random parameters. (Russian) *Problems of stability of motion, analytical mechanics and control of motion (Third All-Union Četaev Conf., Irkutsk, 1977)* (Russian), pp. 69–74, 321. "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. (Authors' summary) **81g:70028** 70L05 (60H10)
- Ruza, Imre (with Urbán, János) In memoriam Rózsa Péter. (Hungarian) *Mat. Lapok* 26 (1975), no. 3–4, 125–137 (1978). (Editors) **81h:01045** 01A70
- Ruza, Imre Z. Arithmetical functions. I. (Hungarian. English summary) *Mat. Lapok* 27 (1976), no. 1–2, 95–145 (1978). (András Sárközy) **81k:10074a** 10H25 (10–01, 10A20)
Arithmetical functions. II. (Hungarian. Russian and English summaries) *Mat. Lapok* 27 (1976/79), no. 3–4, 227–282. (András Sárközy) **81k:10074b** 10H25 (10K20)
(with Erdős, Paul) On the small sieve. I. Sifting by primes. *J. Number Theory* 12 (1980), no. 3, 385–394. (M. Ram Murty) **81k:10075** 10H30 (10A20, 10H32)
- Rvačov, V. A. See Rvačov, V. O.
- Rvačov, V. L. (with Slesarenko, A. P.) ★ Алгебро-логические и проекционные методы в

- ЗАДАЧАХ ТЕПЛООБМЕНА. (Russian) [Algebraic, logical and projection methods in heat exchange problems] "Naukova Dumka", Kiev, 1978. 138 pp. (RZMat 1978:6 B479) 81m:80006 80A20
- (with Fed'ko, V. V.) Solution of boundary value problems by means of generalized piecewise-Hermite interpolation. (Russian) *Variational-difference methods in mathematical physics* (Proc. All-Union Conf., Novosibirsk, 1977) (Russian), pp. 54-60, *Akad. Nauk SSSR Sibirsk. Otdel., Vyčisl. Centr., Novosibirsk*, 1978. (M. Zlamal) 81i:41006 41A15 (41A30, 41A63, 65N30)
- (with Borodai, G. P.) Approximate solution of three-dimensional problems of elasticity theory for piecewise homogeneous bodies by the method of *R*-functions. (Russian) *Dokl. Akad. Nauk SSSR* 247 (1979), no. 4, 818-821. (D. P. Raikov) 81i:73006 73C40 (73C35)
- Rvačov, V. O. An orthonormal system on the basis of the function $up(x)$. (Russian) *Mathematical analysis and probability theory* (Russian), pp. 146-150, 220, "Naukova Dumka", Kiev, 1978. (Author's summary) 81a:42008 42A10 (42C05)
- Ryabov, V. M. See Rjabov, V. M.
- Ryaciokli-Boumalis, Helen (with Thompson, Wiley E.; Boussalis, Dhemitrios) Vector Lyapunov functions for a class of decentralized systems. *Proceedings of the Second International Conference on Mathematical Modelling* (St. Louis, Mo., 1979), Vol. I, II, pp. 601-610, *Univ. Missouri-Rolla, Rolla, Mo.*, 1980. (Authors' summary) 81m:93054 93D05
- Ryan, E. P. (with Ichikawa, Akira) Filtering and control of distributed parameter systems with point observations and inputs. *Control of distributed parameter systems* (Proc. Second IFAC Sympos., Coventry, 1977), pp. 347-357, *IFAC, Düsseldorf*, 1978. (C. P. Tsokos) 81c:93083 93E11
- (with Ichikawa, Akira) Sensor and controller location problems for distributed parameter systems. *Automatica—J. IFAC* 15 (1979), no. 3, 347-352. (Jean-Pierre Lepeltier) 81m:93066 93E03 (93E25)
- Singular optimal controls for second-order saturating systems. *Internat. J. Control* 30 (1979), no. 4, 549-564. (Eitelbert N. Chukwu) 81c:49017 49B10 (93C05)
- On the sensitivity of a time-optimal switching function. *IEEE Trans. Automat. Control* 25 (1980), no. 2, 275-277. (Kunihiko Ichikawa) 81c:93062 93D15
- Ryan, R. J. (with Beyer, W. A.; Harris, D. R.) A stochastic model of the Isle Royale biome. Conference on Deterministic Differential Equations and Stochastic Processes Models for Biological Systems (San Cristobal, N.M., 1977). *Rocky Mountain J. Math.* 9 (1979), no. 1, 3-18. (Authors' summary) 81c:92010 92A17
- Ryan, Thomas P. See Smith, Gary; et al., 81m:62131
- Ryazec, C. Inequalities for the zeros of Dirichlet *L*-functions. *Linear Algebra Appl.* 28 (1979), 205-211. (M. Makys) 81h:10063 10H10 (15A18)
- Rybak, Boris Welcome address. *Advanced technology* (Proc. NATO Summer School, Paris 1978), pp. 1-15, *NATO Adv. Study Inst. Ser., Ser. E: Appl. Sci.*, 31, *Sijthoff & Noordhoff, Alphen aan den Rijn*, 1979. (Editors) 81g:00010 00A69 (58F14, 92A05)
- See also *Advanced technology*, 81a:92001
- Rybak, M. A. See Ribak, M. O.
- Rybak, S. A. Negative-energy sound waves. *Akust. Zh.* 26 (1980), no. 2, 248-256 (Russian); translated as *Soviet Phys. Acoust.* 26 (1980), no. 2, 136-140. (Author's summary) 81g:76104 76V05 (76Q05)
- Rybakov, Ju. P. Conditional stability of regular solutions in a nonlinear field theory. (Russian) *Problemy Teor. Gravitacii i Element. Častic* No. 10 (1979), 194-202. (From the introduction) 81c:81043 81E99
- Rybakova, V. E. An integral equation with partial integrals and kernels with fixed singularity. (Russian) *Differentsial'nye Uravnenija* (Ryazan) No. 13 (1979), 113-118. (L. B. Rall) 81f:45009 45E05 (45L05)
- Rybakowski, Krzysztof P. Ważewski's principle for retarded functional differential equations. *J. Differential Equations* 36 (1980), no. 1, 117-138. (N. Onuchic) 81d:34064 34K15 (34K20)
- Rybicki, George B. (with Lightman, Alan P.) Inverse Compton reflection: the steady-state theory. *Astrophys. J.* 236 (1980), no. 3, part 1, 928-944. (Authors' summary) 81i:81111 81G45 (82A45)
- Rybina, I. On the question of studying numbers with negative kernels in nonpositional codes. (Russian) *Theoretical and applied problems in mathematics and mechanics* (Russian), pp. 274-279, 316, "Nauka" Kazakh. SSR, Alma-Ata, 1977. (Przemysław Prusinkiewicz) 81f:10013 10A30 (94A05)
- Rybka, Eugeniusz Tadeusz Przypkowski (1905-1977). (Polish) Bibliography compiled by Stanisław Brzozowski. *Kwart. Hist. Nauk. Tech.* 23 (1978), no. 3-4, 759-767 (1 plate). (Editors) 81m:01073 01A70
- Rybnikov, A. K. Osculatory spaces and connections. I. (Russian. English summary) *Vestnik Moskov. Univ. Ser. I Mat. Meh.* 1979, no. 6, 44-48, 107. (I. Kolář) 81g:53025a 53C05
- Osculatory spaces and connections. II. (Russian. English summary) *Vestnik Moskov. Univ. Ser. I Mat. Meh.* 1980, no. 2, 8-11, 101. (I. Kolář) 81g:53025b 53C05
- Rybnikov, K. A. ★Введение в методологию математики. (Russian) [Introduction to the methodology of mathematics] *Moskov. Gos. Univ., Moscow*, 1979. 128 pp. (I. Ruza) 81c:00011 00A25
- Rychlik, Zdzisław A central limit theorem for martingales. (Lithuanian and Russian summaries) *Litovsk. Mat. Sb.* 18 (1978), no. 4, 139-145, 202. (Author's summary) 81j:60033 60F05
- (with Sznajl, Dominik) On the rate of convergence in the central limit theorem. *Probability theory* (Papers, VIIth Semester, Stefan Banach Internat. Math. Center, Warsaw, 1976), pp. 221-229, *Banach Center Publ.*, 5, *PWN, Warsaw*, 1979. (L. Hahn) 81c:60029 60F05 (60G50)
- The Berry-Esseen inequality for sums of a random number of independent random variables. (Russian) *Mat. Zametki* 28 (1980), no. 2, 301-304, 320. (B. Jesiak) 81m:60040 60F05
- (with Csörgő, M.) Weak convergence of sequences of random elements with random indices. *Math. Proc. Cambridge Philos. Soc.* 88 (1980), no. 1, 171-174. (David J. Aldous) 81d:60027 60F05 (60F17)
- Ryčkov, G. S. Uniqueness of the limit cycle of the equation $(y - P_3(x))dy = P_1(x, y)dx$. (Russian) *Differentsial'nye Uravnenija* 16 (1980), no. 3, 433-437, 572. (M. Bertolino) 81f:34036 34C05
- Ryel, Ronald J. (with Fowler, Charles W.) Projection matrices in population dynamics. *Encyclia* 55 (1978), no. 1-2, 39-46. (Pragneshu) 81f:92022 92A15
- Rychlik, Z. See Rychlik, Zdzisław
- Ryhmim, I. L. On temperature and heat source distributions in sliding contact problems. (German summary) *Acta Mech.* 32 (1979), no. 4, 261-274. (From the summary) 81c:80011 80A20 (73T05)
- Rykov, A. S. (with Emeľjanov, S. V.; Korovin, S. K.) Locally optimal simplex procedure of direct search. (Russian. English summary) With a loose English translation. *Problemy Control Inform. Theory/Problemy Upravlen. Teor. Inform.* 9 (1980), no. 2, 83-101. (Joachim Hirsche) 81g:90078 90C30
- Rykov, V. A. (with Ceremisin, F. G.; Šahov, E. M.) Numerical investigations in rarefied gas dynamics. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 20 (1980), no. 5, 1266-1283, 1359. (Authors' summary) 81k:76054 76F05 (76-04, 76N99)
- Ryland, G. II (with Meirovitch, L.) Response of vibrating systems with perturbed parameters. *J. Guidance Control* 3 (1980), no. 4, 298-303. (Authors' summary) 81d:70017 70J05
- Ryll-Nardzewski, Czesław (with Musiał, Kazimierz) Liftings of vector measures and their applications to RNP and WRNP. *Vector space measures and applications* (Proc. Conf., Univ. Dublin, Dublin, 1977), II, pp. 162-171, *Lecture Notes in Math.*, 645, Springer, Berlin, 1978. (B. Walsh) 81d:46053 46G15 (46B22, 46G10)
- See also Mostowski, Andrzej Włodzimierz, 81i:01018a and Mostowski, Andrzej Włodzimierz, 81i:01018b
- Ryman, A. G. (with Rowe, D. J.) Coherent-state representation of many-fermion quantum mechanics. *Phys. Rev. Lett.* 45 (1980), no. 6, 406-409. (Authors' summary) 81c:81176 81Hxx
- Rypdal, K. (with Goldman, Martin V.; Hafizi, B.) Dimensionality and dissipation in Langmuir collapse. *Phys. Fluids* 23 (1980), no. 5, 945-955. (Authors' summary) 81f:78011 78A40
- Ryśkenko, N. D. Approximation of functions of several variables by Walsh-Paley polynomials. (Russian) *Teor. Funkcii Funkcional. Anal. i Priložen.* No. 31 (1979), 145-150, 169. (Z. Rubinstein) 81d:41027 41A30 (41A17, 42C10)
- Ryscov, I. K. An asymptotic estimate of the length of a diagnostic word for a finite automaton. (Russian) *Dokl. Akad. Nauk SSSR* 241 (1978), no. 2, 294-296. (Author's introduction) 81f:68060 68D05
- Ryser, H. J. A theorem in combinatorial matrix theory. *Linear Algebra Appl.* 29 (1980), 451-458. (V. A. Zinov'ev) 81i:15013 15A24 (05B20)
- van Rysia, John See Van Rysia, John
- Ryskin, G. The extensional viscosity of a dilute suspension of spherical particles at intermediate microscale Reynolds numbers. With an appendix by G. Ryskin and J. M. Rallison. *J. Fluid Mech.* 99 (1980), no. 3, 513-529. (Authors' summary) 81f:76037 76T05 (76D05)
- Ryškov, S. S. Multidimensional sails. (Russian) *Algebra, number theory and their applications. Trudy Mat. Inst. Steklov.* 148 (1978), 211-217, 277. (Author's summary) 81j:10037 10E25 (52A25)
- (with Baranovskii, E. P.) Classical methods of the theory of lattice packing. (Russian) *Uspehi Mat. Nauk* 34 (1979), no. 4(208), 3-63, 256. (R. A. Rankin) 81i:10045 10E30 (10E25, 52A45)
- Rytter, Wojciech A correct preprocessing algorithm for Boyer-Moore string-searching. *SIAM J. Comput.* 9 (1980), no. 3, 509-512. (Author's summary) 81g:68129 68H05 (68C05)
- Ryu, Dewey D. Y. (with Lee, Sun Bok) External diffusion effects on the kinetic constants of immobilized enzyme systems. *J. Theoret. Biol.* 84 (1980), no. 2, 259-279. (Authors' summary) 81d:92096 92A09 (80A30)
- Ryzhik, I. M. See Ryzik, I. M.
- Ryzhov, O. S. See Ryzov, O. S.
- Ryzhov, Yu. A. See Ryzov, Yu. A.
- Ryzik, I. M. (with Gradshteyn, I. S.) ★Table of integrals, series, and products. Corrected and enlarged edition edited by Alan Jeffrey. Incorporating the fourth edition edited by Yu. V. Geronimus [Yu. V. Geronimus] and M. Yu. Tseytin [M. Ju. Ceitin]. Translated from the Russian. *Academic Press [Harcourt Brace Jovanovich, Publishers]*, New York-London-Toronto, Ont., 1980. xv + 1160 pp. ISBN 0-12-294760-6 (F. J. Papp) 81g:33001 33-01 (65A05)
- van Ryzin, John See Van Ryzin, John
- Ryzkina, T. A. Generation of discontinuous groups of nondegenerate linear-fractional transformations with real coefficients. (Russian) *Metric questions of the theory of functions and mappings, No. VI* (Russian), pp. 110-116, "Naukova Dumka", Kiev, 1975. (See 80j:30003) 30C45
- On the question of the discontinuity of groups of Möbius' transformations. (Russian) *Metric questions of the theory of functions and mappings, No. VII* (Proc. Fourth Colloq., Quasiconformal Mappings and their Generalizations, Donetsk, 1974) (Russian), pp. 145-153, "Naukova Dumka", Kiev, 1975. (See 80c:30023) 30C45
- Ryžkov, V. V. On the theory of *n*-conjugate nets in affinely connected spaces. (Russian. Georgian and English summaries) *Sobšč. Akad. Nauk Gruz. SSR* 97 (1980), no. 3, 545-548. (M. C. Chaki) 81m:53021 53B05
- Ryžov, Ju. A. Mean electromagnetic field in a randomly inhomogeneous medium. *Ž. Eksp. Teoret. Fiz.* 77 (1979), no. 6, 2179-2185 (Russian); translated as *Soviet Phys. JETP* 50 (1979), no. 6, 1046-1049 (1980). (Kazimierz Sobczyk) 81h:78016 78A40 (76X05, 82A42)
- Ryžov, O. S. (with Žuk, V. I.) Internal waves in the boundary layer with self-induced pressure. (French summary) *J. Mécanique* 19 (1980), no. 3, 561-580. (Authors' summary) 81j:76061 76J99 (76D10)
- (with Ni, A. L.) The structure of relaxation zones behind a shock wave in chemically active gas mixtures. (Russian) *Ž. Prikl. Meh. i Tehn. Fiz.* 1980, no. 1, 33-45, 172. (Authors' summary) 81d:76069 76L05 (82A40)
- See also *Numerical methods in the dynamics of rarefied gases*, 81i:76028a
- Ryžova, N. P. An elementary proof of a theorem on primes in arithmetic progressions. (Russian) *Kul'turnye Gos. Ped. Inst. Naučn. Trudy* 215 (1978), Issled. po Additionel'noj Čisl. 37-41. (W. Narkiewicz) 81k:10070 10H20 (10A25)
- Rzaev, S. F. Some linear processes of summation of Fourier series in generalized spherical functions and best approximation. (Russian) *Azerbaidžan. Gos. Univ. Učen. Zap.* 1978,

- no. 3, 13-22. (A. Oleviskii) **81d:42034** 42C10
- Raeva, U. S. (with Abramov, A. H.) Determination of characteristics of a priority queueing system with two types of interruption. (Russian) *Questions of mathematical cybernetics and applied mathematics*, No. 3 (Russian), pp. 82-92, "Élm", Baku, 1978. (M. A. Fainberg) **81d:60160** 60K25
- Risvinskaja, E. V. Mean approximation of functions by Fourier-Laguerre sums. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1979, no. 11, 87-93. (I. Szalay) **81h:41032** 41A50
- Rzpiewski, Kazimierz (with van Hemmen, J. Leo) On the thermodynamic equivalence of the Dicke maser model and a certain spin system. *Phys. Lett. A* 77 (1980), no. 4, 211-213. (Authors' summary) **81k:81119** 81K05 (82A15)
(with Mostowski, Jan) Rabi oscillations in a partially coherent field. *Z. Phys. B* 39 (1980), no. 2, 183-185. (Authors' summary) **81h:81194** 81K05
- Rzepecki, Bogdan Remarks on Schauder's fixed point principle and its applications. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math.* 27 (1979), no. 6, 473-480. (Simeon Reich) **81b:47073** 47H10 (47H09)
An extension of Krasnosel'skii's fixed point theorem. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math.* 27 (1979), no. 6, 481-488. (Simeon Reich) **81b:47074** 47H10 (47H09)
- Rzeplinski, D. G. (with Sarkisjan, A. S.) Numerical modeling of the large-scale oceanic circulation. *Izv. Akad. Nauk SSSR Ser. Fiz. Atmosf. i Okeana* 15 (1979), no. 7 (Russian); translated as *Izv. Acad. Sci. USSR Atmospher. Ocean. Phys.* 15 (1980), no. 7, 502-507. (Authors' summary) **81k:86005** 86A05 (86-04)
- Rzeplinski, S. V. (with Nenahov, E. I.) A means of reconstructing unconditional minimization algorithms. (Russian) *Theory of optimal decisions* (Russian), pp. 86-91, 112, *Akad. Nauk Ukrain. SSR, Inst. Kibernet., Kiev*, 1979. (G. D. Maistrovskii) **81b:65074** 65K10 (90C25)
- Rzeplinski, D. G. See Rzeplinski, D. G.
marques de Sá, E. See Marques de Sá, E.
- Saah, Elias On the Radon-Nikodym property in a class of locally convex spaces. *Pacific J. Math.* 75 (1978), no. 1, 281-291. (Author's summary) **81k:46046** 46G10 (46B22)
A characterization of w^* -compact convex sets having the Radon-Nikodym property. (French summary) *Bull. Sci. Math. (2)* 104 (1980), no. 1, 79-88. (Barbara T. Fairies) **81c:46011** 46B22 (46G10)
Universally Lusin-measurable and Baire-1 projections. *Proc. Amer. Math. Soc.* 78 (1980), no. 4, 514-518. (A. Badrikian) **81g:46025** 46B22
(with Ghousoub, Nassif A.) On the weak Radon-Nikodym property. *Proc. Amer. Math. Soc.* 81 (1981), no. 1, 81-84. (Jerry A. Johnson) **81j:46068** 46G10 (46B22)
- Saah, Paulette La représentation intégrale de Choquet dans le cas vectoriel. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 286 (1978), no. 14, A621-A624. (Author's summary) **81f:46014** 46A55 (46G10)
The Choquet integral representation in the affine vector-valued case. *Aequationes Math.* 20 (1980), no. 2-3, 252-262. (Eggert Briem) **81j:46020** 46A55 (46E40)
- Saad, Y. Variations on Arnoldi's method for computing eigenvalues of large unsymmetric matrices. *Linear Algebra Appl.* 34 (1980), 269-295. (E. L. Albasing) **81m:65055** 65F15
- Saadet, H. (with Filippi, P.) Diffraction of a spherical wave by a thin infinite plate. *J. Acoust. Soc. Amer.* 69 (1981), no. 2, 397-403. (Authors' summary) **81m:76035** 76Q05 (73J06)
- Saak, E. M. Solvability of a general boundary value problem for the Laplace equation. (Russian) *Differentsial'nye Uravnenija* 14 (1978), no. 6, 1093-1103, 1151. (R. Vybornyj) **81c:35037** 35J25
The analogue of Neumann's theorem in the class $W_2^{1,1}(\Omega)$. (Russian) *Ukrain. Mat. Ž.* 31 (1979), no. 3, 325-329, 336. (E. M. Saak) **81a:30005** 30C15 (35J99)
Stability of the jump problem for a holomorphic problem. (Russian) *Ukrain. Mat. Ž.* 31 (1979), no. 5, 525-531, 619. (Ju. V. Kostarčuk) **81k:35041** 35J15 (31B20)
Fredholm property of a class of boundary value problems. (Russian) *Differentsial'nye Uravnenija* 16 (1980), no. 3, 507-515, 574. (T. Stij) **81g:35031** 35J40
- Saakjan, A. A. Properties of Fourier coefficients of the superposition of functions. (Russian) *Dokl. Akad. Nauk SSSR* 248 (1979), no. 2, 302-306. (O. D. Gabisonija) **81d:42031** 42A20 (26B40)
- Sauri, Donald G. (with Saigal, Romesh) Some generic properties of paths generated by fixed point algorithms. *Analysis and computation of fixed points* (Proc. Sympos., Math. Res. Center, Univ. Wisconsin, Madison, Wis., 1979), pp. 57-72, *Publ. Math. Res. Center Univ. Wisconsin*, 43, Academic Press, New York, 1980. (T. Y. Li) **81m:65078** 65H10 (58C15, 90C30)
(with Stebezh, Victor; Waldvogel, J.; Kirchgraber, Urs) Eduard L. Stiefel (1909-1978). Proceedings of the Sixth Conference on Mathematical Methods in Celestial Mechanics (Math. Forschungsinst., Oberwolfach, 1978), Part I. *Celestial Mech.* 21 (1980), no. 1, 3-4. (Editors) **81a:01042** 01A70 (22-03, 57-03, 65-03, 70-03)
On the role and the properties of n -body central configurations. Proceedings of the Sixth Conference on Mathematical Methods in Celestial Mechanics (Math. Forschungsinst., Oberwolfach, 1978), Part I. *Celestial Mech.* 21 (1980), no. 1, 9-20. (Author's summary) **81a:70016** 70F10
- Saarnil, I. A possibility of constructing iteration methods. (Russian. German summary) *Tartu Riikl. Ül. Toimetised No. 500 Trudy Mat. i Meh.* no. 25 (1979), 43-52. (A. V. Džikarjani) **81c:47048** 47H17 (65R20)
- Santkamp, Klaus Best approximation in the space of bounded operators and its applications. *Math. Ann.* 250 (1980), no. 1, 35-54. (Sheldon Axler) **81b:41031** 41A65 (41A35, 46B25)
- Saaty, Thomas L. Modeling unstructured decision problems: the theory of analytical hierarchies. *Proceedings of the First International Conference on Mathematical Modeling* (St. Louis, Mo., 1977), Vol. I, pp. 59-77, *Univ. Missouri-Rolla, Rolla, Mo.*, 1977. (Author's summary) **81j:90153** 90D35
Interaction and impacts in hierarchical systems. *Decision information*, pp. 29-77, Academic Press, New York, 1979. (A. Rapoport) **81g:92029** 92A27 (15A06, 90A05)
- Sabellinskis, L. (with Jucys, A.-A.; Bernotas, A. P.) The classification of the SU(3)-states in the case of heavy odd nuclei. (Russian. Latvian and English summaries) *Litovsk. Fiz. Sb.* 20 (1980), no. 1, 3-13, 119. (A. M. Gavriluk) **81k:81106** 81G30 (22E70)
- Sabatin, P. L. (with Aksej'ev, L. A.) Problems of S. N. Andrianov. (Russian) *Trudy Sem. Krasn. Zadačam* No. 14 (1977), 28-35. (W. K. Hayman) **81j:30022** 30C35
- Sabellinskis, L. Ju. See Sabellinskis, L.
- Sabanov-Kularenko, Ju. P. Analytic methods for implicit determination of finite alphabetic operators. (Russian) *Automat. Sistemy Upravlenija i Pribyr. Automat.* No. 54 (1980), 96-102, iii-iv. (G. Asser) **81j:80039** 03B50
- Sabat, A. B. Nonlinear evolution equations and the Riemann problem. (Russian) *Proceedings of an All-Union Conference on Partial Differential Equations* (Moscow State Univ., Moscow, 1976) (Russian), pp. 242-245, *Moskov. Gos. Univ., Meh.-Mat. Fakul'tet, Moscow*, 1978. (See 80f:35002) 34B25
An inverse scattering problem. (Russian) *Differentsial'nye Uravnenija* 15 (1979), no. 10, 1824-1834, 1918. (Boris Pavlov) **81m:34026** 34B25 (34A55)
(with Sokolov, V. V.) (L, A)-pairs and Riccati type substitution. (Russian) *Funktsional. Anal. i Prilozhen.* 14 (1980), no. 2, 79-80. (P. A. Kučment) **81k:35152** 35Q20 (34G20, 58F07)
- Sabat, G. B. A system of equations of S. P. Novikov. (Russian) *Funktsional. Anal. i Prilozhen.* 14 (1980), no. 2, 89-90. (P. A. Kučment) **81k:58038** 58F07 (14D05, 35Q20)
- Sabata, H. A certain type of integrating factors for some single systems. *Let. Nuovo Cimento* (2) 28 (1980), no. 11, 395-399. (Prem Bajaj) **81j:34007** 34A05 (34A34)
- Sabatov, E. G. (with Belov, Ju. Ja.) The approximation of systems of composite type. (Russian) *Čisl. Metody Meh. Splajn. Sredy* 9 (1978), no. 6 *Mat. Modelirovanie*, 12-24. (A. I. Kir'janen) **81j:34107** 34G10
- Sabatier, Germain (with Hucher, Monique; Crolier, Jacques) Effectifs des diverses séquences de polyèdres 3-valents convexes ayant moins de 11 faces et de polyèdres sans face triangulaire ayant de 11 à 14 faces. (English summary) *Discrete Appl. Math.* 2 (1980), no. 3, 255-257. (Authors' summary) **81h:52004** 52A25 (86A99, 90C10)
- Sabatier, Pierre C. Spectral and scattering inverse problems. *J. Math. Phys.* 19 (1978), no. 12, 2410-2425. (Author's summary) **81j:34038** 34B25
On some spectral problems and isospectral evolutions connected with the classical string problem. I. Constants of motion. *Let. Nuovo Cimento* (2) 26 (1979), no. 15, 477-482. (Edward J. Haug, Jr.) **81h:34034a** 34B25 (41A27, 70J99)
On some spectral problems and isospectral evolutions connected with the classical string problem. II. Evolution equation. *Let. Nuovo Cimento* (2) 26 (1979), no. 15, 483-486. (Edward J. Haug, Jr.) **81h:34034b** 34B25 (41A27, 70J99)
Around the classical string problem. *Nonlinear evolution equations and dynamical systems* (Proc. Meeting, Univ. Lecce, Lecce, 1979), pp. 85-102, *Lecture Notes in Phys.*, 120, Springer, Berlin, 1980. (P. C. Parks) **81h:70013** 70J10 (35L05)
See also Applied inverse problems, 81a:00024
- de Sabhata, V. (with Gasperini, M.) On the Maxwell equations in a Riemann-Cartan space. *Phys. Lett. A* 77 (1980), no. 5, 300-302. (Authors' summary) **81m:83043** 83E10 (58A10, 83C50)
- Sabelfeld, V. K. Equivalent transformations of standard schemes. (Russian) *Akad. Nauk SSSR Sibirsk. Otdel. Vychisl. Centr Preprint* No. 85 (1978), 43 pp. (Karel Čulík) **81c:68017** 68B10 (68E10)
Polynomial estimation of the complexity of recognizing logical term equivalence. (Russian) *Dokl. Akad. Nauk SSSR* 249 (1979), no. 4, 793-796. (Juris Borzovs) **81g:68072** 68C25 (03D15)
(with Nepomnjaščij, V. A.) Elimination of identity assignments in standard program schemata. *Programirovanie* 1979, no. 4, 34-43, 95 (Russian); translated as *Programming and Comput. Software* 5 (1979), no. 4, 249-256. (Authors' summary) **81g:68023** 68B10
The logic-term equivalence is polynomial-time decidable. *Inform. Process. Lett.* 10 (1980), no. 2, 57-62. (Author's introduction) **81a:68039** 68C05 (68C25)
- Sabidussi, G. (with Földes, Stéphane) Subgroups and supergraphs. *Graph theory and related topics* (Proc. Conf., Univ. Waterloo, Waterloo, Ont., 1977), pp. 197-199, *Academic Press*, New York, 1979. (See 80c:05004) 05C25
(with Földes, Stéphane) On semigroups of graph endomorphisms. *Discrete Math.* 30 (1980), no. 2, 117-120. (S. I. Gendler) **81c:05000** 05C25 (20B25)
- Sabla, M. A. Contouring—a review of methods for scattered data. *Mathematical methods in computer graphics and design* (Proc. Conf., Univ. Leicester, Leicester, 1978), pp. 63-86, *Academic Press*, London, 1980. (See 81f:68010) 68K05
- Sablin, O. Ju. (with Minjaeva, L. N.) Adaptive statistical modelling algorithms for stochastic control systems. *Automat. i Vychisl. Tehn. (Riga)* 1980, no. 1, 55-63, 97 (Russian); translated as *Automat. Control Comput. Sci.* 14 (1980), no. 1, 50-57. (Authors' summary) **81j:93070** 93E25 (68J10)
- Sabir, M. (with Joseph, K. Babu) Lagrange multiplier formalism for spin-2 fields. *J. Phys. A* 13 (1980), no. 7, 2489-2499. (Authors' summary) **81e:81100** 81E99 (81D25)
- Sabirov, T. S. (with Kozobrod, V. N.) Extendability with respect to a parameter of periodically distributed solutions of differential equations in Banach spaces with random coefficients. (Russian) *Funktsional. Anal. i Differentsial. Uravnenija*, pp. 78-89, *Ul'janovsk. Gos. Ped. Inst., Ul'janovsk*, 1979. (D. Bobrowski) **81c:60009** 60H10
- The Cauchy problem for abstract differential equations in a Banach space. (Russian. Kazakh summary) *Izv. Akad. Nauk Kazah. SSR Ser. Fiz.-Mat.* 1980, no. 1, 77-79, 94. (J. W. Macki) **81k:34061** 34G20
- Sabirov, K. B. Boundary value problems for an equation of mixed type with degeneration of the second kind on the boundary of an infinite domain. (Russian) *Kulbyšev. Gos. Ped. Inst. Nauchn. Trudy* 226 (1978), *Funktsional. Anal. i Differentsial. Uravnenija*, 32-38. (Editors) **81g:35090** 35M05
- Sabirov, R. A. (with Zemljakov, A. S.; Somov, E. I.) Automated synthesis of hierarchical systems of control of motion with an application of Ljapunov vector-valued functions. (Russian) *Theory of stability and its applications* (Russian), pp. 264-271, 304, "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. (Pavel Krčec) **81d:34053** 34H05 (93C15)
- Sablinskaja, L. N. (with Jurgelas, V. V.) A remark on the stability of the Abramov-Gaipova iteration process. (Russian) *Proceedings of a Seminar on Differential Equations*, No. 3 (Russian), pp. 136-139, 151, *Kulbyšev. Gos. Univ., Kulbyšev*, 1977. (Authors' summary) **81c:65028** 65J10
- Sablin, V. M. (with Alekseevskaja, M. A.; Pereverzev-Orlov, V. S.) Prediction of medical tactics. (Russian) *Mathematical models of mechanisms of pathological processes. Voprosy Kibernet. (Moscow)* No. 49 (1979), 111-119. (See 81f:92007) 92A07
- Sablov, V. L. (with Komarov, V. V.; Popova, A. M.; Osborn, T. A.) Failure of the

- connected-kernel method. *Phys. Rev. C* (3) **22** (1980), no. 3, 976-984. (Authors' summary) **81k:81113** 81F10
- Šabo, Michal** Classification and extension by the transfinite induction. (Russian summary) *Math. Slovaca* **29** (1979), no. 2, 169-176. (Hartmut Höft) **81k:06006** 06B99 (28A05)
- Šabonov, M.** (with Pereverzev, S. V.) On the question of quadrature and cubature formulas that are connected with Hermite splines. (Russian) *Akad. Nauk Ukrain. SSR Inst. Mat. Preprint No. 26 Splajny o Zadachah Approximatsii. I. Splajnoan.* (1978), 42-47. (Yury Girshovich) **81k:41078** 41A55 (65D07, 65D32)
- An optimality property of two-dimensional splines. (Russian) *The theory of functions and its applications* (Russian), pp. 199-204, 212. "Naukova Dumka", Kiev, 1979. (A. A. Pekarskii) **81k:41020** 41A15
- Sahay, A. A.** Symmetric and asymmetric stabilities of charged liquid drops. *Phys. A* **101** (1980), no. 1, 223-242. (Authors' summary) **81k:82022** 82A50
- Sahy, Hegazi** Sur l'estimation non paramétrique des fonctions de régression. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **286** (1978), no. 5, A285-A288. (Authors' summary) **81k:62045** 62G05
- Sahvaliev, M. M.** Asymptotic behavior of the solution of a boundary value problem for a one-characteristic third-order differential equation with a small parameter. (Russian. Azerbaijani and English summaries) *Akad. Nauk Azerbaidžan. SSR Dokl.* **35** (1979), no. 7, 3-7. (J. Chrastina) **81k:35012** 35B25 (35C20)
- Sacchetti, Anna Martellotti** (with Candeloro, Domenico) Some problems concerning subadditive scalar measures and applications to the case of finite additivity. (Italian) *Atti S.m. Mat. Fis. Univ. Modena* **27** (1978), no. 2, 284-296 (1979). (B. Rodríguez-Salinas) **81k:28006** 28C15
- Sacchi, G.** (with Cinquini, C.) Problems of optimal design for elastic and plastic structures. (French summary) *J. Méc. Appl.* **4** (1980), no. 1, 31-59. (Authors' summary) **81k:73036** 73K99 (49D29, 73H05)
- Sačenko, A. V.** (with Kogan, M. I.) On variational equations of mixed type in elasticity theory. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* **1980**, no. 5, 50-57. (Vadim Komkov) **81k:73012** 73C99 (49H05)
- tong van Sach** See **Tong Van Sach**
- Sacher, Howard** The F_p span of the incidence matrix of a finite projective plane. *Geom. Dedicata* **8** (1979), no. 4, 407-415. (J. J. Seidel) **81k:94020** 94B10 (12C05, 51E99)
- Sachdev, P. L.** Exact, self-similar, time-dependent free surface flows under gravity. *J. Fluid Mech.* **96** (1980), no. 4, 797-802. (Authors' summary) **81k:76014** 76B99
- Sacher, Richard S.** A decomposition algorithm for quadratic programming. *Math. Programming* **18** (1980), no. 1, 16-30. (Siegfried Schaible) **81k:90067** 90C20
- Šachl, Vladimír** (with Bednář, Miroslav) Fourth degree Casimir operator of the semisimple graded Lie algebra $(Sp(2N); 2N)$. *J. Math. Phys.* **19** (1978), no. 7, 1487-1492. (Authors' summary) **81k:17006** 17B10 (17A70)
- Sachrajda, C. T.** Applications of perturbative QCD to hard scattering processes. *Quantum chromodynamics* (Proc. Tenth G.I.F.T. Internat. Sem. Theoret. Phys., Univ. Zaragoza, Jaca, 1979), pp. 137-230. *Lecture Notes in Phys.*, **118**, Springer, Berlin, 1980. (E. Wiecezorek) **81k:81091** 81G05 (81F20)
- Sachs, Ekkehard** Differentiability in optimization theory. *Math. Operationsforsch. Statist. Ser. Optim.* **9** (1978), no. 4, 497-513. (Lucio Boccardo) **81k:49013** 49A51 (46G05, 49B27, 58C20, 90C30)
- Sachs, Hans** Zur Geometrie der Hypersphären im n -dimensionalen einfach isotropen Raum. *J. Reine Angew. Math.* **298** (1978), 199-217. (Wendelin Degen) **81k:51012** 51N25
- (with Strommer, Gyula) Geodätische und Pseudogeodätische auf Regelflächen im Flaggenraum. *Arch. Math. (Basel)* **33** (1979/80), no. 5, 478-484. (K. Strubecker) **81k:53018** 53A35
- Sachs, Horst** On a theorem connecting the factors of a regular graph with the eigenvectors of its line graph. *Combinatorics* (Proc. Fifth Hungarian Colloq., Keszthely, 1976), Vol. II, pp. 947-957. *Colloq. Math. Soc. János Bolyai*, **18**, North-Holland, Amsterdam, 1978. (Giorgio Balconi) **81k:05065** 05C50 (05C70)
- Graphs and surfaces assigned to finite groups. (French summary) *Problèmes combinatoires et théorie des graphes* (Colloq. Internat. CNRS, Univ. Orsay, Orsay, 1976), pp. 371-375. *Colloques Internat. CNRS*, **260**, CNRS, Paris, 1978. (Norman Biggs) **81k:05071** 05C10 (05C25, 20F32)
- (with Cvetković, Dragomir M.; Doob, Michael) ★Spectra of graphs. Theory and application. Pure and Applied Mathematics, **87**. Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], New York-London, 1980. 368 pp. ISBN 0-12-195150-2 (N. Trinajstić) **81k:05054** 05Cxx (05-01, 92A40)
- Sack, Ira Howard** Prefilters over an arbitrary Boolean algebra. *Proceedings of the Eighth International Symposium on Multiple-Valued Logic* (Rosemont, Ill., 1978), pp. 242-250. *IEEE, Long Beach, Calif.*, 1978. (Sabine Koppelberg) **81k:06008** 06E99 (03B45, 03B50, 03G05)
- Sacker, Robert J.** The splitting index for linear differential systems. *J. Differential Equations* **33** (1979), no. 3, 368-405. (G. R. Sell) **81k:34020** 34B05 (47A53, 47E05)
- (with Haddock, John R.) Stability and asymptotic integration for certain linear systems of functional differential equations. *J. Math. Anal. Appl.* **76** (1980), no. 2, 328-338. (T. A. Burton) **81k:34130** 34K20 (34D20)
- (with Sell, George R.) Singular perturbations and conditional stability. *J. Math. Anal. Appl.* **76** (1980), no. 2, 406-431. (K. W. Chang) **81k:34086** 34D15
- Šackil, V. P.** A boundary value problem for singular symmetric systems of odd order. (Russian) *Dokl. Akad. Nauk SSSR* **248** (1979), no. 4, 806-809. (S. P. Gavajla) **81k:35030** 35G15 (35J70)
- Sackrowitz, Harold** The influence of the nonrenewal past in prediction for stochastic processes. *J. Multivariate Anal.* **9** (1979), no. 2, 222-233. (A. I. Ponomarenko) **81k:60060** 60G25 (62M20)
- Sacks, Gerald E.** Effective bounds on Morley rank. *Fund. Math.* **103** (1979), no. 2, 111-121. (M. Makkai) **81k:03035** 03C70 (03C45)
- Sacks, J.** (with Spiegelman, Clifford H.) Consistent window estimation in nonparametric regression. *Ann. Statist.* **8** (1980), no. 2, 240-246. (M. Hušková) **81k:62070** 62G05
- Sacks-Davis, R.** (with Jackson, K. R.) An alternative implementation of variable step-size multistep formulas for stiff ODEs. *ACM Trans. Math. Software* **6** (1980), no. 3, 295-318. (Hans J. Stetter) **81k:65120** 65L05
- Fixed leading coefficient implementation of SD-formulas for stiff ODEs. *ACM Trans. Math. Software* **6** (1980), no. 4, 540-562. (Authors' summary) **81k:65084** 65L05
- Săciu, Ion** (with Zorilescu, Dan) ★Numere aleatoare. (Romanian) [Random numbers] Aplicații în economie, industrie și studii fenomenelor naturale. [Applications in economy, industry and the study of natural phenomena] With an English summary. Editura Academiei Republicii Socialiste România, Bucharest, 1978. 251 pp. (A. Spîtaru) **81k:65012** 65C10 (65C05, 65U05)
- Sad, Paulo Roberto** See **Grossi Sad, P. R.**
- mir-mohamad-Sadeq, A.** See **Mir-Mohamad-Sadeq, A.**
- Sadeh, E.** (with Koren, I.) On the convergence of the signal reliability of iterative and sequential systems. (French and German summaries) *Digital Process.* **6** (1980), no. 1, 21-33. (Authors' summary) **81d:94036** 94C10 (68A05)
- Sadikova, R. H.** A general class of inequalities containing the Steffensen inequality and its generalization. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* **1980**, no. 4, 79-80. (B. Crstici) **81j:26021** 26D15
- Šadimetov, H. M.** (with Žamalov, Z. Ž.) Calculation of the coefficients of optimal quadrature formulas. (Russian) *Dokl. Akad. Nauk UzSSR* **1980**, no. 4, 4-7. (I. P. Mysovskij) **81k:41025** 41A55 (65D32)
- (with Žamalov, Z. Ž.) Optimal quadrature formulas. (Russian) *Dokl. Akad. Nauk UzSSR* **1980**, no. 7, 3-5. (Yury Girshovich) **81j:41049** 41A55 (65D32)
- Sadjadi, D.** (with Hastings, N. A. J.) Markov programming with policy constraints. *European J. Oper. Res.* **3** (1979), no. 3, 253-255. (Authors' introduction) **81k:90200** 90C40
- Sadka, Efraim** (with Dalton, Thomas R.) A many-good Corlett-Hague tax rule. *Econom. Lett.* **4** (1979/80), no. 2, 169-172. (Wilhelm Gehrig) **81k:90022** 90A12
- Sadkowski, Wawrzyniec** Boundedness of solutions of some nonlinear hyperbolic equations. *Demonstratio Math.* **11** (1978), no. 1, 127-138. (Jack Carr) **81k:35078** 35L15
- Sadosky, Cora** ★Interpolation of operators and singular integrals. An introduction to harmonic analysis. Monographs and Textbooks in Pure and Applied Math., **53**. Marcel Dekker, Inc., New York-Basel, 1979. xii+375 pp. ISBN 0-8247-6883-3 (Kenneth F. Andersen) **81d:42001** 42-02 (42B99)
- (with Cotlar, Mischa) On the Helson-Szegő theorem and a related class of modified Toeplitz kernels. *Harmonic analysis in Euclidean spaces* (Proc. Sympos. Pure Math., Williams Coll., Williamstown, Mass., 1978), Part 1, pp. 383-407. *Proc. Sympos. Pure Math.*, XXXV, Part 1, Amer. Math. Soc., Providence, R.I., 1979. (Authors' introduction) **81j:42022** 42A50 (42B20, 47B35)
- (with Cotlar, Mischa) Characterization of two measures satisfying the Riesz inequality for the Hilbert transform in L^2 . (Spanish summary) *Acta Cient. Venezolana* **30** (1979), no. 4, 346-348. (L. Artega) **81k:44004** 44A20 (42B15)
- Sadovjak, A. M.** (with Car'kov, E. F.) The Cauchy matrix for a system of linear stochastic differential equations. (Russian) *Mathematical analysis and probability theory* (Russian), pp. 150-154, 220. "Naukova Dumka", Kiev, 1978. (Authors' summary) **81k:60057** 60H10 (35R60)
- (with Semčuk, A. R.) Optimal stabilization of a class of stochastic systems with distributed parameters. (Russian) *Asymptotic methods of nonlinear mechanics* (Russian), pp. 111-116, 197. *Akad. Nauk Ukrain. SSR, Inst. Mat., Kiev*, 1979. (Authors' summary) **81k:93089** 93E15
- Sadovnikii, V. A.** (with Dubrovskii, V. V.) Traces of differential operators. (Russian) *Proceedings of an All-Union Conference on Partial Differential Equations* (Moscow State Univ., Moscow, 1976) (Russian), pp. 213-216. *Moskov. Gos. Univ., Meh.-Mat. Fakul'tet, Moscow*, 1978. (See **80f:35002**) 34B25
- (with Dubrovskii, V. V.) Some properties of operators with a discrete spectrum. (Russian) *Differentsial'nye Uravnenija* **15** (1979), no. 7, 1206-1211, 1341. (R. C. Gilbert) **81k:47026** 47A70 (34B25, 47E05)
- (with Ljubiškin, V. A.; Belabassi, Ju.) Regularized sums of roots of an entire function of a certain class. (Russian) *Dokl. Akad. Nauk SSSR* **254** (1980), no. 6, 1346-1348. (C. Tanaka) **81k:30033** 30D15 (30C15)
- Sadovnikov, E. G.** (with Tezin, A. M.) Limit cycles around intersecting closed lines of contact. (Russian) *Kulibšev. Gos. Ped. Inst. Naučn. Trudy* **226** (1978), *Funkcional. Anal. i Differentsial. Uravnenija*, 73-78. (A. Halanay) **81k:34022** 34C05
- Sadovskii, A. L.** (with Litvak, B. G.) Some game models of expert procedures. (Russian) *Moskov. Inst. Inž. Železnodorozh. Transporta Trudy No. 640 Prikl. Mat. i Zadachi Železnodorozh. Transporta* (1979), 66-68, 153. (Authors' summary) **81k:90145** 90D40
- Sadovskii, A. P.** Formal transformations of two-dimensional dynamical systems. (Russian. English summary) *Dokl. Akad. Nauk BSSR* **23** (1979), no. 12, 1077-1079, 1149. (G. V. Hmelevskaja-Plotnikova) **81k:34029** 34C20
- A criterion for the existence of a center for a system with homogeneous right-hand sides. (Russian. English summary) *Dokl. Akad. Nauk BSSR* **24** (1980), no. 7, 585-587, 667. (P. Brunovsky) **81k:34034** 34C05
- Sadovskii, V. N.** Logico-methodological analysis of the verisimilitude of scientific theories. (Russian. English summary) *Voprosy Filos.* **1979**, no. 9, 97-110, 187. (Siegfried Gottwald) **81k:03018** 03A05 (00A69)
- On contemporary British concepts of the philosophy of science. (Russian. English summary) *Voprosy Filos.* **1980**, no. 2, 134-142, 188. (Siegfried Gottwald) **81k:03019** 03A05
- (with Lektorskii, V. A.) Problems of the methodology and philosophy of science. (Russian. English summary) *Voprosy Filos.* **1980**, no. 3, 16-29, 186. (I. Ruza) **81k:00006** 00A25
- See also **Systems research**, **81j:00028**
- Sadrina, A. P.** (with Bondarev, E. A.) A numerical method for solving one-dimensional problems of nonisothermal gas filtration. (Russian) *Methods in continuum mechanics* (Russian), pp. 59-70, 124. *Akad. Nauk SSSR Sibsk. Otdel. Yakutsk. Filial, Yakutsk*, 1977. (L. I. Rubinstein) **81k:76042** 76S05 (76N15)
- Sadullaez, A.** Defect divisors in the sense of Valiron. (Russian) *Mat. Sb. (N.S.)* **108** (1979), no. 4, 567-580, 640. (Harold P. Boas) **81k:32019** 32H25
- P-regularity of sets in C^n . *Analytic functions*, *Kozubnik* 1979 (Proc. Seventh Conf. Kozubnik, 1979), pp. 402-408. *Lecture Notes in Math.*, **798**, Springer, Berlin, 1980. (Gary A. Harris) **81k:32020** 32E20 (31C10)
- Locally and globally ϑ -regular compacta in C^n . (Russian) *Dokl. Akad. Nauk SSSR* **250** (1980), no. 5, 1324-1327. (Wiesław Pleśniak) **81k:32025** 32F05 (31C10)

- The operator (dd^*u) and condenser capacities. (Russian) *Dokl. Akad. Nauk SSSR* 251 (1980), no. 1, 44-47. (Wiesław Pleśniak) **81h:32024** 32F05 (31C15, 32E10) (with Degiar, P. V.) Approximation divisors and other questions of multidimensional Nevanlinna theory. (Russian) *Dokl. Akad. Nauk UzSSR* 1980, no. 7, 10-13. (I. P. Ramadanov) **81m:32003** 32A22 (32H30)
- Schwarz's lemma for circular domains and its application. (Russian) *Mat. Zametki* 27 (1980), no. 2, 245-253, 318. (R. R. Simha) **81g:32001** 32A07 (32H99)
- Sedukhin, R. S. (with Kurbanmuradov, O. A.) Application of the Monte Carlo method to the solution of a problem of steady-state pressure filtration. (Russian) *Voprosy Vychisl. i Prikl. Mat. (Tashkent)* No. 56 (1979), 25-31, 138. (Authors' summary) **81b:65009** 65C05 (76S05)
- (with Kurbanmuradov, O. A.) Application of the "walk on a sphere" method for solving stationary problems of filtration theory. (Russian) *Voprosy Vychisl. i Prikl. Mat. (Tashkent)* No. 58 (1979), 14-19, 119. (E. Ungureanu-David) **81k:76076** 76S05 (65C05)
- Sedukhin, S. S. (with Ramizov, Z. R.) Difference schemes of the fourth order of accuracy for second-order equations of elliptic type. (Russian) *Voprosy Vychisl. i Prikl. Mat. (Tashkent)* No. 56 (1979), 8-16, 137. (Authors' summary) **81b:65085** 65N05 (with Makarov, V. L.) Four-point difference schemes for a Goursat problem. (Russian) *Voprosy Vychisl. i Prikl. Mat. (Tashkent)* No. 57 (1979), 19-26, 167-168. (S. P. Gavelja) **81j:39004** 39A12 (65N10)
- (with Makarov, V. L.) On the question of convergence of difference schemes for the Helmholtz equation in a rectangle. (Russian) *Voprosy Vychisl. i Prikl. Mat. (Tashkent)* No. 58 (1979), 30-38, 120. (S. P. Gavelja) **81b:65082** 65N10 (39A12)
- (with Makarov, V. L.) Four-point difference scheme for the Goursat problem. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* 1980, no. 8, 21-24, 87. (V. D. Glushkov) **81m:65149** 65M05 (65M10)
- Sedykhov, A. E. Elasticity theory problem for wedge with semi-infinite crack subjected to point moment. *Prikl. Meh.* 16 (1980), no. 5, 91-96 (Russian); translated as *Soviet Appl. Mech.* 16 (1980), no. 5, 431-437. (Editors) **81k:73070** 73M05
- Sedykhov, V. E. Asymptotic behavior of a class of double integrals depending on the parameter. (Russian) *Azerbaijan. Gos. Univ. Uchen. Zap.* 1978, no. 3, 74-77. (E. Riekstins) **81c:41048** 41A60
- Asymptotic behavior of a class of double integrals depending on two parameters. (Russian) *Dokl. Akad. Nauk SSSR* 247 (1979), no. 5, 1064-1068. (L. Berg) **81c:41074** 41A60 (32A30, 44A10)
- Sedykhov, A. E. See Sedykhov, A. E.
- Sedykhov, A. S. Ibn Sina and the development of the natural sciences. (Russian. English summary) *Voprosy Filos.* 1980, no. 7, 54-61, 187. (Author's summary) **81j:01008** 01A30
- Sedykhov, M. K. (with Muhidinov, N. M.; Hužanov, U.) Formalization on a computer of the theory of stability of difference schemes. (Russian) *Voprosy Vychisl. i Prikl. Mat. (Tashkent)* No. 57 (1979), 52-62, 168-169. (Murlu M. Gupta) **81f:65075** 65N15 (65J10, 65V05)
- Sedykhov, F. Z. Extremals in variational problems. (Russian) *Lato. Mat. Ezegodnik* No. 23 (1979), 124-130, 273. (François Berquier) **81c:49001** 49A21
- Sedykhov, R. S. A discrete singular operator and its properties. (Russian. Azerbaijani and English summaries) *Izv. Akad. Nauk Azerbaidzhan. SSR Ser. Fiz.-Tehn. Mat. Nauk* 1978, no. 3, 31-38. (From the text) **81f:65093** 65R20 (47B99)
- Solution of a class of nonlinear singular integral equations by the quadrature method. (Russian. Azerbaijani and English summaries) *Izv. Akad. Nauk Azerbaidzhan. SSR Ser. Fiz.-Tehn. Mat. Nauk* 1978, no. 6, 30-36. (Author's summary) **81d:65074** 65R20 (65D32)
- The criterion of coverability in domains of normed spaces. (Russian) *Dokl. Akad. Nauk SSSR* 253 (1980), no. 6, 1318-1322. (J. Daneš) **81k:55027** 55R05 (46B99, 57Q99)
- Seki, Masami (with Araki, Mitsuhiro) A new estimate of the stability regions of large-scale systems. *Internat. J. Control* 32 (1980), no. 2, 257-269. (Authors' summary) **81h:93068** 93D05 (93A15)
- Seki, Sadahiro On convolution squares of singular measures. *Illinois J. Math.* 24 (1980), no. 2, 225-232. (Gunter Ritter) **81j:42005** 42A16 (28A12, 43A10)
- Bohr compactification and continuous measures. *Proc. Amer. Math. Soc.* 80 (1980), no. 2, 244-246. (Colin C. Graham) **81i:43008** 43A25 (43A46)
- Saeks, Richard (with Sen, Neeraj) Fault diagnosis for linear systems via multifrequency measurements. Special issue on automatic analog fault diagnosis. *IEEE Trans. Circuits and Systems* 26 (1979), no. 7, 457-465. (Authors' summary) **81a:94051** 94C05
- (with Olivier, Philip D.) Nonlinear state decomposition. *IEEE Trans. Circuits and Systems* 27 (1980), no. 11, 1113-1121. (Authors' summary) **81j:93034** 93C25 (93B30)
- Saenz, Eduardo (with Tuma, Elias; Szanto, Ivan) On the instability of a nonlinear system. (Spanish. English summary) *Scientia (Valparaiso)* No. 152 (1979), 33-37. (Z. Vorel) **81j:34094** 34D20
- Safavi-Naili, R. (with Blake, Ian F.) Generalized t -designs and orthogonal arrays. *Ars Combin.* 7 (1979), 135-151. (Chester J. Salwach) **81m:05029** 05B05 (05B15, 94B05)
- (with Blake, Ian F.) Generalized t -designs and weighted majority decoding. *Inform. and Control* 42 (1979), no. 3, 261-282. (V. A. Zinov'ev) **81e:94023** 94B35
- Saff, E. B. (with Varga, Richard S.) Uniform approximation by incomplete polynomials. *Internat. J. Math. Math. Sci.* 1 (1978), no. 4, 407-420. (John A. Roulier) **81a:41016** 41A10 (41A30)
- (with Lanchance, M.; Varga, Richard S.) Bounds for incomplete polynomials vanishing at both endpoints of an interval. *Constructive approaches to mathematical models (Proc. Conf. in honor of R. J. Duffin, Pittsburgh, Pa., 1978)*, pp. 421-437. Academic Press, New York, 1979. (J. Prasad) **81f:41006** 41A10
- (with Anderson, Ned; Varga, Richard S.) On the Eneström-Kakeya theorem and its sharpness. *Linear Algebra Appl.* 28 (1979), 5-16. (Joaquín Bustoz) **81e:26011** 26C10 (15A48)
- (with Varga, Richard S.) The sharpness of Lorentz's theorem on incomplete polynomials. *Trans. Amer. Math. Soc.* 249 (1979), no. 1, 163-186. (Toshihiko Nishishiraho) **81b:41048** 41A25 (33A65, 41A60)
- Saffer, Sheila (with Christensen, A. H. J.; Jacobson, D. H.) Modelling the human red blood cell shape. *Mathematical modelling in biology and ecology (Proc. Sympos., Pretoria, 1979)*, pp. 149-174. *Lecture Notes in Biomath.* 33, Springer, Berlin, 1980. (See **81i:92001**) 92A07
- Saffman, Philip G. (with Yuen, Henry C.) A note on numerical computations of large amplitude standing waves. *J. Fluid Mech.* 95 (1979), no. 4, 707-715. (Authors' summary) **81a:76010** 76B15 (65R20)
- (with Crawford, Donald R.; Yuen, Henry C.) Evolution of a random inhomogeneous field of nonlinear deep-water gravity waves. *Wave Motion* 2 (1980), no. 1, 1-16. (Authors' summary) **81b:76009** 76B15
- Safford, F. B. (with Masri, S. F.; Bekey, G. A.) A global optimization algorithm using adaptive random search. *Appl. Math. Comput.* 7 (1980), no. 4, 353-375. (Authors' summary) **81k:90087** 90C30
- Safil, M. Nasser Generalizations of Severi's theorem. (Russian) *Mat. Zametki* 26 (1979), no. 5, 687-690, 813. (R. R. Simha) **81d:32023** 32D15 (32D10)
- Saffo, John L. (with Carlson, George T., Jr.) Canonical forms for axial symmetric space-times. *Ann. Physics* 128 (1980), no. 1, 131-153. (Basilis C. Xanthopoulos) **81k:83030** 83C99 (53B50)
- (with Carlson, George T., Jr.) Matching of the plane symmetric static and homogeneous vacuum solutions of the Einstein field equations. *J. Math. Phys.* 21 (1980), no. 6, 1442-1448. (A. H. Taub) **81g:83005** 83C05 (53B50)
- Safonov, Michael G. (with Athans, Michael) On stability theory. *Proceedings of the 1978 IEEE Conference on Decision and Control including the 17th Symposium on Adaptive Processes (San Diego, Calif., 1979)*, pp. 301-314. *IEEE, New York, 1979.* (Peter A. Cook) **81c:93063** 93D15 (93D25)
- Safonova, M. A. Classes and bases of quasiequivalence relatives. (Russian) *Mathematical models of behavior*, No. 3 (Russian), pp. 28-43, 86. *Saratov. Gos. Univ., Saratov*, 1978. (V. Topenčarov) **81c:08009** 08A99 (90A06)
- Safranov, V. D. Virial theorem for a system of charged particles. *Uspehi Fiz. Nauk* 128 (1979), no. 1, 161-164 (Russian); translated as *Soviet Phys. Uspekhi* 22 (1979), no. 5, 368-370. (Author's summary) **81d:78013** 78A35
- Safranovskii, I. I. See Fedorov, E. S., **81g:01022**
- Safranovskii, Ja. M. (with Mel'nikov, O. I.) Parametric problem in scheduling theory. *Kibernetika (Kiev)* 1979, no. 3, 53-57, 122 (Russian); translated as *Cybernetics* 15 (1979), no. 3, 352-357 (1980). (From the text) **81b:90091** 90B35
- Safro, V. M. Nonstrict minimum in a minimax problem. (Russian) *Moskov. Inst. Ind. Železnodorozh. Transporta Trudy* No. 640 *Prikl. Mat. i Zadachi Železnodorozh. Transporta* (1979), 101-106, 156. (Author's summary) **81g:60024** 49B40
- Sagan, Bruce (with Rota, Gian-Carlo) Congruences derived from group action. *European J. Combin.* 1 (1980), no. 1, 67-76. (Hugo S. Sun) **81g:05018** 05A15 (20B99)
- Sagara, Setsoo (with Tanaka, Shogo) Optimization of an adaptive observation system in a linear dynamical system. *Internat. J. Control* 30 (1979), no. 4, 695-712. (O. A. Sebakhly) **81c:93051** 93C40 (93E10)
- Sagdeev, R. Z. (with Lominadze, D. G.; Mihalovskii, A. B.) Langmuir turbulence of a relativistic plasma in a strong magnetic field. *Zh. Èksp. Teoret. Fiz.* 77 (1979), no. 5, 1951-1961 (Russian); translated as *Soviet Phys. JETP* 50 (1979), no. 5, 927-932. (Authors' summary) **81b:82009** 82A45 (76X05, 76Y05, 85A30)
- Sager, Herbert The nature of reduction in Turing machines and its relation to reduction in automata. *Math. Colloq. Univ. Cape Town* 12 (1978/79), 43-54 (1980). (Horst Reichel) **81g:03044** 03D10 (68D40)
- Sagher, Yoram (with Coifman, Ronald R.; Cwikel, M.; Rochberg, R.; Weiss, Guido) Complex interpolation for families of Banach spaces. *Harmonic analysis in Euclidean spaces (Proc. Sympos. Pure Math., Williams Coll., Williamsstown, Mass., 1978)*, Part 2, pp. 269-282. *Proc. Sympos. Pure Math., XXXV, Part 2, Amer. Math. Soc., Providence, R.I., 1979.* (Bernard Beauzamy) **81a:46082** 46M35
- (with Coifman, Ronald R.; Rochberg, R.; Weiss, Guido; Cwikel, M.) The complex method for interpolation of operators acting on families of Banach spaces. *Euclidean harmonic analysis (Proc. Sem., Univ. Maryland, College Park, Md., 1979)*, pp. 123-153. *Lecture Notes in Math.*, 779, Springer, Berlin, 1980. (M. Z. Borkaloiko) **81k:46075** 46M35 (46E30)
- (with Calderón, Calixto P.) On the Fourier series of certain smooth functions. *Illinois J. Math.* 24 (1980), no. 3, 437-439. (John A. Gosselin) **81j:42010** 42A20
- Saginavili, A. I. Singular integral operators with coefficients having semi-almost-periodic type discontinuities. (Russian. Georgian and English summaries) *Sovetsk. Akad. Nauk Gruzin. SSR* 94 (1979), no. 2, 289-291. (Johannes Elschner) **81d:45012a** 45E05 (47G05)
- Singular integral operators with coefficients having semi-almost-periodic discontinuities. (Russian. Georgian and English summaries) *Sovetsk. Akad. Nauk Gruzin. SSR* 95 (1979), no. 3, 541-543. (Johannes Elschner) **81d:45012b** 45E05 (47G05)
- Saginjan, L. A. Summability to infinity of trigonometric series and of series in the Walsh system. (Russian) *Mat. Sb. (N.S.)* 106(150) (1979), no. 3, 457-470, 479. (T. I. Ahobadze) **81b:42038** 42A24
- Sagh, Yehoshua (with Beeri, Catriel; Mendelson, Alberto O.; Ullman, Jeffrey D.) Equivalence of relational database schemes. *Conference Record of the Eleventh Annual ACM Symposium on Theory of Computing (Atlanta, Ga., 1979)*, pp. 319-329. *ACM, New York, 1979.* (Dusan Ondruš) **81f:68026** 68B15
- An algorithm for inferring multivalued dependencies with an application to propositional logic. *J. Assoc. Comput. Mach.* 27 (1980), no. 2, 250-262. (Giorgio Ausiello) **81j:68035** 68B15
- Sagraloff, Boris (with Mennicken, R.) On Banach's closed range theorem. *Arch. Math. (Basel)* 33 (1979/80), no. 5, 461-465. (Robert F. Wheeler) **81c:47005** 47A05 (46A30)
- Normale Auflösbarkeit bei linearen partiellen Differentialoperatoren in lokalen gewichteten Sobolevräumen. *J. Reine Angew. Math.* 310 (1979), 131-150. (Robert D. Brown) **81b:47037** 47F05 (35A05)
- (with Mennicken, R.) Characterizations of nearly-openness. *J. Reine Angew. Math.* 313 (1980), 105-115. (N. Adasch) **81c:46004** 46A30 (47A05)
- Sagretti, C. (with Turchetti, Giorgio) Stieltjes functions and approximate solutions of an inverse problem. *Applied inverse problems*, pp. 122-134. *Lecture Notes in Phys.*, 85, Springer, Berlin, 1978. (Pierre C. Sabatier) **81j:34041** 34B25 (86A20)
- Saguz, C. (with Larrecq, M.) Contrôle de systèmes à frontière libre. Application à la coulée continue d'acier. *Computing methods in applied sciences and engineering (Proc.*

- Fourth Internat. Sympos., Versailles, 1979, pp. 385-404, North-Holland, Amsterdam, 1980. (Michel Chipot) **81i:80007** 80A20 (35R35, 65J15)
- Sah, C. H. ★ Hilbert's third problem: scissors congruence. Research Notes in Mathematics, 33. Pitman (Advanced Publishing Program), San Francisco, Calif.-London, 1979. vi + 188 pp. ISBN 0-273-08426-7 (E. Vinberg) **81g:51011** 51M20 (20H15, 51M25, 57S30)
- Saha, Dines Chandra (with Rao, Ganti Prasada) Identification of lumped linear systems in the presence of unknown initial conditions via Poisson moment functionals. *Internat. J. Control* **31** (1980), no. 4, 637-644. (Authors' summary) **81e:93028** 93B30 (93C05)
- (with Rao, Ganti Prasada) Identification of lumped linear time-varying parameter systems via Poisson moment functionals. *Internat. J. Control* **32** (1980), no. 4, 709-721. (Authors' summary) **81m:93024** 93B30 (94A40)
- Saha, G. M. (with Sinha, Kishore) Construction of some series of partially balanced weighing designs. *Utilitas Math.* **14** (1978), 279-286. (Jane W. Di Paola) **81a:05026** 05B30
- A construction of balanced arrays and some BIB designs therefrom. *Proceedings of the 3rd National Symposium on Probability and Statistics (Inst. Mat. Estatist. Univ. São Paulo, São Paulo, 1978) (Portuguese)*, pp. 174-178, Unio. São Paulo, São Paulo, 1979. (Sanpei Kageyama) **81i:05030** 05B05 (05B15, 62K10)
- (with Sinha, Kishore) On the construction of balanced and partially balanced ternary design. *Biometrical J.* **21** (1979), no. 8, 767-772. (Damaraju Raghavarao) **81g:62132** 62K10 (05B05)
- Saha, Tripti On a tri-criterion transportation problem. *J. Math. Phys. Sci.* **13** (1979), no. 5, 507-522. (F. Benito) **81i:90185** 90C31 (90C08)
- Sahaev, S. The solvability of a mixed problem for an equation of elliptic type. (Russian. Kazakh summary) *Izv. Akad. Nauk Kazah. SSR Ser. Fiz.-Mat.* **1980**, no. 1, 79-83, 94. (I. Aganovic) **81i:35054** 35J25 (35R35)
- Sahai, Ajit (with Ray, S. K.; Sahai, Ashok) A note on ratio and product type estimators. *Ann. Inst. Statist. Math.* **31** (1979), no. 1, 141-144. (Mankal N. Murthy) **81f:62019** 62D05
- Sahai, Ashok (with Ray, S. K.) On variance of the MVU inverse binomial estimator. *Calcutta Statist. Assoc. Bull.* **27** (1978), no. 105-108, 155-157 (1979). (Authors' summary) **81h:62032** 62F10
- (with Ray, S. K.; Sahai, Ajit) A note on ratio and product type estimators. *Ann. Inst. Statist. Math.* **31** (1979), no. 1, 141-144. (Mankal N. Murthy) **81f:62019** 62D05
- (with Burman, J. M.) Bounds for the variance of an inverse binomial estimator. *Statist. Neerlandica* **33** (1979), no. 4, 213-215. (E. H. Lehman) **81c:62029** 62F10
- (with Ray, S. K.) Efficient families of ratio and product-type estimators. *Biometrika* **67** (1980), no. 1, 211-215. (Mankal N. Murthy) **81g:62018** 62D05
- Sahal, Hardeo A bibliography on variance components. *Internat. Statist. Rev.* **47** (1979), no. 2, 177-222. (Friedrich Pukelsheim) **81j:62139** 62J10
- Sahal, Devendra A theory of evolution of technology. *Internat. J. Systems Sci.* **10** (1979), no. 3, 259-274. (Authors' summary) **81i:93004** 93A10 (92A90)
- Saharov, I. E. (with Golant, V. E.; Zilinski, A. P.) ★ Fundamentals of plasma physics. Translated from the Russian by K. Z. Vedeneyeva [K. Z. Vedeneyeva] and V. F. Agranat. Translation edited by Sanborn C. Brown. Wiley Series in Plasma Physics. John Wiley & Sons, New York-Chichester-Brisbane, 1980. xvi + 405 pp. ISBN 0-471-04593-4 (Editors) **81c:82018** 82A45 (76X05)
- Sahasrabudhe, G. G. (with Sarma, C. R.) Permutational symmetry of many particle states. *J. Math. Phys.* **21** (1980), no. 4, 638-649. (William G. Hartner) **81j:81025** 81C40 (81G30)
- (with Dinesha, K. V.; Sarma, C. R.) Clebsch-Gordan coefficients for the permutation group. *J. Phys. A* **14** (1981), no. 1, 85-96. (Authors' summary) **81m:20024** 20C35 (81C40)
- Saharjan, K. V. Structural solutions in problems of scheduling theory. (Russian) Numerical methods and questions in the organization of calculations. *Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* **90** (1978), 239-248, 270. (N. B. Lebedinskaja) **81h:90093** 90B35 (68C15)
- Sahelhan, F. (with Simoncini, Luca; Friedman, A. D.) Concurrent computation and diagnosis in multiprocessor systems. *FTCS-9 (Ninth Annual Internat. Sympos. Fault-Tolerant Comput., Madison, Wis., 1979)*, pp. 149-156, IEEE, New York, 1979. (See **81m:94001**) **68B20**
- (with Simoncini, Luca; Friedman, A. D.) Design of self-diagnosable multiprocessor systems with concurrent computation and diagnosis. *IEEE Trans. Comput.* **29** (1980), no. 6, 540-546. (Authors' summary) **81e:68025** 68B20
- Sahel-Djalromi, N. CPOs of measures for nondeterminism. *Theoret. Comput. Sci.* **12** (1980), no. 1, 19-37. (Authors' summary) **81m:68023** 68B10
- Sahgall, V. V. (with Burdzelko, B. P.) Stationary and periodic modes in cyclic random walk models of the simplest digital phase-lock loop system. *Radiotekhn. i Elektron.* **24** (1979), no. 9, 1796-1805 (Russian); translated as *Radio Engng. Electron. Phys.* **24** (1979), no. 9, 54-62 (1980). (Authors' summary) **81k:93059** 93E03
- Sahmurov, V. B. The compactness of an imbedding into nonisotropic spaces of vector-valued functions and applications. (Russian) *Dokl. Akad. Nauk SSSR* **241** (1978), no. 6, 1285-1287. (H. G. Bzhitlov) **81f:46049** 46E35 (35J65)
- Sahney, B. N. (with Holland, Anthony S. B.) On degree of approximation by Euler (E, q)-means. *Studia Sci. Math. Hungar.* **11** (1976), no. 3-4, 431-435 (1978). (Jean Trzimbaliaro) **81h:42004** 42A10
- (with Holland, Anthony S. B.; Trzimbaliaro, Jean) A criterion for Taylor summability of Fourier series. *Canad. Math. Bull.* **22** (1979), no. 3, 345-350. (P. D. Kathal) **81h:42034** 42A24
- (with Kuttner, B.) Summability of interpolating polynomials. *J. London Math. Soc.* (2) **21** (1980), no. 1, 144-148. (A. K. Varma) **81j:42008** 42A15
- Sahni, Paramdeep S. (with Mazenko, Gene F.) Statistical-mechanical treatment of kinks in a one-dimensional model for dispersive phase transitions. *Phys. Rev. B* (3) **18** (1978), no. 11, 6139-6159. (Authors' summary) **81i:82024** 82A25 (47A55, 81E99, 82A65)
- (with José, Jorge V.) Thermodynamic and static properties of the one-dimensional planar model with symmetry-breaking fields. *Phys. Rev. B* (3) **21** (1980), no. 11, 5381-5399. (Authors' summary) **81d:81277** 81Hxx (81D20)
- Sahni, Sartaj (with Nassimi, David) An optimal routing algorithm for mesh-connected parallel computers. *J. Assoc. Comput. Mach.* **27** (1980), no. 1, 6-29. (Authors' summary) **81d:68008** 68A05 (68B15)
- (with Cho, Yookun) Scheduling independent tasks with due times on a uniform processor system. *J. Assoc. Comput. Mach.* **27** (1980), no. 3, 550-563. (Authors' summary) **81f:68049** 68C15 (68C25)
- (with Cho, Yookun) Bounds for list schedules on uniform processors. *SIAM J. Comput.* **9** (1980), no. 1, 91-103. (Authors' summary) **81a:68041** 68C15
- (with Hunt, H. B., III; Constable, Robert L.) On the computational complexity of program scheme equivalence. *SIAM J. Comput.* **9** (1980), no. 2, 396-416. (Steven S. Muchnick) **81j:68051** 68C25 (03D15, 68B10)
- Sahnov, I. F. (with Komolov, S. V.; Makeev, S. P.; Serov, G. P.) Optimal control of a finite automaton with fuzzy constraints and a fuzzy target. *Kibernetika (Kiev)* **1979**, no. 6, 30-34 (Russian); translated as *Cybernetics* **15** (1979), no. 6, 805-810 (1980). (Authors' introduction) **81j:90090** 90C15 (90C40, 93A15)
- Sahnov, L. A. Factorization of an operator transfer function. (Russian) *Spectral theory of operators (Proc. Second All-Union Summer Math. School, Baku, 1975) (Russian)*, pp. 166-175, "Elm", Baku, 1979. (Editors) **81h:93025** 93C15 (47A68)
- Factorization of operators in $L^2(a, b)$. (Russian) *Funktsional. Anal. i Prilozhen.* **13** (1979), no. 3, 40-45. (Jürgen Leiterer) **81a:47019** 47A68
- Systems of equations with difference kernels. (Russian) *Ukrain. Mat. Z.* **32** (1980), no. 1, 61-68, 142. (D. Przeworska-Rolewicz) **81a:45008** 45F15 (47G05)
- Equations with a difference kernel on a finite interval. (Russian) *Uspehi Mat. Nauk* **35** (1980), no. 4(214), 69-129, 248. (A. G. Ramm) **81h:45011** 45E10 (85A25)
- Sahoo, B. (with Parida, J.) On the complementarity problem over polyhedral cone. *Indian J. Pure Appl. Math.* **11** (1980), no. 7, 838-844. (Edward J. Haug, Jr.) **81i:90190** 90C33 (52A40)
- Sahov, E. M. Intense point source explosion in rarefied gas. (Russian) *Numerical methods in the dynamics of rarefied gases*, No. 4 (Russian), pp. 24-38, 133, Akad. Nauk SSSR, Vyčisl. Centr, Moscow, 1979. (V. Protopenescu) **81h:76028** 76P05 (65L05)
- (with Rykov, V. A.; Čeremisin, F. G.) Numerical investigations in rarefied gas dynamics. (Russian) *Z. Vyčisl. Mat. i Mat. Fiz.* **20** (1980), no. 5, 1266-1283, 1359. (Authors' summary) **81i:76054** 76P05 (76-04, 76N99)
- Saharlin, B. I. (with Gribov, A. F.; Križenko, A. P.) Dynamic behavior of third-order piecewise linear system. *Automat. i Telemekh.* **1980**, no. 2, 21-30 (Russian. English summary); translated as *Automat. Remote Control* **41** (1980), no. 2, part 1, 153-160. (Authors' summary) **81h:93035** 93C15
- (with Mihov, V. M.) Dynamics of a synchronization system with discontinuous characteristics. (Russian. English summary) With a loose English translation. *Problems Control Inform. Theory/Problemy Upravlen. Teor. Inform.* **9** (1980), no. 6, 429-439. (Authors' summary) **81m:93043** 93C15 (58F13)
- Saha, R. P. Perfect Dedekind's number. *J. Maulana Azad College Tech.* **11** (1978), 53-56. (J. L. Brenner) **81c:10007** 10A20
- A note on the Dedekind's function $g(x) = \prod_{n=1}^{\infty} (1+x^n)$. *J. Maulana Azad College Tech.* **11** (1978), 65-68. (J. L. Brenner) **81c:10008** 10A20
- Sahardud, V. I. (with Zimin, V. D.) Method of calculating stresses by the results through translucence of three-dimensional birefractive models. (Russian) *Problems in the theory of elasticity and viscoelasticity (Russian)*, pp. 19-33, 121, Akad. Nauk SSSR, Ural. Nauch. Centr, Sverdlovsk, 1978. (M. Mišicu) **81g:78004** 78A05 (73C05)
- (with Kartašev, E. M.; Nečae, V. M.) A class of dynamical problems of thermoelasticity in a region with moving boundaries. (Russian) *Problems in the theory of elasticity and viscoelasticity (Russian)*, pp. 97-103, Akad. Nauk SSSR, Ural. Nauch. Centr, Sverdlovsk, 1978. (Szczepan Borkowski) **81m:73061** 73U05 (35K05)
- Saherdjan, A. Ju. Decrease of bounded functions that are analytic in the disc. (Russian. Armenian and English summaries) *Izv. Akad. Nauk Armjan. SSR Ser. Mat.* **14** (1979), no. 3, 157-167, 234. (W. H. J. Fuchs) **81i:30055** 30D35
- Sahel, E. A. (with Chow, P. L.) Analysis of a stochastic Reynolds equation and related problems. *Constructive approaches to mathematical models (Proc. Conf. in honor of R. J. Duffin, Pittsburgh, Pa., 1978)*, pp. 321-326, Academic Press, New York, 1979. (R. K. Rathy) **81h:76020** 76D99 (60H10)
- Saher, A. I. (with Malahov, A. N.) Representation of a wave reflected from a randomly inhomogeneous layer in the form of a series satisfying the causality condition. (Russian. English summary) *Izv. Vysš. Učebn. Zaved. Radiofizika* **22** (1979), no. 11, 1324-1333. (Authors' summary) **81a:78015** 78A45
- Consideration of some corrections to parabolic approximation of quasi-optics in a statistical description of waves propagating in randomly inhomogeneous media. (Russian) *Izv. Vysš. Učebn. Zaved. Radiofizika* **22** (1979), no. 11, 1405-1408. (K. Wódkiewicz) **81d:78017** 78A40 (35J05, 35R60)
- (with Medvedev, S. Ju.) An exact derivation of the diffusion coefficient of phase of a synchronized oscillator. *Radiotekhn. i Elektron.* **24** (1979), no. 10, 2058-2061 (Russian); translated as *Radio Engng. Electron. Phys.* **24** (1979), no. 10, 79-82 (1980). (Authors' summary) **81g:78041** 78A55
- Saidaliev, Z. M. A topology in Boolean algebras. (Russian) *Voprasy Vyčisl. i Prikl. Mat. (Tashkent)* No. 58 (1979), 3-5, 119. (Aleksander Błaszczyk) **81k:54070** 54H12
- Saidenko, A. V. Mappings that preserve volume. (Russian) *Sibirsk. Mat. Z.* **21** (1980), no. 2, 209-214, 240. (K. Radziszewski) **81g:52005** 52A20 (26B15)
- Some characteristic properties of the ellipsoid. (Russian) *Sibirsk. Mat. Z.* **21** (1980), no. 3, 232-234, 240. (H. W. Guggenheimer) **81k:53006** 53A07 (52A20)
- Saidukov, G. M. (with Saidukov, K. M.) Numerical solution of the interior Neumann problem. (Russian) *Mathematical analysis (Russian)*, pp. 108-111, Kazan. Gos. Univ., Kazan, 1978. (Raico Lazarov) **81h:65122** 65N35
- Saidukov, K. M. (with Saidukov, G. M.) Numerical solution of the interior Neumann problem. (Russian) *Mathematical analysis (Russian)*, pp. 108-111, Kazan. Gos. Univ., Kazan, 1978. (Raico Lazarov) **81h:65122** 65N35
- Saidurov, V. V. (with Marčuk, G. I.) ★ Повышение точности решений разностных схем. (Russian) [Increasing the accuracy of solutions of difference schemes] "Nauka", Moscow, 1979. 320 pp. (C. Ilioi) **81m:65004** 65-02
- el-Saied, M. A. See El-Saied, M. A.
- Salfin, H. (with Tweddle, I.) From B-completeness to countable dimensional subspaces via the closed graph theorem. *Proc. Roy. Soc. Edinburgh Sect. A* **96** (1980), no. 1-2, 107-114. (T. Husain) **81k:46003** 46A15 (46A30)
- Saigal, Ramesh (with Kojima, Masakazu) A study of PC^1 homeomorphisms on subdivided

- polyhedrons. *SIAM J. Math. Anal.* 10 (1979), no. 6, 1299–1312. (Ethan D. Bolker) **81e:65022** 65H10 (57Q35, 90C30)
- (with Saari, Donald G.) Some generic properties of paths generated by fixed point algorithms. *Analysis and computation of fixed points (Proc. Sympos., Math. Res. Center, Univ. Wisconsin, Madison, Wis., 1979), pp. 57–72, Publ. Math. Res. Center Univ. Wisconsin, 43, Academic Press, New York, 1980. (T. Y. Li)* **81m:65078** 65H10 (58C15, 90C30)
- (with Kojima, Masakazu) A property of matrices with positive determinants. *Linear Algebra Appl.* 30 (1980), 1–8. (Marvin Marcus) **81i:15016** 15A30 (52A05)
- Saigardarov, Ju. Z. Asymptotic behavior of the solution of a boundary value problem for a fourth-order parabolic equation. (Russian) *Differentsial'nye Uravneniya* 14 (1978), no. 10, 1851–1862, 1918. (B. P. Panejah) **81e:35020** 35B40 (35K35)
- Saïet, L. E. Equations for determining the moments of solutions of linear stochastic differential equations with aftereffect. (Russian) *Theory of random processes, No. 6 (Russian), pp. 120–123, 136, "Naukova Dumka", Kiev, 1978. (G. N. Mil'shtein)* **81g:60064** 60H10
- (with Kolmanovskii, V. B.) Approximate synthesis of quadratic control problems. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* 1980, no. 4, 15–18, 98. (Authors' summary) **81e:49032** 49D40
- Salkin, S. S. Transient cavitation flow around a contour in a canal. (Russian) *Trudy Sem. Krasn. Zashch. No. 15* (1978), 123–131, 218. (Author's summary) **81h:76006** 76B10
- Salmou, B. See Simon, B.
- Sain, B. M. See Schein, Boris M.
- Sala, I. (with Andr  ka, Hajnal; N  meti, Istv  n) Completeness problems in verification of programs and program schemes. *Mathematical foundations of computer science, 1979 (Proc. Eighth Sympos., Olomouc, 1979), pp. 208–218, Lecture Notes in Comput. Sci., 74, Springer, Berlin, 1979. (Authors' summary)* **81e:68011** 68B10
- There are general rules for specifying semantics: observations of abstract model theory. *CL & CL—Comput. Linguist. Comput. Lang.* 13 (1979), 195–250. (H. Andr  ka) **81d:03040** 03C95 (03B45, 03C85, 68B10, 68F20)
- Sala, M. K. (with Leake, R. Jeffrey; Peczkowski, J. L.) Step trackable linear multivariable plants. *Internat. J. Control* 30 (1979), no. 6, 1013–1022. (N. Harris McClamroch) **81e:93049** 93C35
- Sala-Aubin, Y. (with Patera, J.; Zassenhaus, Hans) Finite subgroups of the generalized Lorentz groups $O(p, q)$. *J. Math. Phys.* 21 (1980), no. 2, 234–239. (Nigel B. Backhouse) **81e:22023** 22E43 (20C35, 81C40)
- Sanguis-Sainte-Beuve, Marie-France. See Noug  s-Sainte-Beuve, Marie-France
- Saint-Pierre, Jean. Points expos  s d'une multiapplication    valeurs convexes de \mathbb{R}^n . (English summary) *C. R. Acad. Sci. Paris S  r. A-B* 288 (1979), no. 2, A121–A123. (Author's summary) **81j:90099** 90C25 (46A55, 90C48)
- Saint-Pierre, Patrick (with Laffont, Jean-Jacques) Planning with externalities. *Internat. Econom. Rev.* 20 (1979), no. 3, 617–634. (Rubin Saposnik) **81e:90004** 90A05
- Saint-Raymond, Jean (with Godefroy, Gilles) Sous-espaces de dimension 3 des espaces $\mathcal{C}(K)$. (English summary) *Bull. Sci. Math. (2)* 103 (1979), no. 3, 259–262. (H. E. Lacey) **81f:46037** 46E25
- Saito, Hiroshi On lifting of automorphic forms. *S  minaire Delange-Pisot-Poitou, 18e ann  e: 1976/77, Th  orie des nombres, Fasc. 1, Exp. No. 13, 6 pp., Secr  tariat Math., Paris, 1977. (Stephen Gelbart)* **81f:10043** 10D40 (10D15)
- Abelian varieties attached to cycles of intermediate dimension. *Nagoya Math. J.* 75 (1979), 95–119. (Allen B. Altman) **81a:14021** 14K30
- (with Yamauchi, Masatoshi) Trace formula of certain Hecke operators for $\Gamma_0(q)$. *Nagoya Math. J.* 76 (1979), 1–33. (A. N. Andrianov) **81a:10036** 10D15 (10D40)
- Sait  , Kazuyuki AW^* -algebras with monotone convergence property and type III, non- W^* -factors. C^* -algebras and applications to physics (Proc. Second Japan-USA Sem., Los Angeles, Calif., 1977), pp. 131–134, *Lecture Notes in Math.*, 650, Springer, Berlin, 1978. (J. D. Maitland Wright) **81e:46051** 46L35
- Sait  , K  ichi-Suke A note on invariant subspaces for finite maximal subdiagonal algebras. *Proc. Amer. Math. Soc.* 77 (1979), no. 3, 348–352. (Jean-Marie Schwartz) **81h:46078** 46L10 (46L50)
- Sait  , Kiyoshi On lifting of automorphic forms. (Japanese) *S  gakushi Kenky   No. 77* (1978), 39–42. (K. Inoue) **81k:01011** 01A27
- Saito, Kyoji (with Yano, Tamaki; Sekiguchi, Jiro) On a certain generator system of the ring of invariants of a finite reflection group. *Comm. Algebra* 8 (1980), no. 4, 373–408. (E. Vinberg) **81g:20095** 20H15 (15A72, 32C40, 32M10)
- Sait  , Nobuhiko (with Shibata, Akira; Mayuyama, Toshihiro; Mizutani, Masahiro) The nature of chaos in a simple dynamical system. *Z. Naturforsch. A* 34 (1979), no. 11, 1283–1289. (P. J. Holmes) **81a:58037** 58F13 (58F11)
- (with Shibata, Akira) Time delays and chaos in two competing species. *Math. Biosci.* 51 (1980), no. 3–4, 199–211. (J. M. Cushing) **81m:92054** 92A17 (58F13)
- Saito, Nobuyuki (with Takamizawa, K.; Nishizeki, Takao) An algorithm for finding a short closed spanning walk in a graph. *Networks* 10 (1980), no. 3, 249–263. (Claude Benzenen) **81k:05074** 05C45 (68C25)
- Saito, Sadao (with Hayasaka, Takao) Langford sequences: a progress report. *Math. Gaz.* 63 (1979), no. 426, 261–262. (D. P. Roselle) **81e:05007** 05A05
- Harmonic analysis of the Langford sequence. *Res. Rep. Miyagi Tech. College* No. 16 (1980), 99–103. (D. P. Roselle) **81m:05005** 05A05 (05B30)
- Saito, T. (with Shimogoto, T.) Linear-response theory for an impinged charged particle in turbulent plasma. (Italian and Russian summaries) *Nuovo Cimento B* (11) 56 (1980), no. 1, 72–86. (F. C. Auluck) **81f:82027** 82A45 (76X05)
- Saito, Tatsuhiko Set-systems in a semigroup. I. *Proceedings of the 3rd Symposium on Semigroups (Inter-Univ. Sem. House of Kanai, Kobe, 1979), pp. 39–43, Osaka Univ., Osaka, 1980. (V  clav Koubek)* **81f:20096** 20M30
- Saito, Tetsuo H  lder estimates on higher derivatives of the solution for $\bar{\partial}$ -equation with C^k -data in strongly pseudoconvex domain. *J. Math. Soc. Japan* 32 (1980), no. 2, 213–231. (Makhlouf Derridj) **81g:32014** 32F15 (32A25, 35N05)
- Sait  , T  ru Fundamentally linearly ordered semigroups. *Proceedings of the 2nd Symposium on Semigroups (Tokyo Gakugei Univ., Tokyo, 1978), pp. 45–51, Tokyo Gakugei Univ., Tokyo, 1978. (T. S. Blyth)* **81e:06019** 06F05 (20M10)
- The orderability of regular semigroups. *Proceedings of the Conference on Semigroups in Honor of Alfred H. Clifford (Tulane Univ., New Orleans, La., 1978), pp. 161–163,*
- Tulane Univ., New Orleans, La., 1979. (Editors)* **81h:06009** 06F05 (20M10)
- Archimedean classes in a nonnegatively ordered semigroup. *Bull. Tokyo Gakugei Univ.* (4) 31 (1979), 19–40. (M. Satyanarayana) **81e:06026** 06F05
- Nonnegatively ordered semigroups in the strict sense and problems of Satyanarayana. I. *Proceedings of the 3rd Symposium on Semigroups (Inter-Univ. Sem. House of Kanai, Kobe, 1979), pp. 45–59, Osaka Univ., Osaka, 1980. (T. S. Blyth)* **81h:06015** 06F05 (20M10)
- Saito, Toshiya Solutions of $x'' = t^{\alpha-2}x^{1+\alpha}$ with movable singularity. *Tokyo J. Math.* 2 (1979), no. 2, 261–283. (Peter J. Bushell) **81a:34031** 34C05 (34A10)
- Sait  , Yoshimi \star Spectral representations for Schr  dinger operators with long-range potentials. *Lecture Notes in Mathematics*, 727, Springer-Verlag, Berlin-New York, 1979, 149 pp. *ISBN 3-540-09514-4* (Lawrence E. Thomas) **81a:35083** 35P25 (81C05)
- Saitoh, Saburo Approximation of the Bergman norm by the norms of the direct product of two Szeg   spaces. *Proc. Amer. Math. Soc.* 75 (1979), no. 2, 226–230. (K. T. Hahn) **81e:30017** 30C40 (30E10)
- Integral transform by the product of two Szeg   kernel functions. *J. Analyse Math.* 37 (1980), 296–306. (Jacob Burbea) **81j:30023** 30C40 (32H10)
- Some inequalities for entire functions. *Proc. Amer. Math. Soc.* 80 (1980), no. 2, 254–258. (C. N. Linden) **81i:30049** 30D20 (15A69)
- Saitta, Lorenzo (with Dezani-Ciancaglini, M.; Ronchi Della Rocca, S.) Complexity of λ -term reductions. (French summary) *RAIRO Inform. Theor.* 13 (1979), no. 3, 257–287. (Authors' summary) **81j:68016** 68B05 (03B40, 03D15, 03F05)
- (with De Mori, Renato) Automatic learning of fuzzy naming relations over finite languages. *Inform. Sci.* 21 (1980), no. 2, 93–139. (Masaharu Mizumoto) **81i:68127** 68G10 (94D05)
- Sajda, Josef On probability of first order formulas in a given model. *Kybernetika (Prague)* 15 (1979), no. 4, 261–271. (Dennis J. Packard) **81d:68082** 60A05 (03B50, 03C99)
- Sak, J. (with Vause, C.) Non-Ising-like effects in the liquid-vapor transition: singularity in the coexistence curve diameter. *Phys. Lett. A* 77 (1980), no. 2–3, 191–195. (Authors' summary) **81g:82058** 82A50 (82A25)
- (with Vause, C.) Non-Ising-like effects in the liquid-vapor transition: equations of state. *Phys. Rev. A* (3) 21 (1980), no. 6, 2099–2114. (Authors' summary) **81e:82012** 82A25
- Saka, K  ichi Corrigendum: "On a characterization of some L -subalgebras in measure algebras" [J. London Math. Soc. (2) 9 (1974/75), 261–271; MR 53 #1167]. *J. London Math. Soc. (2)* 19 (1979), no. 3, 465–466. (Colin C. Graham) **81d:43003** 43A10
- Sakaguchi, K  ichi (with Fukui, Seiichi) An extension of a theorem of S. Ruscheweyh. *Bull. Fac. Ed. Wakayama Univ. Natur. Sci.* No. 29 (1980), 1–3. (Evelyn M. Silvia) **81g:30017** 30C45
- Sakaguchi, K  ji (with K  no, Kazumasa) On the orthogonal exact designs for some polynomial responses. *Math. Rep. Kyushu Univ.* 11 (1977/78), no. 1, 71–82. (Damaraju Raghavarao) **81e:62086** 62K15
- Sakaguchi, Minoru Information value analysis for the logarithmic investor and gambler. *Math. Japon.* 24 (1979/80), no. 4, 403–418. (Author's summary) **81f:90013** 90A09 (90D30)
- Note: a time-sequential game for sums of random variables. (Japanese summary) *J. Oper. Res. Soc. Japan* 23 (1980), no. 1, 81–90. (Author's summary) **81h:90177** 90D15
- Sakaguchi, Toshio On generalized S -curvature-like tensors on some Sasakian manifolds. *Mem. Defense Acad.* 19 (1979), no. 2–4, 63–70. (P. Wintgen) **81e:53019** 53B20 (53C25)
- Sakai, Akira Uniform approximation in several complex variables. *Osaka J. Math.* 15 (1978), no. 3, 589–611. (J. P. Ferrier) **81e:32019** 32E30 (46J10)
- Sakai, Fumio Canonical models of complements of stable curves. *Proceedings of the International Symposium on Algebraic Geometry (Kyoto Univ., Kyoto, 1977), pp. 643–661, Kinokuniya Book Store, Tokyo, 1978. (M. Ishida)* **81j:14019** 14J10
- Sakai, Hideaki (with Arase, Masahiro) Recursive parameter estimation of an autoregressive process disturbed by white noise. *Internat. J. Control* 30 (1979), no. 6, 949–966. (Robert V. Foutz) **81d:62101** 62M10 (62F12)
- Sakai, Kiyoshi (with Noguchi, Akira) Dark soliton in long and short wave resonant interaction. *J. Phys. Soc. Japan* 49 (1980), no. 5, 2009–2013. (Authors' summary) **81m:35131** 35Q20 (76B25)
- Sakai, Ko (with Morisaki, Masato) A complete axiom system for rational sets with multiplicity. *Theoret. Comput. Sci.* 11 (1980), no. 1, 79–92. (A. Salomaa) **81j:68071** 68D30 (68F10)
- Sakai, K  ichi Remarks on the existence of finite invariant measures for groups of measurable transformations. *Proc. Japan Acad. Ser. A Math. Sci.* 54 (1978), no. 9, 285–287. (J. Kr  l) **81d:28020** 28D05 (28D15)
- Quasi-negative definite functions and certain classes of cyclic unitary representations of groups in Π_∞ -spaces. *Sci. Rep. Kagoshima Univ.* No. 28 (1979), 9–50. (G. L. Litvinov) **81g:22003** 22D12 (47B50)
- Sakai, Manabu Polynomial spline interpolation and two-point boundary value problems. *Rep. Fac. Sci. Kagoshima Univ.* No. 12 (1979), 1–4. (Ian Gladwell) **81e:65050** 65L10 (34B15)
- Sakai, Ry  zi Approximation problem restricted by an incidence matrix. *J. Math. Soc. Japan* 32 (1980), no. 3, 557–585. (Eli Passov) **81j:41021** 41A29 (41A25)
- Sakai, Sh  ichir   Recent developments in the theory of unbounded derivations in C^* -algebras. C^* -algebras and applications to physics (Proc. Second Japan-USA Sem., Los Angeles, Calif., 1977), pp. 85–122, *Lecture Notes in Math.*, 650, Springer, Berlin, 1978. (R. H. Herman) **81g:46079** 46L05 (82A15)
- Recent developments in the theory of unbounded derivations in C^* -algebras. *Proceedings of the International Congress of Mathematicians (Helsinki, 1978), pp. 709–714, Acad. Sci. Fennica, Helsinki, 1980. (Derek W. Robinson)* **81e:46043** 46L05
- Sakai, Takashi On the diameter of some Riemannian manifolds. *Arch. Math. (Basel)* 30 (1978), no. 4, 427–434. (Midori Goto) **81k:53040** 53C20
- Cut loci of compact symmetric spaces. *Minimal submanifolds and geodesics (Proc. Japan-United States Sem., Tokyo, 1977), pp. 193–207, North-Holland, Amsterdam, 1979. (John Bolton)* **81h:53051** 53C35 (57R70)
- Sakai, Yoshihiro A simple general equilibrium model of production: comparative statics with price uncertainty. *J. Econom. Theory* 19 (1978), no. 2, 287–306. (Author's

- summary) **81f:90031** 90A11
- Sakakura, Arthur Y.** (with Brittin, Wesley E.) Composite particles in nonrelativistic many-body theory: foundations and statistical mechanics. *Phys. Rev. A* (3) **21** (1980), no. 6, 2050–2063. (Chindhu S. Warke) **81d:81124** 81Hxx
- Sakamaki, J.** (with Pliuškevičius, R.; Pliuškevičienė, A.; Jukna, S. P.) On the logic of programs. *Kibernetika (Kiev)* **1979**, no. 2, 12–19. (Russian); translated as *Cybernetics* **15** (1979), no. 2, 167–176. (From the text) **81a:68017** 68B10
- Sakamoto, Koichi** (with Okai, Mutsuo) Product theorem of the fundamental group of a reducible curve. *J. Math. Soc. Japan* **30** (1978), no. 4, 599–602. (Richard Randell) **81h:14019** 14H30 (14H20, 57M05)
- Sakamoto, Kunio** (with Takemura, Yoshiya) On almost contact structures belonging to a CR-structure. *Kodai Math. J.* **3** (1980), no. 1, 144–161. (S. M. Webster) **81f:53014** 53B05 (32F30, 53A40)
- Sakamoto, Reiko** On a sufficient condition for well-posedness of weakly hyperbolic Cauchy problems. *Publ. Res. Inst. Math. Sci.* **15** (1979), no. 2, 469–518. (Maria Cinquini-Cibrario) **81i:35096** 35L30
- Sakamoto, Ruyji** (with Kondo, Eiji; Sunaga, Teruo) Design of single linear functional filters. *Internat. J. Control* **30** (1979), no. 4, 565–579. (Norman P. Coleman, Jr.) **81a:93098** 93E11 (93E20)
- Sakan, Ken-ichi** On stability of finitely generated Kleinian groups. *Osaka J. Math.* **17** (1980), no. 1, 165–176. (I. Kra) **81b:30086** 30F40 (30C60)
- Sakane, Yusuke** On hypersurfaces of a complex Grassmann manifold $G_{m+n,n}(C)$. *Osaka J. Math.* **16** (1979), no. 1, 71–95. (Bang-yen Chen) **81j:53056** 53C40 (53C30)
- (with Takeuchi, Masaru) Geometry of Yang-Mills fields—introduction to lectures by Prof. Bourguignon. (Japanese) *Sigaku* **32** (1980), no. 1, 44–63. (A. Morimoto) **81k:53032** 53C05 (58E20, 81E10)
- Sakarovich, Jacques** Théorème de transversale rationnelle pour les automates à pile déterministes. (English summary) *Theoretical computer science (Fourth GI Conf., Aachen, 1979)*, pp. 276–285. *Lecture Notes in Comput. Sci.*, 67, Springer, Berlin, 1979. (Author's summary) **81j:68098** 68F10
- Sakasegawa, H.** Uniform random number generators and their standard tests. (Japanese. English summary) *Proc. Inst. Statist. Math.* **27** (1980), no. 1, 107–114. (Author's summary) **81e:65005** 65C10
- Sakata, Hiroshi** (with Ukeguchi, Nobuhiro; Adachi, Takeshi) On the numerical analysis of compressible flow problems by the "modified FLIC method". Special issue: computational methods in nonlinear fluid mechanics. *Comput. & Fluids* **8** (1980), no. 2, 251–263. (Authors' summary) **81d:76066** 76H05 (65N30)
- Sakata, M.** (with Aoki, S.; Kishimoto, K.; Izumihara, Y.) Dynamic analysis of cracked linear viscoelastic solids by finite element method using singular element. (French summary) *Internat. J. Fracture* **16** (1980), no. 2, 97–109. (Authors' summary) **81b:73046** 73M05 (73K25)
- Sakawa, Masatoshi** Decomposition approaches to large-scale multiobjective reliability design. *J. Inform. Optim. Sci.* **1** (1980), no. 2, 103–120. (Author's summary) **81h:90066** 90B25 (90C31)
- (with Sasakura, Takayuki) Interactive multiobjective decision making: SPOT. (Japanese. English summary) *Systems and Control* **24** (1980), no. 10, 681–689. (Authors' summary) **81k:90004** 90A05
- Sakawa, Yoshiyuki** (with Ukai, Hiroyuki) Optimal shape of an elastic structure. *Optimal Control Appl. Methods* **1** (1980), no. 4, 373–385. (I. Tadjbakhsh) **81k:73053** 73K40 (49B10, 49D15, 49G10)
- Sakemi, Yasuhiko** A distributive law over fuzzy theory and its application. *Mem. Fac. Sci. Kyushu Univ. Ser. A* **32** (1978), no. 1, 145–151. (Author's introduction) **81c:68075** 68D99 (94D05)
- Sakamoto, N. I.** Permutability of set-theoretic operations with a countable index set. (Russian) *Topological spaces and algebraic systems. Mat. Issled.* No. 53 (1979), 195–220, 227. (B. Weglorz) **81j:04003** 04A15 (54H10)
- Sakharov, I. E.** See **Saharov, I. E.**
- Sakharov, Ju. S.** The dependence of qualitative portraits of the equation $dz/d\theta = P(\theta, z)/Q(\theta, z)$ on the choice of the separatrix. (Russian) *Differentsial'nye Uravneniya (Ryazan)* No. 13 (1979), 159–163. (K. R. Schneider) **81c:34025** 34C05
- Sakita, B.** Field theory of strings as a collective field theory of $U(N)$ gauge fields. *Phys. Rev. D* (3) **21** (1980), no. 4, 1067–1073. (Author's summary) **81d:81062** 81E99 (81C35)
- Sakvor, E.** (with Lepik, Ü.) Supplement to the dynamic problem of optimization of rigid-plastic beams in an approximate formulation. (Russian. Estonian and English summaries) *Tartu Riikl. Ül. Toimetised* No. 487 (1979), 37–39. (R. Kodnár) **81j:73059** 73K05
- Sakur, I. A.** (with Chan, S. K.) Construction of the phase of the scattering amplitude by iteration of bounds from unitarity integral. *J. Math. Phys.* **21** (1980), no. 4, 735–739. (Authors' summary) **81d:81093** 81F15
- A variational problem for the forward or backward scattering amplitude with three constraints. *J. Math. Phys.* **21** (1980), no. 8, 2227–2230. (Author's summary) **81h:81127** 81F20 (49H05)
- Variational calculation of a quantity which determines the uniqueness of the phase of the scattering amplitude. *Lett. Nuovo Cimento* (2) **28** (1980), no. 4, 118–120. (From the introduction) **81e:81115** 81F15
- Sakoda, William J.** (with Sipser, Michael) Nondeterminism and the size of two-way finite automata. *Conference Record of the Tenth Annual ACM Symposium on Theory of Computing (San Diego, Calif., 1978)*, pp. 275–286. *ACM, New York*, 1978. (Joel I. Seiferas) **81c:68048** 68D35 (68C25, 68F10)
- Sakojan, S. K.** (with Nagev, S. V.) A remark on the article: "An estimate for the probability of large deviations" [*Limit theorems and mathematical statistics* (Russian), pp. 132–140, "Fan" Uzbek. SSR, Tashkent, 1976; MR **55** #9237]. (Russian) *Random processes and mathematical statistics* (Russian), pp. 143–146, 189, "Fan", Tashkent, 1978. (Werner Wolf) **81h:60036** 60F10
- Sakr, M. F.** (with Fahmy, Moustafa M.; Hanafy, A. A. R.) On the discrete time-optimal regular control problem. *Internat. and Control* **44** (1980), no. 3, 223–235. (Authors' summary) **81g:93074** 93C55
- Saka, Michael E.** (with Proctor, Robert A.; Sturtevant, Dean G.) Product partial orders with the Sperner property. *Discrete Math.* **30** (1980), no. 2, 173–180. (Derek C. J. Burgess) **81f:06005** 06A10 (05A05)
- Dilworth numbers, incidence maps and product partial orders. *SIAM J. Algebraic Discrete Methods* **1** (1980), no. 2, 211–215. (J. R. Griggs) **81j:05025** 05A99 (06A10)
- Saks, R. S.** Noetherian boundary value problems for some classes of weakly elliptic systems of differential equations. (Russian) *Mathematical analysis and related mathematical questions* (Russian), pp. 237–253, 354, "Nauka" Sibirsk. Otdel., Novosibirsk, 1978. (Ja. A. Roitberg) **81c:35057** 35J99 (35H05)
- Weakly elliptic systems of pseudodifferential equations on a manifold without boundary. (Russian) *Partial differential equations* (Russian), pp. 103–126, 143, *Trudy Sem. S. L. Soboleva*, No. 2, 1978, *Akad. Nauk SSSR Sibirsk. Otdel., Inst. Mat., Novosibirsk*, 1978. (József Dodziuk) **81d:58051** 58G15 (35S05)
- Weakly elliptic systems of differential equations and their properties. (Russian) *Theory of cubature formulas and the application of functional analysis to problems of mathematical physics* (Proc. Sem. S. L. Sobolev, No. 1, 1979) (Russian), pp. 91–118, 154–155, *Trudy Sem. S. L. Soboleva*, No. 1, 1979, *Akad. Nauk SSSR Sibirsk. Otdel., Inst. Mat., Novosibirsk*, 1979. (Stephan Rempel) **81i:35039** 35H05 (58G05)
- Saksomov, A. I.** The ring of classes and the ring of characters of a finite group. (Russian) *Mat. Zametki* **26** (1979), no. 1, 3–14, 156. (V. D. Mazurov) **81i:20004** 20C05
- Saksomov, M. T.** A class of problems for the control of stochastic differential equations. (Russian. Tajiki summary) *Dokl. Akad. Nauk Tadzhik. SSR* **22** (1979), no. 6, 342–345. (Vladimir Katkovnik) **81c:49015** 49B60 (93E03)
- Necessary optimality conditions of the principle of the maximum type for systems of control of statistical differential equations. (Russian. Tajiki summary) *Dokl. Akad. Nauk Tadzhik. SSR* **22** (1979), no. 12, 712–716. (Albert Jugel) **81d:49019** 49B60 (93E20)
- Sakuma, Makoto** The homology groups of abelian coverings of links. *Math. Sem. Note Kobe Univ.* **7** (1979), no. 3, 515–530. (Yoshihiko Marumoto) **81g:75005** 57M25 (57M10)
- Sakuma, Motoyoshi** (with Okuyama, Hiroshi) On the Poincaré series of a local ring reduced modulo its socle. *J. Math. Tokushima Univ.* **13** (1979), 1–6. (W. Vogel) **81k:13007** 13H10 (13D03, 14B99)
- On relation modules. *J. Math. Tokushima Univ.* **13** (1979), 7–12. (Chin-Pi Lu) **81c:13010** 13C10
- Salaev, V. V.** Local estimate for a one-dimensional singular integral and its application. (Russian) *Azerbaij. Gos. Univ. Učen. Zap.* **1978**, no. 3, 87–93. (B. S. Rubin) **81j:42023** 42A50
- (with Guseinov, E. G.) A singular integral along an interval of a line in spaces of summable functions. (Russian) *Azerbaij. Gos. Univ. Učen. Zap.* **1979**, no. 1, 81–87. (M. O. Bašelevili) **81h:45011** 45E99
- (with Seifullayev, R. K.) On the article: "A singular Cauchy operator along an open curve" (*Azerbaij. Gos. Univ. Učen. Zap.* **1977**, no. 3, 5–11; MR **58** #17724). (Russian) *Azerbaij. Gos. Univ. Učen. Zap.* **1979**, no. 1, 88–100. (V. S. Piliđi) **81k:45003** 45E05 (47G05)
- Sălăgean, Grigore Stefan** Properties of starlikeness and convexity preserved by some integral operators. *Romanian-Finnish Seminar on Complex Analysis (Proc., Bucharest, 1976)*, pp. 367–372. *Lecture Notes in Math.*, 743, Springer, Berlin, 1979. (Carl P. McCarthy) **81c:30024** 30C45
- Salahidinov, A. N.** See **Research in mathematics and physics**, **81i:00004**
- Salahidinov, M. S.** (with Mengzjajev, B.) A boundary value problem with conformal derivative for an equation of mixed type with two lines of degeneration. (Russian) *Differential equations and their applications* (Russian), pp. 3–14, 166, "Fan", Tashkent, 1979. (A. Džuravov) **81i:35123** 35M05
- (with Hasanov, A.) Boundary value problems with shift for the equation $\operatorname{sgn} y|_{\gamma} u_{xx} + u_{yy} = 0$. (Russian) *Differential equations and their applications* (Russian), pp. 14–25, 166, "Fan", Tashkent, 1979. (S. A. Tersenov) **81h:35034** 35M05
- (with Hasanov, A.) A boundary value problem for the generalized Tricomi equation. (Russian) *Izv. Akad. Nauk UzSSR Ser. Fiz.-Mat. Nauk* **1979**, no. 6, 29–33, 91. (A. M. Nahušev) **81c:35090** 35M05
- (with Mirsaburov, M.) Some boundary value problems with a shift for an equation of hyperbolic type that degenerates on the boundary. (Russian) *Izv. Akad. Nauk UzSSR Ser. Fiz.-Mat. Nauk* **1980**, no. 1, 16–21, 95. (Authors' summary) **81d:35057** 35L80
- See also *Differential equations and their applications*, **81f:35003**
- Salam, Abdus** (with Elias, Victor) Induced Higgs couplings and spontaneous symmetry breaking. *Phys. Rev. D* (3) **22** (1980), no. 6, 1469–1472. (Authors' summary) **81h:81052** 81D20 (81E10)
- Salamatin, A. N.** (with Pudovkin, M. A.; Fomin, S. A.; Čistiakov, V. K.) The effect of the form of the working surface of a hot point drill on the boring factor for ice by melting. (Russian) *Issled. Prikl. Mat. No. 7* (1979), 117–130. (Jiří Nedoma) **81j:86005** 86A99 (76R99, 80A20)
- Salamó, S.** (with Gambini, R.; Trias, A.) Self-dual covariant Lagrangian formulation of electromagnetism with magnetic charges. *Lett. Nuovo Cimento* (2) **27** (1980), no. 12, 385–388. (From the text) **81f:81097** 81L05
- Salamon, D.** Observers and duality between observation and state feedback for time delay systems. *IEEE Trans. Automat. Control* **25** (1980), no. 6, 1187–1192. (Author's summary) **81m:93018** 93B07 (34K05, 47D05, 93C50)
- Salamon, Peter** (with Band, Yehuda B.; Kalri, Oded) Maximum work production from a heating gas in a cylinder with piston. *Chem. Phys. Lett.* **72** (1980), no. 1, 127–130. (Authors' summary) **81e:80001** 80A10
- (with Nitzan, Abraham; Andresen, Bjarne; Berry, R. Stephen) Minimum entropy production and the optimization of heat engines. *Phys. Rev. A* (3) **21** (1980), no. 6, 2115–2129. (Authors' summary) **81f:80002** 80A10
- Salaraya, A. K.** Numerical solution of a differential equation in fluid mechanics. *Comput. Methods Appl. Mech. Engrg.* **21** (1980), no. 2, 211–216. (Author's introduction) **81a:65080** 65L10 (76D05)
- Šalator, V. K.** (with Brudnyi, Ju. A.) Complex interpolation of Lipschitz spaces. (Russian) *Qualitative and approximate methods for the investigation of operator equations, No. 4* (Russian), pp. 30–42. *Jaroslavl. Gos. Univ., Yaroslavl*, 1979. (S. G. Samko) **81k:46035** 46E35 (46E30)
- Šalát, T.** On statistically convergent sequences of real numbers. (Russian summary) *Math.*

- Slovakia 30 (1980), no. 2, 139-150. (Shri Nivas Bhatt) **81k:40002** 40A05
- Salvador, K. (with Belard, K. I.; Mihalev, A. V.) Generalized identities and semiprime rings with involution. (Russian) *Uspehi Mat. Nauk* 35 (1980), no. 1(211), 222. (Ju. N. Mal'cev) **81i:16020** 16A38 (16A28)
- Salazar, Jorge (with Ahmad, Shair) On existence of periodic solutions for nonlinearly perturbed conservative systems. *Differential equations (Proc. Eighth Fall Conf., Oklahoma State Univ., Stillwater, Okla., 1979)*, pp. 103-114, Academic Press, New York, 1980. (James R. Ward, Jr.) **81c:34046** 34C25
- Sallany, Sergio An embedding theorem for k -compact spaces. *Math. Colloq. Univ. Cape Town* 52 (1978/79), 95-106 (1980). (M. Husek) **81c:54037** 54D30 (54E55)
(with Abiar, Alexander) Rings of real-valued functions and the finite subcovering property. *Rev. Colombiana Mat.* 13 (1979), no. 1, 39-48. (W. T. Whitley) **81i:54014** 54C30 (54C40, 54D35, 54D60)
- Sale, Luigi The λ -inductive topology on abelian p -groups. *Rend. Sem. Mat. Univ. Padova* 59 (1978), 167-177 (1979). (R. S. Pierce) **81a:20063** 20K45
Cotorsion theories for abelian groups. *Symposia Mathematica, Vol. XXIII (Conf. Abelian Groups and their Relationship to the Theory of Modules, INDAM, Rome, 1977)*, pp. 11-32, Academic Press, London, 1979. (P. L. Sperry) **81j:20078** 20K40 (18E40)
 I_1 -groups and almost totally injective groups. (Italian summary) *Ann. Univ. Ferrara Sez. VII (N.S.)* 25 (1979), 197-204. (R. Vergosen) **81i:20070** 20K99
- Saldyryan, V. A. (with Kosmodamians'kii, O. S.) ★Толстые многосвязные пластины. (Russian) [Thick multiconnected plates] "Naukova Dumka", Kiev, 1978. 239 pp. (François Sidoroff) **81i:73039** 73K10
A version for construction of refined theories of the bending of transversely isotropic plates. (Russian. Armenian and English summaries) *Izv. Akad. Nauk Armjan. SSR Ser. Meh.* 33 (1980), no. 2, 55-63, 79. (Author's summary) **81i:73032** 73K10
- Saleh, Adel A. M. Theorems on match and isolation in multipoint networks. *IEEE Trans. Microwave Theory Tech.* 28 (1980), no. 4, 428-429. (Author's summary) **81c:94039** 94C05
- Saleh, Ahmed Salvat Abd el-Radi Diffraction of waves on the curvature discontinuity line of a boundary surface with an impedance boundary condition. (Russian. English summary) *Vestnik Moskov. Univ. Ser. I Mat. Meh.* 1980, no. 1, 26-28, 91. (V. M. Babič) **81i:76062** 76Q05
- Saleh, Basma E. A. (with Goeke, Wayne C.) Linear restoration of bilinearly distorted images. *J. Opt. Soc. Amer.* 70 (1980), no. 5, 506-515. (Authors' summary) **81i:78002** 78A10 (78A45)
- Salehi, H. (with Miamee, A. G.) On the prediction of periodically correlated stochastic processes. *Multivariate analysis, V (Proc. Fifth Internat. Sympos., Univ. Pittsburgh, Pittsburgh, Pa., 1978)*, pp. 167-179, North-Holland, Amsterdam, 1980. (J. B. Robertson) **81c:60054** 60G25 (62M20)
- Salehova, I. G. The Riemann problem for a countable set of intervals of the real axis. (Russian) *Trudy Sem. Kruco. Zadacham No. 16* (1979), 137-148, 244. (S. A. Tersenov) **81i:30038** 30E25
- Salenius, Tarmo An elementary proof of Pohlke's theorem. (Swedish. English summary) *Nordisk Mat. Tidskr.* 25/26 (1978), no. 3-4, 150-152, 209. (E. J. F. Primrose) **81d:51014a** 51N05
- Saleski, Alan A note on the random mean ergodic theorem. *Z. Wahrsch. Verw. Gebiete* 52 (1980), no. 1, 41-44. (Fumio Hiai) **81j:28030** 28D05 (47A35, 60F05)
- Sales Valles, Francisco de A. Lattices complemented by sets. (Spanish) *Contributions in probability and mathematical statistics, teaching of mathematics and analysis (Spanish)*, pp. 33-38, Grindley, Granada, 1979. (Editors) **81i:06009** 06B05
- Salteer, V. D. The character of stationary conditions and bifurcations in a nonlinear system of phase selftuning frequency. (Russian) *VII. Internationale Konferenz über nichtlineare Schwingungen (Berlin, 1975)*, Band II, 2, pp. 309-318, Abh. Akad. Wiss. DDR, Abt. Math. Naturwiss. Tech., 1977, 6, Akademie-Verlag, Berlin, 1978. (M. I. Immaniel) **81a:93100** 93E11 (93C15)
- Salzberger, Roberto See Ruiz Salguero, Roberto
- Salazar López, Graciela Epireflexivity and connexity in concrete topological categories. (Spanish) *An. Inst. Mat. Univ. Nac. Autónoma México* 18 (1978), no. 2, 29-122. (G. M. Kelly) **81j:18010** 18B30 (18A40, 54B30)
(with Herrlich, Horst; Vázquez, R.) Light factorization structures. *Questiones Math.* 3 (1978/79), no. 3, 189-213. (Roy Dyckhoff) **81i:18003** 18A20 (54B30)
- Salz, M. S. See Abu-Salz, M. S.
- Salliglu, S. The two-dimensional $O(N)$ nonlinear σ -model and the fifth Painlevé transcendent. *Phys. Lett. B* 89 (1980), no. 3-4, 367-368. (B. A. Kupersmidt) **81f:81044** 81E10 (35A30, 35Q20)
- Sallio, G. N. (with Šaripodžajeva, F.) Cubature formulas on the sphere in 5-space that are invariant under the group of the 32-hedron. (Russian) *Voprosy Vychisl. i Prikl. Mat. (Tashkent) No. 51* (1978), 204-222, 233. (A. Cojtu) **81m:65040** 65D32 (52A25)
See also *Obituary: Sallio, G. N.*, **81f:01047**
- Sallio, V. H. Algebraic irreducibility of a set of linear differential equations. (Russian) *Dokl. Akad. Nauk SSSR* 254 (1980), no. 4, 806-808. (Daniel Bertrand) **81i:10055** 10K37 (12H05)
Differential irreducibility of a class of differential equations. (Russian) *Izv. Akad. Nauk SSSR Ser. Mat.* 44 (1980), no. 1, 176-202, 240. (John H. Loxton) **81i:10053** 10F37 (34A30)
- Salli, V. N. Associations, connected with homomorphisms of semigroups onto groups. (Russian) *Theory of semigroups and its applications, No. 4 (Russian)*, pp. 68-75, 125, Saratov. Gos. Univ., Saratov, 1978. (J. Dénes) **81c:20051** 20M15 (20L99)
Some conditions for distributivity of a lattice with unique complements. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1980, no. 5, 47-49. (Anna Romanowska) **81i:06012** 06C15 (06C10, 06D99)
- Sallja, R. N. Properties of optimally operating closed queueing systems. (Russian) *Transactions of the Eighth Prague Conference on Information Theory, Statistical Decision Functions, Random Processes (Prague, 1978)*, Vol. B, pp. 163-173, Reidel, Dordrecht, 1978. (M. A. Fedotkin) **81i:60097** 60K25 (90B22)
- Sallio, S. P. (with Buslaev, V. S.; Merkur'ev, S. P.) Diffraction characteristics of scattering in a quantum system of three one-dimensional particles. (Russian) *Scattering theory. Theory of oscillations (Russian)*, pp. 14-30, 183, Probl. Mat. Fiz., 9, Leningrad. Univ., Leningrad, 1979. (M. Demuth) **81d:81092** 81F15 (35P25, 47A40)
- Sallio, A. H. (with Tairov, M. A.; Nagiev, R. A.) Solution of a boundary value problem for an axially symmetric equation of non-steady-state filtration by the integral correlation method. (Russian) *Studies in some questions of the constructive theory of functions and differential equations (Russian)*, pp. 159-166, Azerbaidžan. Inst. Nefti i Himii, Baku, 1974. (See **80d:00021**) 65P05
- Sallio, F. L. (with Zaharov, V. M.) On the question of the synthesis of probability converters. (Russian) *Probabilistic methods and cybernetics, No. 14 (Russian)*, pp. 47-50, Kazan. Gos. Univ., Kazan, 1978. (I. Vádrva) **81i:94038** 94C10
- Sallio, Ja. Š. A special problem for a class of nonlinear singular equations. (Russian) *Studies in some questions of the constructive theory of functions and differential equations (Russian)*, pp. 99-106, Azerbaidžan. Inst. Nefti i Himii, Baku, 1974. (See **80d:00021**) 45G05
A loaded Hilbert problem. (Russian. Azerbaijani and English summaries) *Izv. Akad. Nauk Azerbaidžan. SSR Ser. Fiz.-Tehn. Mat. Nauk* 1978, no. 5, 58-62. (L. G. Mihailov) **81i:45008** 45E05 (30E25)
- Sallio, R. B. (with Seleznev, V. V.) On the solution of Hilbert's boundary value problem with discontinuous coefficients. (Russian) *Trudy Sem. Kruco. Zadacham No. 16* (1979), 149-162, 244. (S. A. Tersenov) **81m:30039** 30E25
- Sallio, Norberto (with Paulsen, Vern) Two examples of nontrivial essentially n -normal operators. *Indiana Univ. Math. J.* 28 (1979), no. 5, 711-724. (P. A. Fillmore) **81c:47024** 47B15 (47A55, 47C15)
(with Paschke, William L.) Matrix algebras over O_∞ . *Michigan Math. J.* 26 (1979), no. 1, 3-12. (Man-Duen Choi) **81a:46075** 46L05 (46M20)
On the distance to the set of compact perturbations of nilpotent operators. *J. Operator Theory* 3 (1980), no. 2, 179-194. (P. A. Fillmore) **81m:47023** 47A55 (47B99)
- Sallio, Gabriella (with Ricciardi, N.) Quasiadmissibility in general decision theory. (Italian. English summary) *Riv. Mat. Sci. Econom. Social* 2 (1979), no. 2, 85-94. (A. L. Rukhin) **81i:62005** 62C05 (62C07)
(with Wets, Roger J.-B.) Convergence of sequences of closed sets. The Proceedings of the 1979 Topology Conference (Ohio Univ., Athens, Ohio, 1979). *Topology Proc.* 4 (1979), no. 1, 149-158 (1980). (D. E. Wulbert) **81j:54015** 54B20
(with Ricciardi, N.) A new characterization of admissibility in decision theory. (Italian. English summary) *Riv. Mat. Sci. Econom. Social* 3 (1980), no. 1, 45-57. (A. L. Rukhin) **81i:62011** 62C15 (62C05)
(with Wets, Roger J.-B.) Addendum: "On the convergence of convex sets in finite dimensions" [SIAM Rev. 21 (1979), no. 1, 18-33; MR 80h:52007]. *SIAM Rev.* 22 (1980), no. 1, 86. (Editors) **81g:52006** 52A20 (90C25)
- Sallio, Nikos Realization and classification of the universal Clifford algebras as associative Lie-admissible algebras. Proceedings of the Second Workshop on Lie-Admissible Formulations (Sci. Center, Harvard Univ., Cambridge, Mass., 1979), Part B. *Hadronic J.* 3 (1979/80), no. 1, 339-389. (J. Löhrman) **81d:16026** 16A68 (15A66, 17A99, 81C40, 81D25)
- Sallio, L. (with Gherman, O.) Models for $SU(N) \times SU(N)$ symmetry breaking with extremum constraints. *J. Math. Phys.* 21 (1980), no. 5, 1234-1242. (Jean Nuyts) **81i:81055** 81D20
- Sallio, Z. M. A formal language for recording interpretations of words and combinations of words. (Russian) *Problemy Kibernet.* No. 36 (1979), 247-278, 280. (Authors' summary) **81i:68109** 68F30
- Sallio, Harvey M. (with Morito, Susumu) Finding the general solution of a linear Diophantine equation. *Fibonacci Quart.* 17 (1979), no. 4, 361-368. (David Lee Hiliker) **81i:10023** 10B05
(with Morito, Susumu) Using the Blankinship algorithm to find the general solution of a linear Diophantine equation. *Acta Inform.* 13 (1980), no. 4, 379-382. (H. London) **81i:10021** 10B05 (10A30)
(with Morito, Susumu; Williams, David E.) Two backtrack algorithms for the radio frequency intermodulation problem. *Appl. Math. Optim.* 6 (1980), no. 3, 221-240. (Authors' summary) **81d:94008** 94A14 (90C10)
- Sallio, M. A. (with Matveev, V. B.) Conditionally periodic solutions of equations of nonlinear filters. (Russian) *Scattering theory. Theory of oscillations (Russian)*, pp. 128-133, 186, Probl. Mat. Fiz., 9, Leningrad. Univ., Leningrad, 1979. (Authors' summary) **81i:94059** 94C05
- Sallio, S. M. On the stability of quasidouble step spline function approximations for solutions of initial value problems. *Numerical methods (Third Colloq., Keszthely, 1977)*, pp. 517-523, Colloq. Math. Soc. János Bolyai, 22, North-Holland, Amsterdam, 1980. (Sylvet P. Norsett) **81m:65123** 65L05 (65D07)
- Sallio, Jean (with Van der Pyl, Thierry) Entropies, dimensions et représentation d'observations. *Kybernetika (Prague)* 15 (1979), no. 4, 299-315. (Authors' summary) **81c:94010** 94A15
(with Van der Pyl, Thierry) Analyse des processus inductifs bayésiens. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 8, A389-A392. (Authors' summary) **81i:68122** 68G10 (94A17)
- Sallio, M. Über Hermite-Fejérsche Interpolation. *Acta Math. Acad. Sci. Hungar.* 35 (1980), no. 3-4, 379-385. (Manfred v. Golitschek) **81m:41005** 41A05
- Sallio, P. (with Coppo, Mario; Dezanzi-Ciaccagnini, M.) Functional characterization of some semantic equalities inside λ -calculus. *Automata, languages and programming (Sixth Colloq., Graz, 1979)*, pp. 133-146, *Lecture Notes in Comput. Sci.*, 71, Springer, Berlin, 1979. (Authors' summary) **81d:68043** 68C01 (03B40, 68B10)
Note sur la sémantique des structures de contrôle. (English summary) *RAIRO Inform. Théor.* 13 (1979), no. 2, 185-188. (Authors' summary) **81a:68018** 68B10
- Sallio, H. (with Dürr, H.-P.) Unification of isospin and hypercharge in one basic $SU(2)$. (Italian and Russian summaries) *Nuovo Cimento A* (11) 53 (1979), no. 4, 469-511. (Lawrence P. Horwitz) **81a:81097** 81G20 (81D20)
- Sallio, Hans Elementare Herleitung der Dirac-Gleichung. IV. (English summary) *Z. Naturforsch.* A 35 (1980), no. 9, 995-996. (Authors' summary) **81m:81016** 81C05 (81G10)
- Sallio, Ervin (with Klepp, Francis) The conservation equation for complex chemical systems. *Proceedings of the International Symposium on Applications of Mathematics in System Theory (Univ. Braço, Braço, 1978)*, I, pp. 207-210, Univ. Braço, Braço, 1979. (See **81j:93066a**) 80A30 (92A09)

- (with Klepp, Francis) Matrix modelling of the stoichiometry of closed chemical systems. *Proceedings of the International Symposium on Applications of Mathematics in System Theory* (Univ. Braço, Braço, 1978), 1, pp. 211–215. Univ. Braço, Braço, 1979. (See 81j:93066a) 80A30 (92A40)
- Sallum, Elvia Mureb** Vector fields tangent to a Reeb foliation on S^3 . *J. Differential Equations* 34 (1979), no. 2, 204–211. (Robert Roussarie) 81a:58041 58F18
- Sally, Judith D.** Superregular sequences. *Pacific J. Math.* 84 (1979), no. 2, 465–481. (Melvin Hochster) 81m:13024 13H10 (14M05)
- Tangent cones at Gorenstein singularities. *Compositio Math.* 40 (1980), no. 2, 167–175. (Jonathan M. Wahl) 81e:14004 14B05
- Salustiano, Franco** (with Catenacci, Roberto; Marzuoli, Annalisa) A note on Killing vectors in algebraically special vacuum space-times. *Gen. Relativity Gravitation* 12 (1980), no. 7, 575–580. (Alan Barnes) 81k:83022 83C40 (53B50, 83C20)
- Salmon, J.** Irreversibility, velocity correlations and non-Hamiltonian dynamics. *Hydroic J.* 3 (1979/80), no. 3, 1080–1107. (Carlo Cercignani) 81f:82018 82A40 (82A70)
- Salmon, James R.** (with Liggett, James A.; Gallagher, Richard H.) Dispersion analysis in homogeneous lakes. *Internat. J. Numer. Methods Engrg.* 15 (1980), no. 11, 1627–1642. (Authors' summary) 81k:76064 76R99 (65N30, 80A20)
- Salmon, Ronald** The metrizable of the unified space. *Ann. Soc. Sci. Bruxelles Sér. I* 94 (1980), no. 1, 3–6. (Author's summary) 81g:54029 54E35 (54D99)
- Salmons, Arto** Power from power series. *Mathematical foundations of computer science*, 1979 (Proc. Eighth Symp., Olomouc, 1979), pp. 170–181. *Lecture Notes in Comput. Sci.*, 74, Springer, Berlin, 1979. (Author's introduction) 81c:68106 68F05 (03D35, 68C30)
- (with Maurer, Hermann A.; Rozenberg, Grzegorz; Wood, Derrick) Pure interpretations of EOL forms. (French summary) *RAIRO Inform. Théor.* 13 (1979), no. 4, 347–362. (Branislav Rovani) 81h:68073 68F05
- (with Maurer, Hermann A.; Wood, Derrick) On generators and generative capacity of EOL forms. *Acta Inform.* 13 (1980), no. 1, 87–107. (S. Ginsburg) 81f:68085 68F05
- (with Maurer, Hermann A.; Wood, Derrick) Pure grammars. *Inform. and Control* 44 (1980), no. 1, 47–72. (Isao Takanami) 81c:68103 68F05 (03D05)
- (with Culik, Karel, II) Test sets and checking words for homomorphism equivalence. *J. Comput. System Sci.* 20 (1980), no. 3, 379–395. (K. S. Fu) 81h:68064 68F05
- (with Maurer, Hermann A.; Wood, Derrick) Synchronized EOL forms. *Theoret. Comput. Sci.* 12 (1980), no. 2, 135–159. (J. Calvert) 81c:68106 68F05
- Salmons, E.-M.** The concept of fictitious loading. *Internat. J. Numer. Methods Engrg.* 14 (1979), no. 11, 1653–1663. (Petr Procházka) 81a:73034 73K25 (65N30)
- Salor, G. L.** A stochastic approximation theorem in a Hilbert space and its applications. (Russian. English summary) *Teor. Veroyatnost. i Primenen.* 24 (1979), no. 2, 407–413. (V. Dupac) 81g:62143 62L20 (60G30)
- Salsa, Sandro** (with Della Mattia Maderna, Carla) A priori bounds in nonlinear Neumann problems. (Italian summary) *Boll. Un. Mat. Ital. B* 5 (1979), no. 3, 1144–1153. (Sadakazu Aizawa) 81h:35019 35J65
- Saltanov, M. V.** Generalization of a variational principle of hydrodynamics in the Euler representation. (Russian) *Asymptotic methods in systems theory*, No. 9 (Russian), pp. 195–199, 243. *Irkutsk. Gos. Univ., Irkutsk*, 1976. (Author's summary) 81j:76071 76N15 (49H05)
- The analytic mechanics of elastic fibers in the Euler representation. (Russian) *Problems of stability of motion, analytical mechanics and control of motion* (Third All-Union Ceteo Conf., Irkutsk, 1977) (Russian), pp. 134–140, 323, "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. (Author's summary) 81g:73019 73C99 (49D05, 70H20)
- (with Podubnyi, V. I.) Oscillations of an elastic thread in a flow. (Russian) *Gidromek. (Kiev) No. 42* (1980), 99–106, 123. (Authors' summary) 81e:73031 73D99
- Variational models of electrohydrodynamics in the Euler and Euler-Lagrange representations. (Russian) *Mat. Metody i Fiz.-Meh. Polja* No. 11 (1980), 75–81, 122. (M. Drăganu) 81m:76062 76X05 (49H05, 76W05)
- Saltentytė, V.** Estimation of the parameters of an autoregressive sequence measured in the presence of additive noise. (Russian. Lithuanian and English summaries) *Statist. Problemy Upravleniya—Trudy Sem. Protsessy Optimal. Upravleniya V Sekcija No. 39* (1979), 47–61, 159. (Author's summary) 81j:62188 62M10
- Saltman, David J.** Norm polynomials and algebras. *J. Algebra* 62 (1980), no. 2, 333–345. (Lindsay N. Childs) 81h:12018 12E15 (16A16)
- On p -power central polynomials. *Proc. Amer. Math. Soc.* 78 (1980), no. 1, 11–13. (Louis Rowen) 81h:16028 16A38 (16A40)
- Generic Galois extensions. *Proc. Nat. Acad. Sci. U.S.A.* 77 (1980), no. 3, part 1, 1250–1251. (B. Fein) 81i:13001 13B05 (12F10)
- Saltykova, N. M.** A boundary value problem of Biczadze-Samar's type for an equation of mixed type of the second kind. (Russian) *Differentsial'nye Uravneniya* (Ryazan) No. 14 (1979), 149–159. (Author's summary) 81b:35075 35M05
- Salaña, J. K.** A testable design of sequential machines. *FTCS-8 (Eighth Ann. Internat. Conf. Fault-Tolerant Comput., Toulouse, 1978)*, pp. 185–190, IEEE, New York, 1978. (From the introduction) 81e:68060 68D15 (94C30)
- (with Goodwin, Graham C.; Sin, Kwai Sang) Stochastic adaptive control and prediction—the general delay-colored noise case. *IEEE Trans. Automat. Control* 25 (1980), no. 5, 946–950. (Authors' summary) 81k:93078 93E25
- Synchronous sequential machines: a modular and testable design. *IEEE Trans. Comput.* 29 (1980), no. 11, 1020–1025. (Author's summary) 81i:68000 68D15 (94C15)
- (with Anderson, Brian D. O.) Fault diagnosis in loop-connected systems. *Inform. Sci.* 21 (1980), no. 1, 75–92. (Authors' summary) 81h:68004 68A05 (68E10, 93A15)
- Saltukvadze, M. E.** ★Vector-valued optimization problems in control theory. Translated from the Russian by John L. Casti. *Mathematics in Science and Engineering*, 148. Academic Press [Harcourt Brace Jovanovich, Publishers], New York-London-Toronto, Ont., 1979. x+219 pp. ISBN 0-12-616750-8 (R. Hoffmann) 81k:93001 93-02 (90C50)
- Salmeyer, V. A.** The behavior of a diffusion process with a large drift coefficient in a half-space. (Russian. English summary) *Teor. Veroyatnost. i Primenen.* 24 (1979), no. 3, 585–592. (Constantin Tudor) 81g:60081 60G60
- Salunkhe, V. S.** Weierstrass transform of generalized functions. *Indian J. Pure Appl. Math.* 8 (1977), no. 11, 1352–1353. (Author's summary) 81b:44006 44A15
- Salvadori, Anna** (with Brandi, Primo) The weak Burkil-Cesari integral. (Italian) *Atti Sem. Mat. Fis. Univ. Modena* 27 (1978), no. 1, 14–38 (1979). (Francesco Barbieri) 81a:49021 49F25 (28B05)
- (with Brandi, Primo) On generalized area. (Italian) *Atti Sem. Mat. Fis. Univ. Modena* 28 (1979), no. 1, 33–62. (U. D'Ambrosio) 81m:49045 49F25 (26B30)
- Salvadori, L.** (with Moauro, Vinicio; Scalia, M.) Total stability and classical Hamiltonian theory. *Nonlinear equations in abstract spaces* (Proc. Internat. Sympos., Univ. Texas, Arlington, Tex., 1977), pp. 149–159, Academic Press, New York, 1978. (G. Bojadžiev) 81h:58025 58F10 (70H99)
- (with Bernfeld, S. R.) Generalized Hopf bifurcation and h -asymptotic stability. *Nonlinear Anal.* 4 (1980), no. 6, 1091–1107. (F. Visentin) 81k:34037 34D20 (58F14)
- Salvia, Anthony A.** Some fundamental properties of Kolmogorov-Smirnov consonance sets. *Technometrics* 22 (1980), no. 1, 109–111. (George C. S. Yu) 81g:62081 62G15
- Salvi Zagaglia, Norma** Construction of self-converse oriented graphs. (Italian) *Istit. Lombardo Accad. Sci. Lett. Rend. A* 112 (1978), no. 1, 123–130 (1979). (Maria Ferro) 81c:05043 05C20
- Salwicki, Andrzej** Axioms of algorithmic logic univocally determine semantics of programs. *Mathematical foundations of computer science*, 1980 (Proc. Ninth Sympos., Rydzyna, 1980), pp. 552–561, *Lecture Notes in Comput. Sci.*, 88, Springer, Berlin, 1980. (See 81c:68003) 68B10
- Salya, V. I.** (with Zaicev, I. D.; Vainer, V. G.) A problem of the theory of communication networks. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* No. 12 (1979), 1035–1039, 1070. (Authors' summary) 81c:94051 94C15
- Salzano, G.** (with Chavent, Guy) Numerical resolution of immiscible's displacements in presence of gravity. *Boundary and interior layers—computational and asymptotic methods* (Proc. Conf., Trinity College, Dublin, 1980), pp. 231–240, Boole, Dún Laoghaire, 1980. (See 81j:76001) 76S05 (65P05)
- Salzborn, F.** (with Szekeres, G.) A problem in combinatorial group theory. *Ars Combin.* 7 (1979), 3–5. (József Pelikán) 81h:56021 05B10 (05B15, 20K01)
- Salzer, Herbert E.** Mistatements in: *The calculus of finite differences* (Macmillan, London, 1933; Zbl 8, 18] by L. M. Milne-Thomson. *Math. Comp.* 34 (1980), no. 149, 323–324. (Peter Lancaster) 81e:65067 65Q05 (39A05)
- Salzmann, H.** Über ein Differentialgleichungssystem vom elliptisch-hyperbolischen Typ im R^2 . II. *Math. Nachr.* 92 (1979), 309–313. (Genowefa Majcher) 81c:35092 35M05
- Samav, A. S.** Removable singular points for the solutions of parabolic systems. (Russian. English summary) *Vestnik Moskov. Univ. Ser. I Mat. Meh.* 1979, no. 4, 38–42, 101–102. (J. Chrastina) 81d:35042 35K40 (35B65)
- The behavior of solutions of differential equations in a semistrip. (Russian) *Uspehi Mat. Nauk* 35 (1980), no. 1(211), 219–220. (Ju. V. Egorov) 81g:35008 35B40
- Samaja, H.-J.** A unified approach to Miquel's theorem and its degenerations. *Geometry and differential geometry* (Proc. Conf., Univ. Haifa, Haifa, 1979), pp. 132–142, *Lecture Notes in Math.*, 792, Springer, Berlin, 1980. (W. Benz) 81m:51006 51B05 (51B15)
- Samandarov, E. G.** Some Tauberian theorems in the form of explicit inequalities. (Russian. Tajik summary) *Dokl. Akad. Nauk Tadzhik. SSR* 21 (1978), no. 11, 17–20. (O. A. Ziza) 81h:40015 40E05 (60K25)
- Samaniego, Francisco J.** Maximum likelihood estimation for binomially distributed signals in discrete noise. *J. Amer. Statist. Assoc.* 75 (1980), no. 369, 117–121. (G. S. Lingappaiah) 81f:62025 62E10 (62F10)
- Samanta, S. K.** Fixed point theorems for multivalued mappings over a reflexive Banach space. *Bull. Calcutta Math. Soc.* 71 (1979), no. 1, 45–50. (Christian Fenske) 81m:47001 47H10
- (with Panja, Chumki) On determination of a common fixed point. *Indian J. Pure Appl. Math.* 11 (1980), no. 1, 120–127. (Heinrich Steinlein) 81c:47055 47H09 (47H10)
- Samari, N. K.** (with Schneider, G. Michael) A queueing theory-based analytic model of a distributed computer network. *IEEE Trans. Comput.* 29 (1980), no. 11, 994–1001. (Authors' summary) 81i:68020 68A05 (60K25)
- Samarin, Ju. P.** The structure of equations for the state of real materials with rheological properties. (Russian) *Proceedings of a Seminar on Differential Equations*, No. 3 (Russian), pp. 66–72, 146–147, *Kuibyshev. Gos. Univ., Kuibyshev*, 1977. (L. Jentsch) 81d:73004 73B05
- Samarasjka, E. A.** Iteration methods for solving difference equations of gas dynamics. (Russian) *Vestnik Moskov. Univ. Ser. XV Vyčisl. Mat. Kibernet.* 1980, no. 1, 58–66, 73. (From the summary) 81a:65118 65P05 (76N15)
- Samarasjka, A. A.** (with Goloviznin, V. M.; Favorskii, A. P.; Korsija, T. K.) Numerical simulation of MHD-problems on the basis of variational approach. *Sixth International Conference on Numerical Methods in Fluid Dynamics* (Proc. Conf., Tbilisi, 1978), pp. 248–252, *Lecture Notes in Phys.*, 90, Springer, Berlin, 1979. (See 80g:76002) 76W05 (49D45, 65K10)
- (with Makarov, V. L.) Application of exact difference schemes to estimation of the convergence rate of the method of lines. (Russian) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 113* (1979), 32 pp. (Jaroslav Jelen) 81k:65131 65N40
- (with Galaktionov, V. A.; Kurdjumov, S. P.; Mihallov, A. P.) Unbounded solutions of semilinear parabolic equations. (Russian. English summary) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 161* (1979), 36 pp. (Stefan Balint) 81c:35060 35K15
- (with Galaktionov, V. A.; Kurdjumov, S. P.; Mihallov, A. P.) Comparison of solutions of parabolic equations on the basis of a priori pointwise estimates of the highest derivative. (Russian. English summary) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 21* (1979), 60 pp. (I. Aganović) 81a:35043 35K10
- (with Nikolaev, E. S.) Finite difference methods for solving elliptic equations in irregular regions. (Russian) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 63* (1979), 25 pp. (Włodzimierz Proskurkowski) 81h:65100 65N05
- (with Galaktionov, V. A.; Kurdjumov, S. P.; Mihallov, A. P.) The comparison of solutions to parabolic equations. (Russian) *Dokl. Akad. Nauk SSSR* 248 (1979), no. 3, 586–589. (O. A. Oleinik) 81j:35047 35K35 (35B05)
- (with Galaktionov, V. A.; Kurdjumov, S. P.; Mihallov, A. P.) An approach to the comparison of solutions of parabolic equations. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 19 (1979), no. 6, 1451–1461, 1628. (P. C. File) 81f:35064 35K55 (35B05)

- Numerical simulation in plasma physics. *Computing methods in applied sciences and engineering (Proc. Fourth Internat. Sympos., Versailles, 1979)*, pp. 285-303, North-Holland, Amsterdam, 1980. (S. H. Lam) **81k:76091** 76X05 (65C20, 85A15)
- Numerical solution of problems of mathematical physics. (Russian) *Proceedings of the International Congress of Mathematicians (Helsinki, 1978)*, pp. 937-942, Acad. Sci. Fennica, Helsinki, 1980. (From the summary) **81k:65116** 65P05
- Some results of the theory of difference methods. (Russian) *Differentsial'nye Uravneniya* **16** (1980), no. 7, 1155-1171, 1348. (A. V. Džiskariani) **81k:65059** 65J10 (65N10)
- (with Galaktionov, V. A.; Kurdjumov, S. P.; Mihallov, A. P.) Asymptotic phase of modes with peaking and effective localization of heat in problems of nonlinear heat conduction. (Russian) *Differentsial'nye Uravneniya* **16** (1980), no. 7, 1196-1204, 1349. (Authors' summary) **81k:65163** 65N35 (80A20)
- (with Makarov, V. L.) On the question of the convergence rate of truncated schemes of the m th rank for generalized solutions. (Russian) *Differentsial'nye Uravneniya* **16** (1980), no. 7, 1276-1282, 1351. (W. S. Loud) **81k:65091** 65L10
- (with Galaktionov, V. A.; Kurdjumov, S. P.; Mihallov, A. P.) On unbounded solutions of the Cauchy problem for the parabolic equation $u_t = \nabla^2(u) + u^p$. (Russian) *Dokl. Akad. Nauk SSSR* **252** (1980), no. 6, 1362-1364. (J. Kačur) **81j:35018** 35B40 (35K55)
- See also Tihonov, A. N.; et al., **81m:01078** and Birthday: Samarskii, A. A., **81m:01094**
- Samarskii, V. G. (with Timofeev, A. V.) Optimal multistep finitely converging algorithms for solution of systems of target inequalities and their application. (Russian) *Mathematical methods of solution of economic problems*, No. 8 (Russian), pp. 82-95, "Nauka", Moscow, 1979. (B. T. Poljak) **81i:90179** 90C30
- The absence of local unconditional structure in some spaces of operators. (Russian. English summary) Investigations on linear operators and the theory of functions, IX. *Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* **92** (1979), 300-306, 327. (N. Tija) **81g:47049** 47D30 (47D15)
- Sambandham, M. On the upper bound of the number of real roots of a random algebraic equation. *J. Indian Math. Soc. (N.S.)* **42** (1978), no. 1-4, 15-26 (1979). (G. Samal) **81k:60058** 60G99
- (with Maruthachalam, C.) On the number of real zeros of a random trigonometric polynomial. *J. Indian Math. Soc. (N.S.)* **42** (1978), no. 1-4, 143-156 (1979). (J. E. A. Dunnage) **81k:60063** 60G99 (60G15)
- Sambe, Yuriko (with Mimura, Mamoru) On the cohomology mod p of the classifying spaces of the exceptional Lie groups. *J. Math. Kyoto Univ.* **19** (1979), no. 3, 553-581. (J. F. Adams) **81k:55025** 55R40 (57T35)
- (with Mimura, Mamoru) On the cohomology mod p of the classifying spaces of the exceptional Lie groups. II, III. *J. Math. Kyoto Univ.* **20** (1980), no. 2, 327-379. (J. F. Adams) **81j:55023** 55T20
- Sambin, Giovanni A simpler proof of Sahqvist's theorem on completeness of modal logics. *Polish Acad. Sci. Inst. Philos. Sociol. Bull. Sect. Logic* **9** (1980), no. 2, 50-56. (Editors) **81k:03043** 03B45
- (with Valentini, S.) A modal sequent calculus for a fragment of arithmetic. *Studia Logica* **39** (1980), no. 2-3, 245-256. (C. Smoryński) **81m:03025** 03B45 (03F05, 03F30)
- (with Valentini, S.) Post completeness and free algebras. *Z. Math. Logik Grundlag. Math.* **26** (1980), no. 4, 343-347. (David Makinson) **81k:03042** 03B45
- Samborskiĭ, S. M. The Cauchy problem for involutive systems of partial differential equations. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A No. 1* (1980), 18-22, 93. (J. Vanžura) **81k:58055** 58H10 (35N10)
- (with Dudnikov, P. I.) Controllability criterion for systems in a Banach space (generalization of Chow's theorem). (Russian) *Ukrain. Mat. Ž.* **32** (1980), no. 5, 649-653. (Jerzy Klamka) **81k:93010** 93B05 (57R27)
- Sambucetti, Patrizia (with Rossi, Anna Maria) On the compactness of L^p spaces. (Italian. English summary) *Boll. Un. Mat. Ital. B* (5) **16** (1979), no. 3, 972-988. (Richard A. Aló) **81k:46053** 46E40 (46B25)
- Samelina, Fumiko Latent trait theory and its applications. *Multivariate analysis, V (Proc. Fifth Internat. Sympos., Univ. Pittsburgh, Pittsburgh, Pa., 1978)*, pp. 613-627, North-Holland, Amsterdam, 1980. (D. G. Kabe) **81j:62198** 62P15 (62E10, 62J15)
- Samelson, Klaus See Bauer, Friedrich L.; et al., **81k:01025**
- Samet, Hana (with Marcus, Leo) Purging in an equality data base. *Inform. Process. Lett.* **10** (1980), no. 2, 89-95. (From the introduction) **81a:68026** 68B15
- Samet, P. A. See EURO IFIP, **81c:68003**
- Sami, Mariagiovanna (with Morpurgo, Rosamaria) A proposal for the translation of a particular class of regular languages. *Progress in cybernetics and systems research, Vol. V*, pp. 645-664, Hemisphere, Washington, D.C., 1979. (Matti Linna) **81c:68068** 68F10
- Samko, A. H. A problem for differential equations. (Russian) *Azerbaidžan. Gos. Univ. Učen. Zap.* **1978**, no. 3, 50-56. (V. Seda) **81f:34009** 34A10 (65L05)
- Solvability conditions for a boundary value problem. (Russian) *Azerbaidžan. Gos. Univ. Učen. Zap.* **1978**, no. 6, 76-83. (Frederick A. Howes) **81k:34070** 34K10 (34K15)
- (with Mardanov, I. D.; Maksudov, F. G.) Some new conditions for solvability of a boundary value problem for nonlinear differential equations with deviating argument of neutral type. (Russian. Azerbaijani and English summaries) *Izv. Akad. Nauk Azerbaidžan. SSR Ser. Fiz.-Tehn. Mat. Nauk* **1979**, no. 2, 26-32. (József Kalinowski) **81k:34058** 34K10
- On the theory of special boundary value problems for second-order differential equations with deviating argument. (Russian. Azerbaijani and English summaries) *Izv. Akad. Nauk Azerbaidžan. SSR Ser. Fiz.-Tehn. Mat. Nauk* **1979**, no. 2, 86-94. (József Kalinowski) **81k:34059** 34K10
- Samir Abdalrhman, M. A reliability model of partially parallel systems. *Z. Angew. Math. Mech.* **57** (1977), no. 9, 553-555. (Author's summary) **81h:60110** 60K10 (62N05, 90B25)
- Samko, S. G. On the description of the image $I^*(L_2)$ of Riesz potentials. (Russian. Armenian and English summaries) *Izv. Akad. Nauk Armjan. SSR Ser. Mat.* **12** (1977), no. 5, 329-334, 415. (J. Musielak) **81d:46029** 46E30 (31B15)
- Hyperangular integrals with homogeneous characteristics. (Russian. Georgian and English summaries) *Tbilis. Gos. Univ. Inst. Prikl. Mat. Trudy* **5/6** (1978), 235-249. (A. Devnatz) **81a:42028** 42B25
- el-Samman, A.-R. A. See El-Samman, A.-R. A.
- Samson, Peter H. (with Bramble, James H.) Efficient higher order single step methods for parabolic problems. *I. Math. Comp.* **35** (1980), no. 151, 655-677. (G. W. Hedstrom) **81h:65110** 65N30 (65M15)
- Sanna, Sherwood Ratios of off-diagonal C-Wishart. *Ann. Statist.* **8** (1980), no. 1, 199-204. (Minoru Siotani) **81c:62056** 62H10 (93A10)
- (with Speyer, Jason L.; Albanese, Richard) A stochastic differential game theory approach to human operators in adversary tracking encounters. *IEEE Trans. Systems Man Cybernet.* **10** (1980), no. 11, 755-762. (Authors' summary) **81m:90119** 90D26
- Samohin, A. P. (with Logunov, A. A.; Mestvirivili, M. A.; Rčelavišvili, G. L.) Contribution of distant singularities in the cos θ -plane to the scattering amplitude and distribution function of inclusive processes. (Russian. English summary) *Teoret. Mat. Fiz.* **43** (1980), no. 3, 291-308. (V. S. Ol'hovskij) **81i:81088** 81F20
- Samohin, M. V. Some questions related to problems of the existence of automorphic analytic functions with a given modulus of boundary values. (Russian) *Mat. Sb. (N.S.)* **111**(153) (1980), no. 4, 557-578, 624. (S. V. Hruščev) **81j:30078** 30F35
- Samolilenko, A. M. (with Mitropol'skij, Ju. A.) Asymptotic methods in the theory of nonlinear oscillations. (Russian) *Asymptotic methods in the theory of nonlinear oscillations (Proc. All-Union Conf. Asymptotic Methods in Nonlinear Mech., Katsiveli, 1977)* (Russian), pp. 93-113, 274, "Naukova Dumka", Kiev, 1979. (T. Canturia) **81f:34045** 34C15
- (with Nuržanov, O. D.) The Bubnov-Galerkin method for construction of periodic solutions of a Volterra type integro-differential equation. (Russian) *Differentsial'nye Uravneniya* **15** (1979), no. 8, 1503-1517, 1535. (M. Trvdij) **81h:45021** 45J05
- Samolilenko, I. S. Homotopy classification of elliptic systems of two first-order pseudodifferential equations, and boundary value problems. (Russian) *Boundary value problems for partial differential equations (Russian)*, pp. 96-107, 166, "Naukova Dumka", Kiev, 1978. (L. A. Ivanov) **81a:35098** 35S05 (35J45, 58G15)
- Samolilenko, Ju. I. (with Horozov, O. A.) Stability of spin waves in the case of a longitudinal deformation of a ferromagnetic crystal. (Russian) *Control of objects with distributed parameters (Russian)*, pp. 80-88, Akad. Nauk Ukrain. SSR, Inst. Kibernet., Kiev, 1977. (From the introduction) **81a:93058** 93C99 (82A60)
- (with Butkovskij, A. G.) Control of quantum systems. *Avtomat. i Telemekh.* **1979**, no. 4, 5-25 (Russian. English summary); translated as *Automat. Remote Control* **40** (1979), no. 4, part 1, 485-502. (V. P. Belavinskij) **81h:93039a** 93C20 (81C99, 93E03)
- (with Butkovskij, A. G.) Control of quantum systems. II. *Avtomat. i Telemekh.* **1979**, no. 5, 5-23 (Russian. English summary); translated as *Automat. Remote Control* **40** (1979), no. 5, part 1, 629-645. (V. P. Belavinskij) **81h:93039b** 93C20 (81C99, 93E03)
- (with Butkovskij, A. G.) Controllability of quantum objects. (Russian) *Dokl. Akad. Nauk SSSR* **250** (1980), no. 1, 51-55. (From the text) **81g:93010** 93B05 (81C99)
- See also Control of objects with distributed parameters, **81a:93058a**
- Samolilenko, Ju. S. Locally dependent representations of families of normal operators. (Russian) *Operators of mathematical physics and infinite-dimensional analysis (Russian)*, pp. 110-114, 143, Akad. Nauk Ukrain. SSR, Inst. Mat., Kiev, 1979. (F. Smithies) **81h:47014** 47A67 (46M40, 47B15)
- (with Kondrat'ev, Ju. G.) Operators of the type of number of particles and the smoothness of functions of infinitely many variables. (Russian) *Spectral theory of operators (Proc. Second All-Union Summer Math. School, Baku, 1975)* (Russian), pp. 103-114, "Elm", Baku, 1979. (A. V. Buhvalov) **81k:46055** 46G99 (46F05, 81D05, 81E05)
- Infinite-dimensional second-order elliptic operators with constant coefficients. (Russian) *Spectral theory of operators (Proc. Second All-Union Summer Math. School, Baku, 1975)* (Russian), pp. 162-166, "Elm", Baku, 1979. (From the text) **81k:47051** 47B99 (35R15, 47F05)
- (with Krugljak, S. A.) Unitary equivalence of sets of selfadjoint operators. (Russian) *Funkcional. Anal. i Prilozhen.* **14** (1980), no. 1, 60-62. (K. Veselić) **81k:47031** 47B15 (47A99)
- Samolilenko, L. I. Stabilization of lateral oscillations of an electron-ion ring by an external system with parametric excitation. (Russian) *Kibernet. i Vychisl. Tehn.* **No. 47** (1980), 98-104, 112. (Author's summary) **81h:76071** 76X05 (34H05, 93D99)
- Samolilenko, V. G. Wave operators for a Schrödinger type operator in a space of functions of an infinite number of variables. (Russian) *Operators of mathematical physics and infinite-dimensional analysis (Russian)*, pp. 103-109, 143, Akad. Nauk Ukrain. SSR, Inst. Mat., Kiev, 1979. (K. S. Mamedov) **81m:35114** 35P25 (35R15)
- (with Berezanskij, Ju. M.) Selfadjointness of differential operators with finite and infinite number of variables. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A No. 9* (1979), 691-695, 776. (B. Hellwig) **81a:35095** 35R15 (35J99, 47F05)
- A difference operator with an infinite number of variables. (Russian) *Ukrain. Mat. Ž.* **31** (1979), no. 5, 586-588, 622. (Author's summary) **81f:47038** 47B39 (39A70)
- Samolilenko, Yu. I. See Samolilenko, Ju. I.
- Samolilova, N. L. (with Kusov, I. F.; Ilvanov, Ju. L.) Estimation of finite sets in random noises. (Russian. Georgian and English summaries) *Sobšč. Akad. Nauk Gruzin. SSR* **96** (1979), no. 3, 557-560. (Authors' summary) **81j:94027** 94A99
- (with Kusov, I. F.; Bulgakov, M. V.) Stabilization of dynamical systems with distributed parameters under incomplete information conditions. (Russian. Georgian and English summaries) *Sobšč. Akad. Nauk Gruzin. SSR* **97** (1980), no. 3, 581-584. (Authors' summary) **81j:93042** 93D15 (93E15)
- Samojan, F. A. Imbedding theorems and characterization of traces in the spaces $H^p(U)$, $0 < p < \infty$. (Russian) *Mat. Sb. (N.S.)* **107**(149) (1978), no. 3, 446-462. (B. Korenblum) **81j:46084** 46J15 (32A35, 46E15)
- Samokili, B. A. (with Ziv, A. D.) A posteriori estimate for the inverse operator of a degenerate two-point boundary value problem. (Russian) *Ž. Vychisl. Mat. i Mat. Fiz.* **20** (1980), no. 1, 77-83, 260. (E. S. Čičkin) **81g:65115** 65L10

- Samovol, V. S. Linearization of systems of differential equations in the neighborhood of invariant toroidal manifolds. (Russian) *Trudy Moskov. Mat. Obšč.* 38 (1979), 187-219. (A. A. Reinfelds) 81j:34068 34C20 (58F14)
- Sampathkumar, E. (with Walkar, H. B.) The connected domination number of a graph. *J. Math. Phys. Sci.* 13 (1979), no. 6, 607-613. (F. Harary) 81g:05077 05C40
- Sampson, A. A. Optimal redundancy compensation. *Rev. Econom. Stud.* 45 (1978), no. 3, 447-452. (Author's introduction) 81e:90016 90A10 (90A12)
- Sampson, Allan R. Simple BAN estimators of correlations for certain multivariate normal models with known variances. *J. Amer. Statist. Assoc.* 73 (1978), no. 364, 859-862. (T. D. Dwivedi) 81e:62030 62F10
- Nonnegative Cholesky decomposition and its application to association of random variables. *SIAM J. Algebraic Discrete Methods* 1 (1980), no. 3, 284-291. (I. Olkin) 81j:15026 15A57 (60E15, 62H20, 65U05)
- Sampson, G. More on weak estimates for oscillating kernels. *Indiana Univ. Math. J.* 28 (1979), no. 3, 501-505. (Richard Bagby) 81h:44004a 44A35 (47A30)
- More on weak estimates of oscillating kernels. II. *Indiana Univ. Math. J.* 28 (1980), no. 3, 349-360. (Richard Bagby) 81h:44004b 44A35 (47A30)
- Samukov, B. M. (with Belonogov, V. D.; Nikolaev, Ju. A.; Terjaev, E. D.) Estimation of aircraft parameters for design of adaptive digital control. *Identification and system parameter estimation (Proc. Fourth IFAC Sympos., Tbilisi, 1976), Part 2*, pp. 927-940. North-Holland, Amsterdam, 1978. (See 80d:93010b) 93E10
- (with Fursov, V. A.) Estimation of the reliability of parametric identification of an object in adaptive control system. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* 1979, no. 6, 173-180, 222 (Russian); translated as *Engng. Cybernetics* 17 (1979), no. 6, 142-149 (1980). (Authors' summary) 81h:93037 93C40 (90B25)
- Samsó, Julio A. Homocentric solar model by Abū Ja'far al Khāzin. *J. Hist. Arabic Sci.* 1 (1977), no. 2, 268-275. (David A. King) 81e:01011 01A30
- Samsouja, Z. V. On approximate conformal mapping of simply connected domains that are close to one another. (Russian) *Metric questions of the theory of functions and mappings, No. VII (Proc. Fourth Colloq., Quasiconformal Mappings and their Generalizations, Donetsk, 1974)* (Russian), pp. 153-170, "Naukova Dumka", Kiev, 1975. (See 80c:30023) 30E10
- The Green function for a class of second-order elliptic differential equations. (Russian) *Trudy Vyčisl. Centra Akad. Nauk Gruzin. SSR* 19 (1979), no. 1 *Vychisl. Mat. i Programirovanie*, 52-54. (Ju. V. Kostarčuk) 81c:35038 35J25 (35C15)
- Samsonov, A. M. Weierstrass condition in the dynamic problem of optimization of an elastic plate with a stiffener. *Izv. Akad. Nauk SSSR Meh. Teor. Tela* 14 (1979), no. 3, 185-188 (Russian); translated as *Mech. Solids* 14 (1979), no. 3, 163-166. (From the introduction) 81g:73076 73K10 (49B22)
- Samuel, Anbu Thomas (with Dey, Santi Sekhar) Static analysis of orthotropic curved bridge decks. *Comput. & Structures* 12 (1980), no. 2, 161-166. (Authors' summary) 81f:73042 73K30 (73K10)
- Samuel, C. Exemples d'espaces de Banach ayant la propriété de projection uniforme. *Séminaire sur la Géométrie des Espaces de Banach* (1977-1978), Exp. No. 27, 15 pp., *École Polytech., Palaiseau*, 1978. (Y. Benyamini) 81h:46030 46B25
- Sur la reproductibilité des espaces L_p . *Séminaire d'Analyse Fonctionnelle* (1978-1979), Exp. No. 26, 17 pp., *École Polytech., Palaiseau*, 1979. (Mario Milman) 81e:46061 46M05 (46A45)
- Sur la reproductibilité des espaces L_p . *Math. Scand.* 45 (1979), no. 1, 103-117. (Wolfgang Lusky) 81e:46062 46M05 (46B25)
- Samuelides, Mameul Tout feuilletage à croissance polynomiale est hyperfini. *J. Funct. Anal.* 34 (1979), no. 3, 363-369. (Robert Roussarie) 81m:57021 57R30
- Samsels, P. Bifurcation and limit point instability of dual eigenvalue third-order systems. *Internat. J. Solids and Structures* 16 (1980), no. 8, 743-756. (Author's summary) 81e:73047 73H05
- Samuelson, M. R. (with Olsen, O. H.) Rotationally symmetric breather-like solutions to the sine-Gordon equation. *Phys. Lett. A* 77 (1980), no. 2-3, 95-99. (Authors' summary) 81h:81019 81C05 (35Q20)
- Samuelson, William First-offer bargains. *Management Sci.* 26 (1980), no. 2, 155-164. (Author's summary) 81h:90231 90D30 (90A07)
- Samuelsson, A. (with Fröier, M.) Finite elements in plasticity—a variational inequality approach. *Mathematics of finite elements and applications, III (Proc. Third MAFELAP Conf., Brunel Univ., Uxbridge, 1978)*, pp. 105-115, Academic Press, London, 1979. (Vladimir Kerchman) 81e:73028 73E99 (65N30)
- Sami'il ibn Yahyā, Abū Naṣr ibn Yahyā ibn 'Abbas al-Maḡribī al-Andalusī. See Waterhouse, William C. 81i:01006
- Samur, Jorge D. (with de Acosta, Alejandro) Infinitely divisible probability measures and the converse Kolmogorov inequality in Banach spaces. *Studia Math.* 66 (1979), no. 2, 143-160. (Gilles Pisier) 81d:60004 60B11
- Šanin, N. A. (with Grušin, V. V.) Local properties of certain classes of degenerate elliptic pseudodifferential operators and operators of quasiprincipal type. (Russian) *Proceedings of an All-Union Conference on Partial Differential Equations (Moscow State Univ., Moscow, 1976)* (Russian), pp. 89-91, *Moskov. Gos. Univ., Meh.-Mat. Fakul'tet, Moscow*, 1978. (See 80f:35002) 35S05
- Local nonsolvability of differential equations with weighted derivatives. (Russian) *Mat. Sb. (N.S.)* 111(153) (1980), no. 3, 465-477, 480. (I. Aganović) 81i:35006 35A07 (35H05)
- Sanathanan, Lalitha (with Blumenthal, Saul) Estimation with truncated inverse binomial sampling. *Comm. Statist. A—Theory Methods* 9 (1980), no. 10, 997-1017. (Divakar Sharma) 81h:62049 62F10
- Šančenko, N. I. (with Andreev, A. S.; Šul'gin, A. M.) Application of the averaging method and the method of Ljapunov functions in the investigation of the motion of some mechanical systems. (Russian) *Theory of stability and its applications (Russian)*, pp. 157-163, 301, "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. (Authors' summary) 81h:93071 93D20 (34C29, 70F07)
- Sanchez, Carlos Marcelo Minimal words in the free group of rank two. *J. Pure Appl. Algebra* 17 (1980), no. 3, 333-337. (D. E. Cohen) 81h:20034 20E05
- Sanchez, David A. Computing periodic solutions of Riccati differential equations. *Appl. Math. Comput.* 6 (1980), no. 4, 283-287. (Author's summary) 81h:65056 65L05
- Sanchez, E. Compositions of fuzzy relations. *Advances in fuzzy set theory and applications*, pp. 421-433, North-Holland, Amsterdam, 1979. (Tadashi Ohkuma) 81a:03054 03E72
- casas Sánchez, José M. See Casas Sánchez, José M.
- Sanchez, Luis Solutions périodiques non triviales d'une équation d'évolution non linéaire du quatrième ordre. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 7, A305-A307. (Author's summary) 81a:35068 35L75
- Sánchez, Norma Interacting fields in noninvariant frames: one-loop corrections to particle production. *Phys. Lett. A* 81 (1981), no. 8, 424-428. (Author's summary) 81m:81097 81M05 (83E99)
- Sanchez, Richard Finite-wavelength oscillations of a diffuse-profile, Vlasov-fluid plasma column. *Phys. Fluids* 24 (1981), no. 1, 40-47. (Author's summary) 81k:76092 76X05
- Sánchez Giraldo, T. (with Campillo López, Antonio) Finitely generated projective modules and Fitting ideals. *Collect. Math.* 30 (1979), no. 2, 97-102. (J. Ohm) 81h:13009 13C10
- Sanchez-Hubert, Jacqueline Étude de certaines équations intégrales issues de la théorie de l'homogénéisation. (Italian summary) *Boll. Un. Mat. Ital. B* (5) 16 (1979), no. 3, 857-875. (Henri Berestycki) 81k:45017 45K05 (73B35, 76Q05)
- Asymptotic study of the macroscopic behaviour of a solid-fluid mixture. *Math. Methods Appl. Sci.* 2 (1980), no. 1, 1-11. (J. R. Ockendon) 81a:76046 76S05 (73F99)
- Sanchez-Mondragon, J. J. (with Eberly, J. H.; Narožny, N. B.) Periodic spontaneous collapse and revival in a simple quantum model. *Phys. Rev. Lett.* 44 (1980), no. 20, 1323-1326. (Authors' summary) 81g:81116 81K05
- (with Narožny, N. B.; Eberly, J. H.) Coherence versus incoherence: collapse and revival in a simple quantum model. *Phys. Rev. A* (3) 23 (1981), no. 1, 236-247. (Authors' summary) 81h:81123 81K05 (81C05)
- Sánchez Turet, M. (with Cuadras-Avellanas, C. M.) The concept of a common factor in factorial statistical analysis and its relation with the external variables. *Proceedings of the First World Conference on Mathematics at the Service of Man (Barcelona, 1977)*, Vol. 1, pp. 531-540, *Univ. Politéc., Barcelona*, 1980. (See 81m:90003a) 62H25
- Sánchez, C. (with Trillas Ruiz, Enrique) On entropies of fuzzy sets deduced from metrics. (Spanish. English summary) *Estadist. Española* No. 82-83 (1979), 17-25. (Elie Sanchez) 81g:94082 94D05 (94A17)
- Sancho, J. M. (with San Miguel, M.) A colored-noise approach to Brownian motion in position space. Corrections to the Smoluchowski equation. *J. Statist. Phys.* 22 (1980), no. 5, 605-624. (Authors' summary) 81j:82006 82A05 (60J65, 82A70)
- Sancho de San Román, Juan Formations of associative or Lie algebras. *Proceedings of the IV International Colloquium on Differential Geometry (Univ. Santiago de Compostela, Santiago de Compostela, 1978)*, pp. 261-266, *Cursos Congr. Univ. Santiago de Compostela*, 15, *Univ. Santiago de Compostela, Santiago de Compostela*, 1979. (Ralph K. Amayo) 81h:17014 17B30 (17B05)
- Sanctuary, B. C. (with Garisto, Frank) Magnetic multipoles in nonresonance time dependent fields. *J. Chem. Phys.* 73 (1980), no. 6, 2927-2928. (Authors' summary) 81i:81020 81C05
- Sancuk, A. V. (with Kislovskii, V. N.; Sedleckaja, N. I.; Kaščenko, A. V.; Ivanova, L. S.) Algorithms for construction of special lines and grids on surfaces. (Russian) *Prikl. Geom. i Inžener. Grafika* No. 30 (1980), 97-101, 136. (Authors' summary) 81j:53010 53A17
- Sandberg, G. A primer on relational data base concepts. *IBM Systems J.* 20 (1981), no. 1, 23-40. (Author's summary) 81m:68083 68H05
- Sandberg, I. W. A theorem concerning properties of an arms-race model. *IEEE Trans. Systems Man Cybernet.* 8 (1978), no. 1, 29-31. (Author's summary) 81e:90121 90D25 (90A07, 92A20, 93D15)
- On the performance of dominant regulated firms in a competitive environment. *Internat. J. Policy Anal. Inform. Systems* 4 (1980), no. 1, 23-35. (Author's summary) 81i:90035 90A12 (90A14)
- See also Marinov, Corneliu, 81m:94028
- Sandblom, C. L. Theoretical properties and numerical tests of an efficient nonlinear decomposition algorithm. *J. Optim. Theory Appl.* 30 (1980), no. 2, 211-227. (Author's summary) 81d:90094 90C30
- Sandefur, James T., Jr. (with Goldstein, Jerome A.) Equipartition of energy for symmetric hyperbolic systems. *Constructive approaches to mathematical models (Proc. Conf. in honor of R. J. Duffin, Pittsburgh, Pa., 1978)*, pp. 395-411, *Academic Press, New York*, 1979. (J. Glimm) 81h:35060 35L55
- Sandell, Nils R., Jr. (with Athans, Michael) A finite-state, finite-memory minimum principle. *J. Optim. Theory Appl.* 25 (1978), no. 2, 289-310. (Authors' summary) 81e:93097 93E20
- (with Segall, Adrian) Dynamic file assignment in a computer network. II. Decentralized control. *IEEE Trans. Automat. Control* 24 (1979), no. 5, 709-715. (Authors' summary) 81f:68029 68B15 (68A05, 93A99)
- (with Loze, Douglas P.) Gradient calculations for linear quadratic fixed-control structure problems. *IEEE Trans. Automat. Control* 25 (1980), no. 2, 285-288. (G. F. Raggett) 81e:93055 93C50 (49D07)
- (with Pappas, Thrasylvoulos; Laub, Alan J.) On the numerical solution of the discrete-time algebraic Riccati equation. *IEEE Trans. Automat. Control* 25 (1980), no. 4, 631-641. (Authors' summary) 81h:93065a 93C55 (65F05)
- See also Emami-Naeini, A.; et al., 81h:93065b
- fearnley-Sander, Desmond. See Fearnley-Sander, Desmond
- Sander, Guy Application de certains éléments finis équilibre en dynamique des structures. *Journées "Éléments Finis" (Rennes, 1975)*, 26 pp., *Univ. Rennes, Rennes*, 1975. (Author's introduction) 81e:65061 65N30 (73K25)
- Sanders, J. Lyell, Jr. The cylindrical shell loaded by a concentrated normal force. *Mechanics today*, Vol. 5, pp. 427-438, *Pergamon, Oxford*, 1980. (N. Gass) 81m:73066 73J99 (35C05)
- Sanders, J. W. (with Loxton, John H.) On an inversion theorem of Möbius. *J. Austral. Math. Soc. Ser. A* 30 (1980/81), no. 1, 15-32. (Samuel S. Wagstaff, Jr.) 81k:10066 10A20 (10-03, 65D30)
- Sanders, Jan A. (with van der Aa, Els) The 1:2:1-resonance, its periodic orbits and integrals. *Asymptotic analysis*, pp. 187-208, *Lecture Notes in Math.*, 711, Springer, Berlin, 1979. (From the introduction) 81h:70016 70K30 (58F05, 70H99)
- (with Verhulst, Ferdinand) Approximations of higher order resonances with an application to Contopoulos' model problem. *Asymptotic analysis*, pp. 209-228, *Lecture*

- Notes in Math., 711, Springer, Berlin, 1979. (James A. Murdock) **81f:58023** 58F05 (34C25, 70H99, 70K30)
- On the passage through resonance. *SIAM J. Math. Anal.* **10** (1979), no. 6, 1220-1243. (Martin Kummer) **81c:34046** 34E05 (70K30)
- Asymptotic approximations and extension of time-scales. *SIAM J. Math. Anal.* **11** (1980), no. 4, 758-770. (Ch. G. Philos) **81f:34014** 34A45
- Sanders, T. J. A finiteness condition in CG-shape. Proceedings of the 1978 Topology Conference (Univ. Oklahoma, Norman, Okla., 1978), I. *Topology Proc.* **3** (1978), no. 1, 175-177 (1979). (Author's review) **81f:54022** 54F43 (54C56, 54D45)
- Sanderson, Arthur C. (with Segen, Jakob) Detecting change in a time-series. *IEEE Trans. Inform. Theory* **26** (1980), no. 2, 249-255. (Authors' summary) **81c:94009** 94A12 (62M99)
- Sanderson, Brian J. (with Koschorke, Ulrich) Self-intersections and higher Hopf invariants. *Topology* **17** (1978), no. 3, 283-290. (From the introduction) **81f:55014** 55Q25 (55P35, 57R90)
- The geometry of Mahowald orientations. *Algebraic topology, Aarhus 1978* (Proc. Sympos., Univ. Aarhus, Aarhus, 1978), pp. 152-174. *Lecture Notes in Math.*, 763, Springer, Berlin, 1979. (M. Mahowald) **81c:57039** 57R95 (55Q45, 55S05, 57R42)
- Sanderson, Donald E. Criteria for constancy of functions with almost totally disconnected range or domain. *Acta Math. Acad. Sci. Hungar.* **35** (1980), no. 1-2, 33-36. (R. E. Smithson) **81f:54026** 54C60 (26A99)
- Advanced plane topology from an elementary standpoint. A simple combinatorial approach to subtle topological premises of basic undergraduate analysis. *Math. Mag.* **53** (1980), no. 2, 81-89. (A. Dold) **81j:55002** 55-01 (55M99)
- Sandri, Claudio (with Gallo, Giorgio; Sodini, Claudio) An algorithm for the min concave cost flow problem. *European J. Oper. Res.* **4** (1980), no. 4, 248-255. (Authors' summary) **81b:90069** 90B10
- Sandstrand, R. L. (with McGilchrist, C. A.) Recursive estimation of the general linear model with dependent errors. *J. Roy. Statist. Soc. Ser. B* **41** (1979), no. 1, 65-68. (Andrew Harvey) **81c:62073** 62J05
- Sandvici, Profla The nullity spaces of the curvature of a derivation law in a vector bundle. (Romanian. English summary) *Studia Univ. Babeş-Bolyai Math.* **24** (1979), no. 1, 3-6. (D. I. Papuc) **81g:53026** 53C05
- Sandrakli, L. M. Classification of one-electron states in crystal on the basis of spin-space-groups. (Russian) *Izv. Vys. Uchebn. Zaved. Fizika* **1979**, no. 9, 20-25. (Nguyễn Văn Hiê) **81h:81038** 81C40 (82A60)
- Sandru, N. (with Camenschi, G.) Inertia influence in strip drawing problem. *Rev. Roumaine Sci. Tech. Sér. Méc. Appl.* **25** (1980), no. 2, 207-216. (Authors' summary) **81d:73034** 73E99 (76A05)
- Sands, A. D. On Keller's conjecture for certain cyclic groups. *Proc. Edinburgh Math. Soc.* (2) **22** (1979), no. 1, 17-21. (N. G. de Brujin) **81c:20013** 20D99
- Sands, Bill (with Rival, Ivan) Planar sublattices of a free lattice. I. *Canad. J. Math.* **30** (1978), no. 6, 1256-1283. (K. A. Baker) **81f:06011a** 06B25
- (with Rival, Ivan) Planar sublattices of a free lattice. II. *Canad. J. Math.* **31** (1979), no. 1, 17-34. (K. A. Baker) **81f:06011b** 06B25
- Generating sets for lattices of dimension two. *Discrete Math.* **29** (1980), no. 3, 287-292. (James W. Lea, Jr.) **81c:06010** 06B05
- (with Rival, Ivan) On the adjacency of vertices to the vertices of an infinite subgraph. *J. London Math. Soc.* (2) **21** (1980), no. 3, 393-400. (M. E. Watkins) **81i:05094** 05C35 (06A10)
- Sands, Matthew (with Feynman, Richard R.; Leighton, Robert B.) ★Фейнмановские лекции по физике. 5. Электричество и магнетизм. (Russian) [Feynman lectures in physics. 5. Electricity and magnetism] Translated from the English by G. I. Kopylov and Ju. A. Simonov. Edited by Ju. A. Smorodinskii. Second edition. "Mir", Moscow, 1977. 302 pp. (Editors) **81f:78001a** 78-01 (73-01)
- (with Feynman, Richard R.; Leighton, Robert B.) ★Фейнмановские лекции по физике. 7. Физика сплошных сред. (Russian) [Feynman lectures in physics. 7. Continuum physics] With a supplement "A dynamical model of crystal structure" by Lawrence Bragg and J. F. Nye in English and Russian. Translated from the English by A. V. Effemov and Ju. A. Simonov. Edited by Ju. A. Smorodinskii. Second edition. "Mir", Moscow, 1977. 288 pp. (Editors) **81f:78001c** 78-01 (73-01)
- (with Feynman, Richard R.; Leighton, Robert B.) ★Фейнмановские лекции по физике. 8, 9. Квантовая механика. (Russian) [Feynman lectures in physics. 8, 9. Quantum mechanics] Translated from the English by G. I. Kopylov. Edited by Ju. A. Smorodinskii. Second edition. "Mir", Moscow, 1978. 526 pp. (Editors) **81a:81001** 81-01
- Sands, Richard (with Young, Forrest W.) Component models for three-way data: an alternating least squares algorithm with optimal scaling features. *Psychometrika* **45** (1980), no. 1, 39-67. (B. K. Shah) **81h:62183** 62P15
- Sandru, N. I. Relatively free commutative Moufang loops. (Russian) *Algebra i Logika* **18** (1979), no. 2, 194-205, 254. (Ján Duplák) **81m:20093** 20N05
- The structure of CH-quasigroups. (Russian) *Izv. Akad. Nauk Moldav. SSR Ser. Fiz.-Tehn. Mat. Nauk* **1980**, no. 1, 9-15, 92. (Ján Duplák) **81j:20163** 20N05
- Sándor, A. (with Cioacă, C.) Two-nucleon reduced widths in the asymmetric two-center shell model. (French summary) *Rev. Roumaine Phys.* **25** (1980), no. 1, 65-73. (Authors' summary) **81a:81103** 81G35
- Saneakata, Nobuhiro Convergence of approximate solutions to quasilinear evolution equations in Banach spaces. *Proc. Japan Acad. Ser. A Math. Sci.* **55** (1979), no. 7, 245-249. (Maurice Gaultier) **81c:47065** 47H15 (58D25)
- Sandfeld, A. (with Steinhagen, A.; Hennenberg, Marcel; Bisch, P. M.; van Lamsweerde-Gallez, D.; Dalle-Vedove, W.) Mechanical, chemical, and electrical constraints and hydrodynamic interfacial instability. *Dynamics and instability of fluid interfaces* (Proc. Meeting, Tech. Univ. Denmark, Lyngby, 1978), pp. 168-204. *Lecture Notes in Phys.*, 105, Springer, Berlin, 1979. (See **81j:76045**) 76E99
- (with Hennenberg, Marcel; Bisch, P. M.; Vignes-Adler, M.) Interfacial instability and longitudinal waves in liquid-liquid systems. *Dynamics and instability of fluid interfaces* (Proc. Meeting, Tech. Univ. Denmark, Lyngby, 1978), pp. 229-259. *Lecture Notes in Phys.*, 105, Springer, Berlin, 1979. (See **81j:76045**) 76E05
- Sandford, David H. Notes on logics of vagueness and some applications. *Fuzzy sets* (Proc. Sympos. Policy Anal. Inform. Systems, Duke Univ., Durham, N.C., 1980), pp. 123-126, Plenum, New York, 1980. (Siegfried Gottwald) **81m:03033** 03B52
- nguyen dinh Sang See Nguyen Dinh Sang
- Sanginov, A. (with Mulloev, S.) General boundary value problem for a system of equations of composite type with multiple real characteristics. (Russian) *Differential and integral equations*, No. 1 (Russian), pp. 139-148. *Tadzik. Gos. Univ., Dushanbe*, 1977. (A. Džuraev) **81b:35071** 35M05
- Sangiovanni-Vincentelli, Alberto (with Mandrioli, Dino; Somalvico, Marco) Toward a theory of problem solving. *Topics in artificial intelligence*, pp. 47-167. *CISM Courses and Lectures*, 256, Springer, Vienna, 1978. (See **80a:68102**) 68G20
- (with Ting, Benjamin S.; Kuh, Ernest S.) Via assignment problem in multilayer printed circuit board. *IEEE Trans. Circuits and Systems* **26** (1979), no. 4, 261-272. (O. D'Antona) **81a:94068** 94C15 (68C25)
- Sangui, A. G. B_∞ -convex spaces. (Russian. Georgian and English summaries) *Sobbič. Akad. Nauk Gruz. SSR* **94** (1979), no. 3, 553-556. (G. M. Ustinov) **81g:46020** 46B20 (60B11)
- Sanguineti, Giamina An application of the cosinusoidal plasticity condition. (Italian summary) *Boll. Un. Mat. Ital. B* (5) **16** (1979), no. 3, 779-794. (T. G. Rogers) **81c:73029** 73E99 (73E05)
- Sangwine-Yager, J. R. (with Chakerian, G. D.) A generalization of Minkowski's inequality for plane convex sets. *Geom. Dedicata* **8** (1979), no. 4, 437-444. (Erwin Lutwak) **81a:52010** 52A40
- do Sanh See Do Sanh
- Sani, Robert L. (with Lee, Robert L.; Gresho, Philip M.) Smoothing techniques for certain primitive variable solutions of the Navier-Stokes equations. *Internat. J. Numer. Methods Engng.* **14** (1979), no. 12, 1785-1804. (V. Girault) **81c:76025** 76D05 (65D10)
- (with Gresho, Philip M.; Lee, Robert L.; Chan, Stevens T.) Solution of the time-dependent incompressible Navier-Stokes and Boussinesq equations using the Galerkin finite element method. *Approximation methods for Navier-Stokes problems* (Proc. Sympos., Univ. Paderborn, Paderborn, 1979), pp. 203-222. *Lecture Notes in Math.*, 771, Springer, Berlin, 1980. (Authors' introduction) **81h:65113** 65P05 (76D05)
- (with Gresho, Philip M.; Lee, Robert L.) On the time-dependent solution of the incompressible Navier-Stokes equations in two and three dimensions. *Recent advances in numerical methods in fluids*, Vol. 1, pp. 27-79. *Pineridge, Swansea*, 1980. (See **81j:76002**) 76D05
- Sankidze, D. O. An algorithm for finding the shortest covering using the coloring of nonoriented graphs in solving some problems of minimization. (Russian. Georgian and English summaries) *Sobbič. Akad. Nauk Gruz. SSR* **95** (1979), no. 1, 137-139. (Author's summary) **81g:68097** 68E10 (68C05)
- Sania, N. A. Canonical recursive functions and operations. (Russian. English summary) *Studies in constructive mathematics and mathematical logic*, VIII. *Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* **88** (1979), 218-235, 246-247. (S. A. Berezin) **81a:03044** 03D20
- Sankappanavar, H. P. Decision problems: history and methods. *Mathematical logic* (Proc. First Brazilian Conf., State Univ. Campinas, Campinas, 1977), pp. 241-291. *Lecture Notes in Pure and Appl. Math.*, 39, Dekker, New York, 1978. (Roman Murawski) **81a:03011** 03B25 (03D35)
- Sankaran, N. (with Yadav, Ram Avtar) G-domains and pseudovaluations. *Rend. Sem. Mat. Univ. Padova* **61** (1979), 33-38 (1980). (Marco Fontana) **81h:13003** 13B20
- San Miguel, M. (with Aburrea, J.; Campos, C.) On conditional independence in the sense of Beck. (Spanish. English summary) *Contributions in probability and mathematical statistics, teaching of mathematics and analysis* (Spanish), pp. 25-32. *Grindley, Granada*, 1979. (Evarist Giné) **81h:60013** 60B12
- (with Sancho, J. M.) A colored-noise approach to Brownian motion in position space. Corrections to the Smoluchowski equation. *J. Statist. Phys.* **22** (1980), no. 5, 605-624. (Authors' summary) **81j:82006** 82A05 (60J65, 82A70)
- Sannikova, A. K. (with Tanaev, V. S.) A class of extremal permutation problems. (Russian. English summary) *Dokl. Akad. Nauk BSSR* **23** (1979), no. 9, 784-786, 859. (E. Ja. Gabovič) **81c:05010** 05A05
- Sannomiya, Nobuo A method for solving mixed-integer linear programming problems with angular structure. *Mem. Fac. Engng. Kyoto Univ.* **41** (1979), no. 4, 462-473. (Author's summary) **81a:90107** 90C05
- Sannuti, Peddipullaiiah (with Puri, Narindra Nath) Symbolic network analysis—an algebraic formulation. *IEEE Trans. Circuits and Systems* **27** (1980), no. 8, 679-687. (Guy Jumarie) **81j:94052** 94C99 (15A99, 90B40)
- Sano, Osamu (with Hasimoto, Hidenori) Three-dimensional Moffatt-type eddies due to a Stokeslet in a corner. *J. Phys. Soc. Japan* **48** (1980), no. 5, 1763-1768. (Authors' summary) **81m:76021** 76D99
- Sano, Takao Unsteady heat transfer from a circular cylinder immersed in a Darcy flow. *J. Engng. Math.* **14** (1980), no. 3, 177-190. (Author's summary) **81d:76091** 76S05 (80A20)
- sancho de San Román, Juan See Sancho de San Román, Juan
- semenov-tjan-Sanskii, M. A. See Semenov-Tjan-Sanskii, M. A.
- Sansone, Giovanni See Obituary: Sansone, Giovanni, **81k:01057**
- Sansuc, J.-J. (with Colliot-Thélène, Jean-Louis) Fibrés quadratiques et composantes connexes réelles. *Math. Ann.* **244** (1979), no. 2, 105-134. (Daniel Coray) **81c:14010** 14G05 (10C04)
- Santalo, L. A. Random lines and tessellations in a plane. *Stochastica* **4** (1980), no. 1, 3-13. (Rodney Coleman) **81c:60012** 60D05 (52A45, 60G55)
- Santamato, E. (with Lavenda, B. H.) Generalized Einstein theory of Brownian motion for nonequilibrium fluctuations. *Lett. Nuovo Cimento* (2) **26** (1979), no. 16, 505-510. (Hirokazu Fujisaka) **81a:82007** 82A05
- (with Lavenda, B. H.) The stochastic action integral interpretation of the quantum-mechanical transformation function. *Lett. Nuovo Cimento* (2) **28** (1980), no. 5, 189-192. (From the text) **81c:81042** 81C20
- Sant'Anna, A. P. Some transformations of Markov processes. (Portuguese) *Proceedings of the 3rd National Symposium on Probability and Statistics* (Inst. Mat. Estatist., Univ. São Paulo, São Paulo, 1978) (Portuguese), pp. 136-138. *Univ. São Paulo, São Paulo*, 1979. (Henryk Gzyl) **81h:60067** 60J25
- Sánta-Tóth, Edit (with Szóts, Miklós) Colloquium on Logic in Programming, 10-15 September 1978, Salgótarján (Hungary). *Polish Acad. Sci. Inst. Philos. Sociol. Bull. Sect.*

- Logic* 8 (1979), no. 4, 206–213. (Editors) **81d:60016** 68B05
- Santavä, Sylva** Professor Josef Brejcha has died. (Czech) *Časopis Pěst. Mat.* **105** (1980), no. 1, 89–90. (Editors) **81k:01046** 01A70
- di Sante, A.** See Di Sante, A.
- Santhakumari, C.** On quotient loops of normal subloops. *Canad. Math. Bull.* **22** (1979), no. 4, 517–518. (Phullendu Das) **81g:20131** 20N05
- Santilli, Ruggero Maria** On a possible Lie-admissible covering of the Galilei relativity in Newtonian mechanics for nonconservative and Galilei form-noninvariant systems. *Hadronic J.* **1** (1978), no. 1, 223–423. (Edwin Ihrig) **81g:83004a** 83A05 (17B65, 58F06, 70H99)
- Addendum to: "On a possible Lie-admissible covering of the Galilei relativity in Newtonian mechanics for nonconservative and Galilei form-noninvariant systems". *Hadronic J.* **1** (1978), no. 4, 1279–1342. (Edwin Ihrig) **81g:83004b** 83A05 (17B65, 58F06, 70H99)
- Status of the mathematical and physical studies on the Lie-admissible formulations on July 1979, with particular reference to the strong interactions. Proceedings of the Second Workshop on Lie-Admissible Formulations (Sci. Center, Harvard Univ., Cambridge, Mass., 1979), Part A. *Hadronic J.* **2** (1979), no. 6, 1460–2018. (J. F. Cornwell) **81d:17014a** 17D99 (17A30, 81C99)
- (with Fronteau, Jean; Tellez-Arenas, A.) Lie-admissible structure of statistical mechanics. Proceedings of the Second Workshop on Lie-Admissible Formulations (Sci. Center, Harvard Univ., Cambridge, Mass., 1979), Part B. *Hadronic J.* **3** (1979/80), no. 1, 130–176. (D. A. Dubin) **81c:82005** 82A05 (17A30)
- (with Tellez-Arenas, A.; Fronteau, Jean) Closed systems with nonconservative internal forces. Proceedings of the Second Workshop on Lie-Admissible Formulations (Sci. Center, Harvard Univ., Cambridge, Mass., 1979), Part B. *Hadronic J.* **3** (1979/80), no. 1, 177–195. (John McEwan) **81c:81099** 81G05
- (with Myung, Hyo Chul) Further studies on the recently proposed experimental test of Pauli's exclusion principle for the strong interactions. Proceedings of the Second Workshop on Lie-Admissible Formulations (Sci. Center, Harvard Univ., Cambridge, Mass., 1979), Part B. *Hadronic J.* **3** (1979/80), no. 1, 196–255. (H. S. Green) **81b:17001** 17A15 (17D99, 81G20)
- (with Prince, G. E.; Leach, P. G. L.; Kalotas, T. M.; Eliezer, C. J.) The Lie and Lie-admissible symmetries of dynamical systems. Proceedings of the Second Workshop on Lie-Admissible Formulations (Sci. Center, Harvard Univ., Cambridge, Mass., 1979), Part B. *Hadronic J.* **3** (1979/80), no. 1, 390–439. (Richard C. Churchill) **81f:81030** 81D20 (22E70, 58F35, 70H99)
- Initiation of the representation theory of Lie-admissible algebras of operators on bimodular Hilbert spaces. Proceedings of the Second Workshop on Lie-Admissible Formulations (Sci. Center, Harvard Univ., Cambridge, Mass., 1979), Part B. *Hadronic J.* **3** (1979/80), no. 1, 440–506. (J.-P. Antoine) **81h:17004** 17A30 (81D99)
- Remarks on the problematic aspects of Heisenberg/Lie/symplectic formulations. *Hadronic J.* **3** (1979/80), no. 2, 854–913. (S. Gudder) **81d:81005** 81B05 (58F06)
- Errata: "Status of the mathematical and physical studies on the Lie-admissible formulations on July 1979, with particular reference to the strong interactions". *Hadronic J.* **3** (1979/80), no. 2, 914. (From the text) **81d:17014b** 17D99
- (with Klorides, Christos N.; Myung, Hyo Chul) Elaboration of the recently proposed test of Pauli's principle under strong interactions. *Phys. Rev. D* **(3)** **22** (1980), no. 4, 892–907. (From the introduction) **81i:81044** 81D05 (81G05)
- See also Applications of Lie-admissible algebras in physics, **81i:81040**
- Santner, Thomas J.** (with Snell, Mark K.) Small-sample confidence intervals for $p_1 - p_2$ and p_1/p_2 in 2×2 contingency tables. *J. Amer. Statist. Assoc.* **75** (1980), no. 370, 386–394. (Graham J. G. Upton) **81h:62102** 62H17
- Santoro, N.** (with Romani, Francesco) On hash techniques in a paged environment. *Calcolo* **16** (1979), no. 3, 289–303 (1980). (Authors' summary) **81g:68033** 68B15 (68E05, 68H05)
- Santoro, Nicola** Extending the four Russians' bound to general matrix multiplication. *Inform. Process. Lett.* **10** (1980), no. 2, 87–88. (From the introduction) **81a:68051** 68C25
- Santos, Vitoriano Ruas B.** A direct method for solving two-dimensional one phase Stefan problems. *Mem. Numer. Math.* **6** (1979), 39–63. (Richard E. Ewing) **81a:65105** 65N30
- A direct method for solving two-dimensional one-phase Stefan problems. *Comput. Methods Appl. Mech. Engrg.* **25** (1981), no. 1, 51–64. (Author's summary) **81k:80001** 80A20 (65N30)
- Sami, H.** (with Weiland, J.) Formation of convective cells by modulational instability of drift Alfvén waves. *Phys. Lett. A* **72** (1979), no. 3, 221–224. (Authors' summary) **81j:76112** 76X05 (76E15)
- Sanyal, Arun** On triply perspective triangles. *Math. Student* **45** (1977), no. 3, 52–57 (1979). (Author's summary) **81j:51004** 51A05 (51N15)
- (with Mandan, Sahib Ram) An extension of Hesse's theorem. *Math. Student* **45** (1977), no. 3, 92–94 (1979). (From the text) **81j:51020** 51N15 (51A05)
- Sanyal, Gindra S.** (with Deshpande, Manohar D.; Das, B. N.) Analysis of an end launcher for an X-band rectangular waveguide. *IEEE Trans. Microwave Theory Tech.* **27** (1979), no. 8, 731–735. (Y. Hayashi) **81f:78018** 78A50
- Sanz, J. L.** Two charges in an external electromagnetic field: a generalized covariant Hamiltonian formulation. *Ann. Inst. H. Poincaré Sect. A (N.S.)* **31** (1979/80), no. 2, 115–139. (R. P. Gaida) **81d:78014** 78A35 (58F05)
- Sanz, Marta** (with Nualart Rodón, David) Caracterización de martingales a deux paramètres indépendantes du chemin. 8e École d'Été de Calcul des Probabilités de Saint-Flour (Saint-Flour, 1978). *Ann. Sci. Univ. Clermont Math.* **10** (1979), 96–104. (Authors' summary) **81k:60056** 60G44
- (with Nualart Rodón, David) A Markov property for two-parameter Gaussian processes. *Stochastica* **3** (1979), no. 1, 1–16. (M. Zakai) **81i:60066** 60J25 (60G60)
- Sanz Serna, J. M.** Some aspects of the boundary locus method. *BIT* **20** (1980), no. 1, 97–101. (V. R. Ibragimov) **81m:65145** 65L20
- Sanz Solé, Marta** Stochastic differential calculus for processes with n -dimensional parameter. (Spanish) *Stochastica* **2**, no. 4, 51–70 (1978). (Dominique Lepingle) **81f:60078** 60G60 (60H15)
- Sapa, V. A.** See Collection: Questions on mechanics and applied mathematics, **81a:00007**
- and Applied mechanics. Applications of mathematical methods in the natural sciences, **81b:00004**
- Sapagovas, Mifodijus** (with Valaikiénė, Julė; Sapagovienė, Dangutė) The nonlinear relaxation method for solving ordinary differential equations. (Russian. Lithuanian and English summaries) *Diferencial'nye Uravnenija i Primenen.—Trudy Sem. Procepy Optimal. Upravlenija i Sekcija No. 25* (1979), 9–40, 57. (E. G. Djakonov) **81j:65094** 65L10
- Construction of difference schemes of increased accuracy for quasilinear elliptic equations. III. The two-dimensional case. (Russian. Lithuanian and English summaries) *Litovsk. Mat. Sb.* **19** (1979), no. 3, 69–80, 203. (R. Kodnár) **81b:65091** 65N10
- Sapagovienė, Dangutė** (with Valaikiénė, Julė; Sapagovas, Mifodijus) The nonlinear relaxation method for solving ordinary differential equations. (Russian. Lithuanian and English summaries) *Diferencial'nye Uravnenija i Primenen.—Trudy Sem. Procepy Optimal. Upravlenija i Sekcija No. 25* (1979), 9–40, 57. (E. G. Djakonov) **81j:65094** 65L10
- Sapargaliev, A. A.** (with Jakubov, E. M.) Parametric differential equations of a trajectory of charged particles in stationary electromagnetic fields. (Russian. Kazakh summary) *Izv. Akad. Nauk Kazah. SSR Ser. Fiz.-Mat.* **1980**, no. 4, 59–65. (Authors' summary) **81i:78004** 78A35
- Sapilidi, T. M.** Approximation of continuous functions by Riesz sums. (Russian) *Mathematical analysis and probability theory (Russian)*, pp. 158–161, 221. "Naukova Dumka", Kiev, 1978. (Author's summary) **81b:42014** 42A10
- Sharp upper bounds of deviations of conjugate Riesz sums over classes of differentiable functions. (Russian) *Studies in the theory of approximation of functions and their applications (Russian)*, pp. 162–173, 194. *Akad. Nauk Ukrain. SSR, Inst. Mat., Kiev*, 1978. (A. B. Németh) **81c:41047** 41A35 (30E10, 41A44)
- Approximation of functions of Hölder classes by Steklov sums. (Russian) *Akad. Nauk Ukrain. SSR Inst. Mat. Preprint No. 38* (1978), 47 pp. (V. A. Baskakov) **81h:41023** 41A30 (42A24)
- Sapir, M. V.** (with Golubov, È. A.) Residual finiteness of some constructions of universal algebras. (Russian) *Ural. Gos. Univ. Mat. Zap.* **11** (1978), no. 1, 26–40, i–ii. (G. Čupona) **81f:08004** 08A35
- (with Golubov, È. A.) Varieties of finitely approximable semigroups. (Russian) *Dokl. Akad. Nauk SSSR* **247** (1979), no. 5, 1037–1041. (Anna Ja. Aizenštat) **81d:20050** 20M07
- (with Golubov, È. A.) Ideal extensions and commutative bundles of finitely approximable semigroups. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* **1979**, no. 7, 22–30. (Jerzy W. Grzymala-Busse) **81g:20122** 20M12
- On the lattice of quasivarieties of idempotent semigroups. (Russian) *Ural. Gos. Univ. Mat. Zap.* **11** (1979), no. 3. *Issled. po Sovremen. Algebre*, 158–169, 213. (G. Čupona) **81h:08010** 08C15 (20M07)
- Finite and independent axiomatizability of some quasivarieties of semigroups. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* **1980**, no. 2, 76–78. (Anna Ja. Aizenštat) **81h:20076** 20M07 (03B30, 03C05, 03C60, 08C15)
- On the quasivarieties generated by finite semigroups. *Semigroup Forum* **20** (1980), no. 1, 73–88. (Sheila Oates-Williams) **81c:08016** 08C15 (20M07)
- Šapiro, A. G.** (with Kalina, È. V.; Hurgin, Ja. I.) Stable distributions in problems of stochastic programming. (Russian) *Mathematical methods of solution of economic problems*, No. 8. (Russian) pp. 134–138. "Nauka", Moscow, 1979. (From the text) **81c:90063** 90C15 (60E07)
- Šapiro, A. P.** (with Skaleckaja, E. I.; Frisman, E. Ja.) ★ Дискретные модели динамики численности популяций и оптимизация промысла. (Russian) [Discrete models of the dynamics of population size and of optimization of industrial production] "Nauka", Moscow, 1979. 165 pp. (G. S. Ladde) **81f:92001** 92A05 (90A30, 92A15, 93C55)
- Šapiro, B. Z.** An algorithm for construction of a chain covering of an undirected graph. (Russian) *Moskov. Inst. Inž. Železnodoroz. Transporta Trudy No. 640 Prikl. Mat. i Zadaci Železnodoroz. Transporta* (1979), 138–142, 159. (Author's summary) **81i:05100** 05C45 (68C25)
- (with Valnštejn, A. D.) Structure of a set of \bar{a} -representable numbers. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* **1980**, no. 5, 8–11. (D. Preiss) **81h:28001** 28A05 (54H05)
- Šapiro, E. I.** Regulating algorithms for estimation of parameters in a linear regression model. (Russian) *Ekonom. i Mat. Metody* **16** (1980), no. 3, 545–556. (B. L. Granovskij) **81k:62154** 62P20 (62F35, 62J07)
- Šapiro, Ja. L.** (with Žukova, N. I.; Igošin, V. A.) Fiberings on some classes of Riemannian manifolds. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* **1979**, no. 7, 93–96. (D. I. Papuc) **81a:53042** 53C20
- (with Igošin, V. A.) Homomorphisms of quasigeodesic flows. (Russian) *Dokl. Akad. Nauk SSSR* **252** (1980), no. 2, 303–306. (A. Morimoto) **81m:58062** 58F17 (34C40)
- (with Igošin, V. A.) Stability of fibres of a foliation with a compatible Riemannian metric. (Russian) *Mat. Zametki* **27** (1980), no. 5, 767–778, 830. (N. M. Miščev) **81i:57023** 57R30
- Šapiro, L. B.** Regular averaging operators. (Russian) *Funkcional. Anal. i Prilozh.* **13** (1979), no. 1, 84–85. (E. Hallar) **81b:54015** 54C10 (47B99, 54A25)
- Šapiro, R. L.** Irreducible representations of the group $SU(n)$ of class 1 relative to $SU(n-1)$. Twelve papers in logic and algebra, pp. 183–186. *Amer. Math. Soc. Transl.*, **113**, *Amer. Math. Soc., Providence, R.I.*, 1979. (See **80m:00006**) 22E70
- (with Vilenkin, N. Ja.) Irreducible representations of the group $SU(n)$ of class 1 relative to $SU(n-1)$. Twelve papers in logic and algebra, pp. 187–200. *Amer. Math. Soc. Transl.*, **113**, *Amer. Math. Soc., Providence, R.I.*, 1979. (See **80m:00006**) 22E70
- Special functions connected with representations of the group $SU(n)$ of class 1 relative to $SU(n-1)$ ($n \geq 3$). Twelve papers in logic and algebra, pp. 201–211. *Amer. Math. Soc. Transl.*, **113**, *Amer. Math. Soc., Providence, R.I.*, 1979. (See **80m:00006**) 22E45 (22E70, 33A75)
- Šapiro, V. E.** (with Loginov, V. M.) On delocalization of motions in nonuniform high frequency fields with finite correlation time. *Phys. Scripta* **21** (1980), no. 6, 825–827. (B. Buti) **81i:78005** 78A35 (82A45)
- Šapkariev, Ilja A.** Polynome als allgemeine Integrale der homogenen linearen Differentialgleichungen. (Macedonian summary) *Makedon. Akad. Nauk. Umet. Oddel.*

- Prirod.-Mat. Nauk. Prilozh* 10 (1978), no. 2, 17-24. (E. Barvink) **81b:34007** 34A30
Polynome als partikuläre Integrale der normalen homogenen linearen
Differentialgleichungssysteme. (Macedonian summary) *Prirod.-Mat. Fak. Univ. Kiril
Metodij Skopje Godišnj* 26 (1978), 51-55. (E. Heil) **81d:34001** 34A05
- Sapoznik, N. A.* Weak stability of J. Marcinkiewicz's theorem and some inequalities for
characteristic functions. (Russian. English summary) Investigations in the theory of
probability distributions, IV. *Zap. Nauch. Sem. Leningrad. Otdel. Mat. Inst. Steklov.*
(LOMI) **85** (1979), 193-196, 242, 247. (I. V. Ostrovskii) **81a:60025** 60E10
The problem of stability for J. Marcinkiewicz's theorem. (Russian. English
summary) Studies in mathematical statistics, 3. *Zap. Nauch. Sem. Leningrad. Otdel.
Mat. Inst. Steklov. (LOMI)* **87** (1979), 104-124, 208-209, 214. (R. Cuppens) **81a:60024**
60E10
- Sapoznikova, T. O.* (with Maz'ja, V. G.) Multipliers in S. L. Sobolev spaces. (Russian.
English summary) *Vestnik Leningrad. Univ. Mat. Meh. Astronom.* **1979**, no. 2, 33-40,
119. (J. Kačur) **81a:46037** 46E35
(with Maz'ja, V. G.) On conditions for the boundary in the L_p -theory of elliptic
boundary value problems. (Russian) *Dokl. Akad. Nauk SSSR* **251** (1980), no. 5,
1055-1059. (O. John) **81k:35054** 35J40
Equivalent normings in spaces of functions with fractional or functional
smoothness. (Russian) *Sibirsk. Mat. Ž.* **21** (1980), no. 3, 184-196, 238. (M. Z.
Berkoško) **81k:46037** 46E35 (31C15)
- Sapoznik, D. V.* (with Ševčuk, L. M.) The use of the convolution method in two-stage linear
programming problems. (Russian) *Numerical methods of optimization (applied
mathematics)* (Russian), pp. 89-95. *Akad. Nauk SSSR Sibirsk. Otdel., Energet. Inst.,
Irkutsk*, 1978. (Editors) **81e:90061** 90C05
- Sapoznikov, A. V.* (with Bagrov, V. G.; Gitman, D. M.; Suhomlin, N. B.; Sapoznikov, V. N.)
New exact solutions of the Dirac equation. VII. (Russian) *Izv. Vysš. Učebn. Zaved.*
Fizika **1977**, no. 7, 46-51. (Authors' summary) **81a:81015a** 81C05
(with Bagrov, V. G.; Gitman, D. M.; Zadorožnyi, V. N.; Sapoznikov, V. N.) New
exact solutions of the Dirac equation. IX. (Russian) *Izv. Vysš. Učebn. Zaved. Fizika*
1978, no. 3, 46-49. (From the summary) **81a:81015c** 81C05
- Sapoznikov, V. N.* (with Bagrov, V. G.; Gitman, D. M.; Suhomlin, N. B.; Sapoznikov, A. V.)
New exact solutions of the Dirac equation. VII. (Russian) *Izv. Vysš. Učebn. Zaved.*
Fizika **1977**, no. 7, 46-51. (Authors' summary) **81a:81015a** 81C05
(with Bagrov, V. G.; Gitman, D. M.; Zadorožnyi, V. N.; Suhomlin, N. B.) New
exact solutions of the Dirac equation. VIII. (Russian) *Izv. Vysš. Učebn. Zaved. Fizika*
1978, no. 2, 13-18. (Authors' summary) **81a:81015b** 81C05
(with Bagrov, V. G.; Gitman, D. M.; Zadorožnyi, V. N.; Sapoznikov, A. V.) New
exact solutions of the Dirac equation. IX. (Russian) *Izv. Vysš. Učebn. Zaved. Fizika*
1978, no. 3, 46-49. (From the summary) **81a:81015c** 81C05
Symmetry and the separation of variables in a second-order linear differential
equation. I. (Russian) *Izv. Vysš. Učebn. Zaved. Fizika* **1978**, no. 5, 116-122. (Author's
summary) **81g:35011a** 35A22 (53B20)
Symmetry and the separation of variables in a second-order linear differential
equation. II. (Russian) *Izv. Vysš. Učebn. Zaved. Fizika* **1978**, no. 6, 7-10. (Author's
summary) **81g:35011b** 35C05 (53B20)
Stäckel spaces. (Russian) *Sibirsk. Mat. Ž.* **20** (1979), no. 5, 1117-1130, 1168. (V.
Oproiu) **81d:53016** 53B20 (58F05, 70H20)
- Sapoznikov, V. V.* See Sapoznikov, V. V.
Sapoznikov, V. V. See Sapoznikov, V. V.
Sapoznikov, B. D. A priori estimate of principal radii of curvature of a nonclosed convex
surface. (Russian) *Questions of global geometry (Russian)*, pp. 54-57. *Leningrad. Gos.
Ped. Inst., Leningrad*, 1979. (M. C. Chaki) **81h:53067** 53C45
- Sapoznikov, V. V.* (with Sapoznikov, V. V.) Class of easily checkable combinational
circuits. *Automat. i Telemekh.* **1979**, no. 10, 129-132. (Russian. English summary);
translated as *Automat. Remote Control* **40** (1979), no. 10, part 2, 1509-1511 (1980).
(Authors' summary) **81d:94043** 94C10
Check of linear combination circuits. *Kibernetika (Kiev)* **1979**, no. 3, 44-47, 122
(Russian); translated as *Cybernetics* **15** (1979), no. 3, 341-345 (1980). (From the text)
81a:94050 94C05
(with Dundua, A. A.; Sapoznikov, V. V.) On coding the states of asynchronous
automatic devices by a code with constant weight. (Russian. Georgian and English
summaries) *Soobšč. Akad. Nauk Gruz. SSR* **96** (1979), no. 3, 669-672. (Authors'
summary) **81c:68045** 68D25 (94A24)
- Sapoznikov, V. V.* (with Sapoznikov, V. V.) Class of easily checkable combinational
circuits. *Automat. i Telemekh.* **1979**, no. 10, 129-132. (Russian. English summary);
translated as *Automat. Remote Control* **40** (1979), no. 10, part 2, 1509-1511 (1980).
(Authors' summary) **81d:94043** 94C10
(with Dundua, A. A.; Sapoznikov, V. V.) On coding the states of asynchronous
automatic devices by a code with constant weight. (Russian. Georgian and English
summaries) *Soobšč. Akad. Nauk Gruz. SSR* **96** (1979), no. 3, 669-672. (Authors'
summary) **81c:68045** 68D25 (94A24)
- Sapoznikov, B. N.* Structure of a tensor space. (Russian) *Trudy Geom. Sem. Kazan. Univ.*
No. 10 (1978), 97-106. (Jaroslav Bureš) **81k:22016** 22E99
The structure of tensor bundles. I. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika*
1979, no. 5, 63-73. (J. Vilms) **81h:53029** 53B99 (53C10)
- Sarason, L. G.* Generalization of the theorems of Robinson and Molnar. (Russian)
Studies in functional analysis (Russian), pp. 122-129, v. *Ural. Gos. Univ., Sverdlovsk*,
1978. (V. P. Soltan) **81c:52010** 52A30
- Sarai, S. K.* (with Agarwal, A. B. L.) Invariant embedding: a new method of solving a
system of nonlinear boundary-value differential equations. *J. Math. Anal. Appl.* **72**
(1979), no. 2, 524-532. (G. H. Meyer) **81b:65071** 65L10 (34B15)
- Saralova, G. H.* (with Bañov, D. D.) Application of the method of two-sided
approximations to the search for periodic solutions of the integro-differential equation
of Volterra type. (Russian) *Arch. Math. (Brno)* **14** (1978), no. 4, 183-190. (From the
text) **81i:45017** 45J05
(with Bañov, D. D.) Application of the method of two-sided approximations to
finding periodic solutions of an integro-differential equation of Volterra type. (Russian)
An. Univ. București Mat. **28** (1979), 101-109. (Nicola Luca) **81e:45018** 45J05
(45D05)
- (with Bañov, D. D.) An application of the numerical-analytic method of A. M.
Samolienko for investigation of periodic systems of integro-differential equations. *Arch.
Math. (Brno)* **15** (1979), no. 2, 67-80. (A. A. Martinjuk) **81e:45025** 45M10 (34K15,
54J05, 65R20)
- (with Bañov, D. D.) The reduction principle for a class of integro-differential
equations. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* **1979**, no. 4, 39-45. (S. D.
Miluševa) **81b:45022** 45J05 (34A45)
- Sarfatidze, V. A.* Reconstruction of Lambert's optical curve from two of its images.
(Russian) *Dokl. Akad. Nauk SSSR* **249** (1979), no. 3, 565-568. (H. W. Guggenheimer)
81b:60006 86A30 (46N05, 51N05)
Convex sets in a manifold of nonnegative curvature. (Russian) *Mat. Zametki* **26**
(1979), no. 1, 129-136, 159. (A. V. Pogorelov) **81d:53039** 53C40 (52A99)
- Sarrafyan, Dirm* (with Derr, Leroy; Outlaw, Curtis) Generalization of Euler-Maclaurin
sum formula to the six-point Newton-Cotes quadrature formula. (Italian summary)
Rend. Mat. (6) **12** (1979), no. 3-4, 597-607 (1980). (M. I. Levin) **81f:65017** 65D30
- Sarason, S.* Estimate for the remainder term in a central limit theorem for a strongly
multiplicative system of functions. (Russian) *Random processes and mathematical
statistics* (Russian), pp. 178-182, 191, "Fan", Tashkent, 1978. (F. Móricz) **81e:60023**
60F05
- Sarason, V. A.* (with Stepan, L. I.) Plane problem of the dynamics of a crack in an elastic
solid. *Izv. Akad. Nauk SSSR Mekh. Tverd. Tela* **14** (1979), no. 4, 54-73. (Russian);
translated as *Mech. Solids* **14** (1979), no. 4, 46-62. (From the introduction) **81e:73052**
73M05
- Sarason, A. A.* (with Rusanov, V. V.) On the nonuniqueness of the solution of the
problem on steady flow about the plane wedge and circular cone. Special issue:
computational methods in nonlinear fluid mechanics. *Comput. & Fluids* **8** (1980), no. 2,
243-250. (Authors' summary) **81d:76070** 76L05 (76E99)
- Saran, Jagdish* (with Sen, Kanwar) On the fluctuations of partial sums. (German and
Russian summaries) *Math. Operationsforsch. Statist. Ser. Statist.* **10** (1979), no. 3,
469-478. (G. C. Jain) **81h:60096** 60J15 (90A08)
(with Sen, Kanwar) On the joint distribution of some rank order statistics. (French
and Italian summaries) *Statistica (Bologna)* **40** (1980), no. 2, 235-240. (P. K. Sen)
81i:62079 62G10
- Saran, S.* Transformation formulae for the terminating generalized Kampé de Fériet
function. *Indian J. Pure Appl. Math.* **11** (1980), no. 9, 1141-1146. (Ram Kishore Saxena)
81i:33005 33A35
- Sarason, Jukka* On decomposition of solutions of some higher order elliptic equations.
Ann. Acad. Sci. Fenn. Ser. A I Math. **4** (1979), no. 2, 267-277. (A. A. Arsen'ev)
81k:35056 35J40 (35C99)
Über die Approximation der Lösungen der Maxwellischen Randwertaufgabe mit der
Methode der finiten Elemente. (English summary) *Applicable Anal.* **10** (1980), no. 1,
15-30. (Rolf Rannacher) **81e:65062** 65N30 (78A25)
Über das Verhalten der Lösungen der Maxwellischen Randwertaufgabe in Gebieten
mit Kegelspitzen. (English summary) *Math. Methods Appl. Sci.* **2** (1980), no. 2, 235-250,
(Rolf Leis) **81g:35009** 35B65 (35G15, 35Q20, 58A10, 78A25)
- Sarangi, Sangappa Mallappa* (with Uraleddi, Basappa Amrutappa) Functions whose real
parts are greater than α . *J. Karnataka Univ. Sci.* **22** (1977), 37-43. (Carl P. McCarthy)
81a:30011 30C45
On $p(r)$ -defect and Picard Borel theorem. *Proceedings of the Conference on
Mathematical Analysis and its Applications (Inst. Engng., Mysore, 1977)*, pp. M182-M189,
Mathscience Rep., 91, *Inst. Math. Sci., Madras*, 1978. (See **80a:00007**) 30D35
(with Uraleddi, Basappa Amrutappa) The radius of convexity and starlikeness for
certain classes of analytic functions with negative coefficients. I. *Atti Accad. Naz. Lincei
Rend. Cl. Sci. Fis. Mat. Natur.* (8) **65** (1978), no. 1-2, 38-42 (1979). (Herb Silverman)
81d:30019 30C45 (30C55)
(with Singh, S. K.) Uniqueness theorems of meromorphic functions. *J. Indian
Math. Soc. (N.S.)* **42** (1978), no. 1-4, 313-319 (1979). (Heinrich Begehr) **81c:30060**
30D35
- Sarason, C. S.* The role of analogy in the beginning of general relativity. (Russian. English
summary) *History and methodology of the natural sciences. No. XXII: Physics (Russian)*,
pp. 77-83. *Moskov. Gos. Univ., Moscow*, 1979. (Author's summary) **81k:30062** 83-03
(01A65)
See also *History and methodology of the natural sciences. 81j:00002*
- Sarapa, Nikola* On the (c, α) summability of probability measures on compact semigroups.
Ber. Math.-Statist. Sect. Forsch. Graz No. 110-115 (1978), *Ber. No. 115*, 6 pp. (1979). (A.
Mukherjee) **81d:43002** 43A05 (40C05, 60B15)
On limiting properties of double series of probability distributions defined on
compact commutative semigroups. (Serbo-Croatian summary) *Glas. Mat. Ser. III*
13 (33) (1978), no. 1, 161-176. (Author's summary) **81h:43001** 43A05 (60B15)
On limiting properties of m -dimensional series of probability distributions defined
on compact commutative semigroups. (Serbo-Croatian summary) *Glas. Mat. Ser. III*
13 (33) (1978), no. 1, 177-182. (Author's summary) **81h:43002** 43A05 (60B15)
A note on the law of large numbers. (Serbo-Croatian summary) *Glas. Mat. Ser. III*
14 (34) (1979), no. 1, 175-180. (V. K. Rohatgi) **81c:60039** 60F15 (60G50)
- Sarapudinov, I. I.* The topology of the space $E^{(n)}(0, 1)$. (Russian) *Mat. Zametki* **26** (1979),
no. 4, 613-632, 655. (J. Albrecht) **81d:46021** 46E30
- Saratchandran, P.* (with Jacobs, O. L. R.) Comparison of adaptive controllers. *Automatica*
— *J. IFAC* **16** (1980), no. 1, 89-97. (Authors' summary) **81g:93068** 93C40 (93E20)
- Sarath, B.* (with Dixit, V. V.; Sobouti, Y.) Two basis sets for the g - and p -modes of
self-gravitating fluids. *Astronom. and Astrophys.* **89** (1980), no. 3, 259-263. (Authors'
summary) **81h:76028** 76E99 (49G10)
- de Saravia, Dolores A.* (with Bouillet, Julio E.; Villa, Luis T.) Similarity solutions of the
equation of one-dimensional heat conduction. *J. Differential Equations* **35** (1980), no. 1,
55-65. (John M. Ball) **81c:35069** 35K55 (80A20)
- de Saravia, Dolores A.* See *Vera Saravia, Edgar*
- Saravay, R. V.* (with Joshi, N. E.) Viscous fluid flows over \mathbb{R}^n with asymptotic conditions.
J. Math. Phys. Sci. **14** (1980), no. 1, 51-56. (J. F. Heyda) **81k:35135** 35Q10 (58D05,
76D05)
- Sarbadikari, H.* Selection theorems for partitions of complete metric spaces. *Bull. Acad.
Polon. Sci. Sér. Sci. Math. Astronom. Phys.* **26** (1978), no. 12, 953-956 (1979). (Author's

- introduction) **81h:54037** 54E50 (54A25)
 A selection theorem for multifunctions. *Proc. Amer. Math. Soc.* **71** (1978), no. 2, 285–288. (Editors) **81g:54013** 54C65 (04A20, 54A25, 54C60)
 (with Srivastava, S. M.) Parametrizations of G_0 -valued multifunctions. *Trav. Amer. Math. Soc.* **258** (1980), no. 2, 457–466. (Richard D. Mauldin) **81e:54025** 54C60 (54C65)
- Šarčević, L. I. (with Entov, V. M.; Kestenboim, H. S.; Rožkov, A. N.) Dynamic equilibrium shape of a film of viscoelastic liquid. *Izv. Akad. Nauk SSSR Meh. Židk. Gaza* **1980**, no. 2, 9–18 (Russian); translated as *Fluid Dynamics* **15** (1980), no. 2, 181–189. (Authors' summary) **81j:76031** 76D99 (76A10)
- Sard, Arthur Integrating terms for inexact differentials. (German summary) *Numerical methods of approximation theory*, Vol. 5 (Conf., Math. Res. Inst., Oberwolfach, 1979), pp. 245–254. *Internat. Ser. Numer. Math.*, **52**, Birkhäuser, Basel, 1980. (R. A. Lorentz) **81g:41045** 41A65 (26B12, 65J05)
- Sargan, J. D. On the existence of the moments of 3SLS estimators. *Econometrica* **46** (1978), no. 6, 1329–1350. (R. Pfaffenberger) **81a:62065** 62J05 (62P20)
 Some tests of dynamic specification for a single equation. *Econometrica* **48** (1980), no. 4, 879–897. (Author's summary) **81g:62158** 62M10 (62P20)
 Some approximations to the distribution of econometric criteria which are asymptotically distributed as chi-squared. *Econometrica* **48** (1980), no. 5, 1107–1138. (P. C. B. Phillips) **81i:62040** 62E20 (62P20)
- Sargent, R. W. H. (with Virani, N. A. A.) A new approach to the theory of nonlinear stochastic systems. *Analysis and optimisation of stochastic systems (Proc. Internat. Conf., Univ. Oxford, Oxford, 1978)*, pp. 147–164. Academic Press, London, 1980. (See **81j:93069**) 93E03 (60Hxx)
- Sargajan, I. S. (with Kostjučenko, A. G.) ★ Распределение собственных значений. (Russian) [Distribution of eigenvalues] Самосопряженные обыкновенные дифференциальные операторы. [Selfadjoint ordinary differential operators] "Nauka", Moscow, 1979. 400 pp. (R. C. Gilbert) **81j:34034** 34B25 (47E05)
- Sarhan, I. (with Nasr, S. K.) Statistical testing of an educational credit system hypothesis. (Arabic summary) *Bull. Fac. Sci. Riyadh Univ.* (2) **8** (1977), 513–526. (Authors' summary) **81k:62147** 62P15
- Sári, József (with Fényes, Tomás) On the difference equation system of the composition of the amount of money. (Hungarian. English and Russian summaries) *Sigma—Mat.-Közgazdasági Folyóirat* **13** (1980), no. 1–2, 1–21. (From the summary) **81h:90027** 90A12
- Sarason, Edward Property L and asymptotic abelianness for W^* -algebras. *Proc. Amer. Math. Soc.* **80** (1980), no. 1, 125–129. (Jun Tomiyama) **81h:46081** 46L10
- Sardis, George N. Expanding subinterval random search for system identification and control. *Identification and system parameter estimation (Proc. Fourth IFAC Sympos., Tbilisi, 1976)*, Part 3, pp. 1703–1716. North-Holland, Amsterdam, 1978. (See **80d:93010c**) 93B30
 (with Desrochers, A. A.) A model reduction technique for nonlinear systems. *Automatica—J. IFAC* **16** (1980), no. 3, 323–329. (Authors' summary) **81d:93022** 93C10 (93E12)
- Sarin, Rakesh K. (with Dyer, James S.) Group preference aggregation rules based on strength of preference. *Management Sci.* **25** (1979), no. 9, 822–832 (1980). (Prasanta K. Pattanaik) **81g:90012** 90A08
 Ranking of multiattribute alternatives with an application to coal power plant siting. *Multiple criteria decision making theory and application (Proc. Third Conf., Hagen/Königswinter, 1979)*, pp. 405–429. *Lecture Notes in Econom. and Math. Systems*, **177**, Springer, Berlin, 1980. (Author's summary) **81d:90017** 90A10 (90B05)
- Sarin, V. I. (with Ivanov, V. K.) The relation between products of generalized functions. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* **1979**, no. 10, 38–46. (Piotr Antosik) **81k:46043** 46F10 (46F15)
 Some formulas for products of distributions depending on a quadratic form. (Russian) *Trudy Inst. Mat. i Meh. Ural. Nauch. Centr Akad. Nauk SSSR* No. 31 (Obšč.žen. Funkcii i Vektor. Mery) **1979**, 16–19, 91. (J. S. Joel) **81a:46042** 46F10 (32A40, 46F15)
- Sario, Leo (with Nakai, Mitsuru) Square integrable harmonic functions on plane regions. *Ann. Acad. Sci. Fenn. Ser. A I Math.* **4** (1979), no. 2, 193–201. (Lung Ock Chung) **81b:31004** 31A30
- Šaripovič, F. (with Salihov, G. N.) Cubature formulas on the sphere in 5-space that are invariant under the group of the 32-hedron. (Russian) *Voprosy Vyčisl. i Prikl. Mat. (Tashkent)* No. 51 (1978), 204–222, 233. (A. Coju) **81m:65040** 65D32 (52A25)
- Šaripov, B. On some quasilinear simultaneous systems of first-order partial differential equations that are integrable in quadratures. (Russian. Tajiki summary) *Dokl. Akad. Nauk Tadžik. SSR* **23** (1980), no. 3, 126–130. (J. Kolomý) **81i:35066** 35J60
- Šaripov, R. N. (with Gabdulhaev, B. G.) Optimization of quadrature formulas with multiple nodes for singular integrals. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* **1979**, no. 12, 62–66. (M. I. Levin) **81g:65036** 65D32
- Šaripov, T. H. Cubature formula with nodes on number-theoretic grids. (Russian) *Voprosy Vyčisl. i Prikl. Mat. (Tashkent)* No. 55 (1979), 3–6, 177. (M. I. Levin) **81g:65039** 65D32
 (with Ahmedov, H. H.) Norm of the error functional of a cubature formula over a space of continuously differentiable functions given on a torus. (Russian) *Voprosy Vyčisl. i Prikl. Mat. (Tashkent)* No. 57 (1979), 3–6, 167. (M. I. Levin) **81g:65040** 65D32
- Šaripova, M. M. Graphs of code intersections in relation to investigation of the structures of communications networks. (Russian) *Theory of coding and complexity of calculations (Russian)*, pp. 208–212, 224. "Nauka" Kazah. SSR, Alma-Ata, 1980. (Author's summary) **81j:94048** 94C15
 Properties of graphs of code intersections. (Russian) *Theory of coding and complexity of calculations (Russian)*, pp. 213–217, 225. "Nauka" Kazah. SSR, Alma-Ata, 1980. (Author's summary) **81j:94049** 94C15 (05C99)
- Šaripova, R. M. Boundary value problems for certain degenerate elliptic systems. (Russian) *Differencial'nye Uravnenija* **15** (1979), no. 11, 2066–2070, 2110. (Ja. A. Roitberg) **81c:35056** 35J70
- Sarkadi, K. Characterization and testing for normality. *Analytic function methods in probability theory (Proc. Colloq. Methods of Complex Anal. in the Theory of Probab. and Statist., Kossuth L. Univ. Debrecen, Debrecen, 1977)*, pp. 317–329. *Colloq. Math. Soc. János Bolyai*, **21**, North-Holland, Amsterdam, 1979. (G. Tusnády) **81h:62029** 62E10 (62G10)
- Sarkar, Rina (with Roy, A. B.) On the genetic information and evolution of DNA. *Proceedings of the First International Conference on Mathematical Modeling (St. Louis, Mo., 1977)*, Vol. II, pp. 1007–1015. Univ. Missouri-Rolla, Rolla, Mo., 1977. (Authors' summary) **81j:92025** 92A10
- Sarkar, S. K. A test for mean with additional observations. *Calcutta Statist. Assoc. Bull.* **28** (1979), no. 109–112, 47–56. (Takeaki Kariya) **81m:62095** 62H15
- Sarkar, Sarbes Frustration and dynamics. *Phys. Rev. B* (3) **22** (1980), no. 7, 3414–3421. (Author's summary) **81g:82025** 82A25 (81E99)
- Sarkar, Sasabindu Higher-order terms in the eikonal expansion of the T matrix for potential scattering. *Phys. Rev. D* (3) **21** (1980), no. 12, 3437–3458. (From the summary) **81c:81109** 81F05
- Sarkisjan, A. D. Realization of arithmetic functions on iterative networks. (Russian. Armenian summary) *Akad. Nauk Armjan. SSR Dokl.* **68** (1979), no. 5, 267–272. (Pavel Strnad) **81c:03029** 03D15 (68C25, 68C30)
- Sarkisjan, A. S. (with Rzeplinski, D. G.) Numerical modeling of the large-scale oceanic circulation. *Izv. Akad. Nauk SSSR Ser. Fiz. Atmosf. i Okeana* **15** (1979), no. 7 (Russian); translated as *Izv. Acad. Sci. USSR Atmospher. Ocean. Phys.* **15** (1980), no. 7, 502–507. (Authors' summary) **81k:86005** 86A05 (86–04)
- Sarkisjan, A. V. (with Čubarjan, Ė. V.; Gevorkjan, A. S.) Slowly rotating incompressible configurations according to the bimetric theory of gravitation. (Russian. English summary) *Astrofizika* **15** (1979), no. 4, 657–669. (Authors' summary) **81h:85005** 85A99
 Polytropic spheres in the bimetric theory of gravitation. *Astronom. Ž.* **57** (1980), no. 1, 43–52 (Russian); translated as *Soviet Astronom.* **24** (1980), no. 1, 26–31. (Author's summary) **81h:85009** 85A15 (83D05)
- Sarkisjan, G. Z. The class of arithmetic functions that are calculated with the aid of systems of functional elements. (Russian. Armenian summary) *Akad. Nauk Armjan. SSR Dokl.* **66** (1978), no. 5, 257–262. (James P. Jones) **81d:03043** 03D15 (10A20)
- Sarkisjan, R. A. Galois cohomology and some questions of the theory of algorithms. (Russian) *Mat. Sb. (N.S.)* **111**(153) (1980), no. 4, 579–609, 624. (Helmut Koch) **81g:12018** 12B20 (03D40)
- Sarkisjan, S. C. (with Kočinjan, L. S.) A theorem of Picard type. (Russian) *Questions in the metric theory of mappings and its application (Proc. Fifth Colloq. Quasiconformal Mappings, Generalizations Appl., Donetsk, 1976)* (Russian), pp. 120–124, 185. "Naukova Dumka", Kiev, 1978. (R. R. Simha) **81d:32004** 32A22 (30D35, 32A15, 35A99)
- Sarkisov, V. G. Birational automorphisms of three-dimensional algebraic varieties representable as a conic bundle. (Russian) *Uspehi Mat. Nauk* **34** (1979), no. 4(206), 207–208. (R. R. Simha) **81d:14023** 14J30 (14M20)
- Sarkisyan, A. S. See Sarkisjan, A. S.
- Sarkisyan, A. V. See Sarkisjan, A. V.
- Sarko, V. V. Morse functions depending on a parameter. I. (Russian) *Complex analysis and manifolds (Russian)*, pp. 158–166. *Inst. Mat., Akad. Nauk Ukrain. SSR, Kiev*, 1978. (Ju. P. Solov'ev) **81g:57034** 57R70
 Smooth functions on manifolds. (Russian) *Akad. Nauk Ukrain. SSR Inst. Mat. Preprint* No. 22 (1979), 40 pp. (G. N. Himšišvili) **81h:58015** 58C27 (57R45)
 Equivalence of exact Morse functions. I. (Russian) *Akad. Nauk Ukrain. SSR Inst. Mat. Preprint* 1979, no. 12. *Issled. po Teorii Funkcii i Topologii*, 14–26. (V. Oproiu) **81h:57032** 57R65 (57R80)
- Sarkov'skii, O. M. (with Romanenko, O. Ju.) Asymptotic behavior of the solutions of linear functional-differential equations. (Russian) *Asymptotic behavior of solutions of functional-differential equations (Russian)*, pp. 5–39, 153. *Akad. Nauk Ukrain. SSR, Inst. Mat., Kiev*, 1978. (L. J. Grimm) **81b:34067** 34K15
 (with Romanenko, O. Ju.) Functional-differential equations that are close to functional equations. (Russian) *Asymptotic methods in the theory of nonlinear oscillations (Proc. All-Union Conf. Asymptotic Methods in Nonlinear Mech., Katsiceli, 1977)* (Russian), pp. 178–209, 276. "Naukova Dumka", Kiev, 1979. (József Kalinowski) **81i:34063** 34K15
 See also Theoretical and applied questions of differential equations and algebra. **81a:00013** and Approximate and qualitative methods in the theory of differential and functional-differential equations. **81b:34001**
- Sárközy, A. On distances near integers. I. *Studia Sci. Math. Hungar.* **11** (1976), no. 1–2, 37–50, 105–111 (1978). (R. L. Graham) **81c:10056** 10H25
 Some remarks concerning irregularities of distribution of sequences of integers in arithmetic progressions. *IV. Acta Math. Acad. Sci. Hungar.* **30** (1977), no. 1–2, 155–162. (Charles Pisot) **81g:10072** 10K30
 Some remarks concerning irregularities of distribution of sequences of integers in arithmetic progressions. III. *Period. Math. Hungar.* **9** (1978), no. 1–2, 127–144. (Charles Pisot) **81g:10071** 10K30
 (with Erdős, Paul) On the prime factors of $(\frac{n}{k})$ and of consecutive integers. *Utilitas Math.* **16** (1979), 197–215. (G. Greaves) **81k:10066** 10H15
- Sarlet, Willy On linear nonconservative systems derivable from a variational principle. *Hadronic J.* **3** (1979/80), no. 2, 765–793. (B. Vujanović) **81c:70016** 70J20 (34A25)
 (with Bahar, L. Y.) A direct construction of first integrals for certain nonlinear dynamical systems. (French and German summaries) *Internat. J. Non-Linear Mech.* **15** (1980), no. 2, 133–146. (Elisa Udeschini-Brinis) **81i:70010** 70H99 (34A34, 58F05)
- siva rama Sarma, A. See Siva Rama Sarma, A.
- Sarma, C. R. (with Rettrup, S.) A programmable procedure for generating many-particle states. *Phys. Lett. A* **75** (1979/80), no. 3, 181–182. (Authors' summary) **81k:81099** 81G20 (81G50)
 (with Sahasrabudhe, G. G.) Permutational symmetry of many particle states. *J. Math. Phys.* **21** (1980), no. 4, 638–649. (William G. Harter) **81j:81025** 81C40 (81G30)
 (with Sahasrabudhe, G. G.; Dinesha, K. V.) Clebsch-Gordan coefficients for the permutation group. *J. Phys. A* **14** (1981), no. 1, 85–96. (Authors' summary) **81i:20031** 20C35 (81C40)
- Sarma, K. V. Tradition of Āryabhatīya in Kerala: revision of planetary parameters. *Proceedings of the Symposium on the 1500th Birth Anniversary of Āryabhatā I (New*

- Delhi, 1976). *Indian J. Hist. Sci.* 12 (1977), no. 2, 194-199. (R. C. Gupta) **81f:01008** 01A32
- Suman, V. L. N. (with Lal, Nand; Singh, V. K.) An example of a locally finite family. *Amer. Math. Monthly* **87** (1980), no. 2, 121-122. (Donald Plank) **81d:54030** 54G20
- Suman, V. S. S. (with Subbanyan, R.; Vaithilingam, M. C.) An approach for sensitivity-reduced design of linear regulators. *Internat. J. Systems Sci.* 9 (1978), no. 1, 65-74. (Authors' summary) **81e:93031** 93B35
- Sernackaja, E. V. (with Gumen, N. S.) The loci of points proportionally distant from two straight lines. (Russian) *Geometriya*, No. 2 (Russian), pp. 43-51, 157, *Rizsk. Politehn. Inst., Riga*, 1977. (Krzyżtof Witczyński) **81i:51011** 51K05
- (with Gumen, N. S.) The loci of points whose distances from a pair of circles of a plane are linked by a certain functional relationship. (Russian) *Geometriya*, No. 2 (Russian), pp. 52-65, 157, *Rizsk. Politehn. Inst., Riga*, 1977. (Krzyżtof Witczyński) **81i:51012** 51K05
- Sirindul, Carl-Erik A method for assessing efficiency and bias of estimation strategies in survey sampling. *South African Statist. J.* 14 (1980), no. 1, 17-30. (V. P. Godambe) **81g:62019** 62D05
- Sorajli, K. Some theorems on integral operators based on distribution functions and Marcinkiewicz-Zygmund interpolation theorem. *J. Indian Acad. Math.* 1 (1979), no. 2, 35-41. (Mario Milman) **81i:47043** 47G05 (46E35)
- Sorov, N. N. (with Ambrosimov, A. S.) Some asymptotic expansions for the number of functions with a nontrivial inertia group. (Russian) *Problemy Kibernet. No. 36* (1979), 65-84, 279. (I. E. Stradinski) **81j:05008** 05A15 (20B25, 94C10)
- Sorov, V. F. Stability and stabilization of stochastic systems with respect to some of the variables. *Avtomat. i Telemekh.* 1978, no. 11, 63-71 (Russian. English summary); translated as *Automat. Remote Control* 39 (1978), no. 11, part 1, 1629-1636 (1979). (T. Parthasarathy) **81e:93092** 93E15
- Surr, Ju. Model of a system of demarcation of access rights in data base control systems. (Russian) *Trudy Moskov. Orden. Lenin. Energet. Inst. No. 438* (1979), 84-90, 169. (Author's summary) **81g:68034** 68B15
- Sursfield, Richard (with Hoggatt, Verner E., Jr.; Bicknell-Johnson, Marjorie) A generalization of Wythoff's game. *Fibonacci Quart.* 17 (1979), no. 3, 198-211. (Aviezer S. Fraenkel) **81d:90112** 90D05 (05A99, 10L10)
- Surtan, Robert L. (with Anderson, Ronald M.) The Carleman-Fourier transform of a product. *Texas J. Sci.* 32 (1980), no. 2, 99-107. (J. Horváth) **81h:46040** 46F10 (42A38)
- Surtori, Caterina (with Cellina, Arrigo) The search for fixed points under perturbations. *Rend. Sem. Mat. Univ. Padova* 59 (1978), 199-208 (1979). (Kurt Georg) **81e:58013** 58C15 (34D99, 47H10, 55M20)
- Surtori, G. Euclidean self-dual Yang-Mills field configurations. (Italian summary) *Nuovo Cimento A* (11) 56 (1980), no. 1, 73-86. (Author's summary) **81e:81074** 81E10
- Surukhanian, A. G. (with Agaian, S. S.) A note on the construction of Hadamard matrices. *Current topics in cybernetics and systems (Proc. Fourth Internat. Congr., Amsterdam, 1978)*, p. 35, Springer, Berlin, 1978. (See 80a:68001) 05B20
- Sarvas, Jukka Ahlfors' trivial deformations and Liouville's theorem in \mathbb{R}^n . *Complex analysis Joensuu 1978 (Proc. Colloq. Univ. Joensuu, Joensuu, 1978)*, pp. 343-348, *Lecture Notes in Math.*, 747, Springer, Berlin, 1979. (Uri Srebro) **81c:30040** 30C60
- (with Martio, Olli) Injectivity theorems in plane and space. *Ann. Acad. Sci. Fenn. Ser. A I Math.* 4 (1979), no. 2, 383-401. (H. M. Reimann) **81i:30039** 30C60 (30C45, 54C99)
- Sarymsakov, T. A. (with Ajupov, S. A.) Partially ordered Jordan algebras. (Russian) *Dokl. Akad. Nauk SSSR* 249 (1979), no. 4, 789-792. (D. Miličić) **81a:17010** 17C10 (17C65, 46L10)
- (with Ganibodžev, R. N.) The ergodic principle for quadratic stochastic operators. (Russian) *Izv. Akad. Nauk UzSSR Ser. Fiz.-Mat. Nauk* 1979, no. 6, 34-38, 91. (Ar. Leone) **81e:47092** 47H99 (60J99)
- Sasagawa, Tetsuaki Stabilization of linear stochastic systems with delay by using a certain class of controls. *Transactions of the Eighth Prague Conference on Information Theory, Statistical Decision Functions, Random Processes (Prague, 1978)*, Vol. C, pp. 295-300, Reidel, Dordrecht, 1979. (Jan H. Van Schuppen) **81e:93090** 93E15
- A necessary and sufficient condition for the solution of the Riccati equation to be periodic. *IEEE Trans. Automat. Control* 25 (1980), no. 3, 564-566. (R. S. Bucy) **81c:34033** 34C25
- Sasaki, Hiroki On a transfer theorem for Schur multipliers. *Hokkaido Math. J.* 8 (1979), no. 2, 228-238. (Thomas Laffey) **81g:20040** 20D20 (20C25)
- Sasaki, Komei An empirical analysis of linear aggregation problems. The case of investment behavior in Japanese firms. *J. Econometrics* 7 (1978), no. 3, 313-331. (Ranjan Ray) **81i:62124** 62P20
- Sasaki, Masafumi (with Shiraishi, Toshio) Confidence limits for reliability and MTBF of k-out-of-n:G system. *Systems-Comput.-Controls* 9 (1978), no. 2, 21-25. (Authors' summary) **81i:90094** 90B25 (62N05)
- Sasaki, R. Geometrization of soliton equations. *Phys. Lett. A* 71 (1979), no. 5-6, 390-392. (Francesco Calogero) **81j:35101** 35Q20 (53A07, 81C99)
- (with Bulough, R. K.) Geometry of the AKNS-S inverse scattering scheme. *Nonlinear evolution equations and dynamical systems (Proc. Meeting, Univ. Lecce, Lecce, 1979)*, pp. 314-337, *Lecture Notes in Phys.*, 120, Springer, Berlin, 1980. (G. L. Lamb, Jr.) **81h:58008** 58A15 (35A25, 35Q20, 58F07, 81F99)
- Sasaki, Ryoji Some remarks on ordinary abelian varieties. *Tsukuba J. Math.* 3 (1979), no. 1, 91-107. (William C. Waterhouse) **81f:14021** 14K05 (14K25)
- Sasaki, Takehiko The residual limit points of the first kind and the nest groups. *Tôhoku Math. J.* 2 (1980), no. 1, 35-48. (O. M. Fomenko) **81m:30048** 30F40
- Sasaki, Takeshi Hyperbolic affine hyperspheres. *Nagoya Math. J.* 77 (1980), 107-123. (K. Nomizu) **81e:53037** 53C42 (32M10, 35A30, 53A15)
- Sasaki, Y. K. (with Reddy, J. N.) A comparison of stability and accuracy of some numerical models of two-dimensional circulation. *Internat. J. Numer. Methods Engrg.* 16 (1980), Special Issue, 149-170. (From the summary) **81m:76016** 76C15 (65N30)
- Sasakura, Takayuki (with Sakawa, Masatoshi) Interactive multiobjective decision making: SPOT. (Japanese. English summary) *Systems and Control* 24 (1980), no. 10, 681-689. (Authors' summary) **81k:90004** 90A05
- Sasse, Selya (with Takahashi, Hideo) Inner product spaces associated with Poincaré complexes. *Trans. Amer. Math. Soc.* 260 (1980), no. 2, 411-419. (P. J. Kahn) **81i:57013** 57P10
- Sasso, Tautoum An application of multiple-valued logic to a design of programmable logic arrays. *Proceedings of the Eighth International Symposium on Multiple-Valued Logic (Rosemont, Ill., 1978)*, pp. 65-72, IEEE, Long Beach, Calif., 1978. (Author's summary) **81b:94072** 94C10
- (with Kinoshita, Kozo) Conservative logic elements and their universality. *IEEE Trans. Comput.* 28 (1979), no. 9, 682-685. (Tatsuo Higuchi) **81e:94055** 94C10
- Spatada, Edward (with Jarek, Paweł) On the existence of random fields with prescribed conditional probabilities. *Comment. Math. Prace Mat.* 21 (1980), no. 1, 247-251. (J. Fritz) **81h:60072** 60G60
- Sasi Kumar, V. On the digital root series. *J. Recreational Math.* 12 (1979/80), no. 4, 267-270. (J. L. Brenner) **81h:10012** 10A30
- Šalkin, Ju. A. (with Norden, A. P.; Ševrin, L. N.) Valentin Konstantinovič Ivanov (on the occasion of his seventieth birthday). (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1978, no. 11(198), 3-5. (Editors) **81g:01019a** 01A70
- (with Gusak, I. Ja.) Finitely positively independent sets. (Russian) *Mat. Zametki* 26 (1979), no. 3, 417-426, 494. (Ivan Singer) **81a:41030** 41A52 (41A50, 44A60, 52A01)
- (with Gusak, I. Ja.) Korovkin systems in certain finite-dimensional spaces. (Russian) *Trudy Inst. Mat. i Meh. Uralsk. Nauch. Centr. Akad. Nauk SSSR* No. 31 Obobšč. Funkcii i Vektor. Mery (1979), 68-74, 92. (L. G. Labsker) **81i:41019** 41A35 (46B25)
- Šaškov, M. Ja. (with Kortšja, T. K.; Tiškin, V. F.; Favorakii, A. P.) A variational approach to the construction of difference schemes for equations of diffusion of an electromagnetic field. (Russian. English summary) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 179* (1979), 30 pp. (Authors' summary) **81a:78006** 78A25 (65P05)
- Violation of conservation laws in iteration solutions of difference equations. (Russian. English summary) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 189* (1979), 20 pp. (Author's summary) **81a:80006** 80A20 (65N05)
- (with Gasilov, V. A.; Goloviznin, V. M.; Taran, M. D.; Tiškin, V. F.; Favorakii, A. P.) Numerical simulations of the Rayleigh-Taylor instability in an incompressible fluid. (Russian. English summary) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 70* (1979), 61 pp. (Ilija Lukačević) **81h:76033** 76E25 (65C20)
- (with Kortšja, T. K.; Tiškin, V. F.; Favorakii, A. P.) Difference schemes for equations of electromagnetic field diffusion with an anisotropic conductivity coefficient. (Russian. English summary) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 4* (1980), 16 pp. (Authors' summary) **81a:78007** 78A25 (65P05)
- (with Kortšja, T. K.; Tiškin, V. F.; Favorakii, A. P.) A variational approach to the construction of difference schemes on curvilinear grids for the heat equation. (Russian) *Ž. Vyšš. Mat. i Mat. Fiz.* 20 (1980), no. 2, 401-421, 551. (G. I. Sulhanišvili) **81k:65113** 65N10
- Sastri, R. G. S. (with Starostenko, V. I.) The regularizing solution of geophysical three-dimensional problems expressed by integral equations of the first kind of convolution type. (Russian) *Dokl. Akad. Nauk SSSR* 246 (1979), no. 5, 1074-1079. (From the introduction) **81d:86010** 86A20 (45E10, 65R20)
- Sastri, A. S. (with Krishniah, P. V.) Applications of a theorem of Ramsey. *Pure Appl. Math. Sci.* 10 (1979), no. 1-2, 3-6. (J. E. Graver) **81h:05082** 05C55
- Sastri, K. P. R. (with Naidu, S. Venkata Ratnam) On generalized adjoints. *Indian J. Pure Appl. Math.* 9 (1978), no. 7, 722-727. (Authors' summary) **81h:47002** 47A05
- (with Naidu, S. Venkata Ratnam) Convexity conditions in metric linear spaces. *Math. Sem. Notes Kobe Univ.* 7 (1979), no. 2, 235-251. (S. Swaminathan) **81h:46013** 46A99 (46B20)
- (with Naidu, S. Venkata Ratnam) Upper semicontinuity of the best simultaneous approximation operator. *Pure Appl. Math. Sci.* 10 (1979), no. 1-2, 7-8. (O. P. Kapoor) **81e:41037** 41A28
- Sastri, Shankar (with Varaiya, Pravin) Hierarchical stability and alert state steering control of interconnected power systems. *IEEE Trans. Circuits and Systems* 27 (1980), no. 11, 1102-1112. (Authors' summary) **81j:93047** 93D20 (93A13)
- Sastri, Sundaram M. A. (with Srinivasan, Sundarajan) Chebyshev lines and Chebyshev hyperspaces of classical Banach spaces. *J. Madurai Kamaraj Univ.* 7 (1978), no. 2, 115-120. (Russell G. Bilyeu) **81h:41076** 41A50 (46B99)
- (with Kannappan, P.) A duality theorem for nondifferentiable convex programming with operatorial constraints. *Bull. Austral. Math. Soc.* 22 (1980), no. 1, 145-152. (Authors' summary) **81j:90096** 90C25
- Sastri, V. V. S. S. (with Chakrabarti, Alok Nath) A note on Sommerfeld's diffraction problem. *Proceedings of the Conference on Mathematical Methods in Physics (Mysore, 1978)*, Part A, pp. 210-219, *Maiscience Rep.*, 96, Inst. Math. Sci., Madras, 1979. (Authors' summary) **81g:78033** 78A45
- (with Chakrabarti, Alok Nath) A note on Sommerfeld's diffraction problem. *J. Math. Phys.* 20 (1979), no. 10, 2123-2125. (E. Meister) **81a:78016** 78A45
- Satalov, V. V. Uniqueness of coercions in ALGOL 68. *Programirovanie* 1979, no. 3, 54-57, 95 (Russian); translated as *Programming and Comput. Software* 5 (1979), no. 3, 189-192. (Author's summary) **81g:68012** 68B05
- Satapathy, P. K. (with Parhi, H.) A transversely isotropic composite with a penny-shaped crack. (German summary) *Acta Mech.* 32 (1979), no. 4, 275-285. (Authors' summary) **81e:73080** 73M05
- Satgé, Philippe Divisibilité du nombre de classes de certains corps cycliques. *Journées Arithmétiques de Luminy (Colloq. Internat. CNRS, Centre Univ. Luminy, Luminy, 1978)*, pp. 193-203, *Astérisque*, 61, Soc. Math. France, Paris, 1979. (Pierre Damey) **81i:12013** 12A50
- Corps résolubles et divisibilité de nombres de classes d'idéaux. *Enseign. Math.* (2) 25 (1979), no. 3-4, 165-188 (1980). (G. Whaples) **81j:12003** 12A50
- See also Ribet, Kenneth A., **81e:12022**
- Sathe, Y. S. (with Joshi, Suneta) A generalization of Mosteller's test. *Comm. Statist. A—Theory Methods* 7 (1978), no. 7, 709-715. (D. R. Truax) **81h:62058** 62G10
- (with Pradhan, Meena; Shah, S. P.) Inequalities for the probability of the occurrence of at least m out of n events. *J. Appl. Probab.* 17 (1980), no. 4, 1127-1132. (J. Galambos) **81j:60015** 60C05 (60E15, 60G30)
- Sather, D. (with Knightly, George H.) Buckled states of a spherical shell under uniform external pressure. *Arch. Rational Mech. Anal.* 72 (1979/80), no. 4, 315-380. (R. J.

- Knops 81f:73021 73H05 (35B32, 58E07, 73L99)
- Sathiyamoorthy, M. (with Chia, C. Y.) Large amplitude vibration of orthotropic elliptical plates. (German summary) *Acta Mech.* 37 (1980), no. 3-4, 247-258. (Authors' summary) 81g:65166 65N99 (73K12)
- Satija, Indubala I. Quantum Hamiltonian formalism and symmetry crossover in one dimension for weakly anisotropic Heisenberg and planar systems. *Phys. Rev. B* (3) 22 (1980), no. 3, 1362-1370. (Authors' summary) 81f:82043 82A67
- Sattimov, N. (with Rikhsiev, B. B.) Quasilinear differential evasion games. (Russian) *Differentsial'nye Uravneniya* 14 (1978), no. 6, 1046-1052, 1149. (Authors' summary) 81g:90111 90D26
- (with Rikhsiev, B. B.) On the theory of differential evasion games with several pursuers. (Russian) *Voprosy Vychisl. i Prikl. Mat. (Tashkent)* No. 53 (1978), 71-83, 181. (A. B. Kurzanov) 81e:90124 90D26
- Satoh, L. (with Grošek, O.) A new notion in the theory of semigroups. *Semigroup Forum* 20 (1980), no. 3, 233-240. (Eckehart Hotzel) 81j:20007 20M10
- Satoh, A. N. (with Klepikov, N. P.) The domain of definition of wave operators in multichannel scattering. (Russian) *Vestnik Moskov. Univ. Ser. III Fiz. Astronom.* 21 (1980), no. 4, 3-9, 86. (V. S. Ol'hovskij) 81e:81059 81F10 (35P25, 47A40)
- Sato, Ei-ichi The decomposability of an infinitely extendable vector bundle on the projective space. II. *Proceedings of the International Symposium on Algebraic Geometry (Kyoto Univ., Kyoto, 1977)*, pp. 663-672, Kinokuniya Book Store, Tokyo, 1978. (P. E. Newstead) 81i:14012 14F05
- On infinitely extendable vector bundles on G/P . *J. Math. Kyoto Univ.* 19 (1979), no. 1, 171-189. (P. E. Newstead) 81i:14013 14F05
- Sato, Hajime (with Morita, Shigeyuki; Nishikawa, Seiki) On a special kind of Γ -foliation. (Japanese) *Sūgaku* 31 (1979), no. 2, 110-125. (Hideki Omori) 81e:57029 57R30 (57R20, 58H05, 58H10)
- Sato, Hideo On maximal quotient rings of QF-3 1-Gorenstein rings with zero socle. *Osaka J. Math.* 16 (1979), no. 2, 383-393. (E. A. Rutter) 81b:16014 16A36
- Remark on localizations of Noetherian rings with Krull dimension one. *Tsukuba J. Math.* 3 (1979), no. 1, 123-128. (William D. Blair) 81f:16007 16A08 (16A33)
- Sato, Hiroaki On augmented Schottky spaces and automorphic forms. I. *Nagoya Math. J.* 75 (1979), 151-175. (C. Earle) 81b:32009 32G15 (14H15, 30F40)
- Sato, Isuke On a Riemannian manifold admitting a certain vector field. *Kōdai Math. Sem. Rep.* 29 (1977/78), no. 3, 250-260. (David Blair) 81j:53048 53C25 (53C15)
- (with Matsumoto, Kōzō) On P -Sasakian manifolds satisfying certain conditions. *Tensor (N.S.)* 33 (1979), no. 2, 173-178. (S. S. Singh) 81b:53049 53C25
- Sato, Kameo A note on capital and output aggregation in a general equilibrium model of production. *Econometrica* 47 (1979), no. 6, 1559-1563. (Hildegard Dierker) 81a:90058 90A14 (90A11)
- Sato, Ken-iti Convergence to a diffusion of a multi-allelic model in population genetics. *Adv. in Appl. Probab.* 10 (1978), no. 3, 538-562. (H. A. Guess) 81d:92010 92A10 (60F17, 60J60, 60J70)
- On densities of multivariate distributions of class L . *Ann. Sci. Kanazawa Univ.* 16 (1979), 1-9. (Thomas A. O'Connor) 81d:60024 60E07 (60F05)
- Class L of multivariate distributions and its subclasses. *J. Multivariate Anal.* 10 (1980), no. 2, 207-232. (Stephen James Wolfe) 81k:60023 60E07 (60F05)
- Sato, Masahiko A cut-free Gentzen-type system for the modal logic $S5$. *J. Symbolic Logic* 45 (1980), no. 1, 67-84. (Garrel Pottinger) 81h:03044 03B45 (03F05)
- Sato, Masahisa On equivalences between module categories. *Proceedings of the 10th Symposium on Ring Theory (Shinsu Univ., Matsumoto, 1977)*, pp. 83-94, Okayama Univ., Okayama, 1978. (E. A. Rutter) 81e:16058 16A89
- Sato, Mitsuo Derivation of possible framework structures formed from parallel four- and eight-membered rings. *Acta Cryst. Sect. A* 35 (1979), no. 4, 547-553. (D. H. Rouvray) 81e:05052 05B30 (51F15, 82A55)
- Sato, Rinsaburo (with Kinouchi, Toshio; Nakamura, Tadao) Analysis of traffic on a common bus. *Systems-Comput.-Controls* 9 (1978), no. 5, 54-62 (1980). (Authors' summary) 81i:90081 90B20 (90B22)
- Sato, Ryōtarō On abstract mean ergodic theorems. II. *Math. J. Okayama Univ.* 21 (1979), no. 2, 141-147. (R. J. Nagel) 81c:47012 47A35 (47D05)
- Ratio limit theorems and applications to ergodic theory. *Studia Math.* 66 (1979/80), no. 3, 237-245. (Michael Lin) 81k:47011 47A35 (28B05)
- Two local ergodic theorems on L_∞ . *J. Math. Soc. Japan* 32 (1980), no. 3, 415-423. (Michael Lin) 81c:47011 47A35
- On the Blum-Hanson theorem in L_∞ . *Math. J. Okayama Univ.* 22 (1980), no. 1, 27-32. (M. A. Akcoglu) 81c:47012 47A35
- Invariant measures and ergodic theorems for positive operators on $C(X)$ with X quasi-Stonian. *Math. J. Okayama Univ.* 22 (1980), no. 1, 77-90. (Yves Derriennic) 81i:47012 47A35
- Sato, Sadao Deterministic laws of time inhomogeneous diffusion processes. *Kodai Math. J.* 3 (1980), no. 1, 40-43. (Robert F. Anderson) 81c:60078 60J60
- Sato, Shizuko On holomorphically subprojective transformations. *TRU Math.* 15 (1979), no. 1, 21-29. (R. Roşca) 81c:53026 53B20
- Sato, Takeyoshi Comparison theorems for Banach spaces of solutions of $\Delta u = Pu$ on Riemann surfaces. *J. Math. Soc. Japan* 31 (1979), no. 2, 281-316. (M. Nakai) 81c:31007 31A35 (30F25)
- Sato, Yoshiharu (with Sugawa, Kazuaki; Kawaguchi, Michiaki) The geometrical structure of the parameter space of the two-dimensional normal distribution. *Rep. Math. Phys.* 16 (1979), no. 1, 111-119. (Adhir K. Basu) 81c:62071 62F99
- (with Yamanoto, Takahiro; Shimbo, Masaru; Kawaguchi, Michiaki) On the definition of three-way correlation coefficient. *Tensor (N.S.)* 33 (1979), no. 3, 343-346. (Jana Zvárová) 81k:62079 62H20
- Satoh, Shunsuke The use of nonlinear differential equations in biology and chemistry. (Japanese) *Systems and Control* 24 (1980), no. 2, 67-74. (Shigehiro Ushiki) 81b:92016 92A40 (34A34, 58F40, 93C15)
- Satoh, Yoshiaki (with Hirai, Kazumasa) Stability of a system with variable time delay. *IEEE Trans. Automat. Control* 25 (1980), no. 3, 552-554. (A. I. Kir'janen) 81f:34075 34K20
- Satsuma, Junkichi (with Ablowitz, Mark J.) Solutions of an internal wave equation describing a stratified fluid with finite depth. *Nonlinear partial differential equations in engineering and applied science (Proc. Conf., Univ. Rhode Island, Kingston, R.I., 1979)*, pp. 397-414, *Lecture Notes in Pure and Appl. Math.*, 54, Dekker, New York, 1980. (J. S. Joel) 81k:76081 76V05 (35Q20, 58F07)
- Sattarov, A. E. Invariant form of the second variation in the metric space of support vector densities. (Russian) *Trudy Geom. Sem. Kazan. Univ.* No. 10 (1978), 78-85. (L. Tamásy) 81i:53027 53B40
- A generalized equation of the motion of a charged particle in a gravitational electromagnetic field. (Russian. Tajiki summary) *Izv. Akad. Nauk Tadzhik. SSR Otdel. Fiz.-Mat. i Geol.-Him. Nauk* 1980, no. 1(75), 13-16. (R. F. Biljalov) 81g:83038 83C50 (53B50)
- Sattes, U. Best Chebyshev approximation by smooth functions. *Quantitative approximation (Proc. Internat. Sympos., Bonn, 1979)*, pp. 279-289, Academic Press, New York, 1980. (Joseph M. Lambert) 81k:41028 41A65 (41A15)
- Sattinger, David H. ★Group-theoretic methods in bifurcation theory. With an appendix entitled "How to find the symmetry group of a differential equation" by Peter Olver. *Lecture Notes in Mathematics*, 762, Springer-Verlag, Berlin-New York, 1979. iv+241 pp. ISBN 3-540-09715-5 (B. V. Loginov) 81e:58022 58E07 (35B32, 47H15, 76R10, 78A25, 80A20, 81D20)
- Spontaneous symmetry breaking in nonlinear problems. *Bifurcation theory and applications in scientific disciplines (Papers, Conf., New York, 1977)*, pp. 49-63, Ann. New York Acad. Sci., 316, New York Acad. Sci., New York, 1979. (B. V. Loginov) 81e:58029 58E07
- Selection mechanisms in symmetry breaking phenomena. *Approximation methods for Navier-Stokes problems (Proc. Sympos., Univ. Paderborn, Paderborn, 1979)*, pp. 494-504, *Lecture Notes in Math.*, 771, Springer, Berlin, 1980. (B. V. Loginov) 81e:58030 58E07 (35B32, 76R05, 80A30, 92A05, 92A40)
- Bifurcation and symmetry breaking in applied mathematics. *Bull. Amer. Math. Soc. (N.S.)* 3 (1980), no. 2, 779-819. (P. P. Zabrejko) 81i:58020 58E07 (47H99, 58C9, 76F99)
- Satshidheer, D. (with Azlarov, T. A.) Stopping a Brownian motion at a random time. (Russian) *Random processes and mathematical statistics (Russian)*, pp. 3-10, 185, "Fan", Tashkent, 1978. (M. A. Šašikavič) 81i:60089 60J65 (60C40)
- Satymurthy, Kallasaam (with Khot, Narendra S.; Bauld, Nelson R., Jr.) An automated, energy-based, finite-difference procedure for the elastic collapse of rectangular plates and panels. *Comput. & Structures* 11 (1980), no. 3, 239-249. (Authors' summary) 81b:73042 73K30 (73K10)
- Satyanarayana, C. (with Chen, Wai Kai) Theory of broadband matching and the problem of compatible impedances. *J. Franklin Inst.* 309 (1980), no. 4, 267-280. (Authors' summary) 81g:94051 94C05
- Satyanarayana, M. Totally ordered Archimedean semigroups. *Semigroup Forum* 18 (1979), no. 3, 265-270. (P. F. Conrad) 81b:06010 06F05 (20M99)
- On 0-simple semigroups admitting ring structure. *Semigroup Forum* 19 (1980), no. 4, 307-312. (Ferenc Fenyeves) 81i:20100 20M25
- Satyanarayan Rao, Arindam A note on continuously differentiable abstract functions. *Bull. Calcutta Math. Soc.* 68 (1976), no. 4, 261-263. (Authors' summary) 81i:26016 26E20
- Satybalina, K. I. The influence of the smoothness of the distribution function of a random variable on an estimate of the rate of convergence to a stable limit law. (Russian) *Theoretical and applied problems of mathematics and mechanics (Russian)*, pp. 198-202, 245, "Nauka" Kazah. SSR, Alma-Ata, 1979. (Zdzisław Rychlik) 81g:60024 60F05
- Sauer, Charles H. (with Chandry, K. Mani) Computational algorithms for product form queueing networks. *Comm. ACM* 23 (1980), no. 10, 573-583. (Authors' summary) 81i:68047 68C15 (90B22)
- Sauer, Niko (with Penning, Frans) On a class of weighted Sobolev spaces and the minimization of quadratic forms. *Proc. Roy. Soc. Edinburgh Sect. A* 81 (1978), no. 1-2, 119-130. (M. B. Suryanarayana) 81i:46048 46E35 (49G15)
- Saulis, L. Large deviations in the scheme of summing random variables with weights. (Russian. Lithuanian and English summaries) *Lietuv. Mat. Sb.* 19 (1979), no. 2, 179-187, 214. (Werner Wolf) 81a:60039 60F10
- Sauls, J. A. (with Muzikar, Paul; Serene, J. W.) 3P_2 pairing in neutron-star matter: magnetic field effects and vortices. *Phys. Rev. D* (3) 21 (1980), no. 6, 1494-1502. (Authors' summary) 81a:81093 81G10
- Saunon, G. (with Beroff, M. J.; Lelong, F.; Cherruault, Yves; Lafosse, J. E.; Georges, R.) Modèle d'échanges gazeux pulmonaires: influence de l'hétérogénéité de distribution des rapports ventilation-perfusion et conductance-perfusion sur le transfert d'oxygène. (English summary) *Internat. J. Bio-Med. Comput.* 9 (1978), no. 4, 287-300. (Authors' summary) 81k:92010 92A09
- Saunders, B. David (with Schneider, Hans) Applications of the Gordan-Stiemke theorem in combinatorial matrix theory. *SIAM Rev.* 21 (1979), no. 4, 528-541. (S. A. Brualdi) 81e:15009 15A48 (05B20, 15A33)
- Saunders, R. (with Gilsinn, J.; Hoffman, K.; Jackson, Richard H. F.; Leyendecker, E.; Shier, D. R.) Methodology and analysis for comparing discrete linear L_1 approximation codes. Computations for least absolute values estimation. *Comm. Statist. B—Simulation Comput.* 6 (1977), no. 4, 399-413. (See 81b:62127) 90C05
- Saunders, Peter Timothy (with Bazin, M. J.) An application of catastrophe theory to the study of a switch in *Dicystostelium discoideum*. *Kinetic logic: A Boolean approach to the analysis of complex regulatory systems (Proc. EMBO Course, Brussels, 1977)*, pp. 481-501, *Lecture Notes in Biomath.*, 29, Springer, Berlin, 1979. (C. P. Bruter) 81k:92046 92A15 (58C28)
- ★An introduction to catastrophe theory. *Cambridge University Press, Cambridge-New York*, 1980. xii+144 pp. ISBN 0-521-23042-X, 0-521-29782-6 (Zdeněk Ertinger) 81b:58019 58C28 (92-01)
- Saunders, Roy (with Laud, Purushottam) The multidimensional Kolmogorov goodness-of-fit test. *Biometrika* 67 (1980), no. 1, 237. (M. L. Tiku) 81f:62080 62G10
- Sautter, W. (with Deuffhard, P.) On rank-deficient pseudoinverses. *Linear Algebra Appl.* 29 (1980), 91-111. (D. S. Henderson) 81g:65049 65F20 (15A09)
- Sauvageot, Jean-Luc Image d'un homomorphisme et flot des poids d'une relation d'équivalence mesurée. *Math. Scand.* 42 (1978), no. 1, 71-100. (Editors) 81i:46082 46L10 (22D40)
- Ideaux primitifs et produits croisés. (English summary) *Algèbres d'opérateurs et leurs applications en physique mathématique (Proc. Colloq., Marseille, 1977)*, pp. 333-341.

- Colloques Internat. CNRS, 274, CNRS, Paris, 1979. (Richard I. Loeb) **81c:46044**
46L05
- Ideaux primitifs induits dans les produits croisés. *J. Funct. Anal.* **32** (1979), no. 3, 381-392. (Elliot C. Gootman) **81a:46080** 46L55 (22D25, 22D30)
- Savage, I. Richard (with Narayana, T. V.; Saxena, K. M. Lal) Young chains and rank orders. (French summary) *Canad. J. Statist.* **6** (1978), no. 1, 41-47. (J. Sarangi) **81c:62078** 62G10 (06B99)
- (with Leysieffer, Frederick W.; Sylvester, Richard J.) Reprinted articles in statistics and probability theory: a bibliography. I. (French summary) *Internat. Statist. Rev.* **48** (1980), no. 2, 205-228. (From the introduction) **81c:62001a** 62-XX (00A15, 01A75)
- (with Leysieffer, Frederick W.; Sylvester, Richard J.) Reprinted articles in statistics and probability theory: a bibliography. II. *Internat. Statist. Rev.* **48** (1980), no. 3, 289-307. (From the introduction) **81c:62001b** 62-XX (00A15, 01A75)
- Savage, J. R. (with Künzle, H. P.) Equilibrium of slowly rotating relativistic fluids. *J. Math. Phys.* **21** (1980), no. 2, 347-354. (Authors' summary) **81d:83039** 83C55
- Savage, John E. (with Swamy, Sowmitri) Space-time tradeoffs for oblivious integer multiplication. *Automata, languages and programming (Sixth Colloq., Graz, 1979)*, pp. 498-504. *Lecture Notes in Comput. Sci.* **71**, Springer, Berlin, 1979. (Authors' summary) **81d:68059** 68C25
- (with Swamy, Sowmitri) Space-time tradeoffs for linear recursion. *Conference Record of the Sixth Annual ACM Symposium on Principles of Programming Languages (San Antonio, Tex., 1979)*, pp. 135-142. *ACM, New York*, 1979. (Authors' summary) **81g:68013** 68B05
- (with Carlson, David A.) Graph pebbling with many free pebbles can be difficult. *Conference Proceedings of the Twelfth Annual ACM Symposium on Theory of Computing (Los Angeles, Calif., 1980)*, pp. 326-332. *ACM, New York*, 1980. (See **81j:68006**) 68C25
- Savage, N. (with Bustoz, J.) Inequalities for ultraspherical and Laguerre polynomials. II. *SIAM J. Math. Anal.* **11** (1980), no. 5, 876-884. (S. Saran) **81m:33095** 33A45
- Savaria, P. (with Kunzatter, G.; Moffat, J. W.) Cosmological solution with matter in a new theory of gravitation. (French summary) *Canad. J. Phys.* **58** (1980), no. 6, 729-736. (L. K. Patel) **81c:83043** 83D05
- Savarskii, B. Z. (with Kazimirs'kii, P. S.) Semiscalar equivalence of certain polynomial matrices. (Russian) *Theoretical and applied questions of differential equations and algebra (Russian)*, pp. 96-100, 263. "Naukova Dumka", Kiev, 1978. (Nicholas Young) **81b:15008** 15A21
- Sarantsev, G. See Simulation of systems 79, **81j:60009**
- Savchenko, O. Ja. (with Ignat'ev, A. O.) On the question of the effect of constantly acting perturbations on nonasymptotically stable motions. (Russian) *Theory of stability and its applications (Russian)*, pp. 31-38, 297. "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. (A. Corduneanu) **81f:34054** 34D20
- (with Pogojan, T. I.) Motion of a Lagrange gyroscope in a force field that is variable with respect to direction. (Russian) *Meh. Tverd. Tela No. 12* (1980), 85-90, 119. (Z. Jankovic) **81e:70006** 70E05 (70H35)
- Savchenko, V. G. (with Ševchenko, Ju. M.; Babeiko, M. E.; Piskun, V. V.) *Пространственные задачи термопластичности. (Russian) [Three-dimensional problems of thermoplasticity] "Naukova Dumka", Kiev, 1980. 263 pp. (Vadim Komkov) **81h:73058** 73U05 (73C03, 73E99)
- Savčuk, M. N. Formulas for parameters of distribution of certain random variables in the problem of allocation of particles by complexes. (Russian) *Mathematical methods in operations research and reliability theory (Russian)*, pp. 81-87. *Akad. Nauk Ukrain. SSR, Inst. Kibernet.*, Kiev, 1978. (From the text) **81m:60016** 60C05
- Save, M. A. Theory of optimal plastic design of structures. *Structural optimization*, pp. 151-210. *CISM Courses and Lectures*, 237, Springer, Vienna, 1978. (See **80h:73049**) 73K40 (00A69)
- Savel'ev, L. Ja. Inductive limits of sequences of continuous measures. (Russian) *Dokl. Akad. Nauk SSSR* **247** (1979), no. 5, 1060-1063. (Z. Lipceki) **81d:28010** 28B10
- Extension of continuous measures. (Russian) *Sibirsk. Mat. Ž.* **20** (1979), no. 5, 1082-1091, 1167. (Z. Lipceki) **81a:28012** 28B10
- See also Olympiads. Algebra. Combinatorial analysis, **81j:00004**
- Savel'ev, M. V. (with Leznov, A. N.) Representation theory and integration of nonlinear spherically symmetric equations to gauge theories. *Comm. Math. Phys.* **74** (1980), no. 2, 111-118. (Authors' summary) **81h:81073** 81E10 (58F07, 81C40)
- Savel'ev, V. A. (with Dolin, L. S.) Equation of optical image transfer in a scattering medium. *Izv. Akad. Nauk SSSR Ser. Fiz. Atmosf. i Okeana* **15** (1979), no. 7 (Russian); translated as *Izv. Acad. Sci. USSR Atmosf. Ocean. Phys.* **15** (1980), no. 7, 493-497. (Authors' summary) **81k:78013** 78A45 (86A35)
- Savel'ev, M. V. See Savel'ev, M. V.
- Savelova, T. I. On stable differentiation of functions. (Russian) *Ž. Vychisl. Mat. i Mat. Fiz.* **20** (1980), no. 2, 501-505, 552. (S. G. Samko) **81k:26008** 26A33 (45L05, 46E35)
- Savel'ev, V. A. See Savel'ev, V. A.
- Savchenkov, V. A. A mixed problem of elasticity theory for an anisotropic plane with cuts on the real axis. (Russian) *Vestnik Belorus. Gos. Univ. Ser. I* **1980**, no. 2, 56-58, 64. (M. Sokolowski) **81m:73022** 73C35 (45F15, 73C03)
- Savchenko, N. P. A nonlinear eigenvalue problem. (Russian) *Differentsial'nye Uravneniya* **16** (1980), no. 4, 741-745, 767. (Jan Bochenek) **81k:35127** 35P30 (78A50)
- Savina, O. N. (with Grigor'ev, G. I.; Dokucaev, V. P.) Acoustic-gravity perturbations in the atmosphere from horizontally moving sources. *Izv. Akad. Nauk SSSR Ser. Fiz. Atmosf. i Okeana* **15** (1979), no. 6 (Russian); translated as *Izv. Acad. Sci. USSR Atmosf. Ocean. Phys.* **15** (1980), no. 6, 458-460. (From the text) **81f:86006** 86A35
- Savlovsk, Ju. A. Existence of solutions for some classes of nonlinear equations with C -compact operators. (Russian) *Functional analysis*, No. 13 (Russian), pp. 121-130. *U'panosk. Gos. Ped. Inst., U'panosk*, 1979. (S. Burjček) **81h:47054** 47H15 (47H10)
- Savinova, L. T. See Dang Van Uyen, **81k:65040**
- Savir, Jacob Syndrome-testable design of combinatorial circuits. *FTCS-9 (Ninth Annual Internat. Sympos. Fault-Tolerant Comput., Madison, Wis., 1979)*, pp. 137-140. *IEEE, New York*, 1979. (See **81m:94001**) 94C05
- Testing for single intermittent failures in combinatorial circuits by maximizing the probability of fault detection. *IEEE Trans. Comput.* **29** (1980), no. 5, 410-416. (Author's summary) **81b:94060** 94C05
- Syndrom-testable design of combinatorial circuits. *IEEE Trans. Comput.* **29** (1980), no. 6, 442-451. (Author's summary) **81j:94050a** 94C30
- Detection of single intermittent faults in sequential circuits. *IEEE Trans. Comput.* **29** (1980), no. 7, 673-678. (From the summary) **81g:94078** 94C99
- Correction to: "Syndrome-testable design of combinatorial circuits". *IEEE Trans. Comput.* **29** (1980), no. 11, 1012-1013. (Editors) **81j:94050b** 94C30
- Savits, Robert (with Kazama, Yoichi) Dual formulation of nonabelian gauge theories. *Phys. Rev. D* (3) **21** (1980), no. 10, 2916-2925. (Authors' summary) **81g:81052** 81E10 (49C05, 53C05)
- Duality in field theory and statistical systems. *Rev. Modern Phys.* **52** (1980), no. 2, part 1, 453-487. (Author's summary) **81a:82056** 82A67 (81E99)
- Savitch, Walter J. The influence of the machine model on computational complexity. *Interfaces between computer science and operations research (Proc. Sympos., Math. Centrum, Amsterdam, 1976)*, pp. 1-32. *Math. Centre Tracts*, 99, Math. Centrum, Amsterdam, 1978. (See **81f:68001**) 68C25
- Graphs of processors. *Graph-grammars and their application to computer science and biology (Internat. Workshop, Bad Honnef, 1978)*, pp. 418-425. *Lecture Notes in Comput. Sci.*, 73, Springer, Berlin, 1979. (From the introduction) **81d:68039** 68B20 (68J10)
- (with Stimson, Michael J.) Hierarchies of recursive computations. *Internat. J. Comput. Math.* **7** (1979), no. 4, 271-286. (Giorgio Ausiello) **81c:68038** 68C40 (03D15, 68C25)
- (with Stimson, Michael J.) Time bounded random access machines with parallel processing. *J. Assoc. Comput. Mach.* **26** (1979), no. 1, 103-118. (Authors' summary) **81g:68073** 68C25 (68B20)
- Savits, Thomas H. (with Block, Henry W.) Multivariate increasing failure rate average distributions. *Ann. Probab.* **8** (1980), no. 4, 793-801. (Moshe Shaked) **81f:60120** 60K10 (62N05)
- Savkov, E. S. (with Frolov, V. F.; Vernikov, E. M.) Calculation of parameters of heat pipe with convective heat transfer. *Int.-Fiz. Ž.* **38** (1980), no. 2, 222-230 (Russian); translated as *J. Engng. Phys.* **38** (1980), no. 2, 132-138. (Authors' summary) **81i:80004** 80A20 (76R05)
- Savo, Bonaventura Analytical solutions of the sine-Gordon equation and their application to Josephson tunnel junctions. *Nonlinear evolution equations and dynamical systems (Proc. Meeting, Univ. Lecce, Lecce, 1979)*, pp. 299-313. *Lecture Notes in Phys.*, 120, Springer, Berlin, 1980. (E. Pinney) **81i:35151** 35Q20 (76X05, 81J05)
- Savolins, N. S. (with Černikov, N. A.) Example of the relativistic two-body problem. I. The boundary value problem for a minimal surface. (Russian. English summary) *Theoret. Mat. Fiz.* **42** (1980), no. 1, 59-70. (Authors' summary) **81j:8307a** 83C10 (49F10, 70F05)
- (with Černikov, N. A.) Example of the relativistic two-body problem. II. Equations of motion. (Russian. English summary) *Theoret. Mat. Fiz.* **43** (1980), no. 3, 356-366. (Authors' summary) **81j:8307b** 83C10 (49F10, 70F05)
- Savoy, C. A. (with Buccella, F.; Ruegg, H.) Spontaneous symmetry breaking of $SU(n)_c$. *Nuclear Phys. B* **169** (1980), no. 1-2, 68-76. (A. O. Barut) **81m:81071** 81G20 (22E70, 81D20)
- Savracki, S. H. (with Pelinovski, E. N.) Breaking of stationary waves in nonlinear dispersive media. *Phys. D* **1** (1980), no. 3, 317-328. (Authors' summary) **81m:78018** 78A40 (81K05)
- Savruk, M. P. (with Panajuk, V. V.; Nazareuk, Z. T.) The plane problem of diffraction of an electromagnetic field by a system of curvilinear screens. (Russian) *Dokl. Akad. Nauk SSSR* **252** (1980), no. 5, 1101-1104. (V. M. Babit) **81h:78022** 78A45
- Savruia, Ja. G. (with Šinkarenko, G. A.; Vovk, V. N.) A posteriori estimate of an approximate solution obtained by the finite element method in a problem of rod torsion. (Ukrainian. Russian summary) *Visnik L'viv. Derž. Univ. Ser. Meh.-Mat. No. 12* (1977), 63-68, 96. (V. G. Korneev) **81i:65107** 65N15 (65N30)
- New orthogonal curvilinear coordinates. (Ukrainian. Russian summary) *Visnik L'viv. Derž. Univ. Ser. Meh.-Mat. No. 13* (1978), 85-90, 129. (Hans Sachs) **81m:53011** 53A17 (70E99)
- Sávilene, Št. N. Large scale periodic solutions of the unsteady boundary layer equations. *Acta Mech.* **37** (1980), no. 1-2, 153-158. (From the introduction) **81e:76035** 76D10
- Saw, John G. A family of distributions on the m -sphere and some hypothesis tests. *Biometrika* **65** (1978), no. 1, 69-73. (Authors' summary) **81g:62091** 62H10 (62H15)
- (with Bovett, James M.) On comparing two Poisson intensity functions. *Comm. Statist. A—Theory Methods* **9** (1980), no. 9, 943-948. (Paul I. Nelson) **81h:62150** 62M07 (62G10)
- Sawa, Takamitsu Information criteria for discriminating among alternative regression models. *Econometrica* **46** (1978), no. 6, 1273-1291. (O. Gulyás) **81a:62071a** 62J99 (62B10)
- The exact moments of the least squares estimator for the autoregressive model. *J. Econometrics* **8** (1978), no. 2, 159-172. (Authors' summary) **81c:62105** 62M10 (62P20)
- See also Leamer, Edward E., **81a:62071b**
- Sawada, Ken On the iterations of diffeomorphisms without C^0 -explosions: an example. *Proc. Amer. Math. Soc.* **79** (1980), no. 1, 110-112. (Michał Krych) **81h:58055** 58F30 (28D10)
- Sawaki, Katsuhiko Piecewise linear dynamic programs with applications. (Japanese summary) *J. Oper. Res. Soc. Japan* **23** (1980), no. 2, 91-110. (A. A. Julkevich) **81k:90106** 90C40
- Sawami, Hideo (with Niki, Hiroshi; Ondoh, Tetsuya) Note on the nonstationary iterative method for the estimation of the optimum overrelaxation parameter. *J. Comput. Appl. Math.* **6** (1980), no. 2, 127-131. (Authors' summary) **81e:65016** 65F10 (65N20)
- Sawaragi, Yoshikazu (with Ikeda, Saburo; Miyamoto, S.) Regularization method for identification of distributed systems. *Identification and system parameter estimation (Proc. Fourth IFAC Sympos., Tbilisi, 1976)*, Part 3, pp. 1517-1526. *North-Holland, Amsterdam*, 1978. (See **80d:93010c**) 93B30
- (with Nakayama, Hirotsugu; Tanino, Tetsuzo; Matsumoto, Keinosuke; Matsuo, Hirofumi; Inoue, Koichi) Methodology for group decision support with an application to assessment of residential environment. *IEEE Trans. Systems Man Cybernet.* **9** (1979), no. 9, 477-485. (Authors' summary) **81a:90027** 90A07

- (with Nakayama, Hirotsuka; Tanino, Tetsuzoh) An interactive optimization method in multicriteria decision making. *IEEE Trans. Systems Man Cybernet.* 10 (1980), no. 3, 163-169. (Authors' summary) **81a:90015** 90A05
- (with Tanino, Tetsuzoh) Stability of nondominated solutions in multicriteria decision-making. *J. Optim. Theory Appl.* 30 (1980), no. 2, 229-253. (P. L. Yu) **81c:90085** 90C31
- Sawczuk, A.** On plastic analysis of shells. *Theory of shells (Proc. Third IUTAM Symp., Tbilisi, 1978)*, pp. 27-63, North-Holland, Amsterdam, 1980. (P. D. S. Verma) **81d:73075** 73L99
- Saweris, N. B.** (with Pillai, K. C. S.) Asymptotic formulae for the percentiles and c.d.f. of Hotelling's trace under violations. (Spanish summary) *Rev. Téc. Fac. Ingr. Univ. Zulia* 2 (1979), no. 1-2, 105-122. (Minoru Siotani) **81b:62064** 62H10
- Sawford, R. L.** (with Frederiksen, J. S.) Statistical dynamics of two-dimensional inviscid flow on a sphere. *J. Atmospheric Sci.* 37 (1980), no. 4, 717-732. (Authors' summary) **81d:76023** 76C15 (86A10)
- Savortnov, Parfeny P.** Characterization of the trace-class. *Proc. Amer. Math. Soc.* 78 (1980), no. 4, 545-547. (Harro Heuser) **81b:47030** 47B10 (46K15)
- Linear spaces with an H^* -algebra-valued inner product. *Trans. Amer. Math. Soc.* 262 (1980), no. 2, 543-549. (B. Yood) **81m:46080** 46K99 (46G10, 46H99)
- el-Sawy, A. H.** See El-Sawy, A. H.
- Sawyer, Stanley** (with Rosenkrantz, Walter A.) L^p estimates for stopping times of Bessel processes. *Z. Wahrsch. Verw. Gebiete* 41 (1977), no. 2, 145-151. (S. R. S. Varadhan) **81m:60148** 60J65
- Saxe, James B.** On the number of range queries in k -space. *Discrete Appl. Math.* 1 (1979), no. 3, 217-225. (John Cherniavsky) **81b:68065** 68C25
- (with Bentley, John Louis) Generating sorted lists of random numbers. *ACM Trans. Math. Software* 6 (1980), no. 3, 359-364. (George Marsaglia) **81k:65010** 65C10 (68-01)
- Saxe, Paul** (with Brooks, Bernard R.; Laidig, William D.; Goddard, John D.; Yamaguchi, Yukio; Schaefer, Henry F., III) Analytic gradients from correlated wave functions via the two-particulate density matrix and the unitary group approach. *J. Chem. Phys.* 72 (1980), no. 8, 4652-4653. (From the text) **81a:81119** 81G55
- Saxena, Ashok** (with Prasad, Rajendra) On the uniform Nörlund summability of the conjugate series of the Fourier series. *Ann. Fac. Sci. Univ. Nat. Zaire (Kinshasa) Sect. Math.-Phys.* 4 (1978), no. 2, 235-246 (1979). (Shri Nivas Bhatt) **81j:42014** 42A24 (42A50)
- Discrimination with a mixture population. *Biometrical J.* 21 (1979), no. 7, 661-666. (Chien-Pai Han) **81f:62103** 62H30
- (with Arfin, Khurshidul) On the strong (L) summability of the ($C, 1$) mean of a conjugate series of a Fourier series. *Pure Appl. Math. Sci.* 11 (1980), no. 1-2, 61-64. (Tikam Singh) **81f:42010** 42A50
- Saxena, K. M. Lal** (with Narayana, T. V.; Savage, I. Richard) Young chains and rank orders. (French summary) *Canad. J. Statist.* 6 (1978), no. 1, 41-47. (J. Sarangi) **81i:62078** 62G10 (06B99)
- Saxena, K. P.** (with Rao, C. V.) A study of power of a test procedure based on two preliminary tests of significance. *Estatistica* 33 (1979), no. 121, 201-214. (Vijaya Prakash Gupta) **81c:62081** 62J10 (62F99)
- Saxena, P. C.** (with Patkar, Vivek; Parkash, Om) A note on an algorithm for integer solution to linear and piecewise linear programs. *Pure Appl. Math. Sci.* 9 (1979), no. 1-2, 31-36. (Thomas L. Magnanti) **81j:90083** 90C10
- (with Patkar, Vivek; Parkash, Om) Linear fractional functional programming in complex space. *Z. Angew. Math. Mech.* 59 (1979), no. 6, 276-278. (I. M. Stancu-Minasian) **81b:90145** 90C32
- (with Aggarwal, S. P.) Parametric linear fractional functional programming. *Econom. Comput. Econom. Cybernet. Stud. Res.* 14 (1980), no. 1, 87-97. (Tomas Gal) **81f:90107** 90C32 (90C08, 90C31)
- Saxena, P. K.** (with Bhandari, M. C.) Lower and upper formation radical of near-rings. *Kyungpook Math. J.* 19 (1979), no. 2, 205-211. (Gordon Mason) **81b:16028** 16A76
- Saxena, R. B.** (with Srivastava, K. B.) On interpolation operators. II. A proof of Timan's theorem for differentiable functions. *Anal. Numer. Théor. Approx.* 8 (1979), no. 2, 215-227. (R. K. Beatson) **81g:41013** 41A10 (41A25)
- (with Bojanić, R.; Prasad, Jagdish) An upper bound for the rate of convergence of the Hermite-Fejér process on the extended Chebyshev nodes of the second kind. *J. Approx. Theory* 26 (1979), no. 3, 195-203. (Martin Bartelt) **81c:41032** 41A25
- Saxena, R. K.** (with Jain, D. R.; Jain, Pawan K.) On certain classes of entire functions over non-Archimedean fields. *Rev. Roumaine Math. Pures Appl.* 25 (1980), no. 5, 811-821. (Lalitha Swetharanyam) **81m:46104** 46P05 (30D15, 32A15, 46E10)
- Saxena, Ram Kishore** (with Kalla, Shyam Lal) An expansion formula for the H -function of two variables. (Spanish summary) *Rev. Téc. Fac. Ingr. Univ. Zulia* 2 (1979), no. 1-2, 67-76. (C. K. Sharma) **81a:33005** 33A35
- Saxena, V. K.** Comments on the Ising spin-glass with competing interactions. *Phys. Lett. A* 79 (1980), no. 2-3, 213-214. (Authors' summary) **81b:82052** 82A67
- Saxl, Jan** (with Praeger, Cheryl E.) On fixed points in paired suborbits. *Arch. Math. (Basel)* 33 (1979/80), no. 4, 325. (Editors) **81f:20002** 20B05
- (with Praeger, Cheryl E.) On the orders of primitive permutation groups. *Bull. London Math. Soc.* 12 (1980), no. 4, 303-307. (Peter Rowlinson) **81g:20003** 20B20
- Saxton, Lawrence V.** (with Probert, Robert L.; Cheston, Grant A.) Computing minimum path covers for flow graphs of well-structured programs. *Proceedings of the Seventh Manitoba Conference on Numerical Mathematics and Computing (Univ. Manitoba, Winnipeg, Man., 1977)*, pp. 503-523, Congress. Numer., XX, Utilitas Math., Winnipeg, Man., 1978. (Kurt Mehlhorn) **81e:68086** 68E10 (68B05)
- Sayama, H.** (with Oi, K.; Takamatsu, T.) Multimodality analysis of a class of multistage allocation problems. *J. Optim. Theory Appl.* 25 (1978), no. 1, 33-48. (Authors' summary) **81f:90095** 90C30 (49D99, 80A30, 90B05)
- Sayasov, Yu. S.** Influence of the pressure and viscosity effects on the magneto-acoustic oscillations in bounded plasmas. *Helv. Phys. Acta* 52 (1979), no. 5-6, 568-579 (1980). (Authors' summary) **81d:76124** 76X05
- Sayed, W. A.** (with Smalagic, A.) Coulomb-like solutions for SU_2 gauge fields coupled to strong gravity. (Italian and Russian summaries) *Nuovo Cimento A* (11) 56 (1980), no. 4, 435-444. (Authors' summary) **81e:81105** 81E99 (83E99)
- Sayer, F. P.** The recurrence relation $(r+1)f_{r+1} = xf_r + (K-r+1)x^2f_{r-1}$. *Fibonacci Quart.* 17 (1979), no. 3, 228-239. (R. F. Churchhouse) **81f:33016** 33A70 (39A10)
- Sayer, P.** The long-wave behaviour of the virtual mass in water of finite depth. *Proc. Roy. Soc. London Ser. A* 372 (1980), no. 1748, 65-91. (Authors' summary) **81g:76026** 76B99
- An integral-equation method for determining the fluid motion due to a cylinder heaving on water of finite depth. *Proc. Roy. Soc. London Ser. A* 372 (1980), no. 1748, 93-110. (Authors' summary) **81g:76027** 76B99 (45B05, 65R20)
- Sayf, A.** (with Cooper, G. J.) Additive methods for the numerical solution of ordinary differential equations. *Math. Comp.* 35 (1980), no. 152, 1159-1172. (David K. Kahaner) **81k:65079** 65L05
- Sayir, Mahir** (with Mitropoulos, Constantin) On elementary theories of linear elastic beams, plates and shells. (German summary) *Z. Angew. Math. Phys.* 31 (1980), no. 1, 1-55. (Yi-Yuan Yu) **81h:73029** 73K05 (73K10, 73L99)
- Saylor, Paul E.** Use of the singular value decomposition with the Manteuffel algorithm for nonsymmetric linear systems. *SIAM J. Sci. Statist. Comput.* 1 (1980), no. 2, 210-222. (F. Szczyrowski) **81m:65049** 65F10 (65F15)
- Sayre, James W.** The distributions of the actual error rates in linear discriminant analysis. *J. Amer. Statist. Assoc.* 75 (1980), no. 369, 201-205. (S. John) **81g:62106** 62H30
- Sazanov, V. S.** Generalization of a theorem of É. Cartan. (Russian) *Izv. Vysš. Ucheb. Zaved. Matematika* 1980, no. 3, 67-70. (Hillel Gauchman) **81c:53013** 53B20
- Sažin, M. V.** (with Braginskii, V. B.; Gričuk, L. P.; Doroković, A. G.; Menskii, M. B.; Novikov, I. D.; Zel'dovich, Ja. B.) On the electromagnetic detection of gravitational waves. *Gen. Relativity Gravitation* 11 (1979), no. 6, 407-409 (1980). (Authors' summary) **81d:83026** 83C35
- Sazonov, A. Ju.** The Fourier method for certain singular hyperbolic equations. (Russian) *Dokl. Akad. Nauk SSSR* 248 (1979), no. 4, 792-796. (V. Duriković) **81j:35071** 35L20 (35C10)
- Sazonov, E. A.** (with Prohorov, L. V.) Classical dynamics and quasiclassical approximation in theories with anticommuting variables. (Russian. English summary) *Vestnik Leningrad. Univ. Fiz. Him.* 1980, vyp. 2, 12-18, 122. (Authors' summary) **81h:81103** 81E99 (22E65, 58F06)
- Sazonov, L. I.** (with Mjasknov, A. G.) Singular integral operators with a non-Carlema shift on an open contour. (Russian) *Funkcional. Anal. i Prilozhen.* 14 (1980), no. 1, 71-72. (N. K. Karapetjan) **81g:47057** 47G05 (47B38)
- Sazonov, V. V.** (with Gataullin, I. R.) Forced periodic oscillations of a mathematical pendulum with friction. (Russian) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No.* 171 (1979), 30 pp. (V. G. Kolomic) **81g:34052** 34C25 (70K99)
- Sazonov, A. G.** The similarity relation and turbulence spectra in a stratified medium. *Izv. Akad. Nauk SSSR Ser. Fiz. Atmosf. i Okeana* 15 (1979), no. 8 (Russian); translated as *Izv. Acad. Sci. USSR Atmosf. Ocean. Phys.* 15 (1980), no. 8, 566-570. (Authors' summary) **81k:76082** 76V05 (76F99)
- Sbibi, Najiba** Algorithme de recherche d'un stable de cardinalité maximum dans un graphe sans étoile. *Discrete Math.* 29 (1980), no. 1, 53-76. (John Staples) **81e:68087** 68E10 (05C40)
- (with Naddef, D.; Tchente, M.) Independence systems with continuous cardinality of bases. *Discrete Math.* 31 (1980), no. 1, 107-109. (J. E. Graver) **81g:05040** 05B35 (05C99)
- Shordone, Carlo** (with Marcellini, Paolo) Relaxation of nonconvex variational problems. (Italian summary) *Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur.* (8) 63 (1977), no. 5, 341-344 (1978). (Lucio Boccardo) **81b:49004** 49A21 (94A15)
- On some convergence problems for quasiconformal mappings. *Romanian-Finnish Seminar on Complex Analysis (Proc., Bucharest, 1976)*, pp. 223-237, *Lecture Notes in Math.*, 743, Springer, Berlin, 1979. (Olli Martio) **81m:30021** 30C60 (49A22)
- (with Carbone, Luciano) Some properties of T -limits of integral functionals. *Ann. Mat. Pura Appl.* (4) 122 (1979), 1-60. (M. A. Jagubov) **81f:49034** 49D30 (49F25)
- (with Marcellini, Paolo) Semicontinuity problems in the calculus of variations. *Nonlinear Anal.* 4 (1980), no. 2, 241-257. (Erich Miersemann) **81d:49011** 49A50
- Sburian, S. F.** Constraint strongly monotone operators. *Romanian-Finnish Seminar on Complex Analysis (Proc., Bucharest, 1976)*, pp. 648-655, *Lecture Notes in Math.*, 743, Springer, Berlin, 1979. (D. Pascali) **81h:73013** 73C99 (35J20, 47H15, 49A29)
- dalla chiara Scabia, Maria Luisa** See Dalla Chiara Scabia, Maria Luisa
- Seacchi, Walt** (with Kling, Rob) Computing as social action: the social dynamics of computing in complex organizations. *Advances in computers*, Vol. 19, pp. 249-321, Academic Press, New York, 1980. (See **81i:68003**) 68K05
- Scaciatelli, E.** (with Benfatto, G.; Cassandro, M.; Gallavotti, G.; Nicolò, F.; Olivieri, E.; Presutti, E.) Some probabilistic techniques in field theory. *Comm. Math. Phys.* 59 (1978), no. 2, 143-166. (Sergio Albeverio) **81e:81081** 81E15 (60G20, 60H15, 60J45, 82A05)
- (with Benfatto, G.; Cassandro, M.; Gallavotti, G.; Nicolò, F.; Olivieri, E.; Presutti, E.) Ultraviolet stability in Euclidean scalar field theories. *Comm. Math. Phys.* 71 (1980), no. 2, 95-130. (Francesco Guerra) **81c:81045** 81E10 (60G20)
- Scalapino, D. J.** (with Cardy, John L.; Nauenberg, M.) Scaling theory of the Potts-model multicritical point. *Phys. Rev. B* (3) 22 (1980), no. 5, 2560-2568. (Authors' summary) **81g:82017** 82A25 (82A67)
- Scalia, M.** (with Moaurio, Vinicio; Salvadori, L.) Total stability and classical Hamiltonian theory. *Nonlinear equations in abstract spaces (Proc. Internat. Sympos., Univ. Texas, Arlington, Tex., 1977)*, pp. 149-159, Academic Press, New York, 1978. (G. Bojadjiev) **81b:58025** 58F10 (70H99)
- cronin-Scanlon, Jane** See Cronin-Scanlon, Jane
- Scapolla, T.** A mixed finite element method for the biharmonic problem. (French summary) *RAIRO Anal. Numér.* 14 (1980), no. 1, 55-79. (Kristian Wituch) **81m:65178** 65N30
- Scaravelli, Corrado** (with Teppati, Giancarlo) A result concerning a class of ladder operators. (Italian summary) *Rend. Istit. Mat. Univ. Trieste* 9 (1977), no. 1-2, 134-140 (1978). (M. Cotlar) **81h:47040** 47B37 (81D05)
- (with Azzimondi, P.) A fixed-point theorem in generalized metric spaces. (Italian. English summary) *Riv. Mat. Univ. Parma* (4) 5 (1979), part 2, 773-780 (1980). (Silvio Massa) **81h:54031** 54H25
- Scarowsky, Manuel** (with Boyarsky, Abraham) On n -dimensional piecewise-linear

- difference equations. *Nonlinear Anal.* 4 (1980), no. 4, 715-731. (Frederick R. Marotto) **81i:39002** 39A10 (39A12, 58F13)
- Scarpellini, Bruno Hilbertraum-Approximation und Jacobi-Matrizen. (English summary) *Z. Angew. Math. Phys.* 30 (1979), no. 2, 326-341. (Klaus Hollig) **81i:41029** 41A65 (15A57, 41A25)
- Scarpetta, G. (with de Filippo, S.; Vilasi, Gaetano; Grella, G.) Clusterlike expansion based on s.u.l. approximation. *Let. Nuovo Cimento* (2) 27 (1980), no. 12, 369-376. (From the text) **81i:81092** 81E99
- Scarpini, F. The numerical approximation of a unilateral parabolic problem with respect to some nonlinear operators. (Italian. English summary) *Boll. Un. Mat. Ital. B* (5) 16 (1979), no. 2, 629-638. (G. C. Barozzi) **81i:65046** 65M15 (35K22, 49A29)
- Sur une inéquation d'évolution parabolique du type II, associée à un problème d'asservissement thermique. (English summary) *Calcolo* 16 (1979), no. 3, 239-254 (1980). (Pierre-Louis Lions) **81i:49006** 49A29 (35K22, 65P05)
- A numerical approach to the solution of some variational inequalities. *Variational inequalities and complementarity problems* (Proc. Internat. School, Erice, 1978), pp. 323-338, Wiley, Chichester, 1980. (Pierre-Louis Lions) **81i:49005** 49A29 (65N99)
- Error estimates for the finite element approximation of some variational inequalities. *Variational inequalities and complementarity problems* (Proc. Internat. School, Erice, 1978), pp. 339-348, Wiley, Chichester, 1980. (R. F. Denmeier) **81i:65118** 65N30 (49A29, 49D10)
- Scarselli, Alessandro Regular S-partitions of a finite group. (Italian. English summary) *Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur.* (8) 62 (1977), no. 3, 300-304. (From the text) **81i:20031** 20D99
- Šedra, B. M. (with Andruševskii, N. M.; Kovács, Margit) A method for the minimization of a quadratic functional by application of a pseudoinverse (MINSQ). (Russian. English summary) *Numerical analysis* (Russian), pp. 28-36, 80, Comp. Center Universities, Budapest, 1978. (Authors' summary) **81i:65057** 65K10 (65F20)
- (with Andruševskii, N. M.; Rudenko, I. M.) A program for finding the global minimum of a single variable function. (Russian. English summary) *Numerical analysis* (Russian), pp. 37-42, 81, Comp. Center Universities, Budapest, 1978. (Authors' summary) **81i:65058** 65K10
- Šeĭgal'kov, E. A. See Ljapunov, A. A., **81i:01033**
- Šehorskiĭ, A. I. Some differential properties of holomorphic mappings. (Russian) *Ukrain. Mat. Ž.* 32 (1980), no. 2, 279-282, 287. (Ju. B. Zelinskii) **81i:32019** 32F99 (49F20)
- Šekoldin, V. A. A property of the critical vertices of a graph. (Russian. English summary) *Vestĭ Akad. Nauk BSSR Ser. Fiz.-Mat. Nauk* 1980, no. 2, 35-36, 140. (G. N. Kopylov) **81i:05066** 05C15
- Šen'nikov, V. V. (with Guščin, V. A.) Solution of problems of the dynamics of a viscous incompressible fluid by the splitting method. (Russian) *Direct numerical simulation of gas flows* (Russian), pp. 114-133, 175, Akad. Nauk SSSR, Vyĭsl. Centr, Moscow, 1978. (See **81i:76084**) 76D05
- (with Kravčenko, V. I.; Ševelev, Ju. D.) Numerical investigation of unsteady viscous incompressible flow about bodies for varying conditions of their motion. *Approximation methods for Navier-Stokes problems* (Proc. Sympos., Univ. Paderborn, Paderborn, 1979), pp. 323-359, Lecture Notes in Math., 771, Springer, Berlin, 1980. (From the text) **81i:76036** 76D05 (65P05)
- Šepakina, M. B. Geometric method of search for a common point of convex sets. *Kibernetika* (Kiev) 1979, no. 3, 110-111, 124 (Russian); translated as *Cybernetics* 15 (1979), no. 3, 429-431 (1980). (Robert A. Abrams) **81i:52014** 52A99 (90C99)
- Modification of a class of mathematical programming algorithms. (Russian) *Ž. Vyĭsl. Mat. i Mat. Fiz.* 19 (1979), no. 6, 1387-1395, 1627. (O. Pokorný) **81i:90081** 90C25
- Šepetev, V. A. (with Gutljanskii, V. Ja.) Exact estimates of the modulus of a univalent analytic function with a quasiconformal extension. (Russian) *Akad. Nauk Ukrain. SSR Inst. Mat. Preprint* 1979, no. 13, 28 pp. (R. Kühnau) **81i:30031** 30C60 (30C70)
- Šerbak, O. P. Existence conditions for a nondegenerate mapping with a given support. (Russian) *Funkcional. Anal. i Prilozhen.* 13 (1979), no. 2, 95. (G. R. Belickii) **81i:32013** 32B30
- Šerbak, S. B. (with Mahviladze, G. M.) A numerical method for investigation of non-steady-state spatial motions of a compressible gas. (Russian. Bulgarian and English summaries) *Teoret. Priloz. Meh.* 11 (1980), no. 2, 41-53, 4, 8. (Authors' summary) **81i:76038** 76N10 (65P05)
- Šerbakov, A. P. (with Komarov, I. V.) Classical scattering by an anisotropic potential. (Russian. English summary) *Vestnik Leningrad. Univ. Fiz. Him.* 1979, vyp. 3, 24-31, 114. (Authors' summary) **81i:70017** 70F35
- Šerbakov, B. A. A theorem of a fixed point in functional spaces. (Russian) *Contemporary questions of applied mathematics and programming* (Russian), pp. 162-164, 173, "Štiinca", Kishinev, 1979. (I. Kubiacyk) **81i:54068** 54H25 (54C35)
- See also *Contemporary questions of applied mathematics and programming*, **81i:00008** and *Algebraic invariants of dynamic systems*, **81i:34081**
- Šerbakov, E. A. Variational method in a problem of axially symmetric cavitation flow taking into account surface attraction. (Russian) *Dinamika Splošn. Sredy* No. 40 *Dinamika Židkosti so Svobod. Granic.* (1979), 99-113, 141. (V. P. Kalashnikov) **81i:76008** 76B10
- Šerbakov, S. A. Horospherical coordinate net on a hyperbolic horn. (Russian) *Geometry*, no. 6 (Russian), pp. 117-128, Leningrad. Gos. Ped. Inst., Leningrad, 1977. (W. Wrona) **81i:53043** 53C20
- Šerbakov, V. N. Emission propagation in an absorbing medium involving discrete scatterers. (Russian. English summary) *Vestĭ Akad. Nauk BSSR Ser. Fiz.-Mat. Nauk* 1979, no. 6, 89-95, 143. (Piero Bassanini) **81i:78034** 78A45 (35P25, 35R60, 78A45)
- Šerbin, G. V. On the question of a priori estimates for solutions of second-order equations. (Russian) *Differentsial'nye Uravneniya* 15 (1979), no. 10, 1840-1847, 1918. (I. Kiguradze) **81i:34007** 34A45
- Šerbin, N. V. (with Paramonov, P. V.) Examples of nonanalytic uniform algebras. (Russian. English summary) *Vestnik Moskov. Univ. Ser. I Mat. Meh.* 1980, no. 4, 26-28, 99. (C. C. White) **81i:46083** 46J15 (46J20)
- Šerbin, O. A. A local algorithm for integral optimization problems. (Russian) *Ž. Vyĭsl. Mat. i Mat. Fiz.* 20 (1980), no. 3, 802-804, 816. (Ja. I. Al'ber) **81i:90067** 90C10 (65K10)
- Šerbin, A. F. An optimal sampling method. (Russian) *Ž. Vyĭsl. Mat. i Mat. Fiz.* 20 (1980), no. 3, 769-773, 815. (I. Váduva) **81i:65018** 65C05 (65D30)
- Šerbova, E. N. (with Grudzev, G. P.; Moniev, A. Ja.) Review of the mathematical modeling of the process of hematopoiesis (stem cell). (Russian) *Mathematical models of mechanisms of pathological processes. Voprasy Kibernet. (Moscow) No. 49* (1979), 64-106. (See **81i:92007**) 92A07
- Schnaasma, Willem (with van Vark, Gerrit N.) Classification and discrimination problems with applications. *Ila. Statist. Neerlandica* 33 (1979), no. 2, 91-126. (Authors' summary) **81i:62111** 62H30
- Schaback, Robert Suboptimal exponential approximations. *SIAM J. Numer. Anal.* 16 (1979), no. 6, 1007-1018. (C. W. Clenshaw) **81i:65017** 65D15 (41A35)
- Bemerkungen zur Fehlerabschätzung bei linearer Tschebyscheff-Approximation. (English summary) *Numerical methods of approximation theory, Vol. 5 (Conf., Math. Res. Inst., Oberwolfach, 1979)*, pp. 255-276, Internat. Ser. Numer. Math., 52, Birkhäuser, Basel, 1980. (G. Mühlbach) **81i:41033** 41A50 (41A52)
- Schach, Siegfried (with Schäfer, Thomas) ★Regression- und Varianzanalyse. (German) [Regression and variance analysis] Eine Einführung. [An introduction] Hochschultext. [University text] Springer-Verlag, Berlin-New York, 1978. viii + 262 pp. ISBN 3-540-08727-3 (J. Kleffe) **81i:62002** 62-01 (62J05, 62J10)
- Schacher, Murray (with Fein, Burton) Brauer groups and character groups of function fields. *J. Algebra* 61 (1979), no. 1, 249-255. (David J. Saltman) **81i:12036** 12G05 (12E15)
- (with Gordon, Basil) The admissibility of A_5 . *J. Number Theory* 11 (1979), no. 4, 498-504. (Paul van Praag) **81i:12014** 12A80 (16A39)
- (with Fein, Burton) Brauer groups of fields. *Ring theory and algebra, III (Proc. Third Conf., Univ. Oklahoma, Norman, Okla., 1979)*, pp. 345-356, Lecture Notes in Pure and Appl. Math., 55, Dekker, New York, 1980. (F. DeMeyer) **81i:12025** 12E15 (12F20, 20K10)
- (with Fein, Burton) Strong crossed product division algebras. *Comm. Algebra* 8 (1980), no. 5, 451-466. (S. Elliger) **81i:16020** 16A39 (12A80)
- (with Fein, Burton; Wadsworth, Adrian R.) Division rings and the square root of -1. *J. Algebra* 65 (1980), no. 2, 340-346. (A. Rosenberg) **81i:12015** 12D15 (16A39)
- Schachermayer, W. (with Cooper, J. B.) Saks spaces and vector-valued measures. *Categorical topology* (Proc. Internat. Conf., Free Univ. Berlin, Berlin, 1978), pp. 44-54, Lecture Notes in Math., 719, Springer, Berlin, 1979. (Igor Kluvánek) **81i:46047** 46G10 (28B05)
- Schachter, B. J. (with Lee, D. T.) Two algorithms for constructing a Delaunay triangulation. *Internat. J. Comput. Inform. Sci.* 9 (1980), no. 3, 219-242. (Wolfgang Boehm) **81i:52001** 52-04 (32B25, 68K05)
- Schader, M. Hierarchical analysis: classification with ordinal object dissimilarities. *Metrika* 27 (1980), no. 2, 127-132. (Authors' summary) **81i:68136** 68H05 (62H30)
- Schaefer, Helmut H. Antrittsrede. *Juch. Heidelberger Akad. Wiss.* 1979, 100-102 (1980). (Editors) **81i:01026** 01A70
- Interpolation of spectra. *Integral Equations Operator Theory* 3 (1980), no. 3, 463-469. (Peter Lancaster) **81i:47030** 47B38 (47A10)
- Ordnungsstrukturen in der Operatoretheorie. *Jahresber. Deutsch. Math.-Verein.* 82 (1980), no. 1, 33-50. (Ju. A. Abramovič) **81i:47038** 47B55 (47D05)
- On positive contractions in L^p -spaces. *Trans. Amer. Math. Soc.* 257 (1980), no. 1, 261-268. (Dieter Lutz) **81i:47048** 47B55
- Schaefer, Henry F., III (with Brooks, Bernard R.; Laidig, William D.; Saxe, Paul; Goddard, John D.; Yamaguchi, Yukio) Analytic gradients from correlated wave functions via the two-particle density matrix and the unitary group approach. *J. Chem. Phys.* 72 (1980), no. 8, 4652-4653. (From the text) **81i:81119** 81G55
- Schaefer, Mark E. (with Balachandran, K. R.) Class dominance characteristics at a service facility. *Econometrica* 47 (1979), no. 2, 515-519. (From the introduction) **81i:90091** 90B22
- (with Balachandran, K. R.) Public and private optimization at a service facility with approximate information on congestion. *European J. Oper. Res.* 4 (1980), no. 3, 195-202. (Richard F. Serfozo) **81i:60098** 60K25 (90B22)
- Schaefer, Martin (with Kraft, Olaf; Mathar, Rudolf) A refined geometric-arithmetic means inequality for integers. *Numerische Methoden bei graphentheoretischen und kombinatorischen Problemen, Band 2 (Tagung, Math. Forschungsinst., Oberwolfach, 1978)*, pp. 216-223, Internat. Ser. Numer. Math., 46, Birkhäuser, Basel, 1979. (Norbert Schmitz) **81i:26016** 26D20 (10E99)
- On the existence of binary variance-balanced block designs. *Utilitas Math.* 16 (1979), 87-95. (Sanpei Kageyama) **81i:05031** 05B05 (05B20)
- Schaefer, Philip W. Some maximum principles for nonlinear elliptic boundary-value problems. *Quart. Appl. Math.* 35 (1977/78), no. 4, 517-523. (Author's summary) **81i:35036** 35J25
- (with Goyal, Vinod B.) Liouville theorems for a class of fourth-order elliptic equations. *Proc. Roy. Soc. Edinburgh Sect. A* 86 (1980), no. 1-2, 129-137. (E. Kreyzig) **81i:35027** 35J30 (31B35)
- See also *Sperh, René P.*, **81i:35039**
- Schaeffer, David G. (with Golubitsky, Martin) An analysis of imperfect bifurcation. *Bifurcation theory and applications in scientific disciplines (Papers, Conf., New York, 1977)*, pp. 127-133, Ann. New York Acad. Sci., 316, New York Acad. Sci., New York, 1979. (B. V. Loginov) **81i:58027** 58E07 (58C27)
- (with Golubitsky, Martin) A qualitative approach to steady-state bifurcation theory. *New approaches to nonlinear problems in dynamics* (Proc. Conf., Pacific Grove, Calif., 1979), pp. 43-51, SIAM, Philadelphia, Pa., 1980. (B. V. Loginov) **81i:58026** 58E07 (47H15)
- Qualitative analysis of a model for boundary effects in the Taylor problem. *Math. Proc. Cambridge Philos. Soc.* 87 (1980), no. 2, 307-337. (R. A. Plastock) **81i:35007** 35B32 (58E07, 76U05)
- Schaeffer, L. R. (with Wilton, J. W.; Thomson, Robin) Simultaneous estimation of variance and covariance components from multitrail mixed model equations. (French summary) *Biometrics* 34 (1978), no. 2, 199-208. (R. Zmylony) **81i:62066** 62J05
- Schaeffer, Richard Semi-classical approximation for heavy ions. *Theoretical methods in medium-energy and heavy-ion physics* (Proc. NATO Adv. Stud. Inst. Theoret. Nuclear Phys., Univ. Wisconsin, Madison, Wis., 1978), pp. 189-234, NATO Adv. Study Inst. Ser.,

- See: *B: Physics*, 38, Plenum, New York, 1978. (See **81b:81030**) **81G50**
- Schäfer, Eugen. SOR-Verfahren für nichtlineare Ungleichungssysteme. (English summary) *Numerische Behandlung von Differentialgleichungen mit besonderer Berücksichtigung freier Randwertaufgaben (Tagung Math. Forschungsinst., Oberwolfach, 1977)*, pp. 246–260. Internat. Ser. Numer. Math., 39, Birkhäuser, Basel, 1978. (Rolf Rannacher) **81b:65106** 65N30 (65H99)
- Schäfer, G. Effective Lagrangian and pair production in cosmology. *J. Phys. A* **12** (1979), no. 12, 2437–2443. (S. G. Mamaev) **81c:32029** 83C45 (47D45)
- (with Dehnen, H.) On the gravitational radiation formula. *J. Phys. A* **13** (1980), no. 8, 2703–2722. (Authors' summary) **81g:83025** 83C35 (81M05)
- Schäfer, Lothar (with Witten, T. A., Jr.) Renormalized field theory of polymer solutions: extension to general polydispersity. (French summary) *J. Physique* **41** (1980), no. 6, 459–473. (Authors' summary) **81d:82040** 82A42 (81E15)
- (with Houghton, A.; Wegner, Franz) Two-particle spectral function and ac conductivity of an amorphous system far below the mobility edge: a problem of interacting instantons. *Phys. Rev. B* (3) **22** (1980), no. 8, 3598–3608. (Authors' summary) **81i:82044** 82A42 (82A65)
- (with Wegner, Franz) Disordered system with n orbitals per site: Lagrange formulation, hyperbolic symmetry, and Goldstone modes. *Z. Phys. B* **38** (1980), no. 2, 113–126. (Authors' summary) **81d:82041** 82A42
- Schäfer, Thomas (with Schach, Siegfried) ★Regressions- und Varianzanalyse. (German) [Regression and variance analysis] Eine Einführung. [An introduction] Hochschultext. [University text] Springer-Verlag, Berlin-New York, 1978. viii + 262 pp. ISBN 3-540-08727-3 (J. Kleffe) **81d:62002** 62-01 (62J05, 62J10)
- Schäfer, Juan Jorge. Order-isomorphisms between cones of continuous functions. *Ann. Mat. Pura Appl.* (4) **119** (1979), 205–230. (I. Namioka) **81a:46025** 46E05 (54C40)
- Bounds for automorphisms of normed spaces. *Arch. Math. (Basel)* **33** (1979/80), no. 6, 570–574. (Hermann König) **81f:46019** 46B05 (46B30)
- Schäfer, Karl-August. Ausgleichung durch Splinesfunktionen und ihre Anwendung auf Sterbefälle. *Splinesfunktionen in der Statistik*, pp. 24–42. Sonderhefte zum Allgemein. Statist. Arch., 14, Vandenhoeck & Ruprecht, Göttingen, 1978. (See **81c:62105**) 41A15
- See also *Splinesfunktionen in der Statistik*, **81c:62105**
- Schäfer, R. L. Bondi's vector, and the Seliger & Whitham variational principle for matter fields. *Proc. Roy. Soc. London Ser. A* **368** (1979), no. 1732, 59–73. (N. V. Micevič) **81d:83036** 83C40 (35A15, 35L65, 49H05, 78A25, 83C25)
- van Schagen, F. (with Gohberg, Israel; Kaashoek, Marinus A.) Similarity of operator blocks and canonical forms. I. General results, feedback equivalence and Kronecker indices. *Integral Equations Operator Theory* **3** (1980), no. 3, 350–396. (Edward W. Kamen) **81m:15011** 15A21 (15A23, 47A65, 93B10)
- Schagen, I. P. The use of stochastic processes in interpolation and approximation. *Internat. J. Comput. Math.* **8** (1980), no. 1, 63–76. (Author's summary) **81a:65018** 65D05 (62M99, 90C15)
- Schajer, G. S. (with Mote, C. D., Jr.) An algorithm for the solution of a third-order eigenvalue problem. *Internat. J. Numer. Methods Engrg.* **15** (1980), no. 3, 457–463. (Authors' summary) **81a:65042** 65F15
- Schaller, Kay-Uwe. Über starke Erzeugendensysteme in endlichen auflösbaren Gruppen. *Arch. Math. (Basel)* **35** (1980), no. 1–2, 42–48. (Peter Förster) **81f:20027** 20D10
- Schammel, Stephen Hoel. Heights in number fields. (French summary) *Bull. Soc. Math. France* **107** (1979), no. 4, 433–449. (Michel Waldschmidt) **81c:12025** 12A99 (10B45, 14G25)
- (with Gelbaum, Bernard R.) A characterization of the semigroup of matrix units. *J. Austral. Math. Soc. Ser. A* **29** (1980), no. 3, 291–296. (S. Lajos) **81f:20082** 20M10 (46J10)
- Schapiira, P. (with Bengel, G.) Décomposition microlocale analytique des distributions. (English summary) *Ann. Inst. Fourier (Grenoble)* **29** (1979), no. 3, x, 101–124. (S. Łojasiewicz) **81k:46050** 46F15 (32A45, 46F20, 58C27)
- Schapiromik, F. (with Solomon, J.) On the treatment of gauge zero modes in Yang-Mills theory. *Lett. Nuovo Cimento* (2) **27** (1980), no. 14, 467–471. (From the text) **81c:81075** 81E10 (81C35)
- (with Falomir, H.) Effective Lagrangian for an $SU(N)$ gauge theory with scalar fields. *Phys. Rev. D* (3) **21** (1980), no. 10, 2859–2866. (Authors' summary) **81g:81050** 81E10
- Schappacher, W. (with Kappel, F.) Some considerations to the fundamental theory of infinite delay equations. *J. Differential Equations* **37** (1980), no. 2, 141–183. (Waldyr M. Oliva) **81j:34117** 34K05
- Schappelle, Robert H. (with Brusch, Richard G.) The automation of transversality conditions. *Optimal Control Appl. Methods* **1** (1980), no. 1, 93–98. (W. Börsch-Supan) **81k:49029** 49D99 (65K10)
- Schaps, M. (with Rodman, Leiba) On the partial multiplicities of a product of two matrix polynomials. *Integral Equations Operator Theory* **2** (1979), no. 4, 565–599. (K. Veselić) **81f:15021** 15A24 (47A68)
- Scharf, W. An identity between double h -vector-class and three-stage least-squares estimators: a note. *Internat. Econom. Rev.* **21** (1980), no. 2, 409–412. (V. K. Srivastava) **81k:62155** 62P20
- Scharlau, Rudolf. On the Pythagoras number of orders in totally real number fields. *J. Reine Angew. Math.* **316** (1980), 208–210. (A. Rosenberg) **81g:10036** 10C02 (10J05, 12D15)
- Darstellbarkeit von ganzen Zahlen durch Quadratsummen in einigen totalreellen Zahlkörpern. *Math. Ann.* **249** (1980), no. 1, 49–54. (O. M. Fomenko) **81m:10034** 10C02 (10J05)
- Scharlau, Winfried. Einige Betrachtungen zur Leibnizschen Reihe. *Math.-Phys. Semesterber.* **27** (1980), no. 2, 182–190. (Werner Kratz) **81m:40001** 40A05 (65B10)
- Schatte, P. Grenzwertsatz bei der Messung von Geräteauslastungen. (English and Russian summaries) *Z. Angew. Math. Mech.* **59** (1979), no. 6, 247–255. (Author's summary) **81j:94040** 94C05 (60F05)
- Schattke, W. Current carrying states in quantum statistics of an open system. *Z. Naturforsch. A* **35** (1980), no. 7, 665–671. (Author's summary) **81g:82029** 82A35
- Schatz, Alfred H. (with Thomée, Vidar; Wahlbin, Lars B.) Maximum norm stability and error estimates in parabolic finite element equations. *Comm. Pure Appl. Math.* **33** (1980), no. 3, 265–304. (Georges A. Lebaud) **81g:65136** 65N10
- A weak discrete maximum principle and stability of the finite element method in L_∞ on plane polygonal domains. I. *Math. Comp.* **34** (1980), no. 149, 77–91. (B. I. Kvaav) **81c:65063** 65N30
- Schatzman, Michelle (with Heyvaerts, Jean; Lasry, Jean-Michel; Witomski, P.) Solar flares: a nonlinear eigenvalue problem in an unbounded domain. *Bifurcation and nonlinear eigenvalue problems (Proc., Session, Univ. Paris XIII, Villetaneuse, 1978)*, pp. 160–191. *Lecture Notes in Math.* **782**, Springer, Berlin, 1980. (Authors' summary) **81f:85001** 85A20 (35B32, 65P05)
- Un problème hyperbolique du 2ème ordre avec contrainte unilatérale: la corde vibrante avec obstacle ponctuel. (English summary) *J. Differential Equations* **36** (1980), no. 2, 295–334. (Giovanni P. Galdi) **81h:70015** 70J99 (35L05, 35R35, 49A29, 73K99)
- A hyperbolic problem of second order with unilateral constraints: the vibrating string with a concave obstacle. *J. Math. Anal. Appl.* **73** (1980), no. 1, 138–191. (Robert Faure) **81d:35047** 35L05 (70K99)
- See also *Bifurcation and nonlinear eigenvalue problems*, **81c:35001**
- Schay, Geza. Erratum: "Optimal joint distributions of several random variables with given marginals" [Stud. Appl. Math. **61** (1979), no. 2, 179–183; MR 80h:60005a]. *Stud. Appl. Math.* **62** (1980), no. 3, 281. (Editors) **81f:60005** 60B05
- Scheaffer, Richard L. (with Doviak, M. J.) A sequential scheme for estimating average quality in a mixed product production process. *Technometrics* **21** (1979), no. 4, 549–554. (S. Blumenthal) **81c:62090** 62L05
- (with Lackritz, James R.) Point sampling in areal-fraction analysis. *Comm. Statist. A—Theory Methods* **9** (1980), no. 4, 355–374. (Roger E. Miles) **81g:62016** 62D05 (60F05)
- Schechter, Eric. Stability conditions for nonlinear products and semigroups. *Pacific J. Math.* **85** (1979), no. 1, 179–200. (J. Kiszyński) **81h:47061** 47H20 (35G20, 35Q20)
- Schechter, Ervin. On the numerical solution of a nonlinear parabolic equation. *Anal. Numer. Theor. Approx.* **8** (1979), no. 1, 89–97. (F. M. Pascal) **81f:65073** 65N10
- Schechter, Martin (with Shapiro, Jack; Snow, Morris) Solution of the nonlinear problem $Av = Nu(v)$ in a Banach space. *Trans. Amer. Math. Soc.* **241** (1978), 69–78. (Authors' summary) **81g:47069** 47H15 (47H10)
- Two space scattering theory using the subspace of continuity. *Lett. Math. Phys.* **3** (1979), no. 6, 521–531. (T. Kato) **81g:47008** 47A40 (47A55)
- The continuous singular spectrum of the Schrödinger operator. *Math. Proc. Cambridge Philos. Soc.* **88** (1980), no. 1, 59–69. (W. Allegretto) **81k:47014** 47A40 (35P05, 81C10)
- (with Weder, Ricardo) Rigorous results on the existence of dyon solutions. *Phys. Rev. Lett.* **44** (1980), no. 20, 1303–1305. (Authors' summary) **81g:81058** 81E10 (58E20)
- Schechter, Murray (with Mond, B.) Duality in homogeneous fractional programming. *J. Inform. Optim. Sci.* **1** (1980), no. 3, 271–280. (Pierre Loridan) **81k:90098** 90C32
- Schechtman, Gléon. A disjointness property of l_p^n sequences in L_p . *Séminaire d'Analyse Fonctionnelle* (1978–1979), Exp. No. 21, 13 pp., École Polytech., Palaiseau, 1979. (From the text) **81a:46033** 46E30 (46B25)
- On the relation between several notions of unconditional structure—a counterexample. *Séminaire d'Analyse Fonctionnelle* (1978–1979), Exp. No. 22, 10 pp., École Polytech., Palaiseau, 1979. (James Hagler) **81c:46021** 46B20
- A simple proof of two theorems concerning bases of $C(0,1)$. *Séminaire d'Analyse Fonctionnelle* (1978–1979), Exp. No. 23, 3 pp., École Polytech., Palaiseau, 1979. (Z. Canturia) **81c:46019** 46B15
- Almost isometric L_p subspaces of $L_p(0,1)$. *J. London Math. Soc.* (2) **20** (1979), no. 3, 516–528. (J. Bourgain) **81f:46026** 46B25 (46E30)
- A tree-like Tairelson space. *Pacific J. Math.* **83** (1979), no. 2, 523–530. (Y. Benyamini) **81h:46027** 46B20
- Schechtman, Jack (with Ross, Sheldon M.) On the first time a separately maintained parallel system has been down for a fixed time. *Naval Res. Logist.* **26** (1979), no. 2, 285–290. (Mark Brown) **81c:60096** 60K10 (90B25)
- Scheel, Günter. See *Leibniz, Gottfried Wilhelm*, **81f:01048**
- Scheerer, Hans. Localisation des espaces de sections et de rétractions. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **287** (1978), no. 13, A851–A853. (Author's summary) **81i:55010** 55P60 (55R05)
- Lokalisierung von Schnittträumen. *Compositio Math.* **40** (1980), no. 2, 269–281. (P. I. Kahn) **81d:55014** 55P60
- Scheffer, Vladimir. The Navier-Stokes equations on a bounded domain. *Comm. Math. Phys.* **73** (1980), no. 1, 1–42. (P. L. Sulem) **81f:35097** 35Q10 (76D05)
- Scheffler, S. See *Survey of numerical methods for partial differential equations*, **81f:65002**
- Scheffold, Egon. Über komplexe Banachverbandsalgebren. (English summary) *J. Funct. Anal.* **37** (1980), no. 3, 382–400. (R. J. Nagel) **81m:46064** 46H20 (46B30)
- Scheibe, Erhard. Kants Philosophie der Mathematik. *Mitt. Math. Gesellsch. Hamburg* **10**, no. 5, 353–372 (1977). (Jan Berg) **81f:00006** 00A25 (01A50, 03A05)
- Schellbach, H. E. (with Nordahl, T. E.) Projective bands. *Algebra Universalis* **11** (1980), no. 2, 139–148. (V. S. Krishnan) **81k:08007** 08B30 (06A12, 20M07)
- Scheid, Werner (with Münchow, Matthias) Modification of the Newton method for the inverse-scattering problem at fixed energy. *Phys. Rev. Lett.* **44** (1980), no. 20, 1299–1302. (Authors' summary) **81g:81079** 81F05
- von Scheidt, Jürgen (with Purkert, Walter) Zur approximativen Lösung des Mittelwertsproblems für die Eigenwerte stochastischer Differentialoperatoren. (English and Russian summaries) *Z. Angew. Math. Mech.* **57** (1977), no. 9, 515–525. (Authors' summary) **81h:60083** 60H10 (34F05, 70L05, 82A42)
- (with Purkert, Walter) Ein Grenzwertsatz für stochastische Eigenwertprobleme. (English and Russian summaries) *Z. Angew. Math. Mech.* **59** (1979), no. 11, 611–623. (D. Bobrowski) **81c:60069** 60H10 (34F05)
- Schein, Boris M. (with Trohimenko, V. S.) Compatible algebras of multiplace functions. (Russian) *Theory of semigroups and its applications*, No. 4 (Russian), pp. 89–98, 127, Saratov. Gos. Univ., Saratov, 1978. (From the text) **81k:08003** 08A99
- Catholic semigroups. *Proceedings of the Conference on Semigroups in Honor of Alfred H. Clifford* (Tulane Univ., New Orleans, La., 1978), pp. 207–214, Tulane Univ., New Orleans, La., 1979. (K. S. S. Namboripad) **81f:20086** 20M10
- On the theory of inverse semigroups and generalized groups. *Twelve papers in logic and algebra*, pp. 89–122, Amer. Math. Soc. Transl., 113, Amer. Math. Soc., Providence.

- R.I., 1979. (See 80m:00006) 20M10 (20N99)
Lectures on semigroups of transformations. *Twelve papers in logic and algebra*, pp. 123-181. *Amer. Math. Soc. Transl.*, 113, *Amer. Math. Soc., Providence, R.I.*, 1979. (See 80m:00006) 20M20
- Scheiberg, Stephen Uniform approximation by meromorphic functions having prescribed poles. *Math. Ann.* 243 (1979), no. 1, 83-93. (Paul M. Gauthier) 81a:30021 30E10 (30F99)
- Approximation and nonapproximation on Riemann surfaces. *Complex approximation (Proc. Conf., Quebec, 1978)*, pp. 110-118, *Progress in Math.*, 4, Birkhäuser, Boston, Mass., 1980. (Paul M. Gauthier) 81i:30066 30E10
- Noninvariance of an approximation property for closed subsets of Riemann surfaces. *Trans. Amer. Math. Soc.* 262 (1980), no. 1, 245-258. (Jane Gilman) 81j:30061 30E10 (30F99)
- Schekman, José Alexandre Stability of separable Hamiltonians and investment theory. *Rev. Econom. Stud.* 45 (1978), no. 3, 559-570. (Karl Shell) 81b:90047 90A16 (49C05)
See also General equilibrium, growth, and trade, 81m:90004
- Scheja, Günter (with Storch, Uwe) Residuen bei vollständigen Durchschnitten. *Math. Nachr.* 91 (1979), 157-170. (K. Kiyek) 81c:14029 14M10 (13H99)
(with Storch, Uwe) ★ *Lehrbuch der Algebra. Teil I.* (German) [Textbook of algebra. Part I] Unter Einfluß der linearen Algebra. [Including linear algebra] Mathematische Leitfäden. [Mathematical Textbooks] B. G. Teubner, Stuttgart, 1980. 408 pp. ISBN 3-519-02203-6 (B. M. Schein) 81i:00002 00A05
- Scheld, R. (with Ribaut, M.) A hybrid method for calculating vector fields subject to inhomogeneous boundary conditions. (French summary) *Z. Angew. Math. Phys.* 30 (1979), no. 3, 503-513. (From the introduction) 81f:76020 76D99 (65N30, 76H05)
- Schellenberg, P. J. (with Mullin, Ronald C.; Stinson, Douglas; Vanstone, S. A.) Some results on the existence of squares. Combinatorial mathematics, optimal designs and their applications (Proc. Sympos. Combin. Math. and Optimal Design, Colorado State Univ., Fort Collins, Colo., 1978). *Ann. Discrete Math.* 6 (1980), 257-274. (Helen Skala) 81m:05036 05B15
- Schellhaas, Helmut Semiregular processes with unbounded rewards. *Math. Oper. Res.* 4 (1979), no. 1, 70-78. (J. A. E. van Nuenen) 81c:60099 60K15 (60K25)
- Schellhuber, H. J. (with Obermaier, G. M.) First-principles calculation of diamagnetic band structure. *Phys. Rev. Lett.* 43 (1980), no. 4, 276-279. (Authors' summary) 81e:82057 82A60 (81C99)
- Schelp, R. H. (with Faudree, R. J.; Sheehan, J.) Ramsey numbers for matchings. *Discrete Math.* 32 (1980), no. 2, 105-123. (J. E. Graver) 81c:05076 05C55
(with Faudree, R. J.; Rousseau, C. C.; Schuster, S.) Panaraborel graphs. *Israel J. Math.* 35 (1980), no. 3, 177-185. (K. B. Reid) 81h:05053 05C05 (05C35)
(with Faudree, R. J.; Rousseau, C. C.) All triangle-graph Ramsey numbers for connected graphs of order six. *J. Graph Theory* 4 (1980), no. 3, 293-300. (J. E. Graver) 81h:05102 05C55
- Schempp, Walter G-stable spaces of solutions of linear partial differential equations. *Fourier analysis and approximation theory (Proc. Colloq., Budapest, 1976)*, Vol. II, pp. 671-677, *Colloq. Math. Soc. János Bolyai*, 19, North-Holland, Amsterdam, 1978. (J. Dieudonné) 81c:58066 58G35 (22E99, 35E99)
(with Dresler, Bernd) Approximation on double coset spaces. *Approximation theory (Papers, Vth Semester, Stefan Banach Internat. Math. Center, Warsaw, 1975)*, pp. 69-81, *Banach Center Publ.*, 4, PWN, Warsaw, 1979. (Hans G. Feichtinger) 81e:43020 43A85 (43A22)
(with Dresler, Bernd) On some applications of Bochner-Schoenberg-Eberlein-type theorems. *Approximation theory (Papers, Vth Semester, Stefan Banach Internat. Math. Center, Warsaw, 1975)*, pp. 83-91, *Banach Center Publ.*, 4, PWN, Warsaw, 1979. (Manfred Stoll) 81e:43007 43A85 (31C12)
- Interpolation zentraler harmonischer Funktionen. *Multivariate approximation theory (Proc. Conf., Math. Res. Inst., Oberwolfach, 1979)*, pp. 326-339, *Internat. Ser. Numer. Math.*, 51, Birkhäuser, Basel, 1979. (F. W. Stallmann) 81j:31005 31B05 (65D15)
A note on the Newman-Schoenberg phenomenon. *Math. Z.* 167 (1979), no. 1, 1-6. (Anthony Holland) 81a:41020 41A15
- Approximation and Transformations methods. II. (English summary) *Numerical methods of approximation theory. Vol. 5 (Conf., Math. Res. Inst., Oberwolfach, 1979)*, pp. 277-281, *Internat. Ser. Numer. Math.*, 52, Birkhäuser, Basel, 1980. (Author's summary) 81f:41012 41A15 (30E10)
- Approximations in the Hardy space $H^1(D)$ with respect to the norm topology. *Quantitative approximation (Proc. Internat. Sympos., Bonn, 1979)*, pp. 291-300, *Academic Press, New York*, 1980. (Sheldon Axler) 81j:30053 30D55 (30D40, 42B30, 47B35)
- Contour integral representation of cardinal spline functions. *C. R. Math. Rep. Acad. Sci. Canada* 2 (1980), no. 4, 165-170. (Author's summary) 81i:41009 41A15
- Schenk, Dieter Hyperbolische Gleichungen in Ultradistributionen und singuläre Schrödingeroperatoren. *Math. Nachr.* 90 (1979), 279-294. (S. Łojasiewicz) 81i:35094 35L15 (46F05, 81C10)
- Integrodifferentialgleichungen zu hyperbolischen Cauchyproblemen in Räumen von Ultradistributionen. *Math. Nachr.* 92 (1979), 247-260. (Philip Brenner) 81k:35090 35L05 (45K05)
- Über Schrödingeroperatoren mit flachem Potential. *Wiss. Z. Tech. Hochschule Karl-Marx-Stadt* 21 (1979), no. 7, 883-888. (Evans M. Harrell) 81h:35035 35P05 (81C05)
- Eine Reihendarstellung der Spektralfunktion dreidimensionaler Schrödinger-Operatoren mit flachem Potential. *Math. Nachr.* 94 (1980), 143-153. (A. Devinatz) 81m:35103 35P05 (35J10, 47F05)
- Schenk, Henk (with van der Putten, Niek; Hauptman, Herbert) On the identity of the entomorph-sensitive three-phase structure seminvariants and variants in P_2 , and their use in procedures for phase determination. *Acta Cryst. Sect. A* 36 (1980), no. 6, 891-897. (Authors' summary) 81i:82057 82A60 (20H15)
(with van der Putten, Niek; Hauptman, Herbert) Application of the three-phase seminvariants to phase determination in P_2 . *Acta Cryst. Sect. A* 36 (1980), no. 6, 897-903. (Authors' summary) 81i:82058 82A60 (20H15)
- Schenzel, Peter Über die freien Auflösungen extremer Cohen-Macaulay-Ringe. *J. Algebra* 64 (1980), no. 1, 93-101. (Ulrich Orbanz) 81j:13024 13H10
- Schenze, Axel (with Wong, N. C.; Brewer, Richard G.) Theorem on coherent transients. *Phys. Rev. A* (3) 22 (1980), no. 2, 635-637. (Authors' summary) 81d:81133 81K05 (81G45)
(with Brand, H.) Exactly soluble multidimensional Fokker-Planck equations with nonlinear drift. *Phys. Lett. A* 81 (1981), no. 6, 321-325. (Authors' summary) 81m:82019 82A35
- Schep, A. R. Positive diagonal and triangular operators. *J. Operator Theory* 3 (1980), no. 2, 165-178. (F.-H. Vasilescu) 81g:47040 47B55
Generalized Carleman operators. *Nederl. Akad. Wetensch. Indag. Math.* 42 (1980), no. 1, 49-59. (M. Schreiber) 81d:47023 47B38 (46E30, 47G05)
- de Schep, I. M. (with Cohen, E. G. D.) Approach to equilibrium in a dense gas. *Fundamental problems in statistical mechanics, IV (Proc. Fourth Internat. Summer School, Jadwisin, 1977)*, pp. 101-160, *Ossolineum, Wrocław*, 1978. (Paul F. Zweifel) 81e:82032 82A40
- Scherer, Karl (with DeVore, Ronald A.) Interpolation of linear operators on Sobolev spaces. *Ann. of Math.* (2) 109 (1979), no. 3, 583-599. (Colin Bennett) 81a:46036 46E35 (46M35)
(with Dahmen, Wolfgang) Best approximation by piecewise polynomials with variable knots and degrees. *J. Approx. Theory* 26 (1979), no. 1, 1-13. (E. W. Cheney) 81f:41023 41A30
Some new results on Y-pentominoes. *J. Recreational Math.* 12 (1979/80), no. 3, 201-204. (A. C. Liu) 81g:05054 05B50
(with DeVore, Ronald A.) Variable knot, variable degree spline approximation to x^p . *Quantitative approximation (Proc. Internat. Sympos., Bonn, 1979)*, pp. 121-131, *Academic Press, New York*, 1980. (Hans Strauss) 81m:41008 41A15 (65D15)
Minimal fault-free rectangles packed with L_n -polyominoes. *J. Recreational Math.* 13 (1980/81), no. 1, 4-6. (H. N. V. Temperley) 81j:05047 05B50
(with Dahmen, Wolfgang; DeVore, Ronald A.) Multidimensional spline approximation. *SIAM J. Numer. Anal.* 17 (1980), no. 3, 380-402. (Dietrich Braess) 81j:41015 41A15 (41A63, 65D07)
See also Quantitative approximation, 81i:41001
- Scherer, R. (with Zeller, Karl) Two-dimensional grids for polynomials. *Multivariate approximation theory (Proc. Conf., Math. Res. Inst., Oberwolfach, 1979)*, pp. 346-352, *Internat. Ser. Numer. Math.*, 51, Birkhäuser, Basel, 1979. (D. D. Stancu) 81m:65017 65D05 (41A05, 41A63)
(with Zeller, Karl) Lobatto-Quadratur und Fixpunkte. *Numerische Integration (Tagung, Math. Forschungsinst., Oberwolfach, 1978)*, pp. 245-251, *Internat. Ser. Numer. Math.*, 45, Birkhäuser, Basel, 1979. (Helmut Brass) 81g:65027 65D30 (41A55)
(with Zeller, Karl) Der Einsequenzensatz in der Birkhoff-Interpolation. *Resultate Math.* 2 (1979), no. 2, 186-195. (A. Meir) 81e:41009 41A05
(with Zeller, Karl) Shorthand notation for rounding errors. *Fundamentals of numerical computation (computer-oriented numerical analysis) (Proc. Conf., Tech. Univ. Berlin, Berlin, 1979)*, pp. 165-168, *Comput. Suppl.*, 2, Springer, Vienna, 1980. (Ramon E. Moore) 81m:65064 65G05
- Scherk, John Antigravity: a crazy idea? *Phys. Lett. B* 88 (1979), no. 3-4, 265-267. (Kenneth Dunn) 81g:83062 83E99
On the monodromy theorem for isolated hypersurface singularities. *Invent. Math.* 58 (1980), no. 3, 289-301. (G.-M. Greuel) 81k:14009 14D05 (14B05, 32B30, 32G20)
- Schertzer, D. (with Frisch, U.; Lesieur, M.) Comments on the quasilinear Markovian approximation for fully-developed turbulence. *J. Fluid Mech.* 97 (1980), no. 1, 181-192. (P. L. Sulem) 81f:76028 76F05
- Schervish, Mark J. Tolerance regions for random vectors and best linear predictors. *Comm. Statist. A—Theory Methods* 9 (1980), no. 11, 1177-1183. (Author's summary) 81g:62066 62F25 (62J05)
(with Bohrer, Robert) An optimal multiple decision rule for signs of parameters. *Proc. Nat. Acad. Sci. U.S.A.* 77 (1980), no. 1, part 1, 52-56. (Thomas J. Santner) 81g:62094 62H15
- Maggiolo-Schettini, Andrea See Maggiolo-Schettini, Andrea
- Schetzen, Martin ★ The Volterra and Wiener theories of nonlinear systems. A Wiley-Interscience Publication. John Wiley & Sons, New York-Chichester-Brisbane, 1980. xvi + 531 pp. ISBN 0-471-04455-5 (Jean-Michel Bismut) 81g:93121 93E12
- Schiffino, Andrea On a Volterra diffusion system. (Italian summary) *Boll. Un. Mat. Ital.* A (5) 16 (1979), no. 3, 610-616. (V. Lakshmikantham) 81h:35046 35K60 (35K10, 45D05, 92A17)
- Schlunck, Rosanna (with Giachetti, Daniela; Mascolo, Elvira) Higher order nonlinear partial differential equations in unbounded domains of \mathbb{R}^n . *Comment. Math. Univ. Carolin.* 20 (1979), no. 3, 583-595. (Sadakazu Aizawa) 81h:35033 35J65 (47H05)
- Schiebel, Wolfgang (with Terno, Johannes; Unger, Gerhard) Ein Beitrag zur Klassifizierung von Rundreiseproblemen. (English and Russian summaries) *Math. Operationsforsch. Statist. Ser. Optim.* 10 (1979), no. 4, 523-528. (Authors' summary) 81m:90079 90C10
- Schiff, H. (with Ahmed, S.) Orbital angular momentum of "humps". *J. Math. Phys.* 21 (1980), no. 7, 1856-1862. (Authors' summary) 81k:81037 81C99 (81G10)
- Schiff, Lewis B. (with Steger, Joseph L.) Numerical simulation of steady supersonic viscous flow. *AIAA J.* 18 (1980), no. 12, 1421-1430. (Authors' summary) 81j:76062 76J99 (65P05)
- Schiffer, M. (with Schober, Glenn) A variational method for general families of quasiconformal mappings. *J. Analyse Math.* 34 (1978), 240-264 (1979). (K. Strebel) 81d:30034 30C60
(with Schober, Glenn) An application of the calculus of variations for general families of quasiconformal mappings. *Complex analysis Joensuu 1978 (Proc. Colloq., Univ. Joensuu, Joensuu, 1978)*, pp. 349-357, *Lecture Notes in Math.*, 747, Springer, Berlin, 1979. (K. Strebel) 81d:30035 30C60
(with Schober, Glenn) The dielectric Green's function and quasiconformal mapping. *J. Analyse Math.* 36 (1979), 233-243 (1980). (R. Kühnau) 81j:30032 30C60 (30C70)
- Schiffmann, Gérard Travaux de Kostant sur la série principale. *Analyse harmonique sur les groupes de Lie (Sém., Nancy-Strasbourg 1976-1978)*, II, pp. 460-510, *Lecture Notes in Math.*, 739, Springer, Berlin, 1979. (P. C. Trombi) 81j:22019 22E46
(with Rallis, Stephen) Weil representation. I. Interwining distributions and discrete spectrum. *Mem. Amer. Math. Soc.* 25 (1980), no. 231, iii + 203 pp. (A. B. Venkov)

- 81j:22007** 22D10 (10C15, 10D40)
See also *Analyse harmonique sur les groupes de Lie*, **81c:22002**
- Schikhof, W. H.** ★Non-Archimedean calculus. Lecture notes. Report, 7812. *Katholieke Universiteit, Mathematisch Instituut, Nijmegen*, 1978. 129 pp. (E. Beckenstein) **81b:46067** 46P05 (12B40, 26E30, 46Ex, 46G05)
- Non-Archimedean differentiation. *Proceedings of the Conference on p-adic Analysis (Nijmegen, 1978)*, pp. 193–204. Report, 7806. *Katholieke Univ., Nijmegen*, 1978. (E. Beckenstein) **81b:46066** 46P05 (12B40, 26E30, 46G05)
- Schilders, W. H. A.** (with Doolan, E. P.) Uniformly convergent difference schemes for stiff initial value problems. *Boundary and interior layers—computational and asymptotic methods (Proc. Conf., Trinity College, Dublin, 1980)*, pp. 256–259. Boole, *Dún Laoghaire*, 1980. (H. Shintani) **81m:65116** 65L05
- Schill, Walter** (with Kosmol, Peter; Wriedt, Michael) Der Satz von Banach-Steinhaus für konvexe Operatoren. *Arch. Math. (Basel)* 33 (1979/80), no. 6, 564–569. (M. M. Day) **81f:46010** 46A40
- Schüncke, Erich** Numerische Lösung von Randwertproblemen partieller Differentialgleichungen vom zusammengesetzten Typ mit einem komplexen Iterationsverfahren. Komplexe Analysis und ihre Anwendung auf partielle Differentialgleichungen (Tagung, Martin-Luther-Universität Halle, 1976). *Wiss. Beitr. Martin-Luther-Univ. Halle-Wittenberg M* 27 (1977), 54–57. (Author's introduction) **81h:65123** 65N99
- Schmuel, A.** Addendum and corrigendum to the paper: "Abelian binomials, power residues and exponential congruences" [*Acta Arith.* 32 (1977), no. 3, 245–274; MR 55 #2829]. *Acta Arith.* 36 (1980), no. 1, 101–104. (D. J. Lewis) **81g:12005** 12A20 (10B99)
- (with Lewis, D. J.) Quadratic Diophantine equations with parameters. *Acta Arith.* 37 (1980), 133–141. (R. J. Cook) **81m:10030** 10B99
- (with Schlickewei, H. P.; Schmidt, Wolfgang M.) Small solutions of quadratic congruences and small fractional parts of quadratic forms. *Acta Arith.* 37 (1980), 241–248. (I. Danicic) **81m:10063** 10E20 (10C25)
- (with Rubel, Lee A.; Tverberg, Helge) On difference polynomials and hereditarily irreducible polynomials. *J. Number Theory* 12 (1980), no. 2, 230–235. (Winfried Müller) **81i:12024** 12D05 (12E10, 39A10)
- See also Heath-Brown, D. R., **81m:10042**
- Schmuel, Britta** Classes of decompositions of a Gödel numbering. *Fundamentals of computation theory (Proc. Conf. Algebraic, Arith. and Categorical Methods in Comput. Theory, Berlin/Wendisch-Rietz, 1979)*, pp. 397–403. *Math. Research*, 2. Akademie-Verlag, Berlin, 1979. (M. Stob) **81k:03037a** 03D20
- Complexity of translations on finite domains. (German and Russian summaries) *Elektron. Informationsverarb. Kybernet.* 15 (1979), no. 12, 621–628. (Author's summary) **81g:68074** 68C25 (68B10)
- Zerlegung mit Vergleichsbedingungen einer Gödelnumerierung. *Z. Math. Logik Grundlag. Math.* 26 (1980), no. 3, 215–226. (M. Stob) **81k:03037b** 03D20
- Schupp, Ferenc** On Carlson's method. *Fourier analysis and approximation theory (Proc. Colloq., Budapest, 1976)*, Vol. II, pp. 679–695. *Colloq. Math. Soc. János Bolyai*, 19. North-Holland, Amsterdam, 1978. (Roger L. Jones) **81a:68061** 60G46 (42A20)
- On a generalization of the Haar system. Special issue dedicated to George Alexits on the occasion of his 80th birthday. *Acta Math. Acad. Sci. Hungar.* 33 (1979), no. 1–2, 183–188. (D. J. Eustice) **81c:42038** 42C10
- Convergence of serial expansions using product systems. (Hungarian) *Mat. Lapok* 28 (1980), no. 1–3, 35–42. (K. Tandori) **81m:42024** 42C10 (43A50)
- Schippers, H.** Multigrid techniques for the solution of Fredholm integral equations of the second kind. *Colloquium Numerical Treatment of Integral Equations (Math. Centre, Amsterdam, 1978/79)*, pp. 27–46. *MC Syllabus*, 41. *Math. Centrum, Amsterdam*, 1979. (P. M. Anselone) **81g:65183** 65R20 (45L10)
- (with Hemker, P. W.) Multiple grid methods for the solution of Fredholm integral equations of the second kind. *Math. Comp.* 36 (1981), no. 153, 215–232. (Frank G. Hagin) **81m:65197** 65R20 (45L10)
- Schirmmer, Horst** (with Schirmmer, Ursula) Einige Bemerkungen über den Satz von Keldych. *Math. Ann.* 236 (1978), no. 3, 245–254. (E. M. J. Bertin) **81h:31024** 31D05
- The geometric aspect of nuclearity. *Geom. Dedicata* 9 (1980), no. 3, 281–290. (A. J. Lazar) **81j:46021** 46A55 (46A12, 52A05)
- Schirmmer, Ursula** Produkte harmonischer Räume. *Bayer. Akad. Wiss. Math.-Natur. Kl. Sitzungsber.* 1978, 5–22 (1979). (J. Lukeš) **81h:31025** 31D05 (60J45)
- (with Schirmmer, Horst) Einige Bemerkungen über den Satz von Keldych. *Math. Ann.* 236 (1978), no. 3, 245–254. (E. M. J. Bertin) **81h:31024** 31D05
- Banach-Stone-type theorems for harmonic spaces. *Romanian-Finnish Seminar on Complex Analysis (Proc., Bucharest, 1976)*, pp. 573–580. *Lecture Notes in Math.*, 743. Springer, Berlin, 1979. (Klaus Janssen) **81d:31018** 31D05
- Konvergenzeigenschaften in harmonischen Räumen. *Invent. Math.* 55 (1979), no. 1, 71–95. (J. C. Taylor) **81h:31025** 31D05
- Schirmer, Helga** Effluent and noneffluent fixed points on dendrites. *Pacific J. Math.* 75 (1978), no. 2, 539–552. (Lewis Lum) **81c:54069** 54H25 (54F50)
- Fix-finite homotopies. *Pacific J. Math.* 83 (1979), no. 2, 531–542. (A. Dold) **81f:54032** 54H25 (55M20)
- Schirra, Willi Wolfgang** Hyperfunktionen und Sätze vom Typ Edge-of-the-Wedge. (English summary) *Manuscripta Math.* 28 (1979), no. 4, 411–429. (Eric Bedford) **81d:32024** 32D15 (32A45, 81F15)
- Schlotnick, M.** (with Blasen, M. W.; Astrahan, M. M.; Chamberlin, D. D.; Gray, James N.; King, W. F.; Lindsay, B. G.; Lorie, R. A.; Mehl, J. W.; Price, T. G.; Putzolu, G. R.; Selinger, P. G.; Slutz, D. R.; Strong, H. R.; Traiger, I. L.; Wade, B. W.; Yost, R. A.) System R: an architectural overview. *IBM Systems J.* 20 (1981), no. 1, 41–62. (Authors' summary) **81m:68079** 68H05
- Schlafly, Roger** Universal connections. *Invent. Math.* 59 (1980), no. 1, 59–65. (S. Ramanan) **81f:53022** 53C05 (14F05, 55R35)
- (with Moore, John Douglas) On equivariant isometric embeddings. *Math. Z.* 173 (1980), no. 2, 119–133. (M. L. Gromov) **81h:53059** 53C42 (58C15)
- Schlageter, G.** Enhancement of concurrency in database systems by the use of special rollback methods. *Data base architecture (Proc. Fifth IFIP Working Conf., Venice, 1979)*, pp. 141–149. North-Holland, Amsterdam, 1979. (See **81b:68005**) **68B15** (68H05)
- Schlatter, M.** (with Eichler, J.) An introduction to the Gaussian least squares approximation and its application in signal processing and system modeling. (French and German summaries) *Signal Process.* 1 (1979), no. 3, 211–225. (Authors' summary) **81g:94001** 94–01
- Schlee, Walter** Nonparametric estimation of curves. *Serdica* 5 (1979), no. 2, 186–202. (Gilbert Walter) **81d:62035** 62G05
- Schlegel, H. B.** (with Krishnan, R.; Pople, J. A.) Derivative studies in configuration-interaction theory. *J. Chem. Phys.* 72 (1980), no. 8, 4654–4655. (From the text) **81c:81170** 81G55
- Schleifer, Nathan** Covariant framework for a mass monopole as a field structure in general relativity. *Phys. Rev. D* (3) 22 (1980), no. 6, 1248–1265. (J. D. McCrea) **81j:83009** 83C10
- Schleiff, Martin** (with Tutschke, Wolfgang; Kühnau, Reiner; Vogel, Wolfgang; Zielke, Gerhard; Krötenheerdt, Otto; Stammer, Ludwig; Strehmel, Karl; Köhler, Jürgen) Mathematische Forschung für Theorie und Anwendung. *Wiss. Z. Martin-Luther-Univ. Halle-Wittenberg Math.-Natur. Reihe* 28 (1979), no. 3, 5–21. (Editors) **81m:01103** 01A72 (00A05)
- Schlessinger, L.** (with Wright, J. A.) High-energy bremsstrahlung in an intense laser field. *Phys. Rev. A* (3) 22 (1980), no. 3, 909–915. (Authors' summary) **81h:81196** 81K05 (81G10)
- Schlessner, John W.** (with Reynolds, Donald F.) Weak topologies and equicontinuity. *Proc. Amer. Math. Soc.* 80 (1980), no. 2, 349–352. (Joe A. Guthrie) **81j:54021** 54C30
- Schlichting, Günter** Polynomidentitäten und Permutationsdarstellungen lokalkompakter Gruppen. *Invent. Math.* 55 (1979), no. 2, 97–106. (Paul Milnes) **81d:22006** 22D05 (22D10)
- Schlicker, Wolfgang** Albert Einstein and the political reaction in imperialist Germany after the First World War. (Czech) Translated from the German by Z. Vypel. *Pokroky Mat. Fyz. Astronom.* 24 (1979), no. 3, 153–160. (Editors) **81d:01022** 01A70 (01A80)
- Schlickewei, H. P.** (with Schinzel, A.; Schmidt, Wolfgang M.) Small solutions of quadratic congruences and small fractional parts of quadratic forms. *Acta Arith.* 37 (1980), 241–248. (I. Danicic) **81m:10063** 10E20 (10C25)
- Schlieder, S.** (with Börner, G.) Some remarks concerning the equivalence principle of general relativity with respect to quantum mechanical one-particle state. *Gen. Relativity Gravitation* 12 (1980), no. 1, 29–41. (Authors' summary) **81d:83012** 83C05 (83B05)
- Schlipf, John Stewart** Recursively saturated models of set theory. *Proc. Amer. Math. Soc.* 80 (1980), no. 1, 135–142. (Matt Kaufmann) **81h:03101** 03E70 (03D70)
- Schlitgen, R.** (with Skarabis, H.; Buseke, K. H.; Apostolopoulos, N.) Sequentializing nonparametric tests. *Comstat Lectures*, I, pp. 57–92. *Physica, Würzburg*, 1978. (M. Hušková) **81f:62126** 62L10 (62G10)
- Schlögl, F.** (with Berry, R. Stephen) Small roughness fluctuations in the layer between two phases. *Phys. Rev. A* (3) 21 (1980), no. 6, 2078–2081. (Authors' summary) **81f:80015** 80A30 (82A25)
- Schlöglmann, Wolfgang** Elliptische Differentialoperatoren und Splines. *Z. Angew. Math. Mech.* 58 (1978), no. 7, 7438–7439. (J. Frehse) **81d:41009** 41A15 (65D07)
- Spline functions and Gaussian processes (multidimensional case). *Multivariate approximation theory (Proc. Conf., Math. Res. Inst., Oberwolfach, 1979)*, pp. 353–358. *Internat. Ser. Numer. Math.*, 51. Birkhäuser, Basel, 1979. (Author's summary) **81c:65070** 65U05 (65D07, 65J05)
- Schlot, K.-H.** See **Wussing, Hans**, **81g:01001**
- Schlottmann, P.** Simple spinless mixed-valence model. I. Coherent-hybridization states versus virtual-bond states. *Phys. Rev. B* (3) 22 (1980), no. 2, 613–621. (Author's summary) **81i:81110a** 81G40 (82A55)
- Simple spinless mixed-valence model. II. Solution of the isolated f-level problem. *Phys. Rev. B* (3) 22 (1980), no. 2, 622–631. (Author's summary) **81i:81110b** 81G40 (82A55)
- Schmalensee, Richard** (with Lewis, Tracy R.) Cartel and oligopoly pricing of nonrenewable natural resources. *Dynamic optimization and mathematical economics*, pp. 133–156. *Math. Concepts and Methods in Sci. and Engng.*, 19. Plenum, New York, 1980. (G. Tintner) **81c:90031** 90A30
- Schmeichel, Edward F.** (with Beineke, Lowell W.) Degrees and cycles in graphs. *Second International Conference on Combinatorial Mathematics (New York, 1978)*, pp. 64–70. *Ann. New York Acad. Sci.*, 319. *New York Acad. Sci., New York*, 1979. (F. Harary) **81a:05080** 05C38
- (with Bloom, Gary S.) Connectivity, genus, and the number of components in vertex-deleted subgraphs. *J. Combin. Theory Ser. B* 27 (1979), no. 2, 198–201. (L. W. Beineke) **81a:05084** 05C40
- Schmeichel, Irmgard** (with Lesch, Jürgen; Lesch, Manfred) Ein Verfahren zur Ermittlung der maximalen stabilen Mengen in einem ungerichteten Graphen. (Russian and English summaries) *Elektron. Informationsverarb. Kybernet.* 16 (1980), no. 1–3, 63–68. (Authors' summary) **81h:68056** 68E10
- Schmeidler, David** (with Postlewaite, Andrew) Notes on optimality and feasibility of informationally decentralized allocation mechanisms. *Game theory and related topics (Proc. Sem., Bonn and Hagen, 1978)*, pp. 365–382. *North-Holland, Amsterdam*, 1979. (Edwin Burmeister) **81h:90033** 90A14
- Schmelter, Bruce Wayne** (with Deutsch, Stuart Jay) Estimation of the sum of differences distribution. *Comm. Statist. B—Simulation Comput.* 9 (1980), no. 6, 563–587. (Authors' summary) **81k:65152** 65U05 (62F03, 65C05)
- (with Shalaby, Mohamed A.) Acceptance/rejection methods for beta variate generation. *J. Amer. Statist. Assoc.* 75 (1980), no. 371, 673–678. (Ryszard Zieliński) **81k:65013** 65C10
- (with Lal, Ram) Squeeze methods for generating gamma variates. *J. Amer. Statist. Assoc.* 75 (1980), no. 371, 679–682. (Authors' summary) **81j:65020** 65C10
- (with Babu, A. J. G.) Beta variate generation via exponential majorizing functions. *Oper. Res.* 28 (1980), no. 4, 917–926. (Authors' summary) **81g:65006** 65C10
- Schmeisser, Gerhard** (with Gervais, R.; Rahman, Q. I.) Simultaneous interpolation and approximation. *Polynomial and spline approximation (Proc. NATO Adv. Study Inst. Univ. Calgary, Calgary, Alta., 1978)*, pp. 203–223. *NATO Adv. Study Inst. Ser. Ser. C: Math. and Phys. Sci.*, 49. Reidel, Dordrecht, 1979. (David W. Kammler) **81c:41005** 41A05 (41A30)
- (with Giroux, André; Rahman, Q. I.) On Bernstein's inequality. *Canad. J. Math.*

- 31 (1979), no. 2, 347-353. (T. T. Tonkov) **81g:30009** 30C10 (41A10)
(with Govil, N. K.; Rahman, Q. I.) On the derivative of a polynomial. *Illinois J. Math.* **23** (1979), no. 2, 319-329. (T. T. Tonkov) **81g:30010** 30C10
(with Rahman, Q. I.) An extremal problem for polynomials with a prescribed zero. *II. Proc. Amer. Math. Soc.* **73** (1979), no. 3, 375-378. (P. Lappan) **81j:30003** 30A10 (26D05)
- Two contributions to numerical quadrature. (German summary) *Numerical methods of approximation theory, Vol. 5 (Conf. Math. Res. Inst., Oberwolfach, 1979)*, pp. 289-318, *Internat. Ser. Numer. Math.*, **52**, Birkhäuser, Basel, 1980. (Stephen W. Brady) **81k:41022** 41A55 (65D32)
- Schmidt, K.-H. Application of Bayes estimation for signal processing and control. *Systems analysis and simulation, 1980 (Proc. Internat. Sympos., Berlin, 1980)*, pp. 197-203, *Math. Research*, **5**, Akademie-Verlag, Berlin, 1980. (See **81j:93009**) 94A05
- Schmidt, James H. Countable homogeneous partially ordered sets. *Algebra Universalis* **9** (1979), no. 3, 317-321. (W. Russell Belding) **81g:06001** 06A10 (03C60)
(with Lerman, Manuel) Theories with recursive models. *J. Symbolic Logic* **44** (1979), no. 1, 59-76. (From the introduction) **81g:03036** 03C50 (03D55)
- Recursive colorings of graphs. *Canad. J. Math.* **32** (1980), no. 4, 821-830. (C. G. Jockusch, Jr.) **81m:03054** 03D45 (05C15)
- Schmidt, Ulf R. A fine structure generated by reflection formulas over primitive recursive arithmetic. *Logic Colloquium '78 (Mons, 1978)*, pp. 335-350, *Studies in Logic and Foundations of Math.*, **97**, North-Holland, Amsterdam, 1979. (John Hooley) **81m:03070** 03F30 (03D55)
- Schmidt, Jean. Spaces of vector-valued continuous functions. *Vector space measures and applications (Proc. Conf., Univ. Dublin, Dublin, 1977)*, I, pp. 368-377, *Lecture Notes in Math.*, **644**, Springer, Berlin, 1978. (Author's summary) **81g:46046** 46E40 (46A09)
- Bounded linear functionals on $C_b(X)$ are sequentially continuous. *Bull. Soc. Roy. Sci. Liège* **48** (1979), no. 5-8, 158-160. (J. B. Cooper) **81c:46015** 46E10 (54D60)
- Schmitter, Leopold. From stochastic approximation to the stochastic theory of optimization. Eleventh Styrian Mathematical Symposium (Graz, 1979). *Ber. Math.-Statist. Sect. Forsch. Graz* **10**, 124-132 (1979). *Ber. No. 127*, 40 pp. (J. Kiefer) **81m:62156** 62L20 (90C15)
- Schmid, Friedrich. Über ein Problem der mehrdimensionalen Skalierung. *Statist. Hefte (N.F.)* **21** (1980), no. 2, 140-144. (Z. Šidák) **81m:62112** 62H30
- Schmid, Hans Joachim. Construction of cubature formulae using real ideals. *Multivariate approximation theory (Proc. Conf., Math. Res. Inst., Oberwolfach, 1979)*, pp. 359-377, *Internat. Ser. Numer. Math.*, **51**, Birkhäuser, Basel, 1979. (Author's summary) **81a:65031** 65D30
- On Gaussian cubature formulae of degree $2k-1$. *Numerische Integration (Tagung, Math. Forschungsinst., Oberwolfach, 1978)*, pp. 252-263, *Internat. Ser. Numer. Math.*, **45**, Birkhäuser, Basel, 1979. (Author's summary) **81c:65015** 65D32
- Interpolatorische Kubaturformeln und reelle Ideale. *Math. Z.* **170** (1980), no. 3, 267-282. (D. D. Stancu) **81k:41023** 41A55 (32B10, 65D32)
- Schmid, Jürg. Tensor products of distributive lattices and their Priestley duals. *Acta Math. Acad. Sci. Hungar.* **35** (1980), no. 3-4, 387-392. (H. A. Priestley) **81m:06027** 06D05
- On lattices of continuous order-preserving functions. *Fund. Math.* **106** (1980), no. 1, 19-30. (H. A. Priestley) **81m:06028** 06D05 (54C40)
- Schmid, Peter (with Beyl, F. Rudolf; Felgner, Ulrich) On groups occurring as center factor groups. *J. Algebra* **61** (1979), no. 1, 161-177. (Richard E. Phillips) **81i:20034** 20E22
- Twisted group algebras and Clifford extensions. *Arch. Math. (Basel)* **35** (1980), no. 1-2, 127-137. (Hubert Grassmann) **81h:20014** 20C20
- A cohomological property of regular p -groups. *Math. Z.* **175** (1980), no. 1, 1-3. (A. Babakhanian) **81k:20071** 20J06 (20D10)
- Schmid, Wilfried. Representations of semi-simple Lie groups. *Representation theory of Lie groups (Proc. SRC/LMS Res. Sympos., Oxford, 1977)*, pp. 185-235, *London Math. Soc. Lecture Note Ser.*, **34**, Cambridge Univ. Press, Cambridge, 1979. (See **81j:22001**) 22E45
- (with Atiyah, Michael) Erratum: "A geometric construction of the discrete series for semisimple Lie groups" *Invent. Math.* **42** (1977), 1-62; MR 57 #3310. *Invent. Math.* **54** (1979), no. 2, 189-192. (P. C. Trombi) **81d:22015** 22E45
- Representations of semisimple Lie groups. *Proceedings of the International Congress of Mathematicians (Helsinki, 1978)*, pp. 195-207, *Acad. Sci. Fennica, Helsinki*, 1980. (Robert Paul Martin) **81c:22024** 22E46 (22-02)
- Schmidt, B. G. (with Ellis, G. F. R.) Classification of singular space-times. *Gen. Relativity Gravitation* **10** (1979), no. 12, 989-997. (Nicholas M. J. Woodhouse) **81a:83025** 83C99
- (with Stewart, J. M.) The scalar wave equation in a Schwarzschild space-time. *Proc. Roy. Soc. London Ser. A* **367** (1979), no. 1731, 503-525. (George Debnay) **81d:83025** 83C30 (53C80)
- (with Ashtekar, Abhay) Null infinity and Killing fields. *J. Math. Phys.* **21** (1980), no. 4, 862-867. (Authors' summary) **81c:83018** 83C30 (53C50, 58D25)
- Schmidt, C. P. (with Gould, F. J.) An existence result for the global Newton method. *Variational inequalities and complementarity problems (Proc. Internat. School, Erice, 1978)*, pp. 187-194, Wiley, Chichester, 1980. (Kurt Georg) **81m:58016** 58C15 (55M20, 65H10)
- Schmidt, Claus-G. Größencharaktere und Relativklassenzahl abelscher Zahlkörper. (English summary) *J. Number Theory* **11** (1979), no. 1, 128-159. (Judith Sunley) **81f:12006** 12A50 (12A35)
- Gauss sums and the classical Γ -function. *Bull. London Math. Soc.* **12** (1980), no. 5, 344-346. (K. S. Williams) **81k:12008** 12A35 (10G15, 12A70)
- Über die Führer von Gaußschen Summen als Größencharaktere. (English summary) *J. Number Theory* **12** (1980), no. 3, 283-310. (K. Shiratani) **81k:12009** 12A35 (10G15)
- Die Relationen für Gruppen von Stickelberger-Elementen und Kreiszahlen. *J. Reine Angew. Math.* **315** (1980), 60-72. (K. Shiratani) **81d:12002** 12A35
- Schmidt, Durrell. On an unboundedness conjecture for strong unicity constants. *J. Approx. Theory* **24** (1978), no. 3, 216-223. (Myron S. Henry) **81a:41045** 41A52 (41A44)
- An existence theorem for Chebyshev approximation by interpolating rationals. *J. Approx. Theory* **27** (1979), no. 2, 146-152. (G. D. Taylor) **81b:41050** 41A29 (41A30)
- Strong unicity and Lipschitz conditions of order $\frac{1}{2}$ for monotone approximation. *J. Approx. Theory* **27** (1979), no. 4, 346-354. (John A. Roulier) **81a:41017** 41A10 (41A29)
- Schmidt, Diana. A partition theorem for ordinals. *J. Combin. Theory Ser. A* **27** (1979), no. 3, 382-384. (E. C. Milner) **81d:04004** 04A20 (05A17)
- Schmidt, Dieter. Die Lösung der linearen Differentialgleichung 2. Ordnung um zwei einfache Singularitäten durch Reihen nach hypergeometrischen Funktionen. *J. Reine Angew. Math.* **309** (1979), 127-148. (J. Nikolaus) **81d:34007** 34A20 (33A30)
- (with Wolf, Gerhard) A method of generating integral relations by the simultaneous separability of generalized Schrödinger equations. *SIAM J. Math. Anal.* **10** (1979), no. 4, 823-838. (Ernest G. Kalnins) **81c:35019** 35C99 (33A99, 34A99)
- Schmidt, Dieter S. Literal solution for Hill's lunar problem. *Celestial Mech.* **19** (1979), no. 3, 279-289. (R. H. Wilson, Jr.) **81f:70012** 70F15 (34A25, 70F07)
- Schmidt, Douglas C. See Oberman, R. M. M., **81c:94053**
- Schmidt, E. J. P. Georg (with Stern, Ronald J.) Invariance theory for infinite-dimensional linear control systems. *Appl. Math. Optim.* **6** (1980), no. 2, 113-122. (B. G. Pachpatte) **81c:93043** 93C05
- The "bang-bang" principle for the time-optimal problem in boundary control of the heat equation. *SIAM J. Control Optim.* **18** (1980), no. 2, 101-107. (Emmanuel Nicholas Barron) **81b:93006b** 93B05 (49A36)
- Boundary control for the heat equation with steady-state targets. *SIAM J. Control Optim.* **18** (1980), no. 2, 145-154. (Emmanuel Nicholas Barron) **81b:93006a** 93B05 (49A36)
- Schmidt, Eliezer Tamás. Remark on generalized function lattices. *Acta Math. Acad. Sci. Hungar.* **34** (1979), no. 3-4, 337-339. (Ivan Rival) **81f:06008** 06B05 (06B30)
- See also Beiträge: Algebra und Geometrie, **81h:00005**
- Schmidt, Erik Meinecke. Space-restricted attribute grammars. *Automata, languages and programming (Proc. Seventh Internat. Colloq., Noordwijkerhout, 1980)*, pp. 436-448, *Lecture Notes in Comput. Sci.*, **85**, Springer, Berlin, 1980. (Author's summary) **81j:68095** 68F05
- (with Engelfriet, Joost; van Leeuwen, Jan) Stack machines and classes of nonnested macro languages. *J. Assoc. Comput. Mach.* **27** (1980), no. 1, 96-117. (S. Ginsburg) **81c:68066** 68F10 (68D35)
- Schmidt, Franz (with Weron, Aleksander). Darstellung von stationären stochastischen Prozessen mit Werten in einem Banach-Raum durch einseitige gleitende Mittel. *Math. Nachr.* **88** (1979), 41-57. (Hannu Niemi) **81c:60046** 60G10 (60G25)
- Schmidt, Garfield C. An "almost algebraic" proof of the spectral theorem for R^* . *Internat. J. Math. Ed. Sci. Tech.* **10** (1979), no. 4, 549-552. (A. Lee) **81h:15025** 15A57 (15A18)
- ★Basic linear algebra with applications. *Applied Mathematics Series*. Robert E. Krieger Publishing Co., Huntington, N.Y., 1980. xiii + 521 pp. ISBN 0-89874-000-2 (F. J. Papp) **81c:15003** 15-01 (00A06)
- Schmidt, Günther. ★Programme als partielle Graphen. (German) [Programs as partial graphs] *Technische Universität München, Institut für Mathematik und Informatik, Munich*, 1978. ii + 75 pp. (Karel Čulík) **81k:68027** 68B10 (03G25, 05C50)
- Investigating programs in terms of partial graphs. *Automata, languages and programming (Sixth Colloq., Graz, 1979)*, pp. 505-519, *Lecture Notes in Comput. Sci.*, **71**, Springer, Berlin, 1979. (Stanley H. Benton, Jr.) **81h:68012** 68B10 (68E10)
- Schmidt, H. Ein optimaler Test für den Parameter der Exponentialverteilung und andere Lebensdauerverteilungen. *Statist. Hefte (N.F.)* **20** (1979), no. 3, 183-190. (I. A. Melamed) **81h:62046** 62F03 (62N05)
- Schmidt, Hermann. Zur Theorie und Anwendung Bernoulli-Nörländischer Polynome und gewisser Verallgemeinerungen der Bernoullischen und der Stirlingischen Zahlen. *Arch. Math. (Basel)* **33** (1979/80), no. 4, 364-374. (Don Redmond) **81i:10017** 10A40 (40A99)
- Schmidt, Jeanette (with Shamir, Eliahu). An improved program for constructing open hash tables. *Automata, languages and programming (Proc. Seventh Internat. Colloq., Noordwijkerhout, 1980)*, pp. 569-581, *Lecture Notes in Comput. Sci.*, **85**, Springer, Berlin, 1980. (From the introduction) **81k:68018** 68B15
- Schmidt, Jochen W. The Brown-Brent method for systems of nonlinear equations. *Proceedings of the Fourth Symposium on Basic Problems of Numerical Mathematics (Pžez, 1978)*, pp. 163-171, *Charles Univ., Prague*, 1978. (John B. Kiouselidis) **81h:65054** 65H10
- Ergebnisse zum Brown-Brent-Verfahren zur numerischen Lösung nichtlinearer Gleichungssysteme. *Wiss. Z. Tech. Univ. Dresden* **29** (1980), no. 2, 442-445. (Karl-Heinz Bachmann) **81k:65053** 65H10
- Schmidt, Klaus D. A probabilistic proof of ergodic decomposition. *Sankhyā Ser. A* **40** (1978), no. 1, 10-18. (Douglas Lind) **81a:28021** 28D05
- (with Losert, Viktor) A class of probability measures on groups arising from some problems in ergodic theory. *Probability measures on groups (Proc. Fifth Conf., Oberwolfach, 1978)*, pp. 220-238, *Lecture Notes in Math.*, **706**, Springer, Berlin, 1979. (Douglas Lind) **81a:28016** 28D05
- Théorèmes de structure pour les amartingales en processus de fonctions d'ensembles à valeurs dans un espace de Banach. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **290** (1980), no. 22, A1069-A1072. (Author's summary) **81f:60073** 60G48 (60B11)
- Théorèmes de convergence pour les amartingales en processus de fonctions d'ensembles à valeurs dans un espace de Banach. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **290** (1980), no. 23, 1103-1106. (Author's summary) **81h:60066** 60G48
- On the value of a stopped set function process. *J. Multivariate Anal.* **10** (1980), no. 1, 123-134. (L. Sucheston) **81f:60047** 60G40
- Schmidt, Margot. Über stetige Funktionen, die sich als Potential elliptischer Gleichungen 2. Ordnung darstellen lassen. *Wiss. Z. Tech. Hochsch. Karl-Marx-Stadt* **21** (1979), no. 7, 895-899. (Gottfried Anger) **81g:31006** 31B10 (35J25)
- Schmidt, Peter. A note on the estimation of seemingly unrelated regression systems. *J. Econometrics* **7** (1978), no. 2, 259-261. (Author's summary) **81c:62075** 62J05 (62P20)
- (with Lovell, C. A. Knox) Estimating technical and allocative inefficiency relative to stochastic production and cost frontiers. *J. Econometrics* **9** (1979), no. 3, 343-366. (Authors' summary) **81a:90042** 90A11
- (with Ferrund, Finn R.; Lovell, C. A. Knox) A survey of frontier production functions and of their relationship to efficiency measurement. *Specification and*

- estimation of frontier production, profit and cost functions. *J. Econometrics* **13** (1980), no. 1, 5–25. (See **81k:62157**) 62P20
(with Olson, Jerome A.; Waldman, Donald M.) A Monte Carlo study of estimators of stochastic frontier production functions. Specification and estimation of frontier production, profit and cost functions. *J. Econometrics* **13** (1980), no. 1, 67–82. (See **81k:62157**) 62P20
(with Lovell, C. A. Knox) Estimating stochastic production and cost frontiers when technical and allocative inefficiency are correlated. Specification and estimation of frontier production, profit and cost functions. *J. Econometrics* **13** (1980), no. 1, 83–100. (See **81k:62157**) 62P20
See also Specification and estimation of frontier production, profit and cost functions, **81k:62157**
- Schmidt, Robert** Some inconsistencies arising in applications of Galerkin's method to bifurcation problems of elastic lability. *Indust. Math.* **30** (1980), no. 2, 121–133. (Nabil R. Nassif) **81m:65139** 65L10 (49G05, 65N30, 73H05)
Buckling of rings subjected to unconventional loads. *Indust. Math.* **30** (1980), no. 2, 135–142. (Author's summary) **81j:73051** 73H05
- Schmidt, Volker** (with König, Dieter) Imbedded and nonimbedded stationary characteristics of queueing systems with varying service rate and point processes. *J. Appl. Probab.* **17** (1980), no. 3, 753–767. (D. J. Daley) **81j:60107** 60K25 (60G55)
(with König, Dieter) Stochastic inequalities between customer-stationary and time-stationary characteristics of queueing systems with point processes. *J. Appl. Probab.* **17** (1980), no. 3, 768–777. (D. J. Daley) **81j:60108** 60K25
See also Klimov, G. P., **81b:60094**
- Schmidt, Wolfgang** Progress in transonic flow computations: analysis and design methods for three-dimensional flows. *Numerical methods in fluid dynamics*, pp. 299–338, Hemisphere, Washington, D.C., 1978. (See **80e:76002**) 76H05
- Schmidt, Wolfgang H.** Asymptotic results for estimation and testing variances in regression models. (German and Russian summaries) *Math. Operationsforsch. Statist. Ser. Statist.* **10** (1979), no. 2, 209–236. (K. C. Chanda) **81g:62110** 62J02 (62F12)
- Schmidt, Wolfgang M.** ★Lectures on irregularities of distribution. Notes taken by T. N. Shorey. Tata Institute of Fundamental Research Lectures on Mathematics and Physics, 56. Tata Institute of Fundamental Research, Bombay, 1977. v + 128 pp. (Henri Faure) **81d:10047** 10K30 (10K05)
Small zeros of additive forms in many variables. II. *Acta Math.* **143** (1979), no. 3–4, 219–232. (Ming-Chit Liu) **81a:10027** 10B15 (10B30, 10J10)
Contributions to Diophantine approximation in fields of series. *Monatsh. Math.* **87** (1979), no. 2, 145–165. (P. Szűcs) **81b:10023** 10F45 (10F10)
★Diophantine approximation. Lecture Notes in Mathematics, 785. Springer-Verlag, Berlin-New York, 1980. x + 299 pp. ISBN 3-540-09762-7 (A. J. van der Poorten) **81j:10038** 10Fxx (10–02)
(with Schinzel, A.; Schlickewei, H. P.) Small solutions of quadratic congruences and small fractional parts of quadratic forms. *Acta Arith.* **37** (1980), 241–248. (I. Danicic) **81m:10063** 10E20 (10C25)
See also Zhu, Yao Chen; et al., **81m:10067**
- Schmidtmayer, Josef** Professor Jiří Fábry, member of the Czechoslovak Academy of Sciences, has died. (Czech) *Apl. Mat.* **24** (1979), no. 3, 238–240. (Editors) **81a:01030c** 01A70
- Schmidt-Naake, Gudrun** (with Dao Van Luong; Pippel, Winfried) Fehlerbetrachtungen bei der Beschreibung von Diffusionsprozessen als Markov-Ketten. *Wiss. Z. Tech. Univ. Dresden* **29** (1980), no. 1, 109–115. (D. Szász) **81g:20080** 82A70 (60J27)
- Schmiedeknecht, Hae-R.** (with Hoffmann, Berthold) A mathematical approach to multipass parsing. *Mathematical foundations of computer science*, 1980 (Proc. Ninth Sympos., Rzym, 1980), pp. 275–290. *Lecture Notes in Comput. Sci.*, **88**, Springer, Berlin, 1980. (See **81k:68003**) 68F20
- Schmieder, Gerald** Zur teilwichtigen Konkretisierung Riemannscher Flächen. *Math. Ann.* **238** (1978), no. 1, 89–96. (G. G. Weill) **81j:30082** 30F99
(with Kasten, Volker) Die Koeffizientenkörper schlichter Trinome. *Math. Z.* **171** (1980), no. 3, 269–284. (S. Ruschewey) **81g:30025** 30C50 (30C15)
- Schmitt, Lucien A.** (with Fleury, Claude) Discrete-continuous variable structural synthesis using dual methods. *AIAA J.* **18** (1980), no. 12, 1515–1524. (Authors' summary) **81j:73068** 73K99
(with Woo, T. H.) Decomposition in optimal plastic design of structures. *Internat. J. Solids and Structures* **17** (1981), no. 1, 39–56. (Authors' summary) **81k:73055** 73K40 (90C50)
- Schmittendorf, W. E.** (with Barmish, B. Ross) A necessary and sufficient condition for local constrained controllability of a linear system. *IEEE Trans. Automat. Control* **25** (1980), no. 1, 97–100. (Authors' summary) **81a:93014** 93B05
(with Barmish, B. Ross) Null controllability of linear systems with constrained controls. *SIAM J. Control Optim.* **18** (1980), no. 4, 327–345. (F. M. Kirillova) **81h:93009** 93B05
- Schmitt, Alfred** Minimizing storage space of sparse matrices by graph coloration algorithms. *Graphs, data structures, algorithms* (Proc. Workshop, Graphtheoretic Concepts in Comput. Sci., Erlangen, 1978), pp. 157–168. *Applied Comput. Sci.*, **13**, Hanser, Munich, 1979. (Author's summary) **81b:68021** 68B15 (68F15)
- Schmitt, Bruno V.** L'espace des homéomorphismes du plan qui admettent un seul point fixe d'indice donné est connexe par arcs. *Topology* **18** (1979), no. 3, 235–240. (Hans G. Bothe) **81a:57036** 57B05 (58F22)
- Schmitt, J. H. M. M.** The anisotropic microwave background in Bianchi V models. *Astronom. and Astrophys.* **87** (1980), no. 1–2, 236–241. (Author's summary) **81e:85013** 85A40
- Schmitt, J. P. M.** (with Lehner, T.) Fluctuations in the ion-cyclotron-frequency range: possible measurement of T_e/T_i in tokamaks. *Phys. Rev. Lett.* **45** (1980), no. 14, 1185–1188. (Authors' summary) **81g:82051** 82A45 (76X05)
- Schmitt, James A.** Truncation error terms in the kinetic energy calculation in the HELP algorithm and their consequences. *J. Comput. Phys.* **35** (1980), no. 2, 206–228. (Author's summary) **81e:65066** 65P05 (76N10)
- Schmitt, Klaus** (with Smith, H. L.) On eigenvalue problems for nondifferentiable mappings. *J. Differential Equations* **33** (1979), no. 3, 294–319. (J. W. Macki) **81a:47061** 47H15 (34B25)
- Bifurcation results for equations with nondifferentiable nonlinearities. *Differential equations* (Proc. Eighth Fall Conf., Oklahoma State Univ., Stillwater, Okla., 1979), pp. 65–86. Academic Press, New York, 1980. (J. B. McLeod) **81j:58031** 58E07 (34B25)
(with Martelli, Mario; Smith, Hal) Periodic solutions of some nonlinear delay-differential equations. *J. Math. Anal. Appl.* **74** (1980), no. 2, 494–503. (Ch. G. Philos) **81e:34056** 34K15
- Schmitt, Peter** (with Hlawka, Edmund; Binder, Christa) ★Grundbegriffe der Mathematik. (German) [Fundamentals of mathematics] Universitätslehr- und Studienbücher: Naturwissenschaften. Prugg Verlag, Vienna, 1979. 195 pp. ISBN 3-85385-038-3 (K. E. Hirst) **81b:00001** 00A05
- Schmitt, Thomas** (with Vogel, Wolfgang) Note on set-theoretic intersections of subvarieties of projective space. *Math. Ann.* **245** (1979), no. 3, 247–253. (D. Kirby) **81a:14025** 14M10 (13C99)
- Schmitz, H.** Estimation of Bayesian confidence intervals for the product of conditional survival probabilities. (German summary) *Biometrical J.* **21** (1979), no. 5, 417–430. (Peter A. Lachenbruch) **81m:62180** 62N05 (62F15, 62P10)
- Schmitz, R.** Force multipole moments for a spherically symmetric particle in solution. *Phys. A* **102** (1980), no. 1, 161–178. (Author's summary) **81j:76029** 76D05 (76T05)
- Schmüdgen, Konrad** An example of a positive polynomial which is not a sum of squares of polynomials. A positive, but not strongly positive functional. *Math. Nachr.* **88** (1979), 385–390. (Man-Duen Choi) **81b:12024** 12D99 (26C99, 46K99)
- Uniform topologies on enveloping algebras. *J. Funct. Anal.* **39** (1980), no. 1, 57–66. (J. W. M. Ford) **81m:17015** 17B35 (46L55, 47D40)
- Schmutz, M.** Explicit representations of a single para-Bose operator. *Phys. Lett. A* **72** (1979), no. 4–5, 301–302. (Author's summary) **81i:81045** 81D05 (17C65, 81G35)
Jahn-Teller systems as displaced para-Bose oscillators. *Phys. A* **101** (1980), no. 1, 1–21. (Author's summary) **81i:81122** 81G55 (81Hxx, 82A60)
- Schmutz, M. E. A.** (with Bandler, W.) Hi & low-in & out: approaches to social status. *J. Cybernet.* **10** (1980), no. 4, 283–299. (Manfred Kochen) **81j:92052** 92A20 (58C28)
- Schnabel, Robert B.** Minimum norm symmetric quasi-Newton updates restricted to subspaces. *Math. Comp.* **32** (1978), no. 143, 829–837. (From the text) **81d:65032** 65K10 (65F30)
- Schnabel, Rudolf** Über die Darstellung von endlichen Gruppen als Zentralisatoren in symmetrischen Gruppen. *Arch. Math. (Basel)* **35** (1980), no. 1–2, 92–94. (Koichiro Harada) **81g:20005** 20B25
- Schnack, D. D.** (with Killen, J.; Shestakov, A. I.) Linear and nonlinear calculation of resistive magnetohydrodynamic instabilities. *Computing methods in applied sciences and engineering* (Proc. Fourth Internat. Sympos., Versailles, 1979), pp. 305–324. North-Holland, Amsterdam, 1980. (Authors' summary) **81k:76026** 76E25 (65N05)
(with Killen, J.) Nonlinear, two-dimensional magnetohydrodynamic calculations. *J. Comput. Phys.* **35** (1980), no. 1, 110–145. (P. C. Jain) **81i:76125** 76X05
- Schnakenberg, J.** Simple chemical reaction systems with limit cycle behaviour. *J. Theoret. Biol.* **81** (1979), no. 3, 389–400. (Richard J. Field) **81f:35013** 35B10 (34C05, 80A30, 92A40)
Theory of fluctuations in limit-cycles of second-order bifurcation type. *Z. Phys. B* **38** (1980), no. 4, 341–349. (Author's summary) **81d:82011** 82A05 (82A35)
- Schneebell, Hans Rudolf** (with Howie, James) Groups of finite quasiprojective dimension. *Comment. Math. Helv.* **54** (1979), no. 4, 615–628. (D. E. Cohen) **81j:20064** 20J05
(with Howie, James) Cellular actions and groups of finite quasiprojective dimension. *Math. Z.* **170** (1980), no. 1, 85–90. (M. J. Dunwoody) **81d:20046** 20J05
- Schneeberger, H.** (with Goller, W.) On the problem of the feasibility of optimal stratification points according to Daleusius. *Statist. Hefte (N.F.)* **20** (1979), no. 4, 250–256. (Victor K. T. Tang) **81i:62024** 62D05
- Schneeweiß, Ch.** See Proceedings: Operations Research, **81e:90003b** and Proceedings: Operations Research, **81e:90003c**
- Schneeweiß, W. G.** Zuverlässigkeitstheorie einer Betrachtungseinheit—eine Ergebnisübersicht als Grundlage für OR-Studien. *Proceedings in Operations Research, 9* (Eighth Annual Meeting, Deutsch. Gesellsch. Operations Res., Regensburg, 1979), pp. 393–404. Physica, Würzburg, 1980. (F. Beichelt) **81g:90056** 90B25 (60K10)
- Schneider, Barbara** (with Wertz, Wolfgang) Statistical density estimation: a bibliography. (French summary) *Internat. Statist. Rev.* **47** (1979), no. 2, 155–175. (A. N. Philippou) **81m:62072** 62G05
See also Vapnik, V. N.; et al., **81j:62114**
- Schneider, C. K. E.** (with Barut, Asim Orhan; Wilson, Raj) Quantum theory of infinite component fields. *J. Math. Phys.* **20** (1979), no. 11, 2244–2256. (N. Mukunda) **81a:81034** 81C40 (58F06)
(with Wilson, Raj) Ladder operators of group matrix elements. *J. Math. Phys.* **20** (1979), no. 12, 2380–2390. (Mineo Ikeda) **81f:22040** 22E70 (33A75)
- Schneider, Claus** Produktintegration mit nicht-äquidistanten Stützstellen. (English summary) *Numer. Math.* **35** (1980), no. 1, 35–43. (Helmut Brass) **81j:65049** 65D30
- Schneider, David M.** Unitary content of the optical potential for an uncorrelated target. *Phys. Rev. C* (3) **22** (1980), no. 2, 362–373. (Author's summary) **81e:81149** 81G35 (81F99)
- Schneider, G. Michael** (with Samari, N. K.) A queueing theory-based analytic model of a distributed computer network. *IEEE Trans. Comput.* **29** (1980), no. 11, 994–1001. (Authors' summary) **81i:68020** 68A05 (60K25)
- Schneider, Hans** (with Saunders, B. David) Applications of the Gordan-Stiemke theorem in combinatorial matrix theory. *SIAM Rev.* **21** (1979), no. 4, 528–541. (R. A. Brualdi) **81e:15009** 15A48 (05B20, 15A33)
(with Engel, Gernot M.) Matrices diagonally similar to a symmetric matrix. *Linear Algebra Appl.* **29** (1980), 131–138. (Ludwig Elsner) **81k:15017** 15A21 (05C38)
(with Rothblum, Uriel G.) Characterizations of optimal scalings of matrices. *Math. Programming* **19** (1980), no. 2, 121–136. (M. Z. Nashed) **81j:65064** 65F35 (15A12)
(with Friedland, Shmuel) The growth of powers of a nonnegative matrix. *SIAM J. Algebraic Discrete Methods* **1** (1980), no. 2, 185–200. (Robert Todd Gregory) **81e:65020** 65F30 (15A45)
- Schneider, Hans-Jürgen** Decomposable extensions of affine groups. *Séminaire d'Algèbre Paul Dubreil et Marie-Paule Malliavin, 32ème année* (Paris, 1979), pp. 98–115. *Lecture Notes in Math.*, **795**, Springer, Berlin, 1980. (Andy R. Magid) **81m:14033** 14L15

- Schneider, Hubert H.** Substitutions for predicate variables and functional variables. *Notre Dame J. Formal Logic* 21 (1980), no. 1, 33–44. (G. Asser) **81b:03009** 03B10
- Schneider, Klaus R.** On a class of nonlinear eigenvalue problems with noninvertible linear part. *Theory of nonlinear operators (Proc. Fifth Internat. Summer School, Central Inst. Math. Mech. Acad. Sci. GDR, Berlin, 1977)*, pp. 240–243. *Abh. Akad. Wiss. DDR, Abt. Math. Naturwiss. Tech.*, 1978, 6, Akademie-Verlag, Berlin, 1978. (P. M. Fitzpatrick) **81b:47076** 47H12
- On the existence and numerical approximation of forced oscillations. *Z. Angew. Math. Mech.* 59 (1979), no. 12, 739–741. (John R. Graef) **81g:34018** 34A50 (34C25, 65L10)
- Asymptotisch optimale Fehlerschranken für eine Klasse von Newton-like-Verfahren. *Beiträge Numer. Math.* 8 (1980), 139–146. (F. V. Lubyev) **81m:65097** 65J15 (47H17)
- Schneider, Manfred** Maximum-Aussagen für das Cauchy-Problem spezieller hyperbolischer Differentialgleichungen im \mathbb{R}^2 . *Math. Nachr.* 83 (1978), 167–176. (S. A. Terzenov) **81d:35048** 35L05
- Mathematik und wissenschaftlich-technischer Fortschritt. *Wiss. Z. Tech. Hochschule Karl-Marx-Stadt* 20 (1978), no. 5, 603–609. (A. A. Mullin) **81g:00006** 00A25 (00A69)
- (with Gilbert, Robert P.) On a class of boundary value problems for a composite system of first order differential equations. *J. Approx. Theory* 25 (1979), no. 2, 105–119. (Megumi Saigo) **81j:35028** 35F15 (35M05)
- (with Aziz, A. K.) On uniqueness of Neumann-Tricomi problem in \mathbb{R}^2 . *Math. Methods Appl. Sci.* 2 (1980), no. 2, 168–177. (Maria Cinquini-Cibrario) **81k:35108** 35M05
- (with Aziz, A. K.; Werschulz, Arthur G.) A finite element method for the Tricomi problem. *Numer. Math.* 35 (1980), no. 1, 13–20. (O. Widlund) **81b:65069** 65M05 (65M10, 65M15)
- Schneider, Michael** (with Okonek, Christian; Spindler, Heinz) ★ Vector bundles on complex projective spaces. Progress in Mathematics, 3. Birkhäuser, Boston, Mass., 1980. vii + 389 pp. ISBN 3-7643-3000-7 (Werner Kleiner) **81b:14001** 14-02 (14D20, 14F05, 32G13, 81C30)
- Holomorphic vector bundles on P_n . *Séminaire Bourbaki* (1978/79), Exp. No. 530, pp. 80–102, *Lecture Notes in Math.*, 770, Springer, Berlin, 1980. (Werner Kleiner) **81g:14012** 14F05 (32L05, 57R22, 81E10)
- (with Elencwajg, Georges; Hirschowitz, André) Les fibres uniformes de rang au plus n sur $P_n(\mathbb{C})$ sont ceux qu'on croit. *Vector bundles and differential equations (Proc. Conf., Nice, 1979)*, pp. 37–63. *Progress in Math.*, 7, Birkhäuser, Boston, Mass., 1980. (Klaus Hulek) **81k:14015** 14F05
- (with Forster, O.; Hirschowitz, André) Type de scindage généralisé pour les fibres stables. *Vector bundles and differential equations (Proc. Conf., Nice, 1979)*, pp. 65–81. *Progress in Math.*, 7, Birkhäuser, Boston, Mass., 1980. (Klaus Hulek) **81k:14016** 14F05
- Chernklassen semi-stabiler Vektorraumbündel vom Rang 3 auf dem komplex-projektiven Raum. *J. Reine Angew. Math.* 315 (1980), 211–220. (S. Ramanan) **81f:14008** 14F05 (32L05, 81E10)
- Schneider, Michel** Généralisation du théorème de l'information transmise par un questionnaire. (English summary) *Information theory (Proc. Internat. CNRS Colloq., Cachan, 1977) (French)*, pp. 399–406. *Colloques Internat. CNRS*, 276, CNRS, Paris, 1978. (Author's summary) **81f:94019** 94A50
- Schneider, Peter** Über gewisse Galoiscohomologiegruppen. *Math. Z.* 168 (1979), no. 2, 181–205. (Robert Perlis) **81k:12010** 12A60 (12B20)
- Schneider, Robert** (with Ahern, Patrick) Holomorphic Lipschitz functions in pseudocovex domains. *Amer. J. Math.* 101 (1979), no. 3, 543–565. (R. Michael Range) **81f:32022** 32E30 (32F20, 32H10)
- Schneider, Rolf** Kinematic measures for sets of colliding convex bodies. *Mathematische* 25 (1978), no. 1, 1–12. (H. W. Guggenheimer) **81k:52012** 52A22 (52A20, 53C05)
- Boundary structure and curvature of convex bodies. *Contributions to geometry (Proc. Geom. Sympos., Siegen, 1978)*, pp. 13–59. Birkhäuser, Basel, 1979. (Ju. Burago) **81f:52001** 52-02 (52A20)
- Convex bodies with congruent sections. *Bull. London Math. Soc.* 12 (1980), no. 1, 52–54. (Marilyn Breen) **81e:52012** 52A35 (52A20)
- Parallelenmengen mit Vielfachheit und Steiner-Formeln. *Geom. Dedicata* 9 (1980), no. 1, 111–127. (C. M. Petty) **81f:52006** 52A20
- (with Goodey, Paul R.) On the intermediate area functions of convex bodies. *Math. Z.* 173 (1980), no. 2, 185–194. (J. Král) **81k:52010** 52A20 (28A75)
- (with Wieacker, John André) Random polytopes in a convex body. *Z. Wahrsch. Verw. Gebiete* 52 (1980), no. 1, 69–73. (Adrian Baddeley) **81f:52008** 52A22 (60D05)
- Schneider, Toni** (with Stoll, E.) Long-time behavior and dynamic scaling properties of displacement fluctuations in the sine-Gordon chain. *Phys. Rev. B* (3) 22 (1980), no. 1, 395–399. (Authors' summary) **81e:82064** 82A67
- (with Stoll, E.) Classical statistical mechanics of the sine-Gordon and ϕ^4 chains. Static properties. *Phys. Rev. B* (3) 22 (1980), no. 11, 5317–5338. (B. Derrida) **81k:82066** 82A67 (81E99)
- Schneiderman, Arthur M.** (with Karo, Douglas P.) Phase-correlation scale effects in atmospheric optics. (French summary) *Optica Acta* 27 (1980), no. 5, 661–670. (Authors' summary) **81d:78006** 78A10
- Schneiders, Werner** Deus subjectum. Zur Entwicklung der Leibnizschen Metaphysik. *Leibniz in Paris (1672–1676) (Sympos. G. W. Leibniz Soc./CNRS, Chantilly, 1976)*, Vol. II (French), pp. 21–31. *Studia Leibnitiana Suppl.*, XVIII, Steiner, Wiesbaden, 1978. (See **81m:01022b**) 01A45
- Schneckenburger, Norbert** Darstellungen halbgeordneter Mengen in Potenzmengenverbänden. *Mitt. Math. Sem. Giessen* No. 142 (1980), 1–30. (E. Harzheim) **81f:06006** 06A10
- Schneider, E.** (with Kraft, K. H.) Rationale Rechenoperationen mit gammaverteilten Zufallsvariablen. *Siemens Forsch. Entwickl.* 9 (1980), no. 4, 227–230. (I. A. Melamed) **81j:62043** 62E15
- Schnorr, C.-P.** An extension of Strassen's degree bound. *Fundamentals of computation theory (Proc. Conf. Algebraic, Arit. and Categorical Methods in Comput. Theory, Berlin/Wendisch-Rietz, 1979)*, pp. 404–416. *Math. Research*, 2, Akademie-Verlag, Berlin, 1979. (Author's summary) **81b:68056** 68C25 (12A20)
- On the additive complexity of polynomials and some new lower bounds. *Theoretical computer science (Fourth GI Conf., Aachen, 1979)*, pp. 286–297. *Lecture Notes in Comput. Sci.*, 67, Springer, Berlin, 1979. (Author's summary) **81m:68037** 68C25
- (with Van de Wiele, J. P.) On the additive complexity of polynomials. *Theoret. Comput. Sci.* 10 (1980), no. 1, 1–18. (Authors' summary) **81k:68037** 68C25 (12-04)
- A 3n lower bound on the network complexity of Boolean functions. *Theoret. Comput. Sci.* 10 (1980), no. 1, 83–92. (Author's summary) **81f:94046** 94C10
- Schober, Anton** Lorentz-covariant formulation of a quantum theory on projective planes. *Phys. Lett. A* 71 (1979), no. 1, 3–5. (Author's summary) **81i:81046** 81D05
- Schober, Glenn** (with Schiffer, M.) A variational method for general families of quasiconformal mappings. *J. Analyse Math.* 34 (1978), 240–264 (1979). (K. Strebel) **81d:30034** 30C60
- (with Schiffer, M.) An application of the calculus of variations for general families of quasiconformal mappings. *Complex analysis Joensuu 1978 (Proc. Colloq., Univ. Joensuu, Joensuu, 1978)*, pp. 349–357. *Lecture Notes in Math.*, 747, Springer, Berlin, 1979. (K. Strebel) **81d:30035** 30C60
- (with Kirwan, W. E.) Inverse coefficients for functions of bounded boundary rotation. *J. Analyse Math.* 36 (1979), 167–178 (1980). (E. P. Merkes) **81j:30026** 30C45
- (with Schiffer, M.) The dielectric Green's function and quasiconformal mapping. *J. Analyse Math.* 36 (1979), 233–243 (1980). (R. Kühnau) **81j:30032** 30C60 (30C70)
- Coefficients of inverses of univalent functions with quasiconformal extensions. *Kodai Math. J.* 2 (1979), no. 3, 411–419. (R. Kühnau) **81b:30039** 30C60 (30C50)
- (with Duren, Peter) Nonvanishing univalent functions. *Math. Z.* 170 (1980), no. 3, 195–216. (Louis Brickman) **81e:30021** 30C45
- Schoch, M.** Neuere Ergebnisse in der diskreten Optimierung. *Fortschritte in der mathematischen Optimierung (Tagung, Humboldt Univ., Berlin, 1978)*, pp. 95–107. *Seminarberichte*, 15, Humboldt Univ., Berlin, 1978. (See **80d:90003**) 90C10
- Schochet, Claude** Homogeneous extensions of C^* -algebras and K -theory. I. *Bull. Amer. Math. Soc. (N.S.)* 3 (1980), no. 1, 715–718. (Jerome Kaminker) **81i:46096** 46M20 (18F25, 46L05, 55N15)
- (with Brown, Lawrence G.; de la Harpe, Pierre) Perfection du groupe de Fredholm. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 3, A151–A154. (Raymond Streater) **81e:22028** 22E65
- Schochetman, I.** The dual topology of certain group extensions. *Adv. in Math.* 35 (1980), no. 2, 113–128. (T. W. Palmer) **81e:22005** 22D30
- Schock, Rolf** A natural deduction system of indexical logic. *Notre Dame J. Formal Logic* 21 (1980), no. 2, 351–364. (N. B. Cocchiarella) **81f:03037** 03B60
- Schoeller, C.** Rationalité de certaines séries de Poincaré. *Séminaire d'Algèbre Paul Dubreil 31ème année (Paris, 1977–1978)*, pp. 323–384. *Lecture Notes in Math.*, 740, Springer, Berlin, 1979. (Hamet Seydi) **81h:13014** 13H15
- Schoeman, M.** (with Bres, E.; Charnes, A.; Cole Eckels, D.; Hitt, S.; Lyders, R.; Rousseau, J.; Russell, K. G.) Costs and their assessment to users of a medical library: a game-theoretic method for allocating joint fixed costs. *Applied game theory (Proc. Conf., Inst. Adv. Stud., Vienna, 1978)*, pp. 334–351. *IHS—Studies*, 1, Physica, Würzburg, 1979. (Authors' summary) **81d:90130** 90D45 (68H05)
- Schoen, Richard** (with Yau, Shing Tung) Existence of incompressible minimal surfaces and the topology of three-dimensional manifolds with nonnegative scalar curvature. *Am. J. Math.* (2) 110 (1979), no. 1, 127–142. (Jonathan Sacks) **81k:58029** 58E12 (49F10, 53C42)
- (with Yau, Shing Tung) Positivity of the total mass of a general space-time. *Phys. Rev. Lett.* 43 (1979), no. 20, 1457–1459. (F. J. Flaherty) **81e:58024** 58D25 (58E20, 83C40)
- (with Yau, Shing Tung) Compact group actions and the topology of manifolds with nonpositive curvature. *Topology* 18 (1979), no. 4, 361–380. (Helmut Kaul) **81k:53044** 58E20 (53C20, 58E20)
- (with Wolpert, Scott; Yau, Shing Tung) Geometric bounds on the low eigenvalues of a compact surface. *Geometry of the Laplace operator (Proc. Sympos. Pure Math., XXXVI, Amer. Math. Soc., Providence, R.I., 1980) (Harold Donnelly)* **81i:58052** 58G25 (49G05, 53C20)
- (with Fischer-Colbrie, Doris) The structure of complete stable minimal surfaces in 3-manifolds of nonnegative scalar curvature. *Comm. Pure Appl. Math.* 33 (1980), no. 2, 199–211. (Themistocles M. Rassias) **81i:53044** 53C40 (58E12)
- Schoenberg, I. J.** On Chebyshev and Markov-type problems for polynomials in a circular ring. *Fourier analysis and approximation theory (Proc. Colloq., Budapest, 1976)*, Vol. II, pp. 697–712. *Colloq. Math. Soc. János Bolyai*, 19, North-Holland, Amsterdam, 1978. (C. W. Clenshaw) **81b:41010** 41A10
- On cardinal spline smoothing. *Approximation theory and functional analysis (Proc. Internat. Sympos. Approximation Theory, Univ. Estadual de Campinas, Campinas, 1977)*, pp. 383–407. *North-Holland Math. Studies*, 35, North-Holland, Amsterdam, 1979. (R. Franke) **81d:41010** 41A15
- On a problem of Steinhaus on lattice points. *Amer. Math. Monthly* 86 (1979), no. 9, 765–766. (Stanley J. Benkoski) **81a:10063** 10J25 (51M25)
- Schoenborn, Werner** (with Stanke, Gerd) Convergence properties of adaptive threshold elements in respect to application and implementation. *Kybernetika (Prague)* 16 (1980), no. 2, 159–171. (Authors' summary) **81d:68120** 68G05
- Schoene, Andrew Y.** On the nonrelativistic limits of the Klein-Gordon and Dirac equations. *J. Math. Anal. Appl.* 71 (1979), no. 1, 36–47. (From the introduction) **81a:81024** 81C05 (35Q20)
- Schoenfelder, C. A.** (with Hoel, D. G.) Properties of the Neyman-Scott carcinogenesis model at low dose rates. *Math. Biosci.* 45 (1979), no. 3–4, 227–246. (John Kalbfleisch) **81g:62177** 62P10 (92A15)
- Schoenstadt, Arthur L.** See *Information linkage between applied mathematics and industry*. **81j:93004**
- Schofield, Norman** Instability of simple dynamic games. *Rev. Econom. Stud.* 45 (1978), no. 3, 575–594. (Hans Keiding) **81h:90014** 90A08 (06A99)
- Schofield, S. L.** (with Bowers, R. G.) Renormalisation group calculations on a mixed-spin system in two dimensions. *J. Phys. A* 13 (1980), no. 12, 3697–3706. (Authors' summary)

- 81j:82033** 82A67
Schölbengel, Johannes Der Zusammenhang zwischen den Nullstellen der ζ -Funktion und Folgen der Form $\{g(p)\}$ Mod 1, p -Prim. *Österreich. Akad. Wiss. Math.-Natur. Kl. Sitzungsber. II* 187, no. 4-7, 183-195 (1978). (L. Kuipers) **81j:10052** 10F40 (10G05)
 Über die Diskrepanz von Folgen (ab^n). *Österreich. Akad. Wiss. Math.-Natur. Kl. Sitzungsber. II* 187, no. 4-7, 225-236 (1978). (William A. Beyer) **81a:10064** 10K05
- Schöller, Ulrich** (with Fischer, Werner) Additive operators in Orlicz spaces. Special issue dedicated to Władysław Orlicz on the occasion of his seventy-fifth birthday. *Comment. Math. Special Issue* 2 (1979), 107-115. (K. Sundaresan) **81c:47069** 47H99
- Scholl, A. J.** On the algebra of modular forms on a congruence subgroup. *Math. Proc. Cambridge Philos. Soc.* 86 (1979), no. 3, 461-466. (Author's introduction) **81i:10029** 10D12
- Scholten, C. S.** (with Dijkstra, Edsger W.) Termination detection for diffusing computations. *Inform. Process. Lett.* 11 (1980), no. 1, 1-4. (From the text) **81i:68006** 68B05
- Scholten, O.** (with Dieperink, A. E. L.) On shapes and shape phase transitions in the interacting boson model. *Nuclear Phys. A* 346 (1980), no. 1-2, 125-138. (Authors' summary) **81c:81104** 81G30
- Scholtz, Robert A.** (with Wei, Victor K. W.) On the characterization of statistically synchronizable codes. *IEEE Trans. Inform. Theory* 26 (1980), no. 6, 733-735. (Authors' summary) **81k:94022** 94A29 (94B50)
- Scholz, Reinhard** Computation of turning points of the stationary Navier-Stokes equations using mixed finite elements. *Bifurcation problems and their numerical solution (Proc. Workshop, Univ. Dortmund, Dortmund, 1980)*, pp. 147-162. *Internat. Ser. Numer. Math.*, 54, Birkhäuser, Basel, 1980. (From the introduction) **81m:65179** 65N30
- Schömaier, W.** (with Raith, K.; Glotz, G.) Ein selbststeuerndes Lösungsverfahren für große Systeme von gewöhnlichen Differentialgleichungen, wie sie zum Beispiel aus der Linienmethode resultieren. Vorträge der Wissenschaftlichen Jahrestagung der Gesellschaft für Angewandte Mathematik und Mechanik, Teil I (Brussels, 1978). *Z. Angew. Math. Mech.* 59 (1979), no. 3, 179-181. (From the text) **81g:65112** 65L10
- Schönbek, Maria Elena** Decay of solutions to the Korteweg-de Vries-Burgers equation and to parabolic conservation laws. *Nonlinear partial differential equations in engineering and applied science (Proc. Conf., Univ. Rhode Island, Kingston, R.I., 1979)*, pp. 213-216. *Lecture Notes in Pure and Appl. Math.*, 54, Dekker, New York, 1980. (Alberto Valli) **81k:35151** 35Q20
- Decay of solutions to parabolic conservation laws. *Comm. Partial Differential Equations* 5 (1980), no. 5, 449-473. (Howard A. Levine) **81k:35081** 35K55 (35L65)
- Schönbek, T.** (with Thompson, K. W.) A problem of the Pompeii type. *Amer. Math. Monthly* 87 (1980), no. 1, 32-36. (Carlos A. Berenstein) **81d:26006** 26B99 (28A99)
- Schöne, Wolfgang** Über Pseudomannigfaltigkeiten, die sich als Randkomplexe simplizialer konvexer Polytope realisieren lassen. *Vorträge der Tagung Geometrie und Anwendungen (Gaußig, 1977)*, pp. 99-113. *Weiterbildungszentrum Math. Kybernet. Rechentechn.*, 28, Tech. Univ. Dresden, Dresden, 1978. (H. E. Debrunner) **81i:52013** 52A25
- Über die Koppelkurve des ebenen Viergelenkgetriebes. *Wiss. Z. Tech. Hochsch. Karl-Marx-Stadt* 21 (1979), no. 5, 559-571. (J. Hoschek) **81d:70002** 70B15 (51N05)
- Schöneberg, Rainald** Leray-Schauder principles for condensing multivalued mappings in topological linear spaces. *Proc. Amer. Math. Soc.* 72 (1978), no. 2, 268-270. (P. M. Fitzpatrick) **81b:47075** 47H10
- (with Kirk, W. A.) Mapping theorems for local expansions in metric and Banach spaces. *J. Math. Anal. Appl.* 72 (1979), no. 1, 114-121. (Gilles Fournier) **81c:47053** 47H05 (54C10, 54H99)
- Matrix-Limitierungen von Picardfolgen nichtexpansiver Abbildungen im Hilbertraum. *Math. Nachr.* 91 (1979), 263-267. (T. E. Williamson, Jr.) **81b:47070** 47H09 (47H10)
- A degree theory for semicondensing vectorfields in infinite-dimensional Banach spaces and applications. *Nonlinear Anal.* 4 (1980), no. 2, 393-405. (Klaus Deimling) **81b:47066** 47H06 (55M25, 58C30)
- Schoenfeld, Jonathan F.** Vierbein singularities in CP^2 . *Ann. Physics* 126 (1980), no. 1, 123-134. (M. J. Perry) **81d:83035** 83C45 (53C99, 57R15)
- Dynamical conservation laws in supersymmetric theories of symmetric-space valued fields. *Nuclear Phys. B* 169 (1980), no. 1-2, 49-67. (Author's summary) **81h:81153** 81G20
- Schoenfelder, J. L.** Very high accuracy Chebyshev expansions for the basic trigonometric functions. *Math. Comp.* 34 (1980), no. 149, 237-244. (Claude Carasso) **81f:65016** 65D20
- Schönhage, Arnold** (with Knuth, Donald E.) The expected linearity of a simple equivalence algorithm. *Theoret. Comput. Sci.* 6 (1978), no. 3, 281-315. (Authors' summary) **81a:68049** 68C25
- Schönhammer, K.** (with Gunnarsson, O.) Localized dynamic perturbations in metals. *Z. Phys. B* 38 (1980), no. 2, 127-131. (Authors' summary) **81d:82059** 82A65
- Schönbek, J.** (with Caro, Yair) Decomposition of trees into isomorphic subtrees. *Ars Combin.* 9 (1980), 119-130. (Daniel I. A. Cohen) **81h:05051** 05C05
- Schöpf, Hans-Georg** Albert Einstein und die ersten Anfänge der Quantentheorie. *Wiss. Z. Tech. Univ. Dresden* 28 (1979), no. 1, 79-83. (H. Treder) **81c:01028** 01A60 (81-03)
- Ehrenpromotion für Prof. Dr. Peter Gabriel Bergmann. *Wiss. Z. Tech. Univ. Dresden* 29 (1980), no. 1, 53-55. (Editors) **81i:01042** 01A70 (83-03)
- Schöpf, Peter** Ebene Mengen mit starker Schnitteigenschaft sind konvex oder haben ein konvexes Komplement. *Arch. Math. (Basel)* 34 (1980), no. 2, 166-170. (G. D. Chakerian) **81k:52007** 52A10
- Schörner, W.** Das stetige Dual von Musielak-Orlicz-Räumen über diskreten Maßräumen. (English and Russian summaries) *Bull. Acad. Polon. Sci. Sér. Sci. Math.* 27 (1979), no. 7-8, 549-552 (1980). (J. Musielak) **81k:46027** 46E30
- Schot, Steven H.** Aberrancy: geometry of the third derivative. *Math. Mag.* 51 (1978), no. 5, 259-275. (Eather Portnoy) **81a:01024** 01A55 (51N10, 53A04)
- Schotter, P. K.** (with Jennings, R. E.) Multiple-valued consistency. *Proceedings of the Ninth International Symposium on Multiple-Valued Logic (Bath, 1979)*, pp. 110-113. *IEEE, Long Beach, Calif.*, 1979. (Ayda I. Arruda) **81a:03027** 03B60 (03A05)
- (with Jennings, R. E.; Johnston, D. K.) Universal first-order definability in modal logic. *Z. Math. Logik Grundlag. Math.* 26 (1980), no. 4, 327-330. (Michael Byrd)
- 81h:03038** 03B45
- Schott, Dieter** Zur Lösung linearer Gleichungen mit nichtvertauschbaren Operatoren. *Rostock. Math. Kolloq.* No. 12 (1979), 31-47. (D. Przeworska-Roletowicz) **81a:47016** 47A50 (35R20, 44A40)
- Schott, René** (with Gallardo, Léonard) Un théorème de structure pour les sous-groupes fermés, connexes des groupes extensions compactes de groupes nilpotents. *Analyse harmonique sur les groupes de Lie (Sém. Nancy-Strasbourg, 1976-1978)*, II, pp. 283-292. *Lecture Notes in Math.*, 739, Springer, Berlin, 1979. (L. Corwin) **81d:22003** 22D05
- (with Prevot, Daniel) Marches aléatoires sur les espaces homogènes des groupes de Lie nilpotents simplement connexes. *Analyse harmonique sur les groupes de Lie (Sém. Nancy-Strasbourg 1976-1978)*, II, pp. 404-426. *Lecture Notes in Math.*, 739, Springer, Berlin, 1979. (Hubert Hennion) **81f:60097** 60J15 (60B99)
- Schottenloher, Martin** An example of a locally convex space which is not an ω -space. *Advances in holomorphy (Proc. Sem. Univ. Fed. Rio de Janeiro, Rio de Janeiro, 1977)*, pp. 735-744. *North-Holland Math. Studies*, 34, North-Holland, Amsterdam, 1979. (G. Coeuré) **81d:46056** 46G20 (46A05)
- Schotter, A.** Voting weights as power proxies: some theoretical and empirical results. *Applied game theory (Proc. Conf., Inst. Adv. Stud., Vienna, 1978)*, pp. 58-73. *IHS—Studies*, 1, Physica, Würzburg, 1979. (Author's summary) **81c:90013** 90A08 (90A07, 90D35)
- See also *Applied game theory*, **81c:90001**
- Schottlander, Stefan** Wilhelm Quade (1.12.1898-10.6.1975). Nachruf der Braunschweigischen Wissenschaftlichen Gesellschaft, vorgetragen in der Plenarsitzung am 8.12.1978. *Abh. Braunschweig. Wiss. Ges.* 30 (1979), 145-148. (Editors) **81i:01036** 01A70
- Zum Gedenken an Wilhelm Quade. *Jahresber. Deutsch. Math.-Verein.* 82 (1980), no. 4, 193-198. (Editors) **81i:01014** 01A70
- Schou, Geert** (with Vaeth, Michael) A small sample study of occurrence/exposure rates for rare events. *Scand. Actuar. J.* 1980, no. 4, 209-225. (Authors' summary) **81m:62181** 62N05 (62P10)
- van der duyn Schouten, Frank A. See van der Duyn Schouten, Frank A.
- Schouten, H. J. A.** Measuring pairwise agreement among many observers. *Biometrika* 67 (1980), no. 6, 497-504. (Byron J. T. Morgan) **81m:62113** 62H30 (92A07, 92A25)
- Schrader, Rainer** (with Bachem, Achim) Minimal inequalities and subadditive duality. *SIAM J. Control Optim.* 18 (1980), no. 4, 437-443. (R. N. Kaul) **81h:90103** 90C11
- Schrader, Robert** (with Osterwalder, Konrad) Axioms for Euclidean Green's functions. II. (Russian) Translated from the English by L. E. Filippova. *Euclidean quantum field theory (Russian)*, pp. 9-45. *Mat.: Novoe Zariub. Nauke*, 12, "Mir", Moscow, 1978. (See **81f:81002**) **81E10**
- (with Hogreve, H.; Seiler, R.) Bounds on the Euclidean functional determinant. *Feynman path integrals (Proc. Internat. Colloq., Marseille, 1978)*, pp. 282-288. *Lecture Notes in Phys.*, 106, Springer, Berlin, 1979. (Aubrey Truman) **81c:81048** 81C35 (81E10)
- (with Cotta-Ramusino, P.; Krüger, W.) Quantum scattering by external metrics and Yang-Mills potentials. (French summary) *Ann. Inst. H. Poincaré Sect. A (N.S.)* 31 (1979), no. 1, 43-71. (Keiichi R. Ito) **81h:81129** 81F99 (35P25, 47A40)
- See also *Symposium: Einstein*, **81c:83001**
- Schrader, Ronald M.** (with Hettmansperger, Thomas P.) Robust analysis of variance based upon a likelihood ratio criterion. *Biometrika* 67 (1980), no. 1, 93-101. (Mir Masoom Ali) **81e:62085** 62J99 (62F05, 62F35)
- (with McKean, Joseph W.) The geometry of robust procedures in linear models. *J. Roy. Statist. Soc. Ser. B* 42 (1980), no. 3, 366-371. (A. I. Khuri) **81m:62061** 62F35 (62J05)
- Schramm, Ruben** On the number of solutions of piecewise linear equations. *Numerical solution of highly nonlinear problems (Sympos. Fixed Point Algorithms and Complementarity Problems, Univ. Southampton, Southampton, 1979)*, pp. 297-313. *North-Holland, Amsterdam*, 1980. (Gilles Fournier) **81f:15038** 15A99 (55M20, 65H10)
- Schranner, Rudolf** (with Ruch, Ernst; Seligman, Thomas H.) Generalization of a theorem by Hardy, Littlewood, and Pólya. *J. Math. Anal. Appl.* 76 (1980), no. 1, 222-229. (Jacques Dubois) **81m:26015** 26D15 (15A51, 47B38)
- Schraattenholzer, Leo** An LP energy supply model for world regions. *Optimization techniques (Proc. Ninth IFIP Conf., Warsaw, 1979)*, Part 2, pp. 559-568. *Lecture Notes in Control and Information Sci.*, 23, Springer, Berlin, 1980. (See **81j:9001b**) **90A30** (90C05)
- Schreckenberger, Jürgen** (with Michler, Lothar) Über die Vollständigkeit algebraischer induktiver Gruppoide. *Algebraische Modelle, Kategorien und Gruppoide*, pp. 61-83. *Studien zur Algebra und ihre Anwendungen*, 7, Akademie-Verlag, Berlin, 1979. (Jaroslav Ježek) **81i:20073** 20L17 (08A35, 18B99)
- Schreiber, Alfred** (with Bender, Peter) The principle of operative concept formation in geometry teaching. *Ed. Stud. Math.* 11 (1980), no. 1, 59-90. (B. Artmann) **81a:00017** 00A25
- Schreiber, Bertram M.** p -adic linear groups with ergodic affine transformations. *Indiana Univ. Math. J.* 29 (1980), no. 1, 31-39. (S. G. Dani) **81h:22011** 22D40 (28D99)
- Schreiber, E.** (with Barlotti, Adriano; Strambach, Karl) The group of projectivities in free-like geometries. *Rend. Sem. Mat. Univ. Padova* 60 (1978), 183-200 (1979). (Hermann Hähl) **81g:51005** 51A35 (51B05)
- Schreiber, Igor** (with Kubiček, Milan; Marek, Miloš) On coupled cells. *New approaches to nonlinear problems in dynamics (Proc. Conf., Pacific Grove, Calif., 1979)*, pp. 496-508. *SIAM, Philadelphia, Pa.*, 1980. (Aubrey B. Poore) **81m:34050** 34C15 (58F13, 80A30, 82A40)
- Schreiber, P.** See *Wussing, Hans*, **81g:01001**
- Schreiber, Ulrich** (with Weihrauch, Klaus) Metric spaces defined by weighted algebraic cpo-s. *Fundamentals of computation theory (Proc. Conf. Algebraic, Arith. and Categorical Methods in Comput. Theory, Berlin/Wendisch-Rietz, 1979)*, pp. 516-522. *Math. Research*, 2, Akademie-Verlag, Berlin, 1979. (Authors' introduction) **81c:68055** 68C30 (03G99, 54A99, 65J99)
- Schreiber, W. M.** (with Landovitz, L. F.; Levine, A. M.) Transition amplitudes for time dependent harmonic oscillators. *J. Math. Phys.* 21 (1980), no. 8, 2159-2163. (Authors' summary) **81h:81018** 81C05

- Schneider, J. A. M. Constructing timetables for sport competitions. Combinatorial optimization, II (Proc. Conf., Univ. East Anglia, Norwich, 1979). *Math. Programming Stud.* No. 13 (1980), 58-67. (Author's summary) **81k:90052** 90B35
- Schriever, Karl-Heinz A truncated vector-at-a-time procedure with a symmetrical stopping-rule for selecting the better of two binomial populations. *Rep. Statist. Appl. Res. Un. Japan. Sci. Engrs.* 26 (1979), no. 1, 6-10. (Rasul A. Khan) **81j:62161** 62L10 (62F07)
- (with Büringer, Helmut; Martin, Herbert) ★Nonparametric sequential selection procedures. *Birkhäuser, Boston, Mass.*, 1980. xi+488 pp. ISBN 3-7643-3021-X (P. K. Sen) **81k:62069** 62G99 (62F07, 62L99)
- Schrijver, A. ★Matroids and linking systems. *Mathematical Centre Tracts*, 88. *Mathematisch Centrum, Amsterdam*, 1978. vii+125 pp. ISBN 90-6196-154-8 (R. A. Brualdi) **81i:05052** 05B35
- On the structure of deltoids. (French summary) *Problèmes combinatoires et théorie des graphes (Colloq. Internat. CNRS, Univ. Orsay, Orsay, 1976)*, pp. 379-380, *Colloques Internat. CNRS*, 260, CNRS, Paris, 1978. (Author's summary) **81k:05042** 05B35
- Some background information from linear algebra. *Packing and covering in combinatorics*, pp. 5-13, *Math. Centre Tracts*, 106, *Math. Centrum, Amsterdam*, 1979. (See **81b:05001**) 15-02
- (with Brouwer, Andries E.) Uniform hypergraphs. *Packing and covering in combinatorics*, pp. 39-73, *Math. Centre Tracts*, 106, *Math. Centrum, Amsterdam*, 1979. (See **81b:05001**) 05C65
- Fractional packing and covering. *Packing and covering in combinatorics*, pp. 201-274, *Math. Centre Tracts*, 106, *Math. Centrum, Amsterdam*, 1979. (See **81b:05001**) 05C70 (05B40, 05C65)
- A counterexample to a conjecture of Edmonds and Giles. *Discrete Math.* 32 (1980), no. 2, 213-215. (Edward Minieka) **81k:05084** 05C70 (90C10)
- See also *Packing and covering in combinatorics*, **81b:05001**
- Schröck-Pauli, Claudia Über die Vollständigkeit und Freiheit von verallgemeinerten Fourier-Systemen. *Math. Nachr.* 97 (1980), 211-222. (K. Tandori) **81m:30004** 30B60 (42A65)
- Schröder, A. (with Fuchssteiner, Benno) Production and distribution. *Game theory and related topics (Proc. Sem., Bonn and Hagen, 1978)*, pp. 281-290, *North-Holland, Amsterdam*, 1979. (Ronald W. Shephard) **81b:90022** 90A11
- Schröder, Eberhard M. (with Blank, Rita) Über den Satz von Morley. *Mitt. Math. Ges. Hamburg* 10, no. 6, 413-429 (1978). (Cyril W. L. Garner) **81f:51053** 51A20 (51B20)
- Modelle ebener metrischer Ringgeometrien. *Abh. Math. Sem. Univ. Hamburg* 48 (1979), 139-170. (A. Cronheim) **81e:51014** 51B99 (51C05)
- Zur Kennzeichnung der Lorentz-Transformationen. (English summary) *Aequationes Math.* 19 (1979), no. 2-3, 134-144. (E. H. Kronheimer) **81b:53022** 53B30 (51B20, 83A05)
- Eine Kennzeichnung der äquiformen Ebenen. *Geom. Dedicata* 9 (1980), no. 3, 329-345. (W. Benz) **81m:51008** 51B10 (51B15, 51B20)
- Schröder, Kurt See *Obituary: Schröder, Kurt*, **81j:01046**
- Schroer, B. Topological methods for gauge theories. *Facts and prospects of gauge theories (Proc. XVII. Internat. Universitätswochen für Kernphysik, Schladming, 1978)*, pp. 155-202, *Acta Phys. Austriaca Suppl.*, XIX, Springer, Vienna, 1978. (M. Carmeli) **81g:10059** 81E10 (58G10)
- Schroth, Peter On $(1, b)$ -replicative functions with isolated discontinuities. *Aequationes Math.* 20 (1980), no. 1, 73-79. (Maciej Sablik) **81k:39008** 39B40 (26A15, 39A10, 39B10)
- On the summation problem of periodic functions. *Arch. Math. (Basel)* 34 (1980), no. 1, 43-48. (B. P. Mishra) **81j:42025** 42A63 (42A05, 42A24)
- Schubert, Lee W. A coverage function for interval estimators of simulation response. *Management Sci.* 26 (1980), no. 1, 18-27. (Author's summary) **81g:65188** 65U05 (62F25)
- Schubert, Hans Irrationalitätskriterien nach Georg Cantor. *Praxis Math.* 22 (1980), 5, 146-151. (P. Bundschuh) **81j:10048** 10F35 (01A55, 10A30)
- Schubert, Gerald (with Zebib, Abdellattah; Straus, Joe M.) Infinite Prandtl number thermal convection in a spherical shell. *J. Fluid Mech.* 97 (1980), no. 2, 257-277. (L. R. Mack) **81d:76050** 76E15
- Schumay, William R. (with Parr, William C.) The jackknife: a bibliography. (French summary) *Internat. Statist. Rev.* 48 (1980), no. 1, 73-78. (From the text) **81k:62036** 62F10
- (with Beckett, James, III; Broffitt, James D.) A special distributional result for bilinear forms. *J. Amer. Statist. Assoc.* 75 (1980), no. 370, 466-468. (C. G. Khatri) **81k:62088** 62H10
- (with Parr, William C.) Minimum distance and robust estimation. *J. Amer. Statist. Assoc.* 75 (1980), no. 371, 616-624. (Rudolph J. Beran) **81m:62062** 62F35 (62G05)
- Schucking, E. L. (with Spedare, R.) A scale parameter for Friedmann models. *Astronom. J.* 85 (1980), no. 5, 586-588. (R. C. Roeder) **81g:83072** 83F05 (85A40)
- Schulke, L. M. (with Stephanopoulos, Gregory; Stephanopoulos, George A.) A decomposition method for the stability analysis of large microbial systems. *Theoret. Population Biol.* 16 (1979), no. 2, 126-143. (P. Bertrand) **81f:92027** 92A15 (93D99)
- Schulz, Hans-Jürgen (with Tweedie, Richard L.) Parameter estimation using transform estimation in time-evolving models. *Math. Biosci.* 45 (1979), no. 1-2, 37-67. (M. P. Quine) **81d:62094** 62M09 (60K99, 92A05)
- (with Cohn, Harry) On the continuity and the positivity of the finite part of the limit distribution of an irregular branching process with infinite mean. *J. Appl. Probab.* 17 (1980), no. 3, 696-703. (E. Seneta) **81g:60084** 60J80
- Schulzenberger, John R. Boundary waves on perfect conductors. *J. Math. Anal. Appl.* 66 (1978), no. 3, 514-549. (Maurice Bouix) **81k:78008** 78A25 (35P25)
- Schulz, L. (with Wolff, H.) Automatische Klassifikation bei unbekannter Klassenzahl auf der Basis globaler Dichteschätzungen. (English summary) *Proceedings in Operations Research*, 9 (Eighth Annual Meeting, Deutsch. Gesellch. Operations Res., Regensburg, 1979), pp. 348-349, *Physica, Würzburg*, 1980. (Authors' summary) **81k:62088** 62H30 (62G05)
- Schulz, F. (with Nienhuis, G.) Collisional broadening of saturated resonance fluorescence spectra by two-state atoms irradiated by monochromatic. *J. Phys. B* 13 (1980), no. 11, 2205-2216. (Authors' summary) **81m:81078a** 81G45 (81K05)
- Schulman, E. I. (with Zaharov, V. E.) Degenerative dispersion laws, motion invariants and kinetic equations. *Phys. D* 1 (1980), no. 2, 192-202. (J. R. Ockendon) **81j:35077** 35L70 (35Q20, 76B15, 81C05)
- Schulte, Manfred Eine Formel für schiefssymmetrische bilineare Räume mit vier maximal totalisotropen Unterräumen. *Arch. Math. (Basel)* 33 (1979/80), no. 5, 411-414. (A. Prószynski) **81f:10028** 10C01
- Schultes, Klaus (with Tavan, Paul) An efficient approach to CI: general matrix element formulas for spin-coupled particle-hole excitations. *J. Chem. Phys.* 72 (1980), no. 6, 3547-3576. (A. Corcioue) **81k:81041** 81C99 (81G50)
- Schultheis, Hildegard (with Lichtner, Peter C.; Griffin, James J.; Schultheis, Rainer; Volkov, Anatole B.) Time-dependent Hartree-Fock phase: unique implication of variational principle. *Phys. Lett. B* 88 (1979), no. 3-4, 221-225. (Authors' summary) **81a:81107** 81G35
- Schultheis, Rainer (with Lichtner, Peter C.; Griffin, James J.; Schultheis, Hildegard; Volkov, Anatole B.) Time-dependent Hartree-Fock phase: unique implication of variational principle. *Phys. Lett. B* 88 (1979), no. 3-4, 221-225. (Authors' summary) **81a:81107** 81G35
- Schultheis, Peter M. (with Ianniello, John P.) Optimum range and bearing estimation with randomly perturbed arrays. *J. Acoust. Soc. Amer.* 68 (1980), no. 1, 167-173. (Authors' summary) **81d:94010** 94A15 (76Q05)
- Schüttling, Heinz-Werner Über die Erzeugendenzahl invertierbarer Ideale in Prüferingen. *Comm. Algebra* 7 (1979), no. 13, 1331-1349. (Manfred Knebusch) **81j:12016** 12D15 (13F05, 46J15)
- Schütz, Barbara Über die induktive Isomorphie endlicher Gruppen. I. *Wiss. Z. Tech. Hochsch. Karl-Marx-Stadt* 21 (1979), no. 5, 541-547. (Hartmut Laue) **81j:20043** 20D99 (20L10)
- Schütz, Frederic W. See *Schultz, Frederic W.*
- Schultz, George W. (with Tsokos, Chris P.) Stochastic combat modeling—Lanchester's first law. *Decision information*, pp. 185-211, *Academic Press, New York*, 1979. (W. H. Ruckle) **81k:90121** 90B99 (60H10, 90D25)
- Schultz, H. (with Cornwell, L. W.; Minkoff, M.) Testing of augmented Lagrangians. *Survey of mathematical programming (Proc. Ninth Internat. Math. Programming Sympos., Budapest, 1976)*, Vol. 1, pp. 409-420, *North-Holland, Amsterdam*, 1979. (T. Giec) **81m:65099** 65K05 (90C30)
- Schultz, Reinhard Finding framed Z_2 actions on exotic spheres. *Algebraic topology, Aarhus 1978 (Proc. Sympos. Univ. Aarhus, Aarhus, 1978)*, pp. 591-603, *Lecture Notes in Math.*, 763, Springer, Berlin, 1979. (H.-T. Ku) **81c:57049** 57S25
- Isotopy classes of periodic diffeomorphisms on spheres. *Algebraic topology, Waterloo, 1978 (Proc. Conf., Univ. Waterloo, Waterloo, Ont., 1978)*, pp. 334-354, *Lecture Notes in Math.*, 741, Springer, Berlin, 1979. (E. C. Turner) **81f:57030** 57R50
- Group actions on hypertoral manifolds. I. *Topology Symposium, Siegen 1979 (Proc. Sympos., Univ. Siegen, Siegen, 1979)*, pp. 364-377, *Lecture Notes in Math.*, 788, Springer, Berlin, 1980. (Allan Edmonds) **81m:57030** 57S17
- Schultz, Reinhard (with Glaschoff, Klaus) Über die genaue Berechnung von besten L^1 -Approximierenden. *J. Approx. Theory* 25 (1979), no. 3, 280-293. (T. J. Rivlin) **81f:65012** 65D15 (41A50)
- Siegmund-Schultze, R. See *Siegmund-Schultze, R.*
- Schulz, Christoph (with Wills, Jörg M.) Minimale Möbiusbänder und kleinste Kleinsche Flaschen. *Mitt. Math. Ges. Hamburg* 10, no. 6, 471-480 (1978). (Udo Pachner) **81c:52017** 52A45 (05B40)
- (with Günter, Ewald; Kleinschmidt, Peter; Pachner, Udo) Neuere Entwicklungen in der kombinatorischen Konvexgeometrie. *Contributions to geometry (Proc. Geom. Sympos., Siegen, 1978)*, pp. 131-163, *Birkhäuser, Basel*, 1979. (E. Hertel) **81j:57009** 57Q05 (52A25)
- (with Wills, Jörg M.) Kleinste Kleinsche Flaschen mit Rand. *Geom. Dedicata* 8 (1979), no. 4, 395-406. (H. B. Griffiths) **81c:57003** 57M20 (52A25)
- Schulz, Karl-Dieter ★Die Monotonie von Differenzenquotienten als Verallgemeinerung der Konvexität von Funktionen. (German) [Monotonicity of difference quotients as a generalization of the convexity of functions] Dissertation, Rheinische Friedrich-Wilhelms-Universität, Bonn, 1978. *Bonner Mathematische Schriften* [Bonn Mathematical Publications], 114, Universität Bonn, Mathematisches Institut, Bonn, 1978. ii+137 pp. (A. Clausen) **81h:26010** 26A51
- Schulz, Konrad (with Schwartz, Bernd) Finite extensions of convex functions. (Russian and German summaries) *Math. Operationsforsch. Statist. Ser. Optim.* 10 (1979), no. 4, 501-509. (Jacques Dubois) **81c:26011** 26B25 (52A20, 90C25)
- Schulz, Manfred An example of a cubic graph with two orbits and simple eigenvalue $\sqrt{3}$. *Discrete Math.* 31 (1980), no. 2, 221-222. (J.-M. Goethals) **81j:05006** 05C50
- Schulz, Rainer Reflexive modules over perfect rings. *J. Algebra* 61 (1979), no. 2, 527-537. (T. Cheatham) **81h:16037** 16A51 (16A40)
- Schulze, Bert-Wolfgang Elliptic operators on manifolds with boundary. *Contributions to the School on Global Analysis (Ludwigsfelde, 1976)*, Part 1, pp. 1-188, *Akad. Wiss. DDR, Berlin*, 1977. (A. S. Dynin) **81f:58036** 58G20 (35S15)
- Multiplicative properties of elliptic boundary value problems. *Romanian-Finnish Seminar on Complex Analysis (Proc., Bucharest, 1976)*, pp. 581-588, *Lecture Notes in Math.*, 743, Springer, Berlin, 1979. (J. Lawrynowicz) **81d:58054** 58G20 (35J55)
- Über eine Verheftung elliptischer Randwert-Probleme. (English summary) *Math. Nachr.* 93 (1979), 205-222. (J. Lawrynowicz) **81k:58065** 58G20 (35J65, 47G05)
- (with Pillat, Ulf) Elliptische Randwertprobleme für Komplexe von Pseudodifferentialoperatoren. *Math. Nachr.* 94 (1980), 173-210. (J. Lawrynowicz) **81k:58064** 58G20 (35J65, 47G05)
- Some classes of nonelliptic boundary value problems for pseudodifferential operators. I. *Math. Nachr.* 95 (1980), 327-350. (Ja. A. Roitberg) **81m:58079** 58G20 (35S15)
- Schulze, Reinhard (with Römisch, Werner) Kennwertmethoden für stochastische Volterra'sche Integralgleichungen. (Russian, English and French summaries) *Wiss. Z. Humboldt-Universität Berlin Math.-Natur. Reihe* 28 (1979), no. 4, 523-533. (Seppo Heikkilä) **81m:60120** 60H20 (65U05, 93E10, 93E12)
- Schumacher, G. (with Huckleberry, Alan T.) Holomorphic maps of generalized Iwasawa manifolds. *Manuscripta Math.* 30 (1979/80), no. 2, 107-117. (D. N. Ahieser) **81a:32025** 32M10

- Schumacher, H. (with Bodendiek, R.; Wagner, Klaus) Zur Minimalstruktur der nicht in die projektive Ebene einbettbaren Graphen. *J. Reine Angew. Math.* 321 (1981), 99–112. (Rudolf Halin) **81a:05063** 05C10
- Schumacher, J. M. A complement on pole placement. *IEEE Trans. Automat. Control* 25 (1980), no. 2, 281–282. (Author's introduction) **81a:93020** 93B05 (93C99)
- Schumacher, Konrad Obere Schranken für die Ausbreitungsgeschwindigkeit bei parabolischen Funktionaldifferentialgleichungen. (English summary) *Constructive methods for nonlinear boundary value problems and nonlinear oscillations (Proc. Conf., Math. Res. Inst., Oberwolfach, 1978)*, pp. 150–160. *Internat. Ser. Numer. Math.*, 48, Birkhäuser, Basel, 1979. (Wolfgang Alt) **81f:35114** 35R99 (35K55, 92A15)
- Dynamical systems with memory on history spaces with monotonic seminorms. *J. Differential Equations* 34 (1979), no. 3, 440–463. (J. Kato) **81g:34091** 34K05 (70G99, 92A15)
- Travelling-front solutions for integro-differential equations. I. *J. Reine Angew. Math.* 316 (1980), 54–70. (A. Haimovici) **81k:45007** 45E10 (92A15)
- Schumaker, Larry L. L_2 approximation by splines with free knots. *Approximation in Theorie und Praxis (Proc. Sympos., Siegen, 1979)*, pp. 157–182. *Bibliographisches Inst., Mannheim, 1979.* (K. Jetter) **81h:41022** 41A15
- Lower bounds for spline approximation. *Approximation theory (Papers, Vth Semester, Stefan Banach Internat. Math. Center, Warsaw, 1975)*, pp. 213–223. *Banach Center Publ.*, 4, PWN, Warsaw, 1979. (Karl Scherer) **81h:41011** 41A15
- On the dimension of spaces of piecewise polynomials in two variables. *Multivariate approximation theory (Proc. Conf., Math. Res. Inst., Oberwolfach, 1979)*, pp. 396–412. *Internat. Ser. Numer. Math.*, 51, Birkhäuser, Basel, 1979. (P. Lipow) **81d:41011** 41A15 (41A63)
- (with Hämmerlin, Günther) Procedures for kernel approximation and solution of Fredholm integral equations of the second kind. *Numer. Math.* 34 (1980), no. 2, 125–141. (Authors' summary) **81h:65122** 65R20 (41A15, 65–04)
- Schumann, G. (with Stute, W.) A general Glivenko-Cantelli theorem for stationary sequences of random observations. *Scand. J. Statist.* 7 (1980), no. 2, 102–104. (R. M. Dudley) **81j:60042** 60F15
- Schumma, George F. Modalities in the extensions of B. *Rep. Math. Logic* No. 10 (1978), 123–128 (1979). (Douglas Walton) **81h:03023** 03B45
- Modal logic with no minimal proper extensions. *Studia Logica* 38 (1979), no. 3, 233–235. (David Makinson) **81c:03015** 03B45
- Schupp, Paul E. Quadratic equations in groups, cancellation diagrams on compact surfaces, and automorphisms of surface groups. *Word problems, II (Conf. on Decision Problems in Algebra, Oxford, 1976)*, pp. 347–371. *Studies in Logic and Foundations of Math.*, 95, North-Holland, Amsterdam, 1980. (G. Peter Scott) **81i:20040** 20F06 (57N05)
- Schuppel, B. See Gohberg, Israel; et al., **81d:45010**
- van Schuppen, J. H. See Van Schuppen, J. H.
- Schurer, F. (with Steutel, F. W.) On the exact degree of approximation of Bernstein operators on $C[0, 1]^r$. *Multivariate approximation theory (Proc. Conf., Math. Res. Inst., Oberwolfach, 1979)*, pp. 413–435. *Internat. Ser. Numer. Math.*, 51, Birkhäuser, Basel, 1979. (P. C. Sikkema) **81d:41022** 41A25
- (with Steutel, F. W.) On the degree of approximation of functions in C_2^r with operators of the Jackson type. *J. Approx. Theory* 27 (1979), no. 2, 153–178. (R. K. Beatson) **81a:42009** 42A10 (41A36)
- Schürger, Klaus On the asymptotic geometrical behaviour of percolation processes. *J. Appl. Probab.* 17 (1980), no. 2, 385–402. (R. T. Smythe) **81g:60102** 60K35
- Schurle, Arlo W. ★Topics in topology. *North-Holland, New York-Oxford, 1979.* xi + 266 pp. ISBN 0-444-00285-5 (Editors) **81e:54002** 54–01 (55–01)
- Schuss, Zeev Singular perturbation methods in stochastic differential equations of mathematical physics. *SIAM Rev.* 22 (1980), no. 2, 119–155. (Pierre-Louis Lions) **81g:60065** 60H10 (35B25)
- Schuster, Allan D. (with Bodin, Lawrence D.; Golden, Bruce L.; Romig, William) A model for the blocking of trains. Special issue: Transportation supply models (Papers, Internat. Sympos. Travel Supply Models, Univ. Montréal, Montréal, 1977). *Transportation Res. Part B* 14 (1980), no. 1–2, 115–120. (Authors' summary) **81a:90112** 90C08 (90B10, 90B30, 90B35)
- Schuster, K.-P. See Proceedings: Operations Research, **81e:90003b**
- Schuster, P. (with Hofbauer, Josef; Sigmund, K.) A note on evolutionary stable strategies and game dynamics. *J. Theoret. Biol.* 81 (1979), no. 3, 609–612. (Leo Jonker) **81d:92015** 92A15 (58F12, 90D40)
- Schuster, S. (with Faudree, R. J.; Rousseau, C. C.; Schelp, R. H.) Panarboreal graphs. *Israel J. Math.* 35 (1980), no. 3, 177–185. (K. B. Reid) **81h:05053** 05C05 (05C35)
- Schütt, Carsten Unconditionality in tensor products. *Israel J. Math.* 31 (1978), no. 3–4, 209–216. (Yehoram Gordon) **81h:46082** 46M05 (46B15)
- Schütt, Hans-Werner (with Scriba, Christoph J.) Bernhard Sticker—1906–1977. *Arch. Internat. Hist. Sci.* 28 (1978), no. 102, 102–105. (Editors) **81k:01047** 01A70
- Schütt, Klaus-P. A model to support the assessment of subjective probabilities. *Theory and Decision* 12 (1980), no. 2, 173–183. (J. M. Bernardo) **81h:62006** 62A15 (62C10, 90A06)
- Schütte, D. (with Gerstenmaier, Y.) Unification of Brueckner theory and HFB theory. *Z. Naturforsch. A* 35 (1980), no. 8, 796–807. (Authors' summary) **81i:81103** 81G35
- Schütte, G. Mass parameter for deformation processes. *Z. Phys. A* 296 (1980), no. 4, 331–339. (Author's summary) **81i:81106** 81G35 (35P30)
- Schütte, H. J. (with Groenewald, N. J.) Certain classes of ideals in group rings. *Comm. Algebra* 8 (1980), no. 1, 87–104. (Donald S. Passman) **81e:16009** 16A27
- Circulant matrices and integer determinants. (Afrikaans. English summary) *Tydskr. Natuurwetenskap.* 20 (1980), no. 1, 33–35. (Author's summary) **81i:15007** 15A15 (15A36)
- Schütte, Kurt Die Entwicklung der Beweistheorie. *Jahresber. Deutsch. Math.-Verein.* 81 (1978/79), no. 1, 3–12. (Editors) **81i:03003** 03–01 (03Fxx)
- Schutz, Bernard F. Statistical formulation of gravitational radiation reaction. *Phys. Rev. D* (3) 22 (1980), no. 2, 249–259. (Author's summary) **81h:83023** 83C35
- Schütz, Christian Eine Verallgemeinerung des kleinen Satzes von Fermat. *Math.-Phys. Semesterber.* 26 (1979), no. 2, 223–229. (I. Danicic) **81a:10005** 10A05
- Schütze, Dieter One-dimensional diffusions with discontinuous scale. *Z. Wahrsch. Verw.* Gebiete 49 (1979), no. 1, 97–104. (François Bronner) **81a:60088** 60J60
- Schützenberger, Marcel-Paul (with Perrin, D.) Un problème élémentaire de la théorie de l'information. (English summary) *Information theory (Proc. Internat. CNRS Colloq., Cachan, 1977) (French)*, pp. 249–260. *Colloques Internat. CNRS*, 276, CNRS, Paris, 1978. (L. L. Campbell) **81k:94038** 94B45 (94A29)
- (with Foata, Dominique) Major index and inversion number of permutations. *Math. Nachr.* 83 (1978), 143–159. (L. Carlitz) **81d:05007** 05A15 (05A10)
- (with Lascoux, A.) A new statistics on words. *Combinatorial mathematics, optimal designs and their applications (Proc. Sympos. Combin. Math. and Optimal Design, Colorado State Univ., Fort Collins, Colo., 1978)*. *Ann. Discrete Math.* 6 (1980), 251–255. (D. G. Rogers) **81m:20018** 20C30 (05A15, 14M15, 90C10)
- Schuur, Jerry D. (with Martelli, Mario) Periodic solutions of Liénard type second order ordinary differential equations. *Tôhoku Math. J. (2)* 32 (1980), no. 2, 201–207. (Jean Mawhin) **81h:34046** 34C25
- Schuermann, F. J. (with Park, C.) Evaluations of absorption probabilities for the Wiener process on large intervals. *J. Appl. Probab.* 17 (1980), no. 2, 363–372. (N. M. Zinchenko) **81f:60111** 60J65 (60G15)
- Schwab, Emil Über Nullfolgen in regulären Kategorien. (Romanian summary) *An. Univ. Timişoara Ser. Ştiinţ. Mat.* 16 (1978), no. 1, 81–87 (1979). (Walter Tholen) **81f:18003** 18A20 (18B35)
- Über Kongruenzen in regulären Kategorien. *Algebraische Modelle, Kategorien und Gruppoide*, pp. 45–50. *Studien zur Algebra und ihre Anwendungen*, 7, Akademie-Verlag, Berlin, 1979. (H. Herrlich) **81g:18004** 18A99
- Schwabhäuser, Wolfram Nonfinitizability of a weak second-order theory. *Fund. Math.* 103 (1979), no. 2, 83–102. (E. Mendelson) **81h:03079** 03C85 (03B15)
- Schwalger, Jens (with Reich, Ludwig) Analytische und fraktionale Iteration formal-biholomorpher Abbildungen. *Jahrbuch Überblicke Mathematik*, 1979, pp. 123–144. *Bibliographisches Inst., Mannheim, 1979.* (K.-T. Chen) **81h:58056** 58F99 (32A99, 34C20)
- Schwalbach, Joachim (with Müller, Jürgen) On the use of nonlinear location models to evaluate the structural efficiency of an industrial sector. *J. Oper. Res. Soc.* 32 (1981), no. 1, 3–10. (Authors' summary) **81k:90020** 90A11
- Schwaln, William A. (with Jezziński, Bogumił; Szalewicz, Krzysztof) Analytic continuation in exchange perturbation theory. *J. Chem. Phys.* 73 (1980), no. 12, 6215–6224. (Authors' summary) **81k:81111** 81G45 (81C12)
- Schwartz, Alan L. (with Connell, William C.) The Littlewood-Paley theory for Jacobi expansions. *Trans. Amer. Math. Soc.* 251 (1979), 219–234. (C. F. Dunkl) **81g:42027** 42C10 (33A65, 42B25)
- Schwartz, B. L. See Roque, Diego R., **81d:60108**
- Schwartz, Bernd (with Schulz, Konrad) Finite extensions of convex functions. (Russian and German summaries) *Math. Operationsforsch. Statist. Ser. Optim.* 10 (1979), no. 4, 501–509. (Jacques Dubois) **81c:26011** 26B25 (52A20, 90C25)
- Schwartz, Charles F. The group of rational solutions of $y^2 = x(x-1)(x-t^2-c)$. *Trans. Amer. Math. Soc.* 259 (1980), no. 1, 33–46. (Andrew Bremner) **81c:14014** 14H25 (10B05, 14H45, 14K20)
- Schwartz, Dietrich Kohärente Systeme von Booleschen Algebren. *Math. Nachr.* 91 (1979), 253–262. (Martin Weese) **81h:03121** 03G05
- Algebra der partiellen Mengen. *Math. Nachr.* 92 (1979), 91–97. (R. S. Pierce) **81h:03101** 03G20 (08B05)
- Cylindric algebras with filter quantifiers. *Z. Math. Logik Grundlag. Math.* 26 (1980), no. 3, 251–254. (D. Monk) **81g:03078** 03G15
- Schwartz, Jacob T. The interplay between mathematics and computer science. *ACM 78 (Proc. Annual Conf., Assoc. Comput. Mach., Washington, D. C., 1978)*, pp. 1–9. *ACM, New York, 1978.* (A. D. Booth) **81e:68001** 68–03 (01A65, 68B05, 68C05, 68C40)
- Mathematics as a tool for economic understanding. *Mathematics today*, pp. 269–295. *Springer, New York, 1978.* (See **80b:00007**) 90A99
- Probabilistic algorithms for verification of polynomial identities. *Symbolic and algebraic computation (EUROSAM '79, Internat. Sympos., Marseille, 1979)*, pp. 200–215. *Lecture Notes in Comput. Sci.*, 72, Springer, Berlin, 1979. (Author's summary) **81g:68060** 68C20
- (with Davis, Martin) Metamathematical extensibility for theorem verifiers and proof checkers. *Comput. Math. Appl.* 5 (1979), no. 3, 217–230. (Richard Statman) **81h:68113** 68G15
- (with Ferro, A.; Omodeo, E. G.) Decision procedures for some fragments of set theory. *5th Conference on Automated Deduction (Les Arcs, 1980)*, pp. 88–96. *Lecture Notes in Comput. Sci.*, 87, Springer, Berlin, 1980. (See **81i:68006**) 68C20 (68B10)
- Schwartz, Jean-Marie (with Enock, Michel) Produit croisé d'une algèbre de von Neumann par une algèbre de Kac. II. *Publ. Res. Inst. Math. Sci.* 16 (1980), no. 1, 189–232. (S. Sakai) **81m:46084** 46L10 (22D35, 46L40)
- Schwartz, Laurent ★Analyse hilbertienne. (French) [Hilbertian analysis] Collection Méthodes. Hermann, Paris, 1979. ii + 297 pp. ISBN 2-7056-5897-1 (T. A. Gillespie) **81a:46001** 46–01 (47–01)
- Geometry and probabilities in Banach spaces. *Proceedings of the First Franco-Southeast Asian Mathematical Conference (Nanyang Univ., Singapore, 1979)*. *Southeast Asian Bull. Math.* 1979, Special Issue a, 157–166. (N. Tomczak-Jaegermann) **81h:46028** 46B20 (60B11)
- Martingales conformes sur une variété analytique complexe. *Séminaire Pierre Lelong-Henri Skoda (Analyse). Années 1978/79 (French)*, pp. 191–198. *Lecture Notes in Math.*, 822, Springer, Berlin, 1980. (Ralph Henstock) **81m:60083** 60G46 (32F05, 58G32)
- See also Séminaire: Goulaouic-Schwartz, **81m:35003**
- Schwartz, Leonard W. (with Vanden-Broeck, Jean-Marc) Numerical solution of the exact equations for capillary-gravity waves. *J. Fluid Mech.* 95 (1979), no. 1, 119–139. (David F. Griffiths) **81h:76012** 76B15
- (with Vanden-Broeck, Jean-Marc) A one-parameter family of sequence transformations. *SIAM J. Math. Anal.* 10 (1979), no. 3, 658–666. (A. Magnus) **81h:41013** 41A20 (41A29)
- Schwartz, Moshe Dual relations for quenched random systems. *Phys. Lett. A* 75 (1979/80), no. 1–2, 102–104. (Author's summary) **81m:82028** 82A42
- Schwartz, Richard F. (with Ichimura, Hideo; Feinstein, David) Studies on the

- determination of multiple numbers of experimental parameters. I. Preliminary study. *J. Math. Anal. Appl.* **76** (1980), no. 1, 270-282. (Authors' summary) **81j:65034** 65D10
- Schwartz, Robert A. (with Cohen, Kalman J.; Maier, Steven F.; Whitcomb, David K.) On the existence of serial correlation in an efficient securities market. *Portfolio theory*, 25 years after, pp. 151-168, *Studies in the Management Sci.*, 11, North-Holland, Amsterdam, 1979. (See **80k:90001**) 90A09
- Schwartz, S. C. (with Hadidi, M. T.) Linear recursive state estimators under uncertain observations. *IEEE Trans. Automat. Control* **24** (1979), no. 6, 944-948. (Authors' summary) **81a:93088** 93E10 (94A99)
- Schwartz, A. S. See Svare, A. S.
- Schwartz, Blayamin Disconjugacy of complex second-order matrix differential systems. *J. Analyse Math.* **36** (1979), 244-273 (1980). (W. J. Kim) **81j:34063** 34C10 (34A20)
- Schwartz, Gerald W. Lifting smooth homotopies of orbit spaces. *Inst. Hautes Études Sci. Publ. Math.* No. 51 (1980), 37-135. (A. L. Oniščik) **81h:57024** 57S15 (14L30, 32C42)
- Schwartz, Gideon Finitely determined processes—an indiscrete approach. *J. Math. Anal. Appl.* **76** (1980), no. 1, 146-158. (Nathaniel Friedman) **81m:28019** 28D20 (60G10)
- Schwartz, H.-U. Banach lattices of bounded operators. *Math. Nachr.* **90** (1979), 103-108. (H. H. Schaefer) **81b:47054** 47D30 (46B30)
- Schwartz, Jerald S. Denotational semantics of parallelism. *Semantics of concurrent computation* (Proc. Internat. Sympos., Evian, 1979), pp. 191-202, *Lecture Notes in Comput. Sci.*, 70, Springer, Berlin, 1979. (Author's summary) **81f:68038** 68B20
- Schwartz, Jochen (with Amayo, Ralph K.) Modularity in Lie algebras. *Hiroshima Math. J.* **10** (1980), no. 2, 311-322. (F. D. Veldkamp) **81k:17007** 17B50 (17B65)
- Schwartz, John H. Supersymmetry approach to the unification of interactions. *Hadronic matter at extreme energy density* (Proc. Workshop, Ettore Majorana Center, Erice, 1978), pp. 291-312, *Ettore Majorana Internat. Sci. Ser.: Phys. Sci.*, 2, Plenum, New York, 1980. (Virendra Singh) **81g:81104** 81G20 (83E99)
- Algebraic structure of broken supersymmetry. *Nuclear Phys. B* **173** (1980), no. 2, 311-318. (Author's summary) **81h:81053** 81D20 (81G20, 83E99)
- Schwartz, Stefan The Euler-Fermat theorem for the semigroup of circulant Boolean matrices. *Czechoslovak Math. J.* **30**(105) (1980), no. 1, 135-141. (J. B. Kim) **81i:20097** 20M20
- Schwartz, Wolfgang (with Spilker, Jürgen) Wiener-Lévy-Sätze für absolut konvergente Reihen. *Arch. Math. (Basel)* **32** (1979), no. 3, 267-275. (E. Grosswald) **81d:32002** 32A05 (10H99, 30B50, 32A10)
- Die Struktur modularer Gruppenringe endlicher Gruppen der p -Länge 1. *J. Algebra* **60** (1979), no. 1, 51-75. (L. Dornhoff) **81a:20012** 20C05 (16A26, 20C20)
- (with Ivić, Aleksandar) Remarks on some number-theoretical functional equations. *Aequationes Math.* **20** (1980), no. 1, 80-89. (T. M. Apostol) **81j:10010** 10A20
- Kosmann-Schwarzbach, Yvette See Kosmann-Schwarzbach, Yvette
- Schwarz, Gunter (with Gerhardt, Hans-Detlef) Simulation—Begriffe und Benennungen. (Russian, English and French summaries) *Wiss. Z. Humboldt-Universität Berlin Math.-Natur. Reihe* **28** (1979), no. 4, 549-556. (Authors' summary) **81g:00008** 00A69 (68J05)
- Towards software for modeling and simulation. *Systems analysis and simulation*, 1980 (Proc. Internat. Sympos., Berlin, 1980), pp. 113-123, *Math. Research*, 5, Akademie-Verlag, Berlin, 1980. (See **81j:93009**) 68J10
- Schwarz, J. See Proceedings: Operations Research, **81e:90003**
- Schwarz, M. G. (with Chuai, R.) Axiomatizations for p -additive measurement structures. *Mathematical logic in Latin America* (Proc. IV Latin Amer. Sympos. Math. Logic, Santiago, 1978), pp. 351-364, *Studies in Logic and Foundations of Math.*, 99, North-Holland, Amsterdam, 1980. (R. D. Luce) **81j:90009** 90A06 (06A10, 92A27)
- Schwarzenberger, R. L. E. (with Jarratt, J. D.) Coloured plane groups. *Acta Cryst. Sect. A* **36** (1980), no. 6, 884-888. (Authors' summary) **81i:20056** 20H15
- Schved, M. (with Piquet, O.; Sibold, K.) Radiative mass generation in perturbation theory and the renormalization group. *Nuclear Phys. B* **168** (1980), no. 2, 337-353. (Authors' summary) **81d:81110** 81G25 (81D20, 81E15)
- Schweder, Tore Scandinavian statistics, some early lines of development. *Scand. J. Statist.* **7** (1980), no. 3, 113-129. (Author's summary) **81j:62003** 62-03 (01A55)
- Schweigel, Dietmar Polarities of Pappian geometric lattices. *Contributions to general algebra* (Proc. Klagenfurt Conf., Klagenfurt, 1978), pp. 341-344, *Heyn, Klagenfurt*, 1979. (From the text) **81j:06011** 06C10 (05B35, 51A40)
- On prepolynomially complete algebras. *J. London Math. Soc.* (2) **20** (1979), no. 2, 179-185. (R. S. Pierce) **81a:08006** 08A40
- (with Dorninger, Dietmar) Zur Darstellung von Polynomen auf De Morgan Algebren. *Czechoslovak Math. J.* **30**(105) (1980), no. 1, 65-70. (Anna Romanowska) **81e:06019** 06D30 (08A40)
- Compatible relations of modular and orthomodular lattices. *Proc. Amer. Math. Soc.* **81** (1981), no. 3, 462-464. (Manfred Stern) **81m:06018** 06C05 (06C15)
- Schweitzer, Paul A. See Problems: Foliations, **81k:57028**
- Schweizer, Berthold (with Sklar, Abe) Probabilistic information spaces. (French summary) *Information theory* (Proc. Internat. CNRS Colloq., Cachan, 1977) (French), pp. 485-494, *Colloques Internat. CNRS*, 276, CNRS, Paris, 1978. (Richard Moynihan) **81j:94006** 94A15 (60B99)
- (with Sklar, Abe) Unsolvability of the general "problème réciproque" for probabilistic and random information spaces. (French summary) *Information theory* (Proc. Internat. CNRS Colloq., Cachan, 1977) (French), pp. 495-501, *Colloques Internat. CNRS*, 276, CNRS, Paris, 1978. (T. N. Bhargava) **81f:94011** 94A15
- (with Frank, M. J.) On the duality of generalized infimal and supramaximal convolutions. (Italian summary) *Rend. Mat.* (6) **12** (1979), no. 1, 1-23. (Richard Moynihan) **81a:60017** 60B99 (26E99, 49B40)
- (with Rice, R. E.; Sklar, Abe) When is $f(f(x)) = ax^2 + bx + c$? *Amer. Math. Monthly* **87** (1980), no. 4, 252-263. (József Tabor) **81e:39005** 39B10 (30C10, 39B70)
- Schweizer, Gregory T. (with Dunn, Olive Jean) Posterior probability estimators in classification simulations. *Comm. Statist. B—Simulation Comput.* **9** (1980), no. 2, 133-140. (Matthew Goldstein) **81j:62113** 62H30
- (with Mickey, M. Ray) A note on the linear discriminant function when group means are equal. *Comm. Statist. B—Simulation Comput.* **9** (1980), no. 6, 633-638. (Authors' summary) **81k:62114** 62H30
- Schwenk, Allen J. (with Wilson, Robin J.) On the eigenvalues of a graph. *Selected topics in graph theory*, pp. 307-336, Academic Press, London, 1978. (See **81e:05059**) 05C50
- Exactly thirteen connected cubic graphs have integral spectra. *Theory and applications of graphs* (Proc. Internat. Conf., Western Mich. Univ., Kalamazoo, Mich., 1976), pp. 516-533, *Lecture Notes in Math.*, 642, Springer, Berlin, 1978. (Author's summary) **81i:05120** 05C99 (92A40)
- Removal-cospectral sets of vertices in a graph. *Proceedings of the Tenth Southeastern Conference on Combinatorics, Graph Theory and Computing* (Florida Atlantic Univ., Boca Raton, Fla., 1979), pp. 849-860, *Congress. Numer.*, XXIII-XXIV, Utilitas Math., Winnipeg, Man., 1979. (Richard D. Ringeisen) **81h:05101** 05C50 (05C75)
- (with Herndon, W. C.; Ellzey, M. L., Jr.) The construction of cospectral composite graphs. *Second International Conference on Combinatorial Mathematics* (New York, 1978), pp. 490-496, *Ann. New York Acad. Sci.*, 319, New York Acad. Sci., New York, 1979. (D. Cvetković) **81e:05100** 05C50
- Spectral reconstruction problems. *Topics in graph theory* (New York, 1977), pp. 183-189, *Ann. New York Acad. Sci.*, 328, New York Acad. Sci., New York, 1979. (P. K. Stockmeyer) **81b:05006** 05C60
- (with Palmer, Edgar M.) On the number of trees in a random forest. *J. Combin. Theory Ser. B* **27** (1979), no. 2, 109-121. (R. W. Robinson) **81j:05071** 05C30 (05C05)
- (with Harary, Frank) The spectral approach to determining the number of walks in a graph. *Pacific J. Math.* **80** (1979), no. 2, 443-449. (D. Cvetković) **81a:05070** 05C30
- Schwermer, Joachim Sur la cohomologie de $SL_n(\mathbb{Z})$ à l'infini et les séries d'Eisenstein. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **289** (1979), no. 7, A413-A415. (Author's summary) **81k:10034** 10D20 (22E41)
- Schweillich, Hubert Einbettungstechniken zur Lösung parameterabhängiger nichtlinearer Gleichungssysteme. *Wiss. Z. Tech. Univ. Dresden* **29** (1980), no. 2, 445-449. (Karl-Heinz Bachmann) **81k:65054** 65H10
- Schwiebert, H. Logic and the axiom of choice. *Logic Colloquium '78* (Mons, 1978), pp. 351-356, *Studies in Logic and Foundations of Math.*, 97, North-Holland, Amsterdam, 1979. (C. Smoryński) **81k:03112** 03F50 (03F05)
- Schwiez, Klaus-Peter Zur Existenz und Eindeutigkeit der Gürtel-Funktionen. I. Die Eindeutigkeit. (English and Russian summaries) *Z. Angew. Math. Mech.* **59** (1979), no. 11, 593-597. (Author's summary) **81g:76042a** 76D10
- Zur Existenz und Eindeutigkeit der Gürtel-Funktionen. II. Das Existenzproblem. (English and Russian summaries) *Z. Angew. Math. Mech.* **59** (1979), no. 12, 685-695. (Author's summary) **81g:76042b** 76D10
- (with Garloff, Jürgen) A bibliography on interval mathematics. II. *J. Comput. Appl. Math.* **6** (1980), no. 1, 67-79. (W. Börsch-Supan) **81k:65048** 65G10 (00A15)
- Schwimmer, Adam (with Domany, Eytan; Mukamel, David) Phase diagram of the $Z(5)$ model on a square lattice. *J. Phys. A* **13** (1980), no. 9, L311-L320. (Authors' summary) **81g:82018** 82A25 (82A67)
- (with Banks, T.; Yankielowicz, S.) Anomaly constraints in chiral gauge theories. *Phys. Lett. B* **96** (1980), no. 1-2, 67-71. (Authors' summary) **81j:81063** 81G20 (53C05)
- Schwind, Camilla A formalism for the description of question answering systems. *Natural language communication with computers*, pp. 1-48, *Lecture Notes in Comput. Sci.*, 63, Springer, Berlin, 1978. (Author's summary) **81f:68133** 68G99 (03B99, 68F30)
- Schwinger, Julian *Selected papers (1937-1976) of Julian Schwinger. Edited by Moshe Flato, Christian Fronsdal and Kimball A. Milton. *Mathematical Physics and Applied Mathematics*, 4, D. Reidel Publishing Co., Dordrecht-Boston, Mass.-London, 1979. xxvii + 413 pp. (1 plate). ISBN 90-277-0974-2; 90-277-0975-0 (Marcel Cox) **81b:01023** 01A75
- Introduction and selected topics in source theory. *Recent developments in particle and field theory* (Sympos. Particles and Fields, Tübingen Univ., Tübingen, 1977), pp. 227-333, Vieweg, Braunschweig, 1979. (Charles L. Hammer) **81h:81177** 81G99
- Thomas-Fermi model: the leading correction. *Phys. Rev. A* (3) **22** (1980), no. 5, 1827-1832. (Author's summary) **81i:81111** 81G40
- Schwölömer, G. See Applied game theory, **81e:90001**
- Schwyba, Werner Conditions for a fuzzy probability measure to be an integral. *Proceedings of the International Seminar on Fuzzy Set Theory* (Inst. Math., Johannes Kepler Univ., Linz, 1979), pp. 47-62, *Johannes Kepler Univ., Linz*, 1980. (See **81m:03067**) 03E72 (28A12, 94D05)
- Schyl, A. A. (with Singh, Sahendra N.) Output feedback nonlinear decoupled control synthesis and observer design for maneuvering aircraft. *Internat. J. Control* **31** (1980), no. 4, 781-806. (D. H. Chung) **81e:93045** 93C10 (93B07)
- Sciama, Dennis W. Cosmology. *Albert Einstein: his influence on physics, philosophy and politics*, pp. 17-23, Vieweg, Braunschweig, 1979. (See **81f:01039**) 01A70
- Sciampicotti, V. (with Gori, Laura Nicolò-Amati) On a boundary value problem for a differential equation with deviating argument. (Italian) *Pubbl. Istit. Mat. Appl. Fac. Ingr. Univ. Stud. Roma Quaderno No. 14* (1979), 25-31. (K. Schmitt) **81a:34065** 34K10
- Sciarrino, A. (with Combe, Ph.; Sorba, P.) On the directions of spontaneous symmetry breaking in $SU(n)$ gauge theories. *Nuclear Phys. B* **158** (1979), no. 2-3, 452-468. (H. Ezawa) **81g:81046** 81E10 (22E45, 81D20)
- Morgan-Sciarrino, J. See Morgan-Sciarrino, J.
- Scimemi, Benedetto Bruck loops and their generalizations. (Italian) *Rend. Sem. Mat. Univ. Padova* **60** (1978), 141-149 (1979). (H. A. Thurston) **81f:20101** 20N05
- Scito, S. (with D'Auria, R.; Regge, T.) Group-theoretical construction of two-dimensional models with infinite sets of conservation laws. *Nuclear Phys. B* **171** (1980), no. 1-2, 167-188. (Enrico Onofri) **81j:35096** 35Q20 (58A15, 58F07, 81E99)
- (with D'Auria, R.) Group theoretical construction of two-dimensional supersymmetric models. *Nuclear Phys. B* **171** (1980), no. 1-2, 189-208. (A. O. Barut) **81k:81072** 81C20 (58A17)
- Selove, Stanley L. The occurrence of fingerprint characteristics as a two-dimensional process. *J. Amer. Statist. Assoc.* **74** (1979), no. 367, 588-595. (S. M. Rudolfer) **81b:62100** 62M05 (62-07)
- Scobey, P. (with Kabe, D. G.) Direct solutions to some linear and quadratic programming problems. *Indust. Math.* **29** (1979), no. 2, 59-75. (Walter Habenicht) **81e:90064** 90C08 (62J05, 90C10, 90C20)
- (with Kabe, D. G.) On linear matrix equations. *Canad. Math. Bull.* **23** (1980), no. 1, 43-49. (Andrzej W. Olbrot) **81i:15014** 15A24 (15A09, 65F05)

- Scolozzi, Donato** (with Marino, Antonio) Homological properties of the sublevels of some even functions on Hilbert spaces. (Italian. English summary) *Boll. Un. Mat. Ital. B* (5) 15 (1978), no. 2, 436–469. (U. D'Ambrosio) **81c:58025** 58E05
- Scorza Dragoni, Giuseppe** See **Tung, Chia Chi**, **81d:32036**
- Scott, A. J.** (with Brewer, K. R. W.; Ho, E. W. H.) Finite population sampling and robust estimation. *J. Amer. Statist. Assoc.* 73 (1978), no. 362, 359–361. (Authors' summary) **81f:62020** 62D05
- (with Holt, D.; Ewings, P. D.) Chi-squared tests with survey data. *J. Roy. Statist. Soc. Ser. A* 143 (1980), no. 3, 303–320. (David Bellhouse) **81m:62018** 62D05
- Scott, Alwyn C.** Magnetic flux annihilation in a large Josephson junction. *Stochastic behavior in classical and quantum Hamiltonian systems* (Volta Memorial Conf., Como, 1977), pp. 167–200. *Lecture Notes in Phys.*, 93, Springer, Berlin, 1979. (J.-L. Calais) **81c:81179** 81J05 (35Q20, 81C05)
- Scott, Brian M.** On the duality of cardinal invariants. Proceedings of the 1977 Topology Conference (Louisiana State Univ., Baton Rouge, La., 1977), II. *Topology Proc.* 2 (1977), no. 2, 563–582 (1978). (Stephen Willard) **81j:54009** 54A25
- Pseudocompact, metacompact spaces are compact. The Proceedings of the 1979 Topology Conference (Ohio Univ., Athens, Ohio, 1979). *Topology Proc.* 4 (1979), no. 2, 577–587 (1980). (P. Fletcher) **81m:54034** 54D20 (54D30)
- Scott, C. H.** (with Jefferson, T. R.) On the optimal control of a single-server queueing system: reply [to a paper by C. F. Klein and W. A. Gruver, *J. Optim. Theory Appl.* 26 (1978), no. 3, 456–462; MR 80i:60088a]. *J. Optim. Theory Appl.* 26 (1978), no. 3, 463–464. (Andor Dobó) **81i:60088b** 60K25
- (with Jefferson, T. R.) On geometric duality for state-constrained control problems. *Bull. Austral. Math. Soc.* 20 (1979), no. 2, 301–312. (S. Rolewicz) **81a:49011** 49A55 (93C15)
- (with Jefferson, T. R.) Fractional programming duality via geometric programming duality. *J. Austral. Math. Soc. Ser. B* 21 (1979/80), no. 4, 398–401. (G. E. Peterson) **81i:90187** 90C32
- (with Jefferson, T. R.; Folic, G. M.) Duality for quasiconcave programs with application to economics. *Naval Res. Logist. Quart.* 26 (1979), no. 4, 611–625. (M. Ali Khan) **81c:90091** 90C30 (90A11)
- (with Jefferson, T. R.) A duality theory for quasiconcave programs. *Applicable Anal.* 10 (1980), no. 3, 165–177. (Roger Hartley) **81f:90080** 90C25 (90C30)
- (with Jefferson, T. R.) On the analysis of an information theoretic model of spatial interaction. *Inform. Sci.* 20 (1980), no. 1, 1–12. (Authors' summary) **81a:94021** 94A15
- (with Jefferson, T. R.) Geometric programming with probabilistic decision variables. *J. Austral. Math. Soc. Ser. B* 22 (1980/81), no. 2, 229–236. (Authors' summary) **81j:90089** 90C15
- (with Jefferson, T. R.) A duality theory for a class of nonzero sum economic games. *J. Math. Anal. Appl.* 77 (1980), no. 1, 288–296. (Authors' summary) **81i:90213** 90D12 (90D35)
- Scott, D. J.** (with Adler, Robert J.) Corrigendum: "Martingale central limit theorems without uniform asymptotic negligibility" [*Bull. Austral. Math. Soc.* 13 (1975), no. 1, 45–55; MR 52 #15607]. *Bull. Austral. Math. Soc.* 18 (1978), no. 2, 311–319. (Authors' summary) **81h:60027** 60F05 (60G42)
- Scott, Dana** Identity and existence in intuitionistic logic. *Applications of sheaves* (Proc. Res. Sympos. Appl. Sheaf Theory to Logic, Algebra and Anal., Univ. Durham, Durham, 1977), pp. 660–696. *Lecture Notes in Math.*, 753, Springer, Berlin, 1979. (Gavin Wraith) **81a:03060** 03F55 (03B20, 03G30)
- Scott, David K.** The current experimental situation in heavy-ion reactions. *Theoretical methods in medium-energy and heavy-ion physics* (Proc. NATO Adv. Stud. Inst. Theoret. Nuclear Phys., Univ. Wisconsin, Madison, Wis., 1978), pp. 3–188. NATO Adv. Study Inst. Ser. B: Physics, 38, Plenum, New York, 1978. (See **81b:81030**) **81G50**
- Scott, David W.** On optimal and data-based histograms. *Biometrika* 66 (1979), no. 3, 605–610. (M. S. Waterman) **81c:62006** 62-07
- (with Tapis, R. A.; Thompson, James R.) Nonparametric probability density estimation by discrete maximum penalized-likelihood criteria. *Ann. Statist.* 8 (1980), no. 4, 820–832. (S. A. Hasilmov) **81j:62079** 62G05
- (with Terrell, George R.) On improving convergence rates for nonnegative kernel density estimators. *Ann. Statist.* 8 (1980), no. 5, 1160–1163. (Gilbert Walter) **81i:62069** 62G05
- See also **Good, I. J.; et al.**, **81g:62073**
- Scott, Edward J.** Green's functions in an octant for mixed problems relative to the Laplace equation. I. *Appl. Math. Comput.* 7 (1980), no. 4, 321–339. (D. L. Colton) **81m:35037** 35J05 (35C15)
- Scott, G. Peter** Ends of pairs of groups. *J. Pure Appl. Algebra* 11 (1977/78), no. 1–3, 179–198. (Ross Geoghegan) **81h:20047** 20F99
- (with Wall, Terry) Topological methods in group theory. *Homological group theory* (Proc. Sympos., Durham, 1977), pp. 137–203. *London Math. Soc. Lecture Note Ser.*, 36, Cambridge Univ. Press, Cambridge, 1979. (W. Jaco) **81m:57002** 57M05 (20E06)
- A new proof of the annulus and torus theorems. *Amer. J. Math.* 102 (1980), no. 2, 241–277. (Wolfgang H. Heil) **81f:57006** 57N10 (57M35)
- Scott, J. C.** Static properties of spin- $\frac{1}{2}$ Ising and classical Heisenberg magnetic chains with alternating exchange. *Phys. Lett. A* 72 (1979), no. 1, 31–34. (Author's summary) **81j:82034** 82A67
- Scott, J. L.** A heuristic algorithm for examination timetabling. *New Zealand Oper. Res.* 8 (1980), no. 2, 103–108. (Author's summary) **81j:90072** 90B35
- Scott, John C.** (with Benjamin, T. Brooke) Gravity-capillary waves with edge constraints. *J. Fluid Mech.* 92 (1979), no. 2, 241–267. (K. K. Puri) **81c:76010** 76B15
- Scott, John S.** (with Holman, Gordon D.; Ineson, James A.; Papadopoulos, K.) The heating of gas in clusters of galaxies by relativistic electrons: collective effects. *Astrophys. J.* 239 (1980), no. 3, part 1, 769–773. (Authors' summary) **81h:85003** 85A05
- Scott, Joseph Frederick** See **Hall, A. R.**, **81c:01038**
- Scott, L. Ridgway** (with Dupont, Todd) Polynomial approximation of functions in Sobolev spaces. *Math. Comp.* 34 (1980), no. 150, 441–463. (Authors' summary) **81h:65014** 65D15 (41A10)
- Scott, Leland L.** Necessary and sufficient conditions for the values of a function of fuzzy variables to lie in a specified subinterval of $[0, 1]$. *Fuzzy sets* (Proc. Sympos. Policy Anal. Inform. Systems, Duke Univ., Durham, N.C., 1980), pp. 35–47. Plenum, New York, 1980. (Tadashi Ohkuma) **81m:03065** 03E72
- Scott, Leonard** (with Cline, Edward; Parshall, Brian) Induced modules and extensions of representations. II. *J. London Math. Soc.* (2) 20 (1979), no. 3, 403–414. (James E. Humphreys) **81f:20051** 20G05 (14F05)
- (with Cline, Edward; Parshall, Brian) Cohomology, hyperalgebras, and representations. *J. Algebra* 63 (1980), no. 1, 98–123. (H. H. Andersen) **81k:20060** 20G10 (14L17)
- (with Cline, Edward; Parshall, Brian) On the tensor product theorem for algebraic groups. *J. Algebra* 63 (1980), no. 1, 264–267. (James E. Humphreys) **81e:20046** 20G05
- (with Parshall, Brian) An imprimitivity theorem for algebraic groups. *Nederl. Akad. Wetensch. Indag. Math.* 42 (1980), no. 1, 39–47. (R. H. Dye) **81k:20059** 20G05
- Scott, Linda F.** See **High-energy physics in the Einstein centennial year**, **81a:81003** and **On the path of Albert Einstein**, **81k:83003**
- Scott, P. R.** A family of inequalities for convex sets. *Bull. Austral. Math. Soc.* 20 (1979), no. 2, 237–245. (K. J. Falconer) **81a:52003** 52A10 (52A40)
- Two inequalities for convex sets with lattice point constraints in the plane. *Bull. London Math. Soc.* 11 (1979), no. 3, 273–278. (Erwin Lutwak) **81a:52012** 52A40
- Further inequalities for convex sets with lattice point constraints in the plane. *Bull. Austral. Math. Soc.* 21 (1980), no. 1, 7–12. (H. Groemer) **81k:10045** 10E05
- Scott, Richard A.** (with Johnson, James P.) Extension of eigenfunction-expansion solutions of a Fokker-Planck equation. I. First order system. (French and German summaries) *Internat. J. Non-Linear Mech.* 14 (1979), no. 5–6, 315–324. (Andrzej Tylikowski) **81i:70018a** 70L05 (34B25, 82A05)
- (with Johnson, James P.) Extension of eigenfunction-expansion solutions of a Fokker-Planck equation. II. Second order system. (French and German summaries) *Internat. J. Non-Linear Mech.* 15 (1980), no. 1, 41–56. (Andrzej Tylikowski) **81i:70018b** 70L05 (34B25, 82A05)
- Scott, S. D.** Involution near-rings. *Proc. Edinburgh Math. Soc.* (2) 22 (1979), no. 3, 241–245. (Gordon Mason) **81b:16029** 16A76
- Finely generated right ideals of transformation near-rings. *Proc. Amer. Math. Soc.* 78 (1980), no. 4, 475–476. (Marjory J. Johnson) **81k:16037** 16A76
- The automorphism group of a near-ring. *Proc. Amer. Math. Soc.* 80 (1980), no. 4, 560–562. (Gordon Mason) **81j:16046** 16A76 (20F28)
- van Scoy, Frances L.** See **Van Scoy, Frances L.**
- Scraton, R. E.** (with Bunday, B. D.) The number of customers served during a busy period for an $M/M/1$ queue: an elementary treatment. *Internat. J. Math. Ed. Sci. Tech.* 11 (1980), no. 1, 25–27. (Asha Seth Kapadia) **81f:60126** 60K25
- Scriba, Christoph J.** (with Schütt, Hans-Werner) Bernhard Sticker—1906–1977. *Arch. Internat. Hist. Sci.* 28 (1978), no. 102, 102–105. (Editors) **81k:01047** 01A70
- Scriven, L. E.** (with Silliman, William J.) Separating flow near a static contact line: slip at a wall and shape of a free surface. *J. Comput. Phys.* 34 (1980), no. 3, 287–313. (David F. Griffiths) **81b:76026** 76D15
- Scull, Sidney C.** A vanishing theorem for fermion fields. *Phys. Lett. B* 76 (1978), no. 3, 340–342. (Author's summary) **81k:22013** 22E45 (53C05, 81E10)
- Scull, D.** Stock control using the stock level frequency distribution. *J. Oper. Res. Soc.* 31 (1980), no. 10, 889–893. (Author's summary) **81h:90054** 90B05
- Scully, Marian O.** On quantum beat phenomena and the internal consistency of semiclassical radiation theories. *Foundations of radiation theory and quantum electrodynamics*, pp. 45–48. Plenum, New York, 1980. (See **81i:81002**) **81K05**
- (with Lee, Hai Woong) A new approach to molecular collisions: statistical quasiclassical method. *J. Chem. Phys.* 73 (1980), no. 5, 2238–2242. (Authors' summary) **81h:81172** 81G55 (81C20)
- (with Moore, Gerald T.) Coherent dynamics of a free-electron laser with arbitrary magnet geometry. I. General formalism. *Phys. Rev. A* (3) 21 (1980), no. 6, 2000–2008. (Authors' summary) **81e:81183a** 81K05
- (with Bonifacio, Rodolfo; Meystre, Pierre; Moore, Gerald T.) Coherent dynamics of a free-electron laser with arbitrary magnet geometry. II. Conservation laws, small-signal theory, and gain-surface relations. *Phys. Rev. A* (3) 21 (1980), no. 6, 2009–2019. (Authors' summary) **81e:81183b** 81K05
- (with Rogovin, D.) Quantum modeling of a current-driven Josephson oscillator. *Phys. Rev. B* (3) 21 (1980), no. 9, 3868–3878. (From the summary) **81a:81130** 81J05
- Šćuric-Cudovan, Vlasta** Die Kongruenzen der Involutorenstrahlen eines durch das (F_2^2) Flächenbüschel bestimmten (V/N) Komplexes. (Serbo-Croatian summary) *Rad Jugoslav. Akad. Znan. Umjet.* No. 382 (1978), 65–90. (Walter O. Vogel) **81h:51013** 51M30
- Scutaru, Horia** Estimations of the entropy of a quantum state with the aid of covariant and contravariant symbols. *Rep. Math. Phys.* 15 (1979), no. 3, 305–315. (P. Achuthan) **81c:81023** 81C99 (47D45, 82A15)
- (with Iosifescu, Mircea) On six-dimensional canonical realizations of the $so(4,2)$ algebra. *J. Math. Phys.* 21 (1980), no. 8, 2033–2045. (A. O. Barut) **81m:81027** 81C40 (17B10, 58F06, 70F05)
- Szczaniecki, L.** Quantum theory of subharmonic lasers. Nonequilibrium phase transition of the first order. *Optica Acta* 27 (1980), no. 2, 251–261. (Author's summary) **81k:81134** 81K05 (82A25)
- Seade, Jesus** (with Dixit, Avinash) Utilitarian versus egalitarian redistributions. *Econom. Lett.* 4 (1979/80), no. 2, 121–124. (Andrew Postlewaite) **81f:90016** 90A10 (58E17)
- On the effects of entry. *Econometrica* 48 (1980), no. 2, 479–489. (Rubin Saponnik) **81a:90059** 90A14
- Seah, E.** (with Williams, H. C.; Cormack, G. V.) Calculation of the regulator of a pure cubic field. *Math. Comp.* 34 (1980), no. 150, 567–611. (J. C. Lagarias) **81d:12083** 12A45 (12A30, 12A50)
- Seah, S. T. E.** (with Stanton, Ralph G.; Cowan, D. D.) Nonexistence of an extremal graph of a certain type. *J. Austral. Math. Soc. Ser. A* 30 (1980/81), no. 1, 55–64. (Authors' summary) **81j:05076** 05C35
- Seal, Hilary L.** From aggregate claims distribution to probability of ruin. *Astin Bull.* 10 (1978/79), no. 1, 47–53. (F. De Vylder) **81m:62186** 62P05

- Searcy, J. L. (with Troesch, B. A.) Correction to: "A cyclic inequality and a related eigenvalue problem" [*Pacific J. Math.* 81 (1979), no. 1, 217-226; MR 80f:15019]. *Pacific J. Math.* 85 (1979), no. 2, 501. (Editors) **81f:15029** 15A39
- Searle, S. R. Estimating multivariate variance and covariance components using quadratic and bilinear forms. *Biometrical J.* 21 (1979), no. 4, 389-398. (Friedrich Pukelsheim) **81g:62128** 62J10
- Alternative covariance models for the 2-way crossed classification. Special issue on covariance. *Comm. Statist. A—Theory Methods* 8 (1979), no. 8, 799-818. (See **81e:62081**) 62J10
- (with Speed, F. M.; Milliken, George A.) Population marginal means in the linear model: an alternative to least squares means. *Amer. Statist.* 34 (1980), no. 4, 216-221. (Authors' summary) **81m:62129** 62J05
- Sears, M. (with Keynes, H. B.) Modelling expansion in real flows. *Pacific J. Math.* 85 (1979), no. 1, 111-124. (Manfred Denker) **81g:54050** 54H20 (58F25)
- Seitz, S. (with Testa, F.) Interpolation and one- and two-dimensional smoothing relative to linear differential operators. (Italian. English summary) *Calcolo* 14 (1977), no. 1, 1-23. (P. J. Laurent) **81f:41013** 41A15 (65D07, 65D10)
- On optimal quadrature formulae according to Sard. (Italian. English summary) *Rend. Sem. Fac. Sci. Univ. Cagliari* 49 (1979), no. 3-4, 349-358. (Walter Gautschi) **81g:41036** 41A55 (65D32)
- Schah, A. V. (with Haddad, A. H.) On the performance of combined detection estimation in convex uncertainty spaces. *IEEE Trans. Automat. Control* 24 (1979), no. 4, 651-652. (A. F. Gualtierotti) **81a:93094** 93E10
- Schubert, Hans-Jürgen (with Glaske, Hans-Jürgen) Verallgemeinerungen Dirichletscher und Lambertscher Reihen. *Serdica* 5 (1979), no. 1, 64-72. (Karl-Heinz Indlekofer) **81a:30002** 30B50
- Schubert, Kuntat J. Relativistic invariance of the external interaction of a composite system of charged particles with the quantized radiation field. *Phys. Lett. A* 67 (1978), no. 2, 105-109. (Authors' summary) **81m:81090** 81K05
- Schubert, Marcos Sur la dualité locale. (English summary) *Ann. Inst. Fourier (Grenoble)* 30 (1980), no. 1, x, 65-90. (Peter Giblin) **81f:32007** 32B10 (32C37)
- Sur les points fixes des automorphismes des fibres avec singularités. *Math. Ann.* 248 (1980), no. 3, 267-273. (Helmut Hamm) **81j:32011** 32B30 (32L05)
- Seber, G. A. F. ★Теория и применение анализа. (Russian) [Linear regression analysis] Translated from the English by V. P. Nosko. Edited by M. B. Maljutov. "Mir", Moscow, 1980. 456 pp. (Editors) **81j:62128** 62J05
- See also Neudecker, H. **81e:15027**
- Seberry, Jennifer Some remarks on generalised Hadamard matrices and theorems of Rajkundlia on SIBDs. *Combinatorial mathematics, VI (Proc. Sixth Austral. Conf., Univ. New England, Armidale, 1978)*, pp. 154-164. *Lecture Notes in Math.*, 748, Springer, Berlin, 1979. (R. A. Mena) **81g:05035** 05B20 (05B05)
- A note on orthogonal Graeco-Latin designs. *Ars Combin.* 8 (1979), 85-94. (D. V. Chopra) **81e:05040** 05B05 (62K10)
- (with Whiteman, Albert Leon) Complex weighing matrices and orthogonal designs. *Ars Combin.* 9 (1980), 149-162. (Peter Eades) **81h:05036** 05B30 (05B15)
- Some infinite classes of Hadamard matrices. *J. Austral. Math. Soc. Ser. A* 29 (1980), no. 2, 235-242. (A. L. Whiteman) **81f:05035** 05B20
- (with Skillicorn, David) All directed BIBDs with $k=3$ exist. *J. Combin. Theory Ser. A* 29 (1980), no. 2, 244-248. (Authors' summary) **81h:05026** 05B05
- A construction for generalized Hadamard matrices. *J. Statist. Plann. Inference* 4 (1980), no. 4, 365-368. (K. Al-Sarraj) **81m:05047** 05B20 (05B15, 62K10)
- Seber, G. N. See Cyganova, N. Ja. **81m:01030**
- Sečkin, G. I. Temljakov integrals of the third kind. (Russian) *Mathematical analysis and the theory of functions*, no. 8 (Russian), pp. 18-20. Moscow. Oblast. Ped. Inst., Moscow, 1977. (I. Bavrín (RŽMat 1978:3 B268)) **81e:32008** 32A25
- Šeda, Václav On the existence of oscillatory solutions in the Weisbuch-Salomon-Atlan model for the Belousov-Zhabotinsky reaction. (Czech and Russian summaries) *Appl. Mat.* 23 (1978), no. 4, 280-294. (J. P. Kernevez) **81j:92016** 92A09 (34C15, 34C25)
- Sedgewick, Robert (with Szymanski, Thomas G.) The complexity of finding periods. *Conference Record of the Eleventh Annual ACM Symposium on Theory of Computing (Atlanta, Ga., 1979)*, pp. 74-80. ACM, New York, 1979. (Authors' summary) **81d:68133** 68J05 (65C10, 68C25)
- Šedivá-Tráková, Věra (with Koubek, Václav) Isomorphisms of products of infinite graphs. *Comment. Math. Univ. Carolin.* 19 (1978), no. 4, 639-652. (László Lovász) **81a:05117** 05C99 (20M30)
- Machines and their behaviour in a category. *Fundamentals of computation theory (Proc. Conf. Algebraic, Arith. and Categorical Methods in Comput. Theory, Berlin/Wendisch-Rietz, 1979)*, pp. 450-461. Math. Research, 2, Akademie-Verlag, Berlin, 1979. (Aleksander Albicki) **81e:18007** 18B20 (68D30)
- (with Adámek, Jiří) Tree-group automata. *Fundamentals of computation theory (Proc. Conf. Algebraic, Arith. and Categorical Methods in Comput. Theory, Berlin/Wendisch-Rietz, 1979)*, pp. 462-468. Math. Research, 2, Akademie-Verlag, Berlin, 1979. (From the introduction) **81h:68069** 68D30 (68D25)
- L-fuzzy functional automata. *Mathematical foundations of computer science, 1979 (Proc. Eighth Sympos., Olomouc, 1979)*, pp. 463-473. *Lecture Notes in Comput. Sci.*, 74, Springer, Berlin, 1979. (Authors' introduction) **81e:68076** 68D99 (03E72)
- Homeomorphisms of products of spaces. (Russian) *Uspehi Mat. Nauk* 34 (1979), no. 6(210), 124-138. (V. I. Mal'vin) **81d:54005** 54B10
- (with Pultr, Aleš) ★Combinatorial, algebraic and topological representations of groups, semigroups and categories. North-Holland Mathematical Library, 22. North-Holland Publishing Co., Amsterdam-New York, 1980. x+372 pp. ISBN 0-444-85083-X (J. R. Isbell) **81d:18001** 18-02 (18B15)
- Homeomorphisms of powers of metric spaces. *Comment. Math. Univ. Carolin.* 21 (1980), no. 1, 41-53. (V. V. Miškin) **81e:54047** 54E35 (54B10, 54G20)
- Isomorphisms of sums of countable Boolean algebras. *Proc. Amer. Math. Soc.* 80 (1980), no. 3, 389-392. (Sabine Koppelberg) **81j:06016** 06E05 (54H10)
- Topological spaces with prescribed nonconstant continuous mappings. *Trans. Amer. Math. Soc.* 261 (1980), no. 2, 463-482. (Yuh-Ching Chen) **81j:54016** 54C05 (20M20, 54H10)
- Šedivá, Jiří More on spanning trees of connected graphs. (Czech. Russian and English summaries) *Časopis Pěst. Mat.* 104 (1979), no. 1, 75-85. (J. Bošák) **81a:05039** 05C05 (05C60)
- Sedláček, N. I. (with Kisilockii, V. N.; Kalčenko, A. V.; Sančuk, A. V.; Ivanova, L. S.) Algorithms for construction of special lines and grids on surfaces. (Russian) *Pril. Geom. i Inžener. Grafika* No. 30 (1980), 97-101, 136. (Authors' summary) **81j:53010** 53A17
- Sedláček, A. M. Excesses of systems of exponential functions. (Russian) *Izv. Akad. Nauk SSSR Ser. Mat.* 44 (1980), no. 1, 203-218, 240. (C. Tanaka) **81h:30010** 30B60
- Dirichlet series on a system of segments starting from the origin. (Russian) *Mat. Zametki* 27 (1980), no. 2, 197-208, 317. (Shlomo Strelitz) **81h:30007** 30B50
- Sedlmayr, E. The application of mesoturbulence to stellar atmospheres. *Stellar turbulence (Proc. Colloq., Univ. Western Ontario, London, Ont., 1979)*, pp. 195-210. *Lecture Notes in Phys.*, 114, Springer, Berlin, 1980. (See **81j:85001**) 85A20
- Sedor, L. I. (with Kamenjař, Ja. A.) Construction of new continuum models. (Russian) *Current problems in theoretical and applied mechanics (Proc. Fourth All-Union Congress Theoret. Appl. Mech., Kiev, 1976)* (Russian), pp. 186-199, 407. "Naukova Dumka", Kiev, 1978. (Szczepan Borkowski) **81j:73008** 73B30 (49H05, 73E99)
- On a description of dynamical properties of the gravitational field in vacuum. (German summary) *Astronom. Nachr.* 301 (1980), no. 2, 45-49. (Authors' summary) **81j:83014** 83C20
- See also General mechanics, **81d:70001** and Mechanics of a solid deformable body, **81j:73054**
- Sedova, E. S. (with Janickil, V. E.) Numerical experiments in the investigation of properties of a statistical model of an ideal gas flow. (Russian) *Direct numerical simulation of gas flows* (Russian), pp. 156-163, 176. Akad. Nauk SSSR, Vychisl. Centr., Moscow, 1978. (See **81g:76084**) 76N15 (65N99)
- Sedova, O. G. The size of carry to the next digit arising in arithmetical cyclic codes. (Russian) *Probabilistic methods and cybernetics, No. XV* (Russian), pp. 90-93. Kazan. Univ., Kazan, 1979. (See **81d:03003**) 94B15
- Seebass, R. (with Fung, K. Y.; Sobieczky, H.) Shock-free wing design. *AIAA J.* 18 (1980), no. 10, 1153-1158. (Authors' summary) **81h:76033** 76J99
- Seeländer, Jörg Zur Existenz von Gitter- und Halbgitterpunkten in bestimmten polyedrischen Mengen. *Wiss. Z. Tech. Hochsch. Leuna-Merseburg* 22 (1980), no. 1, 91-100. (K. Zimmermann) **81f:90075** 90C10 (10J25, 52A20)
- Seeley, R. The index of differential operators in R^n —Fedosov's formula. 4th Latin-American School of Mathematics (Lima, 1978), pp. 335-342. IV ELAM, Lima, 1979. (Th. Friedrich) **81e:58049** 58G10 (35G05, 47A53)
- Seelig, Friedrich Franz Nonthermal instabilities of "optimized" chemical reactors—hysteresis jumps in binary reactions with homogeneous catalysis near the state of maximal yield even under strictly isothermal conditions. *Bifurcation theory and applications in scientific disciplines (Papers, Conf., New York, 1977)*, pp. 338-349. Ann. New York Acad. Sci., 316, New York Acad. Sci., New York, 1979. (C. V. Pao) **81e:80019** 80A30
- Seely, Justus F. Some remarks on exact confidence intervals for positive linear combinations of variance components. *J. Amer. Statist. Assoc.* 75 (1980), no. 376, 372-374. (Burt S. Holland) **81f:62115** 62J10 (62F25)
- Seely, R. A. G. Weak adjointness in proof theory. *Applications of sheaves (Proc. Res. Sympos. Appl. Sheaf Theory to Logic, Algebra and Anal., Univ. Durham, Durham, 1977)*, pp. 697-701. *Lecture Notes in Math.*, 753, Springer, Berlin, 1979. (Anna Labella) **81h:03063** 03F99 (03G30, 18A15, 18D05)
- Seely, Samuel (with Poularikas, Alexander D.) ★Electromagnetics. Classical and modern theory and applications. Electrical Engineering and Electronics, 8, Marcel Dekker, Inc., New York-Basel, 1979. xii+790 pp. ISBN 0-8247-6820-5 (L. G. Chambers) **81a:78002** 78-01
- Seese, Detlef G. Some graph-theoretical operations and decidability. *Math. Nachr.* 87 (1979), 15-21. (From the summary) **81j:03028** 03B25 (05C99)
- Seetharaman, M. (with Mathews, P. M.; Govindarajan, T. R.; Prabhakar, J.) Relativistic wave equations coupled to external fields: an algebraic study of the problem of constraints. *J. Math. Phys.* 21 (1980), no. 6, 1495-1505. (Jean Nuyts) **81j:81061** 81G10 (81D25)
- Šefel, S. Z. Surfaces in Euclidean space. (Russian) *Mathematical analysis and related mathematical questions* (Russian), pp. 297-318, 355. "Nauka" Sibirsk. Otdel., Novosibirsk, 1978. (V. T. Fomenko) **81h:53008** 53A07 (53C42)
- Segal, Daniel (with Grunewald, Fritz J.) The solubility of certain decision problems in arithmetic and algebra. *Bull. Amer. Math. Soc. (N.S.)* 1 (1979), no. 6, 915-918. (James P. Jones) **81h:10014** 10C30 (03D40, 10N05, 20F18, 68C30)
- (with Grunewald, Fritz J.) Remarks on injective specializations. *J. Algebra* 61 (1979), no. 2, 538-547. (B. A. F. Wehrhritz) **81a:20058** 20H20 (13G05)
- (with Grunewald, Fritz J.) On congruence topologies in number fields. *J. Reine Angew. Math.* 311/312 (1979), 389-396. (Witold Wąsław) **81e:12017** 12A99 (12J20, 20K45)
- (with Grunewald, Fritz J.; Pickel, P. F.) Polycyclic groups with isomorphic finite quotients. *Ann. of Math. (2)* 111 (1980), no. 1, 155-195. (C. Y. Tang) **81h:20045** 20F22
- Segal, Graeme The topology of spaces of rational functions. *Acta Math.* 143 (1979), no. 1-2, 39-72. (D. B. Fuks) **81e:55013** 55P10 (32C42, 81E10)
- Segal, Irving E. The constructive approach to nonlinear quantum field theory. *Mathematical physics and physical mathematics (Proc. Internat. Sympos., Warsaw, 1974)*, pp. 175-184. Math. Phys. and Appl. Math., 2, Reidel, Dordrecht, 1976. (See **80i:00006**) **81E10**
- (with Hughes, Rhonda J.) Singular perturbations in the interaction representation. *J. Funct. Anal.* 38 (1980), no. 1, 71-98. (Denise Huet) **81m:47065** 47E05 (47A55, 47B25, 81E05)
- The redshift-magnitude relation for bright galaxies at low redshifts. *Monthly Notices Roy. Astronom. Soc.* 192 (1980), no. 3, 755-767. (Authors' summary) **81i:85002** 85A40 (85A35)
- (with Nicoll, J. F.; Johnson, D.; Segal, W.) Statistical invalidation of the Hubble law. *Proc. Nat. Acad. Sci. U.S.A.* 77 (1980), no. 11, part 1, 6275-6279. (Authors' summary) **81m:85008** 85A35
- Segal, Jack (with Dydak, Jerzy) Strong shape theory: a geometrical approach.

- Proceedings of the 1978 Topology Conference (Univ. Oklahoma, Norman, Okla., 1978), I. *Topology Proc.* 3 (1978), no. 1, 59–72 (1979). (J. E. Keesling) **81h:54042** 54F43
- Shape theory and geometric problems. The Proceedings of the 1979 Topology Conference (Ohio Univ., Athens, Ohio, 1979). *Topology Proc.* 4 (1979), no. 1, 159–172 (1980). (Jerzy Dydak) **81h:55017** 55P55 (54C56)
- Strong shape theory. *Topology (Proc. Fourth Colloq., Budapest, 1978), Vol. II*, pp. 1051–1054. *Colloq. Math. Soc. János Bolyai*, 23, North-Holland, Amsterdam, 1980. (From the text) **81h:55016** 55P55
- (with Handel, David) On k -regular embeddings of spaces in Euclidean space. *Fund. Math.* 106 (1980), no. 3, 231–237. (R. J. Daverman) **81h:57005** 57N35 (57N75)
- Segal, S. L. Helmut Hasse in 1934. (French and German summaries) *Historia Math.* 7 (1980), no. 1, 46–56. (William C. Waterhouse) **81h:01014** 01A70
- Segal, W. (with Nicoll, J. F.; Johnson, D.; Segal, Irving E.) Statistical invalidation of the Hubble law. *Proc. Nat. Acad. Sci. U.S.A.* 77 (1980), no. 11, part 1, 6275–6279. (Authors' summary) **81m:85008** 85A35
- Segall, Adrian (with Kailath, Thomas; Zakai, M.) Fubini-type theorems for stochastic integrals. *Sankhyā Ser. A* 40 (1978), no. 2, 138–143. (Philip Protter) **81j:60067** 60H05
- (with Sandell, Nils R., Jr.) Dynamic file assignment in a computer network. II. Decentralized control. *IEEE Trans. Automat. Control* 24 (1979), no. 5, 709–715. (Authors' summary) **81f:68029** 68B15 (68A05, 93A99)
- Segawa, Shigeo Harmonic majorization of quasibounded type. *Pacific J. Math.* 84 (1979), no. 1, 199–200. (H. L. Jackson) **81h:30077** 30F20
- Segeda, Ju. N. (with Redčenko, G. A.) The structure of invariant equations of motion in generalized Lagrange–Ostrogradskii mechanics. (Russian. English summary) *Ukrain. Fiz. Ž.* 25 (1980), no. 1, 117–122, 170. (Authors' summary) **81a:70023** 70H99 (49H05)
- (with Fulčić, V. I.; Redčenko, G. A.) Invariant systems of equations in generalized mechanics. (Russian) *Ukrain. Mat. Ž.* 32 (1980), no. 4, 569–576. (D. P. Račković) **81h:70006** 70H15 (58F05, 70H35)
- Segel, Lee A. Mathematical models for cellular behavior. *Studies in mathematical biology, Part I*, pp. 156–190. *MAA Studies in Math.*, 15, Math. Assoc. America, Washington, D.C., 1978. (See **80m:92005**) 92A05
- Segen, Jakob (with Sanderson, Arthur C.) Detecting change in a time-series. *IEEE Trans. Inform. Theory* 26 (1980), no. 2, 249–255. (Authors' summary) **81c:94009** 94A12 (62M99)
- Segethová, Jitka Reducing the bandwidth in solving linear algebraic systems arising in the finite element method. (Czech summary) With a loose Russian summary. *Apl. Mat.* 25 (1980), no. 4, 286–304. (I. Norman Katz) **81h:65117** 65N20
- Seghier, Abdelatif Prédiction linéaire et opérateur de Hankel. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 18, A851–A853. (Author's summary) **81f:60061** 60G25
- Seglar, P. (with Canivell, V.) Note on the parity operator. *Phys. Lett. A* 67 (1978), no. 4, 249–250. (Editors) **81m:81024** 81C20
- Segovia, Carlos (with Macías, Roberto A.) Lipschitz functions on spaces of homogeneous type. *Adv. in Math.* 33 (1979), no. 3, 257–270. (Sun Yung A. Chang) **81c:32017a** 32A35 (42B30)
- (with Macías, Roberto A.) A decomposition into atoms of distributions on spaces of homogeneous type. *Adv. in Math.* 33 (1979), no. 3, 271–309. (Sun Yung A. Chang) **81c:32017b** 32A35 (42B30)
- (with Macías, Roberto A.) Singular integrals on generalized Lipschitz and Hardy spaces. *Studia Math.* 65 (1979), no. 1, 55–75. (Alberto Torchinsky) **81e:42031** 42B30 (46E10, 47G05)
- Segre, Beniamino See Tung, Chia Chii, **81d:32036**; Barilotti, Adriano, **81f:01026**; Du Val, Patrick, **81h:01011** and Gallatari, Dionisio, **81m:01050**
- Segner, P. (with Arino, Ovide) Quelques résultats de comportement des solutions d'une classe d'équations différentielles à argument retardé. *Functional differential systems and related topics (Proc. First Internat. Conf., Białeogłowa, 1979)*, pp. 34–48. *Higher College Engrg.*, Zielona Góra, 1980. (V. Staičkos) **81h:34095** 34K15
- Sigima, Gérard On metrics matched to the discrete memoryless channel. *J. Franklin Inst.* 309 (1980), no. 3, 179–189. (Author's summary) **81e:94016** 94A40
- Segur, Harvey (with Hammack, Joseph L.) Modelling criteria for long water waves. *J. Fluid Mech.* 84 (1978), no. 2, 359–373. (From the summary) **81e:76010** 76B15 (35Q20)
- (with Ablowitz, Mark J.; Kruskal, Martin D.) A note on Miura's transformation. *J. Math. Phys.* 20 (1979), no. 6, 999–1003. (Yvette Kosmann-Schwarzbach) **81m:35119** 35Q20
- Resonant interactions of surface and internal gravity waves. *Phys. Fluids* 23 (1980), no. 12, 2556–2557. (Author's summary) **81h:76010** 76B15 (76V05)
- Sehgal, Sudarshan (with Ritter, Jürgen) Group rings of metabelian groups. *Comm. Algebra* 8 (1980), no. 10, 941–951. (W. E. Deskins) **81f:20005** 20C05 (13G05)
- Sehgal, Surinder K. A note on a problem of S. Ulam and equidistributed permutation groups. *Comm. Algebra* 7 (1979), no. 18, 1911–1913. (Michael Klemm) **81e:20001** 20B05
- Sehgal, V. M. (with Norris, C. W.) On the solution of a functional equation. *Math. Japon.* 23 (1978/79), no. 5, 525–527. (Authors' summary) **81h:54037** 54H25
- Some fixed point theorems for set valued directional contraction mappings. *Internat. J. Math. Math. Sci.* 3 (1980), no. 3, 455–460. (V. V. Obuhovskii) **81j:54079** 54H25 (47H10, 54C60)
- (with Husain, S. A.) A remark on a fixed point theorem of Caristi. *Math. Japon.* 25 (1980), no. 1, 27–30. (F. S. Van Vleck) **81h:54053** 54H25 (54C60, 58C30)
- (with Smithson, R. E.) A fixed point theorem for weak directional contraction multifunctions. *Math. Japon.* 25 (1980), no. 3, 345–348. (Silvio Massa) **81m:54081** 54H25 (54C60)
- Sehponjan, L. A. Radial variations of the Blaschke–Džrbaljan products B_n and P_n . (Russian. Armenian and English summaries) *Izv. Akad. Nauk Armjan. SSR Ser. Mat.* 14 (1979), no. 4, 251–267, 314. (Richard E. Frankfurt) **81g:30043** 30D50 (30D35, 30D40)
- (with Zaharjan, V. S.) A bound for the growth of functions of the class $N(\omega)$. (Russian. Armenian and English summaries) *Izv. Akad. Nauk Armjan. SSR Ser. Mat.* 14 (1979), no. 5, 348–368, 403–404. (A. È. Eremenko) **81f:30031** 30D50
- Sehr, Joachim (with Miescke, Klaus-J.) On a conjecture concerning the least favorable configuration of certain two-stage selection procedures. *Comm. Statist. A—Theory Methods* 9 (1980), no. 15, 1609–1617. (Young Jack Lee) **81h:62031** 62F07
- Šešter, B. L. A two-point de la Vallée-Poussin problem. (Russian) *Differentsial'nye Uravnenija* 15 (1979), no. 8, 1457–1467, 1534. (Author's summary) **81i:34014** 34B15
- Ščitman, B. Abstract interpolation theory. (Russian. Estonian and English summaries) *Tartu Riikl. Ül. Toimetised No. 448* (1978), 82–93. (P. S. Kenderov) **81g:41008** 41A05
- Seibert, Peter Attractors in general systems. *Differential equations (Proc. Eighth Fall Conf., Oklahoma State Univ., Stillwater, Okla., 1979)*, pp. 249–270. Academic Press, New York, 1980. (Dean A. Neumann) **81h:34041** 34D20 (58F12)
- Seisak, V. N. (with Zolotarevskii, V. A.) Solution of systems of nonlinear integral equations by the moment method. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1980, no. 7, 79–82. (V. V. Ivanov) **81m:65204** 65R20 (45G05)
- Seidel, J. J. (with Cameron, Peter J.; Goethals, Jean-Marie) Strongly regular graphs having strongly regular subconstituents. *J. Algebra* 55 (1978), no. 2, 257–280. (Joseph A. Thas) **81d:05034** 05C25 (05B05)
- The pentagon. *Second International Conference on Combinatorial Mathematics (New York, 1978)*, pp. 497–507. *Ann. New York Acad. Sci.*, 319, New York Acad. Sci., New York, 1979. (Robert Meyer) **81e:05004** 05-02
- Strongly regular graphs. *Surveys in combinatorics (Proc. Seventh British Combinatorial Conf., Cambridge, 1979)*, pp. 157–180. *London Math. Soc. Lecture Note Ser.*, 38, Cambridge Univ. Press, Cambridge, 1979. (F. Harary) **81e:05027** 05C01 (05-01)
- Seidelmann, P. K. (with Davies, M. E.; Abalakin, V. K.; Cross, C. A.; Duncombe, R. L.; Masursky, H.; Morando, B.; Owen, T. C.; Sinclair, A. T.; Wilkins, G. A.; Tjuffin, Y. S.) Report of the IAU Working Group on Cartographic Coordinates and Rotational Elements of the Planets and Satellites. *Celestial Mech.* 22 (1980), no. 3, 205–230. (Authors' summary) **81h:70009** 70F15
- Seidenberg, A. Constructions in a polynomial ring over the ring of integers. *Amer. J. Math.* 100 (1978), no. 4, 685–703. (Author's introduction) **81g:13016** 13F20
- See also *Studies in algebraic geometry*, **81i:14001**
- Seldenfeld, Teddy Why I am not an objective Bayesian; some reflections prompted by Rosenkrantz. *Theory and Decision* 11 (1979), no. 4, 413–440. (D. V. Lindley) **81h:62009a** 62A15
- Seidl, Laslo See Seidel, L.
- Seldman, Thomas I. Ill-posed problems arising in boundary control and observation for diffusion equations. *Inverse and improperly posed problems in differential equations (Proc. Conf., Math. Numer. Methods, Halle, 1979)*, pp. 233–247. *Math. Research*, 1, Akademie-Verlag, Berlin, 1979. (Mario Primicerio) **81d:35078** 35R25 (35R30)
- Nonconvergence results for the application of least-squares estimation to ill-posed problems. *J. Optim. Theory Appl.* 30 (1980), no. 4, 535–547. (Thomas S. Angell) **81g:65073** 65J10
- Steady-state solutions of diffusion-reaction systems with electrostatic convection. *Nonlinear Anal.* 4 (1980), no. 3, 623–633. (Jesus Hernández) **81h:35075** 35J65 (35P30, 80A30)
- Seler, Werner n -affine Ebenen mit Nachbar-elementen. *Abh. Math. Sem. Univ. Hamburg* 50 (1980), 20–31. (W. R. Heise) **81h:51006** 51B10
- Selleras, Joel I. (with Galil, Zvi) Saving space in fast string-matching. *SIAM J. Comput.* 9 (1980), no. 2, 417–438. (Stanley H. Benton, Jr.) **81h:68052** 68C20 (68C25)
- (with Leong, Benton L.) New real-time simulations of multithread tape units. *J. Assoc. Comput. Mach.* 28 (1981), no. 1, 166–180. (Authors' summary) **81m:68041** 68C40
- (with Galil, Zvi) Linear-time string-matching using only a fixed number of local storage locations. *Theoret. Comput. Sci.* 13 (1981), no. 3, 331–336. (Authors' summary) **81m:68081** 68H05
- Selfert, Burkhardt Note on the UMPU-character of a test for the mean in balanced randomized nested classification. (German and Russian summaries) *Math. Operationsforsch. Statist. Ser. Statist.* 9 (1978), no. 2, 185–189. (Author's summary) **81j:62129** 62J05
- Optimal testing for fixed effects in general balanced mixed classification models. (German and Russian summaries) *Math. Operationsforsch. Statist. Ser. Statist.* 10 (1979), no. 2, 237–255. (Arthur Cohen) **81g:62129** 62J10 (62F03)
- Selfert, George On certain bounded solutions of a Volterra integral equation. *Volterra equations (Proc. Helsinki Sympos. Integral Equations, Otaniemi, 1978)*, pp. 267–270. *Lecture Notes in Math.*, 737, Springer, Berlin, 1979. (Curtis C. Travis) **81a:45002** 45D05
- Positive invariance of closed sets for generalized Volterra equations. *Nonlinear Anal.* 4 (1980), no. 1, 41–50. (V. Sree-Hari-Rao) **81h:34068** 34K15
- A temperature equation for a rigid heat conductor with memory. *Quart. Appl. Math.* 38 (1980/81), no. 2, 246–252. (Gustaf Gripenberg) **81h:45005** 45D05 (45K05, 80A20)
- Selfert, O. See *Proceedings: Operations Research*, **81e:90003b**
- Selford, L. (with Charnes, A.) Gradient states for some dualities with the C^2 extremal principle. *Quantitative planning and control*, pp. 3–8. Academic Press, New York, 1979. (Pierre Loridan) **81e:90078** 90C25
- Seifullaev, R. K. (with Salae, V. V.) On the article: "A singular Cauchy operator along an open curve" [Azerbaij. Gos. Univ. Učen. Zap. 1977, no. 3, 5–11; MR 58 #17724]. (Russian) *Azerbaij. Gos. Univ. Učen. Zap.* 1979, no. 1, 88–100. (V. S. Piliš) **81h:45003** 45E05 (47G05)
- A Riemann boundary value problem on a nonsmooth open curve. (Russian) *Mat. Sb. (N.S.)* 112(154) (1980), no. 2(6), 147–161. (Zbigniew Binderman) **81h:30062** 30E25 (30E20)
- Seitzmanova, L. A. (with Dullak, Ju. I.) Comparison theorem for differential equations and inclusions with deviating argument in Hilbert space and its application. (Russian. Azerbaijani and English summaries) *Izv. Akad. Nauk Azerbaidžan. SSR Ser. Fiz.-Tehn. Mat. Nauk* 1 (1980), no. 1, 23–28. (J. Jarník) **81m:34096** 34K15 (34A60)
- guisán Seijas, M. del Carmen See Guisán Seijas, M. del Carmen
- Seller, R. (with Hogreve, H.; Schrader, Robert) Bounds on the Euclidean functional

- determinant. *Feynman path integrals* (Proc. Internat. Colloq., Marseille, 1978), pp. 282-288, *Lecture Notes in Phys.*, 106, Springer, Berlin, 1979. (Aubrey Truman) **81c:1048** 81C35 (81E10)
- See also **Symposium: Einstein, 81c:23001**
- Sela, P. Letter to the editors: "Metric approach to certain Diophantine inequalities" [Litovsk. Mat. Sb. 18 (1978), no. 1, 217-223; MR 58 #5567]. (Russian) *Litovsk. Mat. Sb.* 20 (1980), no. 1, 215. (Editors) **81f:10064** 10K15
- Selinskii, R. I. (with Abraitis, L. B.; Targamadze, A. E.) Creation of complete fault-detection tests for combination devices by the method of maximum covering of equivalent forms. *Automat. i Vychisl. Tehn. (Riga)* 1979, no. 4, 33-38, 93 (Russian); translated as *Automat. Control Comput. Sci.* 13 (1979), no. 4, 29-34. (Authors' summary) **81k:94030** 94C10
- Selberg, M. V. (with Helemskii, A. Ja.) Amenable Banach algebras. (Russian) *Funktsional. Anal. i Prilozhen.* 13 (1979), no. 1, 42-48, 96. (B. R. Gelbaum) **81g:46061** 46H25 (46M05)
- Selina, D. A. (with Meleško, V. P.; Šneerov, B. E.; Švec, Marko; Dmitrieva-Arrago, L. R.; Parsina, G. V.; Jušina, E. P.; Magazenzov, L. N.; Bogačenko, S. V.) A hydrodynamic model of the general circulation of the atmosphere. (Russian) *Trudy Glavn. Geofiz. Observator. No. 410 Dinamika Global. Atmosf. Processov i Prognoz Pogody* (1980), 3-33, 142. (Authors' summary) **81h:86006** 86A10 (76R05)
- Selmann, O. K. Group-theoretic methods of constructing cuts in integer programming. (Russian) *Mathematical methods of solution of economic problems*, No. 8 (Russian), pp. 44-49, "Nauka", Moscow, 1979. (Author's introduction) **81b:90111** 90C10
- Selranjan, A. P. The problem of minimization of the weight of an airfoil with reverse sweepback with a constraint on the rate of divergence. (Russian) *Učen. Zap. CAGI* 10 (1979), no. 6, 81-89. (Author's summary) **81h:76005** 76B05
- An optimal problem of airfoil efficiency. (Russian. Armenian and English summaries) *Izv. Akad. Nauk Armjan. SSR Ser. Meh.* 33 (1980), no. 1, 54-64, 79. (Author's summary) **81i:73007** 73J05
- Selzer, Ju. B. Абсолютный экстремум в теории оптимальных процессов. (Russian) [Absolute extremum in the theory of optimal processes] "Yym", Ashkhabad, 1979. 138 pp. (Rolf Klötzler) **81k:49019** 49C99
- (with Balin, E. A.; Kirin, N. E.) Estimation of local optimality of trajectories of control systems. (Russian. Turkish and English summaries) *Izv. Akad. Nauk Turkmen. SSR Ser. Fiz.-Tehn. Him. Geol. Nauk* 1980, no. 2, 10-13. (G. Zatišvili) **81i:49010** 49B10
- (with Abramenko, S. N.; Balin, E. A.) Estimations of sets of attainability of controllable systems. (Russian. English and Turkish summaries) *Izv. Akad. Nauk Turkmen. SSR Ser. Fiz.-Tehn. Him. Geol. Nauk* 1980, no. 4, 3-8. (Authors' summary) **81i:93015** 93C15 (93D05)
- Selten, S. M. The theory of finite fields with an additional predicate that singles out a subfield. (Russian) *Sibirsk. Mat. Ž.* 19 (1978), no. 2, 396-405, 480. (A. Sochor) **81g:03040** 03C60 (12L05)
- Seltz, Gary M. Subgroups of finite groups of Lie type. *J. Algebra* 61 (1979), no. 1, 16-27. (James E. Humphreys) **81c:20039** 20G40
- Seltz, William A. (with Wall, Frederick T.; Chin, John C.) Orthogonal vector analyses of distributions of self-avoiding and limited order random walks on lattices. *J. Chem. Phys.* 68 (1978), no. 8, 3845-3849. (Authors' summary) **81e:82011** 82A05 (33A30)
- Selwert, M. (with Hess, P. O.; Maruhn, J.; Greiner, Walter) General collective model and its application to ^{238}U . *Z. Phys. A* 296 (1980), no. 2, 147-163. (Authors' summary) **81f:81068** 81G35
- Selze, Joelp. Equations of motion in nonequilibrium statistical mechanics of open systems. *Phys. Rev. A* (3) 21 (1980), no. 6, 2156-2165. (Hirokazu Fujisaka) **81h:82031** 82A35
- Sekerka, R. F. (with Mullins, W. W.) Proof of the symmetry of the transport matrix for diffusion and heat flow in fluid systems. *J. Chem. Phys.* 73 (1980), no. 3, 1413-1421. (Authors' summary) **81g:82030** 82A35
- Seki, Shigeo (with Kobuchi, Youichi) Decision problems of locally catenative property for DIL systems. *Inform. and Control* 43 (1979), no. 3, 266-279. (Derick Wood) **81h:68069** 68F05 (03D35, 68C30)
- Real-time recognition of two-dimensional tapes by cellular automata. *Inform. Sci.* 19 (1979), no. 3, 179-198. (W. Wechler) **81e:68063** 68D20
- Sekigawa, Kosei. Almost Hermitian manifolds satisfying some curvature conditions. *Kodai Math. J.* 2 (1979), no. 3, 384-405. (M. C. Chaki) **81d:53019** 53B35
- Sekiguchi, Jiro (with Yano, Tamaki) The microlocal structure of weighted homogeneous polynomials associated with Coxeter systems. *I. Tokyo J. Math.* 2 (1979), no. 2, 193-219. (P. Orlik) **81c:32027** 32C40
- (with Saito, Kyoji; Yano, Tamaki) On a certain generator system of the ring of invariants of a finite reflection group. *Comm. Algebra* 8 (1980), no. 4, 373-408. (E. Vinberg) **81g:20095** 20H15 (15A72, 32C40, 32M10)
- (with Ōshima, Toshio) Eigenspaces of invariant differential operators on an affine symmetric space. *Invent. Math.* 57 (1980), no. 1, 1-81. (S. G. Gindikin) **81k:43014** 43A85 (22E30, 53C35, 58G30)
- Sekiguchi, Katsusuke. Units in integral group rings. *Proceedings of the 12th Symposium on Ring Theory (Hokkaido Univ., Sapporo, 1979)*, pp. 39-50, Okayama Univ., Okayama, 1980. (F. C. Polcino Miles) **81h:20005** 20C05 (16A26)
- On the units of integral group rings. *Tokyo J. Math.* 3 (1980), no. 1, 149-162. (Koichiro Harada) **81k:20010** 20C05 (12A57)
- Sekiguchi, Takeshi (with Izumisawa, Masataka) Weighted norm inequalities for martingales. *Séminaire de Probabilités, XIII (Univ. Strasbourg, Strasbourg, 1977/78)*, pp. 307-312, *Lecture Notes in Math.*, 721, Springer, Berlin, 1979. (Norihiro Kazamaki) **81m:60080** 60G44
- (with Kazamaki, Norihiro) On the transformation of some classes of martingales by a change of law. *Tōhoku Math. J. (2)* 31 (1979), no. 3, 261-279. (E. Lengrat) **81f:60067** 60G44
- (with Izumisawa, Masataka; Shiota, Yasunobu) Remark on a characterization of BMO-martingales. *Tōhoku Math. J. (2)* 31 (1979), no. 3, 281-284. (Roger L. Jones) **81h:60063** 60G44
- BMO-martingales and inequalities. *Tōhoku Math. J. (2)* 31 (1979), no. 3, 355-358. (Dominique Lepingle) **81a:60062** 60G46
- Sekiguchi, Tsutomu. On the nonzero points of sections of a line bundle on an abelian variety. *Tsukuba J. Math.* 3 (1979), no. 1, 51-58. (William C. Waterhouse) **81f:14022** 14K05 (14K25)
- Sekino, Junpei (with Smith, J. Wolfgang) Homology on the category of submersions. *Houston J. Math.* 5 (1979), no. 4, 565-601. (Oscar Burlet) **81k:58029** 55R20 (57R99)
- Sekita, Eitaro (with Kuribayashi, Akikazu) On a family of Riemann surfaces. *I. Bull. Fac. Sci. Engrg. Chuo Univ.* 22 (1979), 107-129. (R. F. Lax) **81h:14018** 14H15 (30F35, 32G15)
- Sekiya, T. (with Katayama, K.; Katayama, T.) On the qualitative study of combination resonance in elastic systems under periodic forces. *Mech. Res. Comm.* 7 (1980), no. 4, 227-232. (From the introduction) **81f:73012** 73D30 (70K30)
- Sekiya, Hideaki. Trivial extension of a commutative ring with balanced condition. *Proceedings of the 12th Symposium on Ring Theory (Hokkaido Univ., Sapporo, 1979)*, pp. 1-8, Okayama Univ., Okayama, 1980. (S. S. Page) **81g:16023** 16A36
- Sekovarov, V. S. B-inductively reflexive locally convex spaces. (Russian) *Functional analysis*, No. 14 (Russian), pp. 128-131, *Uljansovsk. Gos. Ped. Inst., Ulyanovsk*, 1980. (Cho Ho Chu) **81m:46013** 46A25
- Sekrieni, I. V. Eigenelements of strongly positive operators. (Russian) *Contemporary questions of applied mathematics and programming (Russian)*, pp. 115-119, 170-171, "Sitiica", Kishinev, 1979. (Ju. A. Abramović) **81h:47034** 47B55 (47A70)
- Seksenbaev, K. S. The lower central series of a wreath product of finitely generated abelian groups. (Russian) *Theoretical and applied problems of mathematics and mechanics (Russian)*, pp. 202-205, 245, "Nauka", Kazah. SSR, Alma-Ata, 1979. (Ju. I. Merzjakov) **81f:20037** 20E22 (20F14, 20K99)
- Sekulski, Radojko M. The method of Prelić for factorization of polynomials. (Macedonian. French summary) *Prirad.-Mat. Fak. Univ. Kirit Metodji Skopje Godišen Zb.* 29 (1978), 115-119. (Author's summary) **81i:12016** 12D99 (26C10)
- Selberg, Henrik L. Über die gewöhnliche Differentialgleichung erster Ordnung. *Math. Scand.* 44 (1979), no. 2, 339-344. (Günter Frank) **81k:34008** 34A20
- Über einen Satz von Rellick. *Math. Scand.* 46 (1980), no. 1, 54-60. (S. M. Shah) **81k:34009** 34A20
- Selberg, Sigmund. Viggo Brun. (Norwegian) *Norske Vid. Selsk. Forh. (Trondheim)* 1979, 57-61 (1980). (Editors) **81m:01074** 01A70
- Seldin, Jonathan P. A second corrigendum to my paper: "Note on definitional reductions" [Notre Dame J. Formal Logic 9 (1968), 4-6; MR 38 #5629]. *Notre Dame J. Formal Logic* 21 (1980), no. 4, 728. (Editors) **81i:03030** 03B99
- See also **Essays: Combinatory logic, lambda calculus and formalism, 81j:03005**
- Seldjukov, E. K. Some nets on two-dimensional surfaces in a five-dimensional Euclidean space. (Russian) *Geometry of imbedded manifolds (Russian)*, pp. 62-69, *Moskov. Gos. Ped. Inst., Moscow*, 1978. (D. Mekero) **81i:53016** 53A60
- Geometry of nets invariantly adjoint to given orthogonal nets on V_5 in E_5 . (Russian) *Kaliningrad. Gos. Univ. Differentsial' naja Geom. Mnogooobraz. Figur* No. 10 (1979), 110-114, 163-164. (Josef Vala) **81i:53004** 53A05 (53A60)
- Selst, A. V. (with Barabanenkov, Ju. N.; Ozrin, V. D.) On the theory of stochastic processes in quantum dynamical systems. (Russian. English summary) *Tsvet. Mat. Fiz.* 42 (1980), no. 2, 232-242. (Authors' summary) **81f:82004** 82A15
- Selzer, V. A. Singular equations on quasiconformal contours. (Russian) *Metric questions of the theory of functions and mappings. No. VII (Proc. Fourth Colloq., Quasiconformal Mappings and their Generalizations, Donetsk, 1974)* (Russian), pp. 170-177, "Naukova Dumka", Kiev, 1975. (See **80c:30023**) 44A99
- Linear singular equations on quasiconformal contours and the problem of linear conjugation for a holomorphic vector on closed Riemann surfaces. (Russian) *Questions in the metric theory of mappings and its application (Proc. Fifth Colloq., Quasiconformal Mappings, Generalizations Appl., Donetsk, 1976)* (Russian), pp. 125-135, 185, "Naukova Dumka", Kiev, 1978. (Martin Costabel) **81i:30081** 30F99 (45E05)
- Selzer, V. V. (with Salimov, R. B.) On the solution of Hilbert's boundary value problem with discontinuous coefficients. (Russian) *Trudy Sem. Kraev. Zadacham* No. 16 (1979), 149-162, 244. (S. A. Tersenov) **81m:30039** 30E25
- Selzer, I. T. (with Petrov, V. N.) Solution of a problem on transient waves in a conducting elastic half-space. (Russian) *Numerical-analytic methods for the solution of problems of heat conduction and electrodynamics (Russian)*, pp. 155-158, 186, *Akad. Nauk Ukrain. SSR, Inst. Mat., Kiev*, 1979. (M. Martinis) **81g:73113** 73R05 (65N20)
- Selridge, J. L. (with Guy, Richard K.) Corrigendum to: "What drives an aliquot sequence?" [Math. Comp. 29 (1975), 101-107; MR 52 #5542]. *Math. Comp.* 34 (1980), no. 149, 319-321. (Stefan A. Burr) **81f:10008** 10A20 (10L10)
- (with Pomerance, Carl) Proof of D. J. Newman's coprime mapping conjecture. *Mathematika* 27 (1980), no. 1, 69-83. (T. M. Apostol) **81i:10008** 10A20
- Selgrade, J. F. (with Churchill, Richard C.) On the Poincaré criterion for asymptotic stability. *SIAM J. Math. Anal.* 10 (1979), no. 6, 1293-1298. (A. Morimoto) **81g:58031** 58F22 (34D05, 92A05)
- Fuchs-Seliger, Susanne. See **Fuchs-Seliger, Susanne**
- Seligman, George B. Mappings into symmetric powers. *J. Algebra* 62 (1980), no. 2, 455-472. (Paul van Praag) **81k:16033** 16A68 (17A35)
- Seligman, Thomas H. Double cosets and the evaluation of matrix elements. *The permutation group in physics and chemistry (Sympos., Univ. Bielefeld, Bielefeld, 1978)*, pp. 178-192, *Lecture Notes in Chem.*, 12, Springer, Berlin, 1979. (P. J. Roberts) **81e:81166** 81G50
- (with Hässelbarth, W.; Ruch, Ernst; Klein, D. J.) Bilateral classes: a new class concept of group theory. *Proceedings of Bremer Konferenz zur Chemie (Univ. Bremen, Bremen, 1978)*, Part II. *Match* No. 7 (1979), 341-348. (Louis Solomon) **81h:20031** 20F99 (81G50)
- (with Deenen, J.; Moshinsky, M.) Canonical transformations to action and angle variables and their representations in quantum mechanics. III. The general problem. *Ann. Physics* 127 (1980), no. 2, 458-477. (Virendra Singh) **81j:81021** 81C40 (81C99)
- (with Ruch, Ernst; Schraner, Rudolf) Generalization of a theorem by Hardy, Littlewood, and Pólya. *J. Math. Anal. Appl.* 76 (1980), no. 1, 222-229. (Jacques Dubois) **81m:26015** 26D15 (15A51, 47B38)
- (with Hässelbarth, W.; Ruch, Ernst; Klein, D. J.) Bilateral classes. *J. Math. Phys.* 21 (1980), no. 5, 951-953. (Louis Solomon) **81j:20003** 20A05
- (with de los Reyes, J.; Mello, P. A.) Analyticity and ergodicity in the maximum-entropy approach to statistical nuclear reactions. *Z. Phys. A* 295 (1980),

- no. 3, 247-249. (From the summary) **81c:81114** 81F15
- Selinger, P. G. (with Blasen, M. W.; Astrahan, M. M.; Chamberlin, D. D.; Gray, James N.; King, W. F.; Lindsay, B. G.; Lorie, R. A.; Mehl, J. W.; Price, T. G.; Putzolu, G. R.; Schkolnick, M.; Slutz, D. R.; Strong, H. R.; Traiger, I. L.; Wade, B. W.; Yost, R. A.) System R: an architectural overview. *IBM Systems J.* **20** (1981), no. 1, 41-62. (Authors' summary) **81c:68079** 68H05
- Sellman, Ju. A. On compatibility of order with some algebras. *Nepali Math. Sci. Rep.* **5** (1980), no. 1, 37-43. (Editors) **81j:66024** 06F99
- Sellman, Ju. V. Biprojective Banach algebras. (Russian) *Izv. Akad. Nauk SSSR Ser. Mat.* **43** (1979), no. 5, 1159-1174, 1198. (B. R. Gelbaum) **81h:46050** 46H05 (46L05, 46M10)
- Sellman, V. L. Index sets of classes of numerations. (Russian) *Probabilistic methods and cybernetics. No. 14* (Russian), pp. 90-103, Kazan. Gos. Univ., Kazan, 1978. (From the introduction) **81k:03042** 03D45
- Several remarks on classes of recursively enumerable sets. (Russian) *Sibirsk. Mat. Ž.* **19** (1978), no. 1, 153-160, 238. (A. H. Lachlan) **81c:03036** 03D45
- The structure of degrees of unsolvability of index sets. (Russian) *Algebra i Logika* **18** (1979), no. 4, 463-480, 508-509. (Roman Murawski) **81i:03067** 03D30
- Sellman, Yuri A. See Sellman, Ju. A.
- Selke, Walter (with Fisher, Michael E.) Infinitely many commensurate phases in a simple Ising model. *Phys. Rev. Lett.* **44** (1980), no. 23, 1502-1505. (Authors' summary) **81f:82039** 82A67
- (with Fisher, Michael E.) Two-dimensional Ising models with competing interactions—a Monte Carlo study. *Z. Phys. B* **40** (1980/81), no. 1-2, 71-77. (Authors' summary) **81k:82067** 82A67 (82-04)
- Sell, George R. The structure of limit sets: a survey. *Differential equations (Proc. Eighth Fall Conf., Oklahoma State Univ., Stillwater, Okla., 1979)*, pp. 87-102, Academic Press, New York, 1980. (M. K. Grammatikopoulos) **81h:34047** 34C25 (34C27)
- (with Sacker, Robert J.) Singular perturbations and conditional stability. *J. Math. Anal. Appl.* **76** (1980), no. 2, 406-431. (K. W. Chang) **81j:34086** 34D15
- (with Nakajima, Fumio) Almost periodic gross-substitute dynamical systems. *Tōhoku Math. J. (2)* **32** (1980), no. 2, 255-263. (T. Yoshizawa) **81j:34075** 34C27 (90A12)
- Sellman, Samuel (with Dussachoy, Alain) Une mesure pour l'interprétation d'un ensemble de facteurs dans une analyse en composantes principales. (English summary) *RAIRO Rech. Opér.* **14** (1980), no. 1, 43-51. (Franz Streit) **81g:62105** 62H25
- (with Forcioli, Alain) Introduction de la notion d'écart entre sous-espaces vectoriels en analyse de données. (English summary) *RAIRO Rech. Opér.* **14** (1980), no. 3, 283-301. (Authors' summary) **81j:62111** 62H25
- Sellers, Peter H. Finding a combinatorial algorithm. *Second International Conference on Combinatorial Mathematics (New York, 1978)*, pp. 508-511, Ann. New York Acad. Sci., 319, New York Acad. Sci., New York, 1979. (From the introduction) **81c:68035** 68C05
- Selljohova, T. N. (with Nicolaeva, M. N.) On differential equations in a class of holomorphic functions. (Russian) *Some questions of differential and integral equations and their applications. No. 2* (Russian), pp. 63-77, 189, Yakutsk. Gos. Univ., Yakutsk, 1977. (Authors' summary) **81d:30039** 30C70
- (with Moskvina, V. G.; Sobolev, V. V.) Extremal properties of certain classes of functions with fixed first coefficients that map the half plane conformally onto itself. (Russian) *Sibirsk. Mat. Ž.* **21** (1980), no. 2, 139-154, 238. (Stanislaw Walczak) **81d:30038** 30C70 (30C50)
- Selman, Alan L. p -selective sets, tally languages, and the behavior of polynomial time reducibilities on NP (preliminary report). *Automata, languages and programming (Sixth Colloq., Graz, 1979)*, pp. 546-555, *Lecture Notes in Comput. Sci.*, 71, Springer, Berlin, 1979. (David A. Plaisted) **81j:68055** 68C25 (03D15)
- p -selective sets, tally languages, and the behavior of polynomial time reducibilities on NP. *Math. Systems Theory* **13** (1979/80), no. 1, 55-65. (Author's summary) **81c:68086** 68F05 (03D15, 68C25)
- Selmer, Ernst S. Organization of Pythagorean number sets. (Norwegian. English summary) *Nordisk Mat. Tidsskr.* **25/26** (1978), no. 3-4, 139-149, 209. (B. Stolt) **81e:10011** 10A40 (10B05)
- Selomov, N. A. Application of the integrating matrix method to solution of boundary-value problems with normal form of the differential equations and isoperimetric edge conditions. *Izv. Vys. Uchebn. Zaved. Aviaci. Tehn.* **1979**, no. 2, 83-89 (Russian); translated as *Soviet Aeronaut.* **22** (1979), no. 2, 65-69. (Author's summary) **81c:65040** 65L10
- Selmark, Flemming (with Krawczyk, Rudolf) Order-convergence and iterative interval methods. *J. Math. Anal. Appl.* **73** (1980), no. 1, 1-23. (Erich Bohl) **81c:65024** 65J15 (47H17)
- Selten, Reinhard A note on evolutionarily stable strategies in asymmetric animal conflicts. *J. Theoret. Biol.* **84** (1980), no. 1, 93-101. (Author's summary) **81d:92016** 92A15 (90D10, 90D40)
- Selvadurai, A. P. S. On the displacement induced in a rigid circular punch on an elastic halfspace due to an external force. *Mech. Res. Comm.* **7** (1980), no. 6, 351-358. (Author's summary) **81k:73063** 73T05
- Selvaggi, Renata (with Sisto, Irene) Regularity of certain integral transforms relative to domains of class C^1 . (Italian. English summary) *Rend. Accad. Sci. Fis. Mat. Napoli* (4) **45** (1978), 393-410 (1979). (Hans-Jürgen Glaeske) **81h:44012** 44A30
- Selwyn, Murray R. (with Gastwirth, Joseph L.) The robustness properties of two tests for serial correlation. *J. Amer. Statist. Assoc.* **75** (1980), no. 369, 138-141. (Moshe Shaked) **81i:62115** 62J05
- Semadeni, Zdzisław (with Wiweger, Antoni) ★Einführung in die Theorie der Kategorien und Funktoren. (German) [Introduction to the theory of categories and functors] Translated from the second Polish edition by E. Buchsteiner-Kießling. With English, French and Russian summaries. Teubner-Texte zur Mathematik. BSB B. G. Teubner Verlagsgesellschaft, Leipzig, 1979. 319 pp. (Editors) **81f:18001** 18-01
- Sematiuk, V. I. ★Численные алгоритмы для нестационарной статистической модели смеси газов с внутренними степенями свободы. (Russian) [Numerical algorithms for nonstationary statistical models of gas mixtures with external degrees of freedom] *Akad. Nauk SSSR, Vyčisl. Centr, Moscow*, 1979. 22 pp. (Publisher's description) **81j:82022** 82A40
- Sembi, B. S. (with Mamdani, E. H.) On the nature of implication in fuzzy logic. *Proceedings of the Ninth International Symposium on Multiple-Valued Logic (Bath, 1979)*, pp. 143-151, IEEE, Long Beach, Calif., 1979. (Maurizio Fattorosi-Barnaba) **81d:93017** 03B52 (94D05)
- (with Mamdani, E. H.) Process control using fuzzy logic. *Fuzzy sets (Proc. Symp. Policy Anal. Inform. Systems, Duke Univ., Durham, N.C., 1980)*, pp. 249-265, Plenum, New York, 1980. (Guy Jumarie) **81k:93048** 93C99 (03B52, 94D05)
- Semenčuk, I. S. Modeling of the dynamical properties of an extrapolating neuron network. (Russian) *Neurobiology and mathematical modeling of living processes (Russian)*, pp. 53-60, 89-90, *Akad. Nauk Ukrain. SSR, Inst. Kibernet., Kiev*, 1979. (See **81j:92002** 92A27)
- Semenčuk, A. R. (with Sadovjak, A. M.) Optimal stabilization of a class of stochastic systems with distributed parameters. (Russian) *Asymptotic methods of nonlinear mechanics (Russian)*, pp. 111-116, 197, *Akad. Nauk Ukrain. SSR, Inst. Mat., Kiev*, 1979. (Authors' summary) **81c:93089** 93E15
- Semelko, N. G. Computer simulation of a component analysis of the superposition of flows of random events. (Russian. English summary) *Vychisl. Prikl. Mat. (Kiev)* **1980**, no. 4, 86-91, 159. (Authors' summary) **81j:65024** 65C99
- Semenčuk, V. N. Minimal non- \bar{y} -groups. (Russian. English summary) *Dokl. Akad. Nauk BSSR* **22** (1978), no. 7, 596-599, 668. (I. D. Macdonald) **81f:20028** 20D10
- Minimal non- \bar{y} -groups. (Russian) *Algebra i Logika* **18** (1979), no. 3, 348-382, 386. (S. S. Levičenko) **81f:20029** 20D10
- Semenenko, M. I. Properties of some subsystems of classical and intuitionistic propositional calculi. *Twelve papers in logic and algebra*, pp. 1-35, *Amer. Math. Soc. Transl.*, 113, Amer. Math. Soc., Providence, R.I., 1979. (See **80m:00006**) 03B20 (03F55)
- Semenoff, G. (with Matsumoto, Hideki; Umezawa, H.; Tachiki, M.) Quantum electrodynamics in solids. *Fortschr. Phys.* **28** (1980), no. 2, 67-98. (Authors' summary) **81d:81136** 81L05 (78A25, 82A55)
- (with Matsumoto, Hideki; Umezawa, H.) Renormalization and quantum correction of soliton solutions. *Progr. Theoret. Phys.* **63** (1980), no. 4, 1393-1412. (Authors' summary) **81d:81062** 81E15
- Semenov, A. L. Some extensions of the arithmetic of natural number addition. (Russian) *Izv. Akad. Nauk SSSR Ser. Mat.* **43** (1979), no. 5, 1175-1195, 1199. (W. Marek) **81c:03009** 03B25 (10N05, 68C30)
- Semenov, A. T. (with Beier-Küchler, Ingeborg) Die Waldsche Fundamentalidentität und ein sequentieller Quotiententest für eine zufällige Irrfahrt über einer homogenen irreduziblen Markovschen Kette mit endlichem Zustandsraum. (English and Russian summaries) *Math. Operationsforsch. Statist. Ser. Statist.* **10** (1979), no. 2, 319-331. (Wolfgang Winkler) **81j:62137** 62L10 (62M05)
- Semenov, E. M. (with Krein, S. G.; Petunin, Ju. I.) ★Интерполяция линейных операторов. (Russian) [Interpolation of linear operators] "Nauka", Moscow, 1978. 400 pp. (E. Gerlach) **81f:46086** 46M35 (46E30, 46E35)
- (with Novikov, S. Ja.; Tokarev, E. V.) The structure of subspaces of the spaces $\Lambda_p(\rho)$. (Russian) *Dokl. Akad. Nauk SSSR* **247** (1979), no. 3, 552-554. (Aleksandr Mekler) **81j:46042** 46E30
- Semenov, Ju. A. (with Perel'muter, M. A.) Selfadjointness of elliptic operators with a finite and with an infinite number of variables. (Russian) *Funkcional. Anal. i Priložen.* **14** (1980), no. 1, 81-82. (Woodford W. Zachary) **81h:35046** 35J10 (35R10, 47F05, 81C10)
- Semenov, P. V. The homotopy type of a group of reflections of Hilbert space. (Russian) *Functional analysis. No. 12* (Russian), pp. 136-142, *Uljansovsk. Gos. Ped. Inst., Ulyanovsk*, 1979. (Ju. G. Borisovič) **81h:57021** 57S05 (46C10, 58B25)
- Semenov, V. I. On the structure of certain classes of homeomorphisms of mappings of a sphere. (Russian) *Sibirsk. Mat. Ž.* **19** (1978), no. 6, 1424-1427, 1441. (I. A. Volynec) **81f:30021** 30C60
- Semenovskaja, S. V. (with Hačaturjan, A. G.; Vainštejn, B. K.) Statistical-thermodynamic approach to determination of structure amplitude phases. *Kristallografiya* **24** (1979), no. 5, 905-916 (Russian); translated as *Soviet Phys. Cryst.* **24** (1979), no. 5, 519-524 (1980). (M. Dutta) **81g:82063** 82A60 (82A30, 82A40)
- Semenov-Tjan-Schanskii, M. A. (with Reiman, A. G.; Frenkel', I. E.) Graded Lie algebras and completely integrable dynamical systems. (Russian) *Dokl. Akad. Nauk SSSR* **247** (1979), no. 4, 802-805. (V. Oproiu) **81h:58042** 58F07 (17B65, 17B70)
- (with Reiman, A. G.) Reduction of Hamiltonian systems, affine Lie algebras and Lax equations. *Invent. Math.* **54** (1979), no. 1, 81-100. (P. A. Kučment) **81h:58021** 58F07 (35Q20, 58F05, 58F06)
- (with Reiman, A. G.) A family of Hamiltonian structures, hierarchy of Hamiltonians and reduction for first-order matrix differential operators. (Russian) *Funkcional. Anal. i Priložen.* **14** (1980), no. 2, 77-78. (P. A. Kučment) **81h:58037** 58F07 (34C99)
- Semenzato, R. The Boltzmann equation: continuity of the solution with respect to initial data. *Lett. Math. Phys.* **4** (1980), no. 2, 123-130. (Author's summary) **81g:82035** 82A40 (45K05)
- Semeran, V. A. (with Gusev, Ju. M.) An algorithm for self-adaptation with control of possible failures in a control system. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* **1979**, no. 3, 168-174, 223 (Russian); translated as *Engng. Cybernetics* **17** (1979), no. 3, 122-128 (1980). (Authors' summary) **81h:93047** 93C40
- Semerdiva, Rosica I. Some boundary value problems for an equation of mixed type. (Russian) *Serdica* **5** (1979), no. 2, 123-127. (A. A. Novruzov) **81g:35091** 35M05
- Semetkov, L. A. ★Формации конечных групп. (Russian) [Formations of finite groups] Современная Алгебра. [Monographs in Modern Algebra] "Nauka", Moscow, 1978. 271 pp. (I. D. Macdonald) **81h:20021** 20D10
- ★Классические факторизации групп и колец. (Russian) [Classical factorizations of groups and rings] *Gomel'. Gos. Univ., Gomel'*, 1979. 65 pp. (M. Kilp) **81h:20029** 20D30 (16A40)
- Semičev, A. Ja. (with Beljakov, Ju. M.; Fafurin, A. V.) Laminar boundary layer development in nozzles with turbulent outflow. *Izv. Vys. Uchebn. Zaved. Aviaci. Tehn.* **23** (1980), no. 1, 23-27 (Russian); translated as *Soviet Aeronaut.* **23** (1980), no. 1, 18-21. (Authors' summary) **81j:76047** 76F10
- Semiguk, V. M. (with Lebedev, L. P.) The behavior of the solution of the problem of linear

- viscoelasticity as $t \rightarrow \infty$. (Russian) *Izv. Severo-Kavkaz. Nauch. Centra Vys. Shkoly Ser. Estest. Nauk.* 1980, no. 2, 20–22, 109. (W. Kecs) **81k:73027** 73F15 (35Q99)
- Semla, S. I. (with Gel'fat, Ju. M.) The mass force effect on the dispersion phase distribution in a two-phase liquid cylindrical vortex. (Russian. English summary) *Lavofas PSR Zindiq. Akad. Vsesit Fiz. Tehn. Zindiq. Ser.* 1980, no. 1, 69–76, 128. (N. N. Janenko) **81j:76080** 76S05
- Semolentso, V. P. (with Sobolev, V. L.; Jacenko, A. A.) Nonequilibrium states in ferromagnetic substances upon nonresonant excitation of spin waves by alternating magnetic field. *Z. Eksp. Teoret. Fiz.* 77 (1979), no. 6, 2324–2330 (Russian); translated as *Soviet Phys. JETP* 50 (1979), no. 6, 1119–1122 (1980). (From the summary) **81d:81128** 81Hxx
- Semenov, Alexander See Semenov, A. T.
- Semmler, Klaus-Dieter (with Benko, Kornel; Kothe, Monika; Simon, Udo) Eigenvalues of the Laplacian and curvature. *Colloq. Math.* 42 (1979), 19–31. (R. S. Millman) **81d:53028** 53C20 (10D24, 30F30)
- Semotjuk, V. N. (with Blazhevič, B. I.; Vasil'ev, E. D.) A rational form of representation of a mathematical model of a nonlinear circuit with linear elements. (Russian. English summary) *Teoret. Elektrotehn.* No. 28 (1980), 119–128, 170. (Authors' summary) **81m:94025** 94C05
- Sempl, Carlo L'opération d'élagage. (Italian summary) *Ann. Univ. Ferrara Sez. VII (N.S.)* 25 (1979), 63–68. (J. Aczél) **81f:94012** 94A17 (10A22)
- A counterexample about Lewis's principle. (Italian summary) *Rend. Mat.* (6) 12 (1979), no. 3–4, 457–463 (1980). (Author's summary) **81i:82009** 82A05
- Sen, A. Eprel (with Tokad, Yilmaz) Shorted terminal matrices. (Turkish summary) *Istanbul Tek. Univ. Bil. Sci.* 32 (1979), no. 1, 39–48. (Authors' summary) **81f:94032** 94C05
- (with Tokad, Yilmaz) The existence and the determination of terminal equations for hybrid connected n -ports. *Internat. J. Circuit Theory Appl.* 8 (1980), no. 3, 205–217. (Authors' summary) **81f:94033** 94C05
- Sen, A. H. The priority method and separation problems. (Russian) *Dokl. Akad. Nauk SSSR* 248 (1979), no. 6, 1309–1313. (G. N. Kobzev) **81b:03046** 03D25
- Sen, A. K. (with Ahmed, Nasiruddin) Stability and control of a trap mode in synchronous orbit. *IEEE Trans. Aerospace Electron. Systems* 16 (1980), no. 4, 474–480. (Authors' summary) **81e:70029** 70M05
- Sen, A. R. Relative efficiency of estimators of the mean of a normal distribution when coefficient of variation is known. *Biometrical J.* 21 (1979), no. 2, 131–137. (Rasul A. Khan) **81f:62056** 62F10
- (with Gerig, Thomas M.) MLE in two normal samples with equal but unknown population coefficients of variation. *J. Amer. Statist. Assoc.* 75 (1980), no. 371, 704–708. (Authors' summary) **81j:62061** 62F10
- Sen, Amartya See Farkas, Daniel R.; et al., **81d:90011**
- Sen, Amitabha (with Ashtekar, Abhay) On the role of space-time topology in quantum phenomena: superselection of charge and emergence of nontrivial vacua. *J. Math. Phys.* 21 (1980), no. 3, 526–533. (J.-P. Antoine) **81i:83030** 83C50 (81D05, 81E10)
- Sen, D. K. The special-relativistic velocity-addition law and a related functional equation. *Internat. J. Theoret. Phys.* 18 (1979), no. 3, 179–184. (Mary L. Boas and R. P. Boas, Jr.) **81a:83004** 83A05 (39B40)
- Sen, Dilip Kumar A note on positive operators on Banach spaces. *An. Ştiinţ. Univ. "Al. I. Cuza" Iaşi Sect. I a Mat. (N.S.)* 26 (1980), no. 1, 43–45. (G. M. Ustinov) **81f:47030** 47B15
- Sen, K. K. Life of Einstein. *Math. Medley* 7 (1979), no. 1, 8–12. (Editors) **81j:01043** 01A70
- (with Wilson, S. J.) Light scattering by an optically thin inhomogeneous, spherically-symmetric planetary atmosphere: brightness at the zenith near the terminator. *Astrophys. and Space Sci.* 71 (1980), no. 2, 405–410. (Authors' summary) **81h:70024** 78A45 (85A99)
- Sen, Kanwar (with Prajeshu) Joint distribution of crossings and their runs. *Metron* 35 (1977), no. 1–2, 181–188 (1979). (Authors' summary) **81m:60134** 60J15 (62G10)
- (with Gupta, A.) A two-dimensional random walk in the presence of a multiple-function barrier. *Metron* 35 (1977), no. 1–2, 189–203 (1979). (Authors' summary) **81m:60130** 60J15
- (with Saran, Jagdish) On the fluctuations of partial sums. (German and Russian summaries) *Math. Operationsforsch. Statist. Ser. Statist.* 10 (1979), no. 3, 469–478. (G. C. Jain) **81h:60096** 60J15 (90A08)
- (with Saran, Jagdish) On the joint distribution of some rank order statistics. (French and Italian summaries) *Statistica (Bologna)* 40 (1980), no. 2, 235–240. (P. K. Sen) **81i:62079** 62G10
- Sen, M. K. (with Dutta, T. K.) On pseudo-ideals of groups. *An. Ştiinţ. Univ. "Al. I. Cuza" Iaşi Sect. I a Mat. (N.S.)* 25 (1979), no. 2, 269–272. (Hugo S. Sun) **81d:20056** 20M12 (20F26)
- Sen, Neeraj (with Sacks, Richard) Fault diagnosis for linear systems via multifrequency measurements. Special issue on automatic analog fault diagnosis. *IEEE Trans. Circuits and Systems* 26 (1979), no. 7, 457–465. (Authors' summary) **81a:94051** 94C05
- Sen, P. K. Brillouin instability in magnetoactive n -type piezoelectric semiconductors. *Phys. Rev. B* (3) 21 (1980), no. 8, 3604–3609. (From the summary) **81a:82047** 82A65
- Sen, Pranab Kumar On some distribution-free tests for affine symmetry. *Calcutta Statist. Assoc. Bull.* 27 (1978), no. 105–108, 59–79 (1979). (George C. S. Yu) **81g:62079** 62G10 (62G20)
- Time-sequential statistical procedures: a preface. Time-sequential statistical procedures. *Comm. Statist. A—Theory Methods* 7 (1978), no. 4, 311–314. (See **81i:62141**) 62N05 (62L10, 62M10, 62P10)
- (with Majumdar, Hiranmay) Nonparametric testing for simple regression under progressive censoring with staggering entry and random withdrawal. Time-sequential statistical procedures. *Comm. Statist. A—Theory Methods* 7 (1978), no. 4, 349–371. (See **81i:62141**) 62G10 (62N05, 62P10)
- (with Gardiner, Joseph C.) Asymptotic normality of a class of time-sequential statistics and applications. Time-sequential statistical procedures. *Comm. Statist. A—Theory Methods* 7 (1978), no. 4, 373–388. (See **81i:62141**) 62G30 (62E20, 62M05, 62P10)
- Nonparametric tests for interchangeability under competing risks. *Contributions to statistics*, pp. 211–228, Reidel, Dordrecht, 1979. (André Antille) **81j:62086** 62G10 (62L10)
- (with Harrell, Frank E.) Statistical inference for censored bivariate normal distributions based on induced order statistics. *Biometrika* 66 (1979), no. 2, 293–298. (M. M. Siddiqui) **81g:62092** 62H12 (62G30, 62H15)
- (with Sinha, Agam Nath) Progressively censored tests for multiple regression based on weighted empirical distributions. *Calcutta Statist. Assoc. Bull.* 28 (1979), no. 109–112, 57–82. (G. K. Bhattacharyya) **81k:62061** 62G10 (62N05)
- Nonparametric repeated significance tests for some analysis of covariance models. Special issue on covariance. *Comm. Statist. A—Theory Methods* 8 (1979), no. 8, 819–841. (See **81e:62081**) 62G10 (62J10)
- The extended two-sample problem: nonparametric case. *J. Statist. Plann. Inference* 3 (1979), no. 4, 287–298 (1980). (I. R. Savage) **81e:62050** 62G20 (62G10)
- (with Gardiner, Joseph C.) Asymptotic normality of a variance estimator of a linear combination of a function of order statistics. *Z. Wahrsch. Verw. Gebiete* 50 (1979), no. 2, 205–221. (Jon A. Wellner) **81e:62055** 62G30 (62E20)
- On almost sure linearity theorems for signed rank order statistics. *Ann. Statist.* 8 (1980), no. 2, 313–321. (Endre Csáki) **81d:60041** 60F15 (62G99)
- (with Ghosh, Malay) On the Pitman efficiency of sequential tests. *Calcutta Statist. Assoc. Bull.* 29 (1980), no. 113–114, 65–72. (I. R. Savage) **81m:62082** 62G20 (62L10)
- On time-sequential point estimation of the mean of an exponential distribution. *Comm. Statist. A—Theory Methods* 9 (1980), no. 1, 27–38. (Malay Ghosh) **81d:62082** 62L12
- (with Tsong, Y.) On functional central limit theorems for certain continuous time parameter stochastic processes. *J. Multivariate Anal.* 10 (1980), no. 3, 371–378. (David J. Aldous) **81m:60052** 60F17 (60B10, 60G44)
- Asymptotic theory of some tests for a possible change in the regression slope occurring at an unknown time point. *Z. Wahrsch. Verw. Gebiete* 52 (1980), no. 2, 203–218. (Jana Jurečková) **81f:62087** 62G10 (62J05)
- See also Time-sequential statistical procedures, **81i:62141**
- Sen, Prodip (with Chidambaram, M. R.) Dolezal's theorem revisited. *Math. Systems Theory* 13 (1979/80), no. 1, 67–79. (G. W. Stewart) **81h:15011** 15A24
- Sen, S. K. Nonnegative integral solution of linear equations. *Proc. Indian Acad. Sci. Sect. A Math. Sci.* 89 (1980), no. 1, 25–33. (Author's summary) **81g:90067** 90C10 (65F10)
- Sen, Sephal Power series in several variables with coefficients and variables in a commutative Banach algebra. *Demonstratio Math.* 12 (1979), no. 3, 733–741. (V. Ganapathy Iyer) **81a:46065** 46J99 (32A05)
- Sen, Shankar On explicit reciprocity laws. *J. Reine Angew. Math.* 313 (1980), 1–26. (Helmut Koch) **81a:12018** 12B25 (10A10)
- Senatore, G. (with Tosi, M. P.) Theory of the surface dipole layer and of surface tension in liquids of charged particles. (Italian summary) *Nuovo Cimento B* (11) 56 (1980), no. 1, 169–186. (Authors' summary) **81i:82047** 82A50
- Senčenko, N. A. Sufficient conditions for high-order invariance. *Avtomat. i Telemekh.* 1980, no. 1, 22–27 (Russian); translated as *Automat. Remote Control* 41 (1980), no. 1, part 1, 15–19. (Author's summary) **81h:93038** 93C15
- Senčenko, I. K. A minimum principle of linear coupled thermoviscoelasticity. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A No. 12* (1979), 1016–1020, 1069. (J. Ignaczak) **81f:73098** 73U05 (49H05, 73F15)
- (with Karnauhov, V. G.) Thermodynamic theory of continua of a differential type with internal variables. (Russian) *Prikl. Meh.* 15 (1979), no. 8, 19–27, 140. (S. F. Surlan) **81f:73001** 73B30 (80A10)
- (with Karnauhov, V. G.) Extremal principles in connected linear thermoelasticity. (Russian) *Mat. Metody i Fiz.-Meh. Polja No. 12* (1980), 21–28, 120. (Authors' summary) **81f:73126** 73U05 (49H05)
- Senchenko, N. A. See Senčenko, N. A.
- Senda, Musuke Spectral factorization of a class of two-dimensional discrete rational density matrices. 1978 *IEEE International Symposium on Circuits and Systems* (New York, 1978), pp. 992–998, IEEE, New York, 1978. (Author's summary) **81e:93062** 93C55
- Sendler, W. On statistical inference in concentration measurement. *Metrika* 26 (1979), no. 2, 109–122. (Jon A. Wellner) **81f:62083** 62G30 (62E20, 62F12)
- Sendov, Bl. Some problems in Hausdorff approximation. (Russian) *The theory of the approximation of functions* (Proc. Internat. Conf., Kahuga, 1975) (Russian), pp. 322–329, "Nauka", Moscow, 1977. (T. Bojanov) **81a:41043** 41A50
- Best Hausdorff approximation with spline functions. *Fourier analysis and approximation theory* (Proc. Colloq., Budapest, 1976), Vol. II, pp. 725–734, Colloq. Math. Soc. János Bolyai, 19, North-Holland, Amsterdam, 1978. (L. L. Schumaker) **81c:41026** 41A15 (41A40)
- Approximation with monotonic operators in A -distance. *Linear spaces and approximation* (Proc. Conf., Math. Res. Inst., Oberwolfach, 1977), pp. 335–341, Internat. Ser. Numer. Math., 40, Birkhäuser, Basel, 1978. (J. P. Ferrier) **81c:41081** 41A65
- Sends, M. See Sands, Matthew
- Senéchal, Marjorie Color groups. *Discrete Appl. Math.* 1 (1979), no. 1–2, 51–73. (A. H. M. Hoare) **81d:20044** 20H15 (05B45)
- Seneta, E. Pascal and probability. *Interactive statistics* (Proc. Appl. Statist. Conf., Macquarie Univ., Sydney, 1979), pp. 225–234, North-Holland, Amsterdam, 1979. (See **81f:62083**) 01A45 (60–03)
- Round the historical work on Bienaymé. *Austral. J. Statist.* 21 (1979), no. 3, 209–220. (H. L. Seal) **81e:62083** 62–03 (01A55, 60–03)
- Sengupta, A. (with Karnick, H.) Analysis of the neutron slowing down equation. *J. Math. Phys.* 19 (1978), no. 12, 2563–2569. (C. V. Pao) **81b:82012** 82A75 (42C30)
- (with Ganguly, K.) Inverse eigenvalue problem for a finite multiplying slab. *J. Phys. A* 13 (1980), no. 7, 2341–2352. (Authors' summary) **81e:82073** 82A70
- Sengupta, Abhijit (with Srimani, Pradip K.) Algebraic determination of circuits in a directed graph. *Internat. J. Systems Sci.* 10 (1979), no. 12, 1409–1413. (Authors' summary) **81b:94080** 94C15 (94C05)
- (with De, Nanda Kisor; Bandyopadhyay, Subir; Srimani, P. K.) Checking p - t diagnosability of a system. *Comput. Electr. Engrg.* 7 (1980), no. 3, 157–162. (Authors' summary) **81m:68005** 68A05
- (with De, Nanda Kisor; Bandyopadhyay, Subir; Srimani, Pradip K.) A new

- method to test system diagnosability. *Inform. Sci.* **22** (1980), no. 2, 131-138. (Authors' summary) **81m:68006** 68A05
- (with De, Nanda Kisor; Bandyopadhyay, Subir; Srimani, Pradip K.) On certain investigations on self-diagnosable systems. *Internat. J. Systems Sci.* **11** (1980), no. 3, 363-375. (Authors' summary) **81b:68002** 68A05 (68J05)
- Sengupta, Bhaskar** Maintenance policies under imperfect information. *European J. Oper. Res.* **5** (1980), no. 3, 198-204. (Authors' summary) **81i:90095** 90B25
- Sengupta, Dipak L.** (with Martins-Camelo, Luis F.) Theory of dielectric-filled edge-slot antennas. *IEEE Trans. Antennas and Propagation* **28** (1980), no. 4, 481-490. (From the summary) **81e:78040** 78A50
- Sengupta, Jati K.** Adaptive stochastic programming models in economic systems. *Proceedings of the First International Conference on Mathematical Modeling (St. Louis, Mo., 1977)*, Vol. 1, pp. 196-206. Univ. Missouri-Rolla, Rolla, Mo., 1977. (From the introduction) **81j:90093** 90C15 (90A11)
- Complementarity theorems in stochastic programming. *Internat. J. Systems Sci.* **10** (1979), no. 10, 1081-1095. (R. Jagannathan) **81d:90183** 90C33 (90A15, 90C15, 90C50)
- Testing and validation problems in stochastic linear programming. *J. Cybernet.* **9** (1979), no. 1, 17-42. (G. S. Tarasenko) **81d:90086** 90C15
- Constrained games as complementary eigenvalue problems. *J. Math. Anal. Appl.* **73** (1980), no. 2, 301-314. (M. Mañás) **81c:90093** 90D05
- Sengupta, M.** (with Banerjee, H.) Transverse momentum cut-off hypothesis in high energy scattering in perturbation theory. *Phys. Lett. B* **93** (1980), no. 3, 277-280. (Authors' summary) **81i:81116** 81F20 (81E99)
- Sengupta, Manimay** The knowledge assumption in the theory of strategic voting. *Econometrica* **48** (1980), no. 5, 1301-1304. (From the text) **81f:90011** 90A08
- Sen Gupta, Prabir Kumar** On a selfadjoint extension of a type of a matrix differential operator. *J. Indian Inst. Sci.* **60** (1978), no. 10, 225-234. (Richard Brown) **81b:34018** 34B25
- Integrable-square solutions of certain vector-matrix differential equations. *J. Indian Inst. Sci.* **60** (1978), no. 10, 235-245. (Richard Brown) **81b:34019** 34B25 (81C05)
- The spectrum of a matrix differential operator. *J. Indian Inst. Sci.* **62** (1980), no. 2, 43-46. (William N. Everitt) **81j:34039** 34B25
- Sengupta, Pran Ranjan** (with Bhattacharyya, S.) On Lamb's problem in a magneto-viscoelastic initially stressed conducting medium. *Acta Clenc. Indica* **4** (1978), no. 2, 180-184. (M. Fabrizio) **81a:73051** 73R05 (35Qxx)
- (with Chakrabarti, Jayasree) Some problems of micropolar theory of elasticity. I. Lamb's problem—line load suddenly applied on a micropolar elastic half-space. I. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Tech.* **27** (1979), no. 1, 1-8. (Giovanni P. Galdi) **81b:7302a** 73B25 (73S99)
- (with Chakrabarti, Jayasree) Some problems of micropolar theory of elasticity. I. Lamb's problem—line load suddenly applied on a micropolar elastic half-space. II. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Tech.* **27** (1979), no. 2, 111-119. (Giovanni P. Galdi) **81b:7302b** 73B25 (73S99)
- (with Chakrabarti, Jayasree) Some problems of micropolar theory of elasticity. III. Propagation of micropolar elastic waves in infinite elastic space containing cylindrical cavity with co-axial cylindrical shell surrounding cavity. Parts I, II. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Tech.* **27** (1979), no. 5-6, 437-445, 447-454. (Authors' summary) **81c:73054** 73S99
- (with Bhattacharyya, S. K.) Hydromagnetic flow of two immiscible viscoelastic Maxwell fluids through a nonconducting rectangular channel. *Rev. Roumaine Sci. Tech. Sér. Méc. Appl.* **25** (1980), no. 2, 171-181. (Authors' summary) **81d:76109** 76W05 (76A10)
- Sengupta, S.** (with Adhikari, A. K.; Roy, Jogabrata) Estimates of parameters of grain-size distribution from weight frequencies. *J. Internat. Assoc. Math. Geol.* **12** (1980), no. 3, 247-265. (Authors' summary) **81m:62042** 62F10 (62P99, 86A99)
- Sengupta, Uday K.** (with Gerlach, Ulrich H.) Gauge-invariant coupled gravitational, acoustical, and electromagnetic modes on most general spherical space-times. *Phys. Rev. D* **3** (1980), no. 6, 1300-1312. (Brian O. J. Tupper) **81m:83032** 83C50 (83C40)
- Senichik, Ju. É.** A generalized method of finite integral transformations in problems of the dynamic theory of elasticity. (Russian) *Approximate methods for investigating differential equations and their applications*, No. 4 (Russian), pp. 66-77, 135-136. Kuibyshev. Gos. Univ., Kuibyshev, 1978. (W. Kecs) **81j:73034** 73D99 (35J25, 44A99, 73C99)
- Seniklin, V. N.** Subharmonic functions and the analytic structure in the space of maximal ideals of a uniform algebra. (Russian) *Mat. Sb. (N.S.)* **100** (1979), no. 1, 115-133, 144. (J. Benkö) **81m:46077** 46J15 (30H05, 31C05, 32E25)
- Senigaglia, E.** (with Massaria, C.) On the explicit solution of a manpower staffing problem. (Italian) *Proceedings of the First AMASES Meeting (Pisa, 1977)* (Italian), pp. 241-259. Giappichelli, Turin, 1979. (Erol Gelenbe) **81j:90044** 90B05 (90C10)
- Senin, A. G.** A statistical optimization of the radiation pattern of an array antenna. *Radiotekhn. i Elektron.* **24** (1979), no. 9, 1739-1747 (Russian); translated as *Radio Engng. Electron. Phys.* **24** (1979), no. 9, 18-25 (1980). (Authors' summary) **81k:78016** 78A50
- Senin, A. I.** See Haruthi, Henning F. **81b:94014**
- Senior, Thomas B. A.** Some problems involving imperfect half planes. *Electromagnetic scattering*, pp. 185-219. Academic Press, New York, 1978. (E. Löneburg) **81f:78017** 78A45
- Senjanović, Pavlo** (with Blagojević, M.) A one-potential formulation of the quantum field theory of magnetic poles. *Nuclear Phys. B* **161** (1979), no. 1, 112-124. (R. Hoegh-Krohn) **81k:81094** 81G10 (81E99)
- Senkevich, A. A.** (with Pasternak, V. E.; Julkanov, A. A.; Jalilov, Ju. I.) Thermal slip of a moderately dense gas along a flat surface. *Inž.-Fiz. Ž.* **37** (1979), no. 2, 273-277 (Russian); translated as *J. Engng. Phys.* **37** (1979), no. 2, 933-936 (1980). (Authors' summary) **81f:76042** 76P05 (82A40)
- Senkevich, S. L.** (with Kirilenko, A. A.) Conditionality of some electrodynamic equation systems of the first kind and the phenomenon of the "relative convergence". *Radiotekhn. i Elektron.* **24** (1979), no. 7, 1301-1307 (Russian); translated as *Radio Engng. Electron. Phys.* **24** (1979), no. 7, 46-51 (1980). (Authors' summary) **81g:78036** 78A50
- Senkevich, A. A.** See Senkevich, S. L.
- Senkevich, S. L.** See Senkevich, S. L.
- Sennott, L. I.** Extending complete continuous pseudometrics. *Colloq. Math.* **41** (1979), no. 2, 237-241. (J. E. Vaughan) **81m:54024** 54C45 (54E15)
- Ses'o, P. S.** Application of the majorant principle to Runge type iteration methods. (Ukrainian. Russian summary) *Visnik L'viv. Derž. Univ. Ser. Meh.-Mat. No. 12* (1977), 61-63, 96. (E. G. Djakovon) **81b:65058** 65J15
- (with Bartš, M. Ja.) Recursive iteration processes of Runge type. (Russian. English summary) *Vysš. Prikl. Mat. (Kiev)* **39** (1979), 149-154, 176. (Authors' summary) **81b:65055** 65J15 (47H17, 65H10)
- Sera-Santa, Euthymia** See Bora-Santa, Euthymia
- Sentilles, F. Dennis** Stone space representation of vector functions and operators on L^1 . *Measure theory, Oberwolfach 1979* (Proc. Conf., Oberwolfach, 1979), pp. 470-473. *Lecture Notes in Math.*, 794, Springer, Berlin, 1980. (J. J. Uhl, Jr.) **81g:28017** 28C20 (47B38)
- Sentis, Rémi** Sur l'approximation d'un processus de transport par une diffusion. (English summary) *Stochastic control theory and stochastic differential systems* (Proc. Workshop, Deutsch. Forschungsgemeinschaft., Univ. Bonn, Bad Honnef, 1979), pp. 566-579. *Lecture Notes in Control and Information Sci.*, 16, Springer, Berlin, 1979. (G. Papanicolaou) **81b:60104** 60J60 (82A70)
- (with Kaulgud, N. N.) Feedback discrétisé pour un problème de contrôle en temps optimal. (English summary) With comments by P. Bernhard. *RAIRO Automat.* **14** (1980), no. 1, 87-94. (Authors' summary) **81d:93047** 93C99 (49A36)
- Seo, Koichi** (with Okawa, Masanori) Field-strength description of nonabelian gauge theories. *Phys. Rev. D* **3** (1980), no. 6, 1614-1619. (Authors' summary) **81a:81057** 81E10
- Sepehroori, K.** (with Carey, G. F.) Gershgorin theory for stiffness and stability of evolution systems and convection-diffusion. *Comput. Methods Appl. Mech. Engrg.* **22** (1980), no. 1, 23-48. (Authors' summary) **81d:65054** 65M10
- Šepienko, V. N.** Potential flow of an ideal incompressible fluid around a body of revolution. (Russian) *Izv. Sibirsk. Otdel. Akad. Nauk SSSR Ser. Tehn. Nauk* **1980**, no. 8, 108-113, 169. (Authors' summary) **81b:76013** 76B99
- Šepeljanskij, D. L.** (with Izrael', F. M.) Quantum resonance for the rotator in a nonlinear periodic field. (Russian. English summary) *Teoret. Mat. Fiz.* **43** (1980), no. 3, 417-428. (K. Kumar) **81k:81015** 81C05 (81D99)
- Šeper, Kajetan** Algorithmic constructions inspired by Caporaso. *Publ. Inst. Math. (Beograd) (N.S.)* **25** (39) (1979), 210-218. (From the summary) **81a:68040** 68C05 (03D05)
- Seppälä, Mika** Bers' Teichmüller spaces of Klein surfaces. *Complex analysis Joensuu 1978* (Proc. Colloq., Univ. Joensuu, Joensuu, 1978), pp. 358-365. *Lecture Notes in Math.*, 747, Springer, Berlin, 1979. (C. Earle) **81b:32010** 32G15 (30F40)
- Serflin, Carlo H.** Twisted prismatic Klein bottles. *Amer. Math. Monthly* **87** (1980), no. 4, 269-277. (Mark D. Meyerson) **81b:57006** 57N05
- Sera, Katsushi** (with Ichinose, Ikuro) Canonical quantization of gauge fields in the axial gauge with indefinite metric: basic formulation for perturbation calculation. *Phys. Rev. D* **3** (1980), no. 4, 982-992. (Authors' summary) **81b:81096** 81E99 (81G05)
- konstantinidos-Serafinidis, Maria** See Konstantinidos-Serafinidis, Maria
- Serafin, Stanisław** (with Zwonek, Małgorzata) Some remarks on congruences in multiplicative systems. *Wyż. Szkoła Ped. Krakow. Rocznik Nauk.-Dydakt. Prace Mat.* **9** (1979), 147-158. (G. Čupona) **81g:20104** 20L05
- Serafini, P.** (with Marzollo, Angelo; Pascoletti, A.) Genericity and singularities in vector optimization. *Recent developments in variable structure systems, economics and biology* (Proc. US-Italy Sem., Taormina, 1977), pp. 201-213. *Lecture Notes in Econom. and Math. Systems*, 162, Springer, Berlin, 1978. (Carl P. Simon) **81j:58034** 58E17 (58C27, 59C31)
- Seraji, H.** Design of pole-placement compensators for multivariable systems. *Automatica* — *J. IFAC* **16** (1980), no. 3, 335-338. (Authors' summary) **81d:93037** 93C35
- Pole placement in multivariable systems using proportional-derivative output feedback. *Internat. J. Control* **31** (1980), no. 1, 195-207. (T. Kaczorek) **81b:93033** 93C35
- Seralev, N. K.** (with Daleckiĭ, Ju. L.) First-order equations for measures and chains in an infinite-dimensional space. (Russian) *Izv. Akad. Nauk UzSSR Ser. Fiz.-Mat. Nauk* **1980**, no. 2, 20-24, 90. (W. A. Woyczyński) **81k:35157** 35R15 (58D25)
- Serban-Tofan, Doina** Spaces of regular operators. (Romanian. French summary) *Stud. Cerc. Mat.* **30** (1978), no. 4, 471-476. (N. Popa) **81k:46006** 46A40 (47D15)
- Serbin, Cynthia A.** (with Serbin, Steven M.) A time-stepping procedure for $\dot{X} = A_1 X + X A_2 + D$, $X(0) = C$. *IEEE Trans. Automat. Control* **25** (1980), no. 6, 1138-1141. (Authors' summary) **81m:65124** 65L05
- Serbin, Steven M.** (with King, J. Thomas) Computational experiments and techniques for the penalty method with extrapolation. *Math. Comp.* **32** (1978), no. 141, 111-126. (Authors' summary) **81c:65052** 65N15
- Rational approximations of trigonometric matrices with application to second-order systems of differential equations. *Appl. Math. Comput.* **5** (1979), no. 1, 75-92. (Authors' summary) **81g:65101** 65L05 (65D25)
- (with Baker, Garth A.; Douglas, Vassilios A.) High order accurate two-step approximations for hyperbolic equations. (French summary) *RAIRO Anal. Numér.* **13** (1979), no. 3, 201-226. (David Gottlieb) **81k:65044** 65M05
- (with Douglas, Vassilios A.) Some remarks on a class of rational approximations to the cosine. *BIT* **20** (1980), no. 2, 204-211. (John P. Coleman) **81j:65086** 65L07 (41A20)
- On a fourth-order unconditionally stable scheme for damped second-order systems. *Comput. Methods Appl. Mech. Engrg.* **23** (1980), no. 3, 330-340. (Authors' summary) **81g:65102** 65L05
- (with Serbin, Cynthia A.) A time-stepping procedure for $\dot{X} = A_1 X + X A_2 + D$, $X(0) = C$. *IEEE Trans. Automat. Control* **25** (1980), no. 6, 1138-1141. (Authors' summary) **81m:65124** 65L05
- On factoring a class of complex symmetric matrices without pivoting. *Math. Comp.* **35** (1980), no. 152, 1231-1234. (Eugene L. Wachspress) **81i:65025** 65F05
- (with Douglas, Vassilios A.) On the superconvergence of Galerkin approximations to second-order hyperbolic equations. *SIAM J. Numer. Anal.* **17** (1980), no. 3, 431-446. (L. Fox) **81j:65106** 65M99
- Serbinowski, Mirosław** (with Bryszewski, Józef) On the minimal displacement under admissible maps. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math.* **27** (1979),

- no. 2, 201-207. (Gencho Skordev) **81h:55002** 55M20 (54C60)
- Serikov, A. V. (with Zijadullaev, N. S.) Some problems of estimating the amount of calculation involved in problems of scheduling theory. (Russian) *Voprosy Vychisl. i Prikl. Mat. (Tashkent)* No. 57 (1979), 153-163, 172. (From the text) **81e:90049** 90B30 (68C15)
- Serdjukov, A. N. (with Bokut', B. V.; Gvozdev, V. V.) Excitation of plasma waves in a medium with nonlinear optical activity. (Russian. English summary) *Dokl. Akad. Nauk BSSR* 24 (1980), no. 11, 983-985, 1052. (Authors' summary) **81h:78009** 78A40 (82A45)
- Serdjukov, A. R. ★Петр Николаевич Лебедев (1866-1912). (Russian) [Petr Nikolaevič Lebedev (1866-1912)] Научно-Биографическая Литература. [Scientific Biography Series] "Nauka", Moscow, 1978. 328 pp. (D. ter Haar) **81e:01027** 01A70
- Serebrjany, E. M. See Serebrjany, E. M.
- Serebrjany, E. P. An inverse problem of the scattering theory for difference equations with matrix coefficients. (Russian) *Dokl. Akad. Nauk SSSR* 250 (1980), no. 3, 562-565. (A. Climescu) **81g:39003** 39A99 (15A18, 47B40)
- Serebrjany, V. V. (with Balaurova, V. N.) Analysis of a vertical axisymmetric cavitating flow around a body. A translation of *Gidromekh.* 40 (1979), 25-28. *Fluid Mech.—Soviet Res.* 8 (1979), no. 5, 33-37. (Authors' summary) **81e:76006** 76B10
- Serebrjany, E. M. (with Frolov, V. P.) Quantum effects in systems with accelerated mirrors. *J. Phys. A* 12 (1979), no. 12, 2415-2428. (S. G. Mamaev) **81e:81087** 81M05 (35L20, 81E99)
- Serebrjany, V. V. See Serebrjany, V. V.
- Sereda, N. V. Fundamental frequencies and forms of the principal longitudinal-torsion vibrations of shaft support and counterbalancing cables of variable length. (Russian) *Dinamika i Prochnost' Mašin* No. 32 (1980), 103-111, 6. (Author's summary) **81h:70016** 70K99
- Serednik, A. V. (with Gol'denberg, L. M.; Klimontov, V. E.) Recursive methods of construction of interpolating spline functions. *Automat. i Telemekh.* 1979, no. 3, 173-176. (Russian. English summary); translated as *Automat. Remote Control* 40 (1979), no. 3, part 2, 467-470. (Derek W. Arthur) **81h:65011** 65D07 (94A15)
- Seremet, M. M. (with Gal', Ju. M.) The growth of functions analytic in the half plane which are prescribed by Dirichlet series. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* 1978, no. 12, 1065-1067, 1150. (A. V. Bratšev) **81d:30004** 30B50
- (with Kondratjuk, A. A.) Asymptotic behavior of a class of entire functions with a transitively measurable zero sequence. (Russian) *Teor. Funkcii Funkcional. Anal. i Prilozhen.* No. 30 (1978), 67-71, iii. (A. È. Eremenko) **81h:30051** 30D15
- Properties of entire functions prescribed by Dirichlet series and their derivatives. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* No. 12 (1979), 993-996, 1068. (C. Tanaka) **81e:30050** 30D15 (30B50)
- Rational approximation on $[0, \infty)$ of entire functions of arbitrary growth with nonnegative Taylor coefficients. (Russian) *Ukrain. Mat. Ž.* 31 (1979), no. 3, 303-311, 335. (L. I. Hedberg) **81e:41027** 41A20
- Asymptotic properties of entire functions, given by Dirichlet series, and their derivatives. (Russian) *Ukrain. Mat. Ž.* 31 (1979), no. 6, 723-730, 767. (Shlomo Streit) **81e:30004** 30B50
- The growth in an angle of entire functions represented by lacunary series. (Russian) *Sibirsk. Mat. Ž.* 21 (1980), no. 3, 197-208, 238. (W. K. Hayman) **81h:30029** 30D15
- The k -logarithmic density of a sequence, and its application to entire functions. III. (Russian) *Teor. Funkcii Funkcional. Anal. i Prilozhen.* No. 33 (1980), 135-141. (C. Tanaka) **81e:30039** 30D15 (30D20)
- Serene, J. W. (with Muzikar, Paul; Sauls, J. A.) 3P_2 pairing in neutron-star matter: magnetic field effects and vortices. *Phys. Rev. D* (3) 21 (1980), no. 6, 1494-1502. (Authors' summary) **81a:81093** 81G10
- Serov, V. G. A variational Dirichlet problem for quasiconformal homeomorphisms. (Russian) *Questions in the metric theory of mappings and its application (Proc. Fifth Collq. Quasiconformal Mappings, Generalizations Appl., Donetsk, 1976)* (Russian), pp. 157-160, 187, "Naukova Dumka", Kiev, 1978. (Matti Lehtinen) **81a:30017** 30C70
- Locally extremal quasiconformal mappings. (Russian) *Dokl. Akad. Nauk SSSR* 250 (1980), no. 6, 1338-1340. (R. Kühnau) **81e:30030** 30C60 (30C70)
- Serezhnik, V. N. (with Zaslavskii, A. E.) ★Конечные линейные группы, порожденные отражениями, над полем нечетных характеристик. (Russian) [Finite linear groups generated by reflections over fields of odd characteristics] *Akad. Nauk Belarus. SSR, Inst. Mat., Minsk*, 1979. 60 pp. (Ju. I. Merzjakov) **81a:20053** 20G40 (20H30)
- Serfling, R. J. (with Boos, Dennis D.) A note on differentials and the CLT and LIL for statistical functions, with application to M -estimates. *Ann. Statist.* 8 (1980), no. 3, 618-624. (Rudolph J. Beran) **81f:62038** 62E20 (62G05)
- On the strong law of large numbers and related results for quasistationary sequences. (Russian summary) *Teor. Veroyatnost. i Primenen.* 25 (1980), no. 1, 190-194. (F. Móricz) **81e:60040** 60F15
- Serforn, Richard F. An equivalence between continuous and discrete time Markov decision processes. *Oper. Res.* 27 (1979), no. 3, 616-620. (From the text) **81j:90127** 90C40
- High-level exceedances of regenerative and semiregulatory processes. *J. Appl. Probab.* 17 (1980), no. 2, 423-431. (M. Zähle) **81h:60050** 60G17 (60G55, 60J30, 60K05)
- Sergachev, O. V. On the analysis of dynamic operating modes of deterministic automata. *Automat. i Vychisl. Tehn. (Riga)* 1979, no. 4, 15-20, 91 (Russian); translated as *Automat. Control Comput. Sci.* 13 (1979), no. 4, 13-17. (Author's summary) **81h:68039** 68D05 (94C99)
- Sergeant, G. (with Dang, Ng. X.) Système et langage portable pour le traitement d'applications réparties sur un réseau hétérogène. *Langages et traducteurs (Papers, IRIA Sem., Rocquencourt, 1977)*, pp. 19-35, IRIA, Rocquencourt, 1977. (See **80c:68002**) 68B20
- Sergeev, A. G. (with Henkin, G. M.) Uniform estimates of the solutions of the $\bar{\partial}$ -equation in pseudoconvex polyhedra. (Russian) *Mat. Sb. (N.S.)* 112(154) (1980), no. 4(8), 522-567. (Harold P. Boas) **81h:35118** 35N15 (32F20)
- Sergeev, I. N. The interior of a set of systems of differential equations with a stable Ljapunov exponent. (Russian) *Differentsial'nye Uravneniya* 16 (1980), no. 6, 1135-1137, 1151. (C. Corduneanu) **81h:34056** 34D05
- Invariance of central exponents with respect to perturbations which approach zero at infinity. (Russian) *Differentsial'nye Uravneniya* 16 (1980), no. 9, 1719, 1728. (Wolfgang Hahn) **81m:34065** 34D05
- Sergeev, Ju. A. (with Poljatin, A. D.) Diffusion to an absorbing particle with mixed kinetics. *Prikl. Mat. Meh.* 41 (1977), no. 4, 667-677 (Russian); translated as *J. Appl. Math. Mech.* 41 (1977), no. 4, 681-691 (1978). (Author's summary) **81d:80008** 80A20 (35K55)
- Sergeev, V. L. Using estimates of local approximation of probability density. *Automat. i Telemekh.* 40 (1979), no. 7, 56-61 (Russian. English summary); translated as *Automat. Remote Control* 40 (1979), no. 7, part 1, 991-995. (Author's summary) **81h:62054** 62G05
- Sergeev, V. S. A family of periodic solutions of equations of motion of a solid body with a fixed point. (Russian) *Theory of stability and its applications (Russian)*, pp. 206-214, 302, "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. (I. A. Gaiullina) **81e:70077** 70E15 (34C25)
- (with Wang, Tan Chih; Stepanov, S. Ja.) Computer solution of a problem of stability. (Russian) *Theory of stability and its applications (Russian)*, pp. 255-260, 303, "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. (A. A. Martinjuk) **81e:65087** 65L07
- See also Rousche, Nicolas; et al. **81e:34055**
- Sergeeva, N. D. (with Karpova, L. M.) al-Marrakūl's graph of a function. (Russian) *Istor.-Mat. Issled.* No. 23 (1978), 231-234, 359. (E. S. Kennedy) **81d:01002** 01A30
- Sergel'nik, V. V. Finitely generated groups with prime-order commutator. (Russian) *Ukrain. Mat. Ž.* 30 (1978), no. 6, 789-796, 861. (D. I. Zaicev) **81j:20049** 20F12
- Sergitskii, I. V. (with Bikov, V. M.) A method of solving problems of discrete programming approximately. (Russian. English summary) *Kibernetika (Kiev)* 1978, no. 3, 75-80. (N. B. Lebedinskaja) **81h:90108** 90C10 (65K05)
- (with Ročkin, V. O.) The approximate solution of some mathematical programming problems with a special structure of the matrix of conditions. (Russian. English summary) *Kibernetika (Kiev)* 1978, no. 6, 63-66. (M. Vlach) **81h:90137** 90C30
- (with Kaspickaya, M. F.) Concept of linearity and convexity in a discrete space. Combinatorial linear problems. II. *Kibernetika (Kiev)* 1980, no. 1, i, 1-5, 149 (Russian); translated as *Cybernetics* 16 (1980), no. 1, 1-6. (Authors' summary) **81h:90065** 90C10
- (with Bikov, V. M.) A method for solving a generalized knapsack problem using parallel computations. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* 1980, no. 7, 84-87. (Authors' summary) **81h:68018** 68C05
- Sergitsen, V. (with Ghys, E.) Stabilité et conjugaison différentiable pour certains feuilletages. *Topology* 19 (1980), no. 2, 179-197. (Elmar Vogt) **81h:57022** 57R30
- Sergievskii, B. D. Addition of power outputs of an arbitrary number of amplifiers or oscillators, connected to a common load and having equivalent circuit with random elements. *Radioelektr. i Elektron.* 24 (1979), no. 9, 1778-1787 (Russian); translated as *Radio Engng. Electron. Phys.* 24 (1979), no. 9, 45-54 (1980). (Author's summary) **81h:94046** 94C05
- Sergin, V. V. The rate of convergence in the central limit theorem for m -dependent random variables. (Russian. English summary) *Teor. Veroyatnost. i Primenen.* 24 (1979), no. 4, 781-794. (Dominik Szynal) **81e:60024** 60F05
- Serres, Caroline (with Bowen, Rufus) Markov maps associated with Fuchsian groups. *Inst. Hautes Études Sci. Publ. Math.* No. 50 (1979), 153-170. (Troels Jørgensen) **81h:58026** 58F11 (30C60, 30F35)
- See also Bowen, Rufus. **81e:28010**
- serif, said Ahmed Serif See Naval Said Ahmed Serif
- Serikawa, Yuichi (with Nishida, Toshio; Yoneyama, Kanji) n queues in tandem attended by a single server. *Rep. Statist. Appl. Res. Un. Japan. Sci. Engrs.* 26 (1979), no. 1, 14-19. (Ralph L. Disney) **81h:60100** 60K25
- Serikhsan, A. U. An inverse mixed problem for a simple layer logarithmic potential. (Russian) *Differential equations and their applications (Russian)*, pp. 151-158, 169, "Fan", Tashkent, 1979. (J. Veselý) **81h:31007** 31A25
- Serlin, Alla Le The spectrum of a composition operator in $C(K)$. (Russian. English summary) *Vesci Akad. Nauk BSSR Ser. Fiz.-Mat. Nauk* 1979, no. 6, 44-48, 140. (F.-H. Vasilescu) **81d:47024** 47B38 (47A10)
- Serio, Gabriella A numerical method of parameter estimation for a class of nonlinear regression models. (Italian. English summary) *Atti Sem. Mat. Fis. Univ. Modena* 27 (1978), no. 2, 333-348 (1979). (D. V. Chopra) **81e:62076** 62J05 (65D10)
- Serkov, V. I. (with Celigov, N. A.) Analytic conditions for absolute stability and root sensitivity of nonlinear sampled-data systems. (Russian) *Theory of invariance and its application (Proc. Fifth All-Union Conf., Kiev, 1976)*, Part 2 (Russian), pp. 32-43, "Naukova Dumka", Kiev, 1979. (È. G. Al'breht) **81m:93063** 93D20
- Sermenev, A. M. Pseudopotentials of the Korteweg-de Vries equation. (Russian) *Usp. Mat. Nauk* 34 (1979), no. 3(207), 217-218. (J. Christina) **81h:35132** 35Q20 (58A15)
- Sanz Serna, J. M. See Sanz Serna, J. M.
- Sassani, Gadliel (with Lempel, Abraham) Factorization of symmetric matrices and trace-orthogonal bases in finite fields. *SIAM J. Comput.* 9 (1980), no. 4, 758-767. (Bradley W. Dickinson) **81h:15019** 15A23 (15A33)
- Serov, G. P. (with Komolov, S. V.; Makeev, S. P.; Šahnov, I. F.) Optimal control of a finite automaton with fuzzy constraints and a fuzzy target. *Kibernetika (Kiev)* 1979, no. 6, 30-34 (Russian); translated as *Cybernetics* 15 (1979), no. 6, 805-810 (1980). (Authors' introduction) **81j:90090** 90C15 (90C40, 93A15)
- Serov, V. S. Convergence of spectral expansions in generalized Besov classes. (Russian) *Mat. Zametki* 26 (1979), no. 6, 845-850, 972. (A. A. Arsen'ev) **81h:42028** 42C15 (35P10)
- Fundamental solution of a differential operator with a singularity. (Russian) *Differentsial'nye Uravneniya* 16 (1980), no. 3, 522-531, 575. (P. A. Mišnaevskii) **81f:35047** 35J70 (35C05, 35J40)
- Serpio, Maria Ezia An example of a 5-subcanonical curve that is not a complete intersection. (Italian. French and English summaries) *Atti Accad. Ligore Sci. Lett.* 35 (1978), 81-85 (1979). (O.-H. Keller) **81h:14017** 14H45
- Serrano Cruzat, Hernán Networks with dynamic characteristics. I. Computational aspects. (French and German summaries) *Rev. Roumaine Sci. Tech. Sér. Électrotech. Énerg.* 25 (1980), no. 2, 205-214, v, vii. (Author's summary) **81g:94052** 94C05
- Serrato, Dany (with Olivier, Jean-Pierre) Catégories de Dedekind. Morphismes transitifs

- dans les catégories de Schröder. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **290** (1980), no. 20, A939-A941. (Authors' summary) **81g:18009** 18B99
- Serre, D. Triplets de solutions d'une équation aux dérivées partielles elliptique non linéaire. (English summary) *Bifurcation and nonlinear eigenvalue problems* (Proc., Session, Univ. Paris XIII, Villetaneuse, 1978), pp. 283-296, *Lecture Notes in Math.*, 782, Springer, Berlin, 1980. (Jacques Robert) **81c:35067** 35J60 (35B32)
- Serre, Jean-Pierre Groupes algébriques associés aux modules de Hodge-Tate. *Journées de Géométrie Algébrique de Rennes*, (Rennes, 1978), Vol. III, pp. 155-188, *Astérisque*, 65, Soc. Math. France, Paris, 1979. (Kenneth A. Ribet) **81j:14027** 14L05 (12B25, 14G20)
- Un exemple de série de Poincaré non rationnelle. *Nederl. Akad. Wetensch. Indag. Math.* **41** (1979), no. 4, 469-471. (P. W. H. Lemmens) **81a:55014** 55P35 (10F99, 26C15)
- See also Cartan, Henri, **81c:01031** and Picard, Charles-Émile, **81j:01494**
- Servin, James Conceptual analysis of the classical second laws of thermodynamics. *Arch. Rational Mech. Anal.* **70** (1979), no. 4, 355-371. (David Owen) **81g:80002** 80A10
- Serstev, A. N. (with Muštari, D. H.) Les fonctions du triangle pour les espaces normés aléatoires. *General inequalities* (Proc. First Internat. Conf., Math. Res. Inst., Oberwolfach, 1976), I, pp. 255-260, Birkhäuser, Basel, 1978. (L. M. Kelly) **81d:60010** 60B99 (46B99)
- A noncommutative analogue of the space L_1 . (Russian) *Mathematical analysis* (Russian), pp. 112-123, Kazan. Gos. Univ., Kazan, 1978. (József Szűcs) **81g:46095** 46L50
- (with Trunov, N. V.) Conditional expectation in a scheme of noncommutative probability theory. (Russian) *Transactions of the Eighth Prague Conference on Information Theory, Statistical Decision Functions, Random Processes* (Prague, 1978), Vol. B, pp. 287-299, Reidel, Dordrecht, 1978. (József Szűcs) **81m:46090** 46L50
- See also Mathematical analysis, **81b:00006** and Constructive theory of functions and functional analysis, **81j:46002**
- Sersteva, L. A. Some fluctuation characteristics of excitability parameters. (Russian) *Probabilistic methods and cybernetics*, No. 14 (Russian), pp. 104-109, Kazan. Gos. Univ., Kazan, 1978. (Editors) **81b:92003** 92A09
- Sertel, Murat R. (with Van der Bellen, Alexander) Synopses in the theory of choice. *Econometrica* **47** (1979), no. 6, 1367-1389. (Dennis J. Packard) **81c:90033** 90A99 (90A08)
- (with Van der Bellen, Alexander) Computations in choice groupoids. *Aequationes Math.* **20** (1980), no. 2-3, 129-132. (R. D. Luce) **81g:90010** 90A06 (04A05, 20L99)
- Sertorio, Luigi See Hadronic matter at extreme energy density, **81e:81006**
- Servas, J. M. (with Chaisé, F.) Implosion, explosion, d'une cavité ellipsoïdale dans un fluide parfait incompressible occupant tout l'espace. (English summary) *J. Mécanique* **19** (1980), no. 1, 99-123. (Authors' summary) **81g:76007** 76B10
- Servedio, Frank J. Orbits in higher singular subvarieties of a hypersurface of a form. *J. Algebra* **61** (1979), no. 1, 178-188. (Wim H. Hesselink) **81a:14024** 14L30
- gourdina Servizero, A. See Gourdina Servizero, A.
- Servi, Mario A generalization of the exponential functor and its connections with the SH-formulas. (Italian summary) *Riv. Mat. Univ. Parma* (4) **5** (1979), part 1, 287-294 (1980). (R. H. Street) **81h:18009** 18D99 (03C05)
- Sesekin, A. N. (with Zavalishin, S. T.) On the question of the synthesis of sampled-data control in a problem of optimization of dynamical systems with quadratic quality criterion. (Russian) *Trudy Inst. Mat. i Meh. Ural. Naučn. Centr Akad. Nauk SSSR No. 32 Nekotorye Spozby Anal. Konstruirovanija Impul'snyh Reguljatorov* (1979), 3-8, 98. (Rolf Klötzler) **81c:93094** 93C57
- Estimation of the order of singularity of singular solutions of a problem of optimization of dynamic systems with quadratic quality criterion. (Russian) *Trudy Inst. Mat. i Meh. Ural. Naučn. Centr Akad. Nauk SSSR No. 32 Nekotorye Spozby Anal. Konstruirovanija Impul'snyh Reguljatorov* (1979), 9-15, 98. (Rolf Klötzler) **81c:93098** 93C99
- Optimization of integral quadratic deviation with a bounded control resource. (Russian) *Trudy Inst. Mat. i Meh. Ural. Naučn. Centr Akad. Nauk SSSR No. 32 Nekotorye Spozby Anal. Konstruirovanija Impul'snyh Reguljatorov* (1979), 16-33, 98. (Authors' summary) **81b:93016** 93C05 (70M05)
- Šeselin, S. V. (with Pobedra, B. E.) On the matrix of influence. (Russian. English summary) *Vestnik Moskov. Univ. Ser. I Mat. Meh.* **1979**, no. 6, 76-81, 108. (Authors' summary) **81b:73009** 73C99
- Seshadri, C. S. Geometry of G/P . I. Theory of standard monomials for minuscule representations. C. P. Ramanujam—a tribute, pp. 207-239, Tata Inst. Fund. Res. Studies in Math., 8, Springer, Berlin, 1978. (H. H. Andersen) **81g:14023a** 14M15 (14L30, 14M17)
- Desingularisation of the moduli varieties of vector bundles on curves. *Proceedings of the International Symposium on Algebraic Geometry* (Kyoto Univ., Kyoto, 1977), pp. 155-184, Kinokuniya Book Store, Tokyo, 1978. (P. E. Newstead) **81g:14011** 14F05 (14D20)
- (with Lakshmibai, V.) Geometry of G/P . II. The work of de Concini and Procesi and the basic conjectures. *Proc. Indian Acad. Sci. Sect. A* **87** (1978), no. 2, 1-54. (H. H. Andersen) **81g:14023b** 14M15 (14L30, 14M17)
- (with Lakshmibai, V.; Musili, C.) Geometry of G/P . Bull. Amer. Math. Soc. (N.S.) **1** (1979), no. 2, 432-435. (H. H. Andersen) **81f:14030** 14M17 (14M15, 20G05)
- (with Lakshmibai, V.; Musili, C.) Geometry of G/P . III. Standard monomial theory for a quasi-minuscule P . *Proc. Indian Acad. Sci. Sect. A Math. Sci.* **88** (1979), no. 3, 93-177. (H. H. Andersen) **81g:14023c** 14M15 (14L30, 14M17)
- (with Lakshmibai, V.; Musili, C.) Geometry of G/P . IV. Standard monomial theory for classical types. *Proc. Indian Acad. Sci. Sect. A Math. Sci.* **88** (1979), no. 4, 279-362. (H. H. Andersen) **81g:14023d** 14M15 (14L30, 14M17)
- (with Mehta, V. B.) Moduli of vector bundles on curves with parabolic structures. *Math. Ann.* **248** (1980), no. 3, 205-239. (Klaus Hulek) **81j:14010** 14F05 (14D20)
- Seshadri, Vamsamamalai (with Styan, George P. H.) Canonical correlations, rank additivity and characterizations of multivariate normality. *Analytic function methods in probability theory* (Proc. Colloq. Methods of Complex Anal. in the Theory of Probab. and Statist., Kassuth L. Univ. Debrecen, Debrecen, 1977), pp. 331-344, Colloq. Math. Soc. János Bolyai, 21, North-Holland, Amsterdam, 1979. (C. G. Khatri) **81h:62089** 62H05
- Seshadri, Venkita (with Lakatos-Lindenberg, Katja) Extrema statistics of Wiener-Einstein processes in one, two, and three dimensions. *J. Statist. Phys.* **22** (1980), no. 1, 69-79. (Authors' summary) **81f:60076** 60J65 (82A70)
- Seshagiri Rao, S. V. (with Reddy, K. Govardhan) Oscillating source flow of a conducting fluid between parallel disks. *Rev. Roumaine Sci. Tech. Sér. Méc. Appl.* **25** (1980), no. 2, 243-254. (Authors' summary) **81d:76108** 76W05
- Seshan, C. R. An algorithm for ranking the extreme points for a linear fractional objective function. *J. Indian Inst. Sci.* **62** (1980), no. 6, 119-121. (Author's summary) **81m:90102** 90C32
- (with Takekar, V. G.) On Sharma-Swarup algorithm for time minimising transportation problems. *Proc. Indian Acad. Sci. Sect. A Math. Sci.* **89** (1980), no. 2, 101-102. (Authors' summary) **81h:90081** 90B35 (90C08)
- Sesiano, J. Note sur trois théorèmes de mécanique d'al-Qūhī et leur conséquence. *Centaurus* **22** (1978/79), no. 4, 281-297. (B. Rozenfeld) **81j:01009** 01A30
- Šelko, M. A. (with Makovoz, Ju. I.) Approximate solution of a singular characteristic integral equation. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* **1979**, no. 12, 69-72. (N. L. Vasilevskii) **81d:45011** 45E05 (45L05)
- (with Rusak, V. N.) Approximation of singular integrals by singular integrals with polynomial density. (Russian. English summary) *Vesci Akad. Nauk BSSR Ser. Fiz.-Mat. Nauk* **1979**, no. 1, 42-50, 139-140. (R. P. Boas, Jr.) **81a:30020** 30E10 (30E20, 41A55, 44A15)
- Sessa, Salvatore (with di Nola, Antonio) A topological interpretation of certain operators of the algebra of complex Boolean elements. (Italian. English summary) *Ricerca* (4) (Napoli) **28** (1977), no. 2, 3-13 (1978). (Richard A. Aló) **81i:54025** 54F99 (54A99, 94C10)
- Šestakov, I. P. A problem of Širšov. (Russian) *Algebra i Logika* **16** (1977), no. 2, 227-246, 251. (G. P. Kukin) **81c:17023** 17D05 (08B05)
- Free alternative algebras. (Russian) *Mat. Zametki* **25** (1979), no. 5, 775-783, 800. (H. Pfugfelder) **81e:17016** 17D05
- Sestieri, A. (with Cerullo, P.) Numerical procedure for determining the eigenvalues, with respect to the problem of stability and of finding eigenfrequencies of oscillations. (Italian. English summary) *Ricerca* (4) (Napoli) **28** (1977), no. 2, 15-38 (1978). (A. de Castro Brzezicki) **81a:65043** 65F15
- Šestopal, A. F. (with Mangeron, Dumitru Ion; D'Ambrosio, Ubratan; Njang, S.) Contribution to the problem of the asymptotic behavior of the number of eigenvalues. I. The estimation of certain expansions in Bessel functions. (Romanian summary) *Bul. Inst. Politehn. Iași Sect. I* **25** (1979), no. 3-4, 9-16. (P. Günther) **81j:10078** 10J25 (35P20, 58G25)
- Šestopal, M. G. See Berman, G. N., **81j:26001**
- Šestopalov, Ju. V. On the justification of the spectral method for calculating natural waves of microstrip lines. (Russian) *Differentsial'nye Uravnenija* **16** (1980), no. 8, 1504-1512, 1534. (Author's summary) **81j:78022** 78A55
- Šestopalov, V. P. (with Košparěnek, V. N.; Meležík, P. N.) Helmholtz resonators in electrodynamics. (Russian) *Dokl. Akad. Nauk SSSR* **250** (1980), no. 2, 344-346. (Authors' summary) **81h:78014** 78A45
- (with Košparěnek, V. N.; Meležík, P. N.; Poedinečuk, A. E.) A rigorous method for the study of electromagnetic interaction of a system of several resonance scatters. (Russian) *Dokl. Akad. Nauk SSSR* **252** (1980), no. 2, 328-331. (N. D. Kazariñoff) **81e:78038** 78A50
- Šestakov, E. G. Approximate-analogue method for solving a problem of nonlinear filtration. (Russian) *Trudy Sem. Kraev. Zadacham* No. 15 (1978), 168-175, 216. (Author's summary) **81h:76053** 76S05
- Seth, G. S. (with Jana, R. N.) Unsteady hydromagnetic flow in a rotating channel with oscillating pressure gradient. (German summary) *Acta Mech.* **37** (1980), no. 1-2, 29-41. (Authors' summary) **81e:76084** 76W05
- Sethares, James C. Magnetostatic surface-wave transducers. *IEEE Trans. Microwave Theory Tech.* **27** (1979), no. 11, 902-909. (Authors' summary) **81d:78033** 78A55
- Sethi, Ravi (with Tang, Adrian) Constructing call-by-value continuation semantics. *Automata, languages and programming* (Sixth Colloq., Graz, 1979), pp. 556-570, *Lecture Notes in Comput. Sci.*, 71, Springer, Berlin, 1979. (Authors' summary) **81e:68106** 68F20
- (with Prabhala, Bhaskaram) Efficient computation of expressions with common subexpressions. *J. Assoc. Comput. Mach.* **27** (1980), no. 1, 146-163. (Authors' summary) **81i:68092** 68F25
- (with Tang, Adrian) Constructing call-by-value continuation semantics. *J. Assoc. Comput. Mach.* **27** (1980), no. 3, 580-597. (Authors' summary) **81f:68096** 68F20
- (with Downey, Peter J.; Tarjan, Robert Endre) Variations on the common subexpression problem. *J. Assoc. Comput. Mach.* **27** (1980), no. 4, 758-771. (Authors' summary) **81j:68077** 68E10 (05C20, 68B15)
- Sethi, Suresh P. (with Gordon, M. J.; Ingham, B.) Optimal dynamic consumption and portfolio planning in a welfare state. *Portfolio theory, 25 years after*, pp. 179-196, *Studies in the Management Sci.*, 11, North-Holland, Amsterdam, 1979. (See **80k:90001**) 90A09
- (with Caines, Peter E.) Recursiveness, causality, and feedback. *IEEE Trans. Automat. Control* **24** (1979), no. 1, 113-115. (Authors' summary) **81h:93091** 93E03
- Optimal advertising policy with the contagion model. *J. Optim. Theory Appl.* **29** (1979), no. 4, 615-627. (Edwin H. Neave) **81b:90048** 90A16
- Optimal pilfering policies for dynamic continuous thieves. *Management Sci.* **25** (1979/80), no. 6, 535-542. (From the summary) **81b:90097** 90B99 (93A10)
- (with Chand, Suresh) Erratum to: "Planning horizon procedures for machine replacement models" [Management Sci. **25** (1979/80), no. 2, 140-161; MR 80f:90064]. *Management Sci.* **26** (1980), no. 3, 342. (Editors) **81j:90056** 90B25
- Erratum to: "Optimal pilfering policies for dynamic continuous thieves" [Management Sci. **25** (1979/80), no. 6, 535-542; MR 81h:90097]. *Management Sci.* **26** (1980), no. 3, 342. (Editors) **81j:90074** 90B99
- (with Bookbinder, James H.) The dynamic transportation problem: a survey. *Naval Res. Logist. Quart.* **27** (1980), no. 1, 65-87. (Authors' summary) **81a:90081** 90B10 (90B35, 90C39)
- (with Derzko, N.; Thompson, Gerald L.) Distributed parameter systems approach to the optimal cattle ranching problem. *Optimal Control Appl. Methods* **1** (1980), no. 1,

- 3-10. (Authors' summary) **81g:93056** 93C20 (49B22, 90B05)
- Setina, P. R. (with Bajaj, A. K.; Lundgren, T. S.) Hopf bifurcation phenomena in tubes carrying a fluid. *SIAM J. Appl. Math.* **39** (1980), no. 2, 213-230. (P. D. S. Verma) **81j:76040** 76E30 (35B32, 58F14)
- Seturaman, Jayaram (with Proschian, Frank) Two generalizations of Muirhead's theorem. *Bull. Calcutta Math. Soc.* **69** (1977), no. 6, 341-344. (J. V. Ryff) **81e:26015** 26D15
- (with Lynch, James) A comparison of two sampling schemes, when testing a simple hypothesis versus a simple alternative. *Sankhyā Ser. A* **40** (1978), no. 4, 333-346. (Authors' summary) **81j:62058** 62F03
- Characterization of distributions by large deviation rates. *Contributions to statistics*, pp. 229-231, Reidel, Dordrecht, 1979. (Reinhard Michel) **81f:60043** 60F10 (62E10)
- Setb, Noriaki Suppression of abnormal solutions below a critical coupling strength in a spinor-type Bethe-Salpeter equation. *Progr. Theoret. Phys.* **64** (1980), no. 3, 1026-1037. (Author's summary) **81k:81045** 81D10
- Sette, Antonio-Marino See *Proceedings: Brazilian Conference on Mathematical Logic*, **81m:03005**
- Setubala, V. L. (with Dokučev, L. V.) Stability of large oscillations of a fluid in a vessel performing angular motions. (Russian) *Theory of stability and its applications* (Russian), pp. 100-106, 300, "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. (Authors' summary) **81i:76022** 76E30
- Setzer, C. Bennett Units over totally real $C_2 \times C_2$ fields. *J. Number Theory* **12** (1980), no. 2, 160-175. (Harvey Cohn) **81k:12005** 12A45
- The determination of all imaginary, quartic, abelian number fields with class number 1. *Math. Comp.* **35** (1980), no. 152, 1383-1386. (T. Metsänkylä) **81k:12005** 12A30 (12A50)
- Ševaldin, V. T. Extremal interpolation with smallest value of the norm of a linear differential operator. (Russian) *Mat. Zametki* **27** (1980), no. 5, 721-740, 830. (D. L. Berman) **81k:41002** 41A05 (41A44)
- Severia, K. S. Some theorems on Laplace and Varma transforms. (Hindi. English summary) *Vijnana Parishad Anusandhan Patrika* **23** (1980), no. 1, 9-15. (S. D. Bajpai) **81g:44005** 44A10 (33A30)
- Sevast'yanov, E. A. (with Dolženko, E. P.) Approximations in the Hausdorff metric. (Russian) *The theory of the approximation of functions* (Proc. Internat. Conf., Kaluga, 1975) (Russian), pp. 175-182, "Nauka", Moscow, 1977. (T. Bojanov) **81a:41030** 41A30
- The best piecewise monotone approximation and the Banach indicatrix. (Russian) *Mat. Zametki* **26** (1979), no. 1, 77-87, 158. (B. Bojanov) **81b:41049** 41A25 (41A27)
- Sevast'yanov, S. V. On the problem of compact summation of vectors. (Russian) *Diskret. Analiz* No. 33 *Metody Diskret. Anal. v Resenii Ekstremal. Zadac* (1979), 77-89, 111. (V. Ju. Trahtman) **81i:90206** 90C99 (90B35)
- (with Grinberg, V. S.) Value of the Steinitz constant. (Russian) *Funkcional. Anal. i Prilozh.* **14** (1980), no. 2, 56-57. (Z. Nádenik) **81h:52008** 52A40
- Ševčenko, E. N. (with Homenko, M. P.) Investigation of problems of isolation and counting, isomorphism and symmetry of graphs by algebraic methods. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* **1980**, no. 10, 22-26, 93. (Authors' summary) **81m:05098** 05C50 (68E10)
- Ševčenko, Ju. I. Parallel transport on surfaces. (Russian) *Kaliningrad. Gos. Univ. Differentsial'naja Geom. Mnogooobraz. Figur* No. 10 (1979), 154-158, 165. (L. Tamásy) **81h:53017** 53B10
- Ševčenko, Ju. M. (with Babeško, M. E.; Piskun, V. V.; Savčenko, V. G.) ★Пространственные задачи термопластичности. (Russian) [Three-dimensional problems of thermoplasticity] "Naukova Dumka", Kiev, 1980, 263 pp. (Vadim Komkov) **81h:73058** 73U05 (73C03, 73E99)
- Ševčenko, S. I. (with Motovilov, I. A.; Novikova, A. M.) Heat-stressed state of a rectangular plate under the action of a multistage heat source. (Russian) *Dinamika i Prochnost' Mašin* No. 31 (1980), 89-96, 3. (Authors' summary) **81g:73124** 73U05 (80A20)
- Ševčenko, V. I. Coincidence of minimal and maximal operators corresponding to an elliptic system. (Russian) *Boundary value problems for partial differential equations* (Russian), pp. 137-142, 167, "Naukova Dumka", Kiev, 1978. (L. A. Ivanov) **81a:35031** 35J45
- The Hilbert problem for a holomorphic vector in a multidimensional space. (Russian) *Differential and integral equations. Boundary value problems* (Russian), pp. 279-291, Tbilis. Gos. Univ., Tbilisi, 1979. (Wolfgang Tutschke) **81m:35053** 35J55 (30E25, 32A25)
- (with Le Hyu Zien) Homotopy classification of systems in the plane that are elliptic in the sense of Douglas and Nirenberg. (Russian) *Dokl. Akad. Nauk SSSR* **244** (1979), no. 4, 824-827. (Stephan Rempel) **81f:35041** 35J55 (58G10)
- The Hilbert problem for a holomorphic vector. (Russian) *Rev. Roumaine Math. Pures Appl.* **24** (1979), no. 5, 801-810. (P. Ju. Alekna) **81e:30077** 30E25
- Ševčenko, V. N. (with Smirnov, A. N.) Martin's algorithm and regular cuts for integer linear programming. (Russian) *Z. Vyčisl. Mat. i Mat. Fiz.* **20** (1980), no. 2, 505-509, 553. (Authors' summary) **81e:90071** 90C10
- Ševčenko, V. V. Spectral decomposition in eigen- and associated functions of a nonselfadjoint problem of Sturm-Liouville type on the entire axis. (Russian) *Differentsial'nye Uravnenija* **15** (1979), no. 11, 2004-2020, 2109. (M. Ráb) **81d:34021** 34B25
- Seveik, K. C. (with Mitrani, I.) The distribution of queueing network states at input and output instants. *Performance of computer systems* (Proc. Fourth Internat. Sympos. Modelling Performance Evaluation Comput. Systems, Vienna, 1979), pp. 319-335. North-Holland, Amsterdam, 1979. (D. C. McNickle) **81j:60111** 60K25 (68C15)
- Severo, P. V. (with Gabov, S. A.) Angular potential on curves of bounded rotation. (Russian) *Dokl. Akad. Nauk SSSR* **249** (1979), no. 2, 271-274. (J. Vesely) **81e:31002** 31A15
- Ševčuk, I. A. A constructive characterization of classes of functions that are continuous on a set $\mathbb{R} \subset \mathbb{C}$ for the k th modulus of continuity. (Russian) *Mat. Zametki* **25** (1979), no. 2, 225-247, 318. (S. V. Hruščev) **81g:30050** 30E10 (41A10)
- Ševčuk, Ju. P. Approximate analysis of cavities with allowance for surface tension and gravity. A translation of *Gidromekh.* **40** (1979), 20-25. *Fluid Mech.—Soviet Res.* **8** (1979), no. 5, 26-32. (Author's summary) **81f:76009** 76B10
- Ševčuk, L. M. (with Šapot, D. V.) The use of the convolution method in two-stage linear programming problems. (Russian) *Numerical methods of optimization (applied mathematics)* (Russian), pp. 89-95, Akad. Nauk SSSR Sibirsk. Otdel., Energet. Inst., Irkutsk, 1978. (Editors) **81e:90061** 90C05
- Ševčuk, S. P. (with Mihaľčuk, R. I.) Sufficient condition for the convergence of continued fractions in a space of continuous functions. (Russian) *Vestnik L'vov. Politehn. Inst.* No. 141 *Differentsial'nye Uravnenija i ih Prilozhen.* (1980), 64-65, 120. (Authors' summary) **81i:40003** 40A15
- Ševčuk, A. G. See Ševčuk, A. G.
- Ševčuk, Ju. D. (with Kravčenko, V. I.; Ščennikov, V. V.) Numerical investigation of unsteady viscous incompressible flow about bodies for varying conditions of their motion. *Approximation methods for Navier-Stokes problems* (Proc. Sympos., Univ. Paderborn, Paderborn, 1979), pp. 323-359, *Lecture Notes in Math.*, 771, Springer, Berlin, 1980. (From the text) **81g:76036** 76D05 (65P05)
- Ševčuk, V. M. (with Ivanov, A. F.) Asymptotic behavior of the solutions of a class of first-order differential equations with a deviation of the argument of a mixed type. (Russian) *Asymptotic behavior of solutions of functional-differential equations* (Russian), pp. 143-150, 158, Akad. Nauk Ukrain. SSR, Inst. Mat., Kiev, 1978. (István Györi) **81h:34083** 34K15
- (with Varch, N. V.) Investigation of oscillatory properties of solutions of first-order differential equations with deviating argument. (Russian) *Asymptotic methods in the theory of nonlinear oscillations* (Proc. All-Union Conf. Asymptotic Methods in Nonlinear Mech., Katsiveli, 1977) (Russian), pp. 247-262, 278, "Naukova Dumka", Kiev, 1979. (M. K. Grammatikopoulos) **81g:34098** 34K15
- Ševčuk, A. G. (with Fal', A. M.) A dynamic programming method for complex functionals with bounded oscillation. (Russian) *Adapt. Sistem. Axiomat. Upravlenija* No. 8 (1980), 37-44, 2. (Authors' summary) **81k:69017** 49C20
- Severinov, L. I. (with Babakov, A. V.) A conservative numerical method of "flows" for the solution of problems in continuum mechanics. (Russian) *Direct numerical simulation of gas flows* (Russian), pp. 96-113, 175, Akad. Nauk SSSR, Vyčisl. Centr., Moscow, 1978. (See **81g:76084**) 73B99 (65N99)
- Ševljakov, A. Ju. Stochastic differentiation and integration of functionals of a Wiener process. (Russian) *Theory of random processes*, No. 6 (Russian), pp. 123-131, 136, "Naukova Dumka", Kiev, 1978. (R. Š. Lipcer) **81b:60053** 60H05 (60J65)
- Ševljakov, Ju. A. See *Interaction in the mechanics of constructions*, **81m:73007**
- Ševrin, L. N. (with Norden, A. P.; Šalkin, Ju. A.) Valentin Konstantinovič Ivanov (on the occasion of his seventieth birthday). (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* **1978**, no. 11(198), 3-5. (Editors) **81g:01019a** 01A70
- Sewell, Geoffrey L. (with Narnhofer, Heide) Equilibrium states of gravitational systems. *Comm. Math. Phys.* **71** (1980), no. 1, 1-28. (Ola Bratteli) **81c:82009** 82A15 (46L60)
- Sewell, Michael J. Elementary catastrophe theory. *Problem analysis in science and engineering* (Conf., Univ. Waterloo, Waterloo, Ont., 1975), pp. 391-426, Academic Press, New York, 1977. (See **80h:00044**) 58C28
- Degenerate duality, catastrophes and saddle functionals. *Duality and complementarity in mechanics of solids* (School-Conf. Duality Problems of Mech. Deformable Bodies, Jablonna, 1977), pp. 273-349, Ossolineum, Wrocław, 1979. (D. R. J. Chillingworth) **81e:58020** 58E05 (49A29, 58C28, 73K05)
- (with Porter, D.) Constitutive surfaces in fluid mechanics. *Math. Proc. Cambridge Philos. Soc.* **88** (1980), no. 3, 517-546. (J. Dunwoody) **81j:76003** 76A02 (49H05, 58C28)
- Sextl, Hannelore (with Sextl, Roman U.) ★White dwarfs—black holes. An introduction to relativistic astrophysics. Translated from the German by Patrick P. Weidhaas. Academic Press [Harcourt Brace Jovanovich, Publishers], New York-London-Toronto, Ont., 1979. ix+203 pp. ISBN 0-12-637350-7 (Victor Wong) **81h:85001** 85-01 (83-01)
- Sextl, Roman U. (with Sextl, Hannelore) ★White dwarfs—black holes. An introduction to relativistic astrophysics. Translated from the German by Patrick P. Weidhaas. Academic Press [Harcourt Brace Jovanovich, Publishers], New York-London-Toronto, Ont., 1979. ix+203 pp. ISBN 0-12-637350-7 (Victor Wong) **81h:85001** 85-01 (83-01)
- See also Albert Einstein: his influence on physics, philosophy and politics. **81i:01039**
- Sexton, Harlan (with Ash, J. Marshall) Termwise averages of two divergent series. *Enseign. Math.* (2) **25** (1979), no. 3-4, 189-192 (1980). (H. P. Dikshii) **81e:40001** 40A05
- Seybold, Hans (with Giering, Oswald) ★Konstruktive Ingenieurgeometrie. (German) [Descriptive geometry for engineers] Second, enlarged edition. Mathematische Grundlagen für Mathematiker, Physiker und Ingenieure. [Mathematical Foundations for Mathematicians, Physicists and Engineers]. Carl Hanser Verlag, Munich-Vienna, 1979. 255 pp. ISBN 3-446-12660-0 (E. Otto) **81j:51019** 51N05
- Seydel, Rüdiger Numerical computation of primary bifurcation points in ordinary differential equations. *Constructive methods for nonlinear boundary value problems and nonlinear oscillations* (Proc. Conf., Math. Res. Inst., Oberwolfach, 1978), pp. 161-169, Internat. Ser. Numer. Math., 48, Birkhäuser, Basel, 1979. (William B. Day) **81c:65041** 65L10 (34B15)
- Programme zur numerischen Behandlung von Verzweigungsproblemen bei nichtlinearen Gleichungen und Differentialgleichungen. (English summary) *Bifurcation problems and their numerical solution* (Proc. Workshop, Univ. Dortmund, Dortmund, 1980), pp. 163-175, Internat. Ser. Numer. Math., 54, Birkhäuser, Basel, 1980. (Author's summary) **81c:65004** 65-04
- Seydl, Hamet Sur la théorie des anneaux excellents en caractéristique zéro. I. *Afrika Mat.* **1**, no. 1, 11-18 (1978). (Gerhard Pfister) **81i:13002a** 13B20
- Sur la théorie des anneaux excellents en caractéristique zéro. II. *Afrika Mat.* **2**, no. 1, 19-32 (1980). (Gerhard Pfister) **81i:13002b** 13B20
- Seyler, R. G. (with Bagchi, B.) Integral equations and the bound-state problem. *Amer. J. Phys.* **48** (1980), no. 8, 828-833. (Authors' summary) **81i:81082** 81F05 (34B25, 47A40)
- Seymour, Brian R. (with Mortell, Michael P.) A finite-rate theory of resonance in a closed tube: discontinuous solutions of a functional equation. *J. Fluid Mech.* **99** (1980), no. 2, 365-382. (C. Bardos) **81j:76064** 76L05 (35L67)
- See also Lardner, R. W.; et al. **81i:35113**
- Seymour, P. D. Sums of circuits. *Graph theory and related topics* (Proc. Conf., Univ. Waterloo, Waterloo, Ont., 1977), pp. 341-355, Academic Press, New York, 1979. (Peter

- Brucker) **81b:05068** 05C38 (90B10)
On multicolourings of cubic graphs, and conjectures of Fulkerson and Tutte. *Proc. London Math. Soc.* (3) **38** (1979), no. 3, 423–460. (W. T. Tutte) **81j:05061** 05C15
Packing and covering with matroid circuits. *J. Combin. Theory Ser. B* **28** (1980), no. 2, 237–242. (James G. Oxley) **81j:05046** 05B35 (05B40)
Four-terminus flows. *Networks* **10** (1980), no. 1, 79–86. (R. A. Brualdi) **81c:00042** 90B10 (05C38)
- Seymour, R. M. Kan fibrations in the category of simplicial spaces. *Fund. Math.* **106** (1980), no. 2, 141–152. (J. P. May) **81f:55017** 55R05 (55U10)
- Seser, Mesut E. (with Šiljak, D. D.) Decentralized stabilization and structure of linear large-scale systems. *Thirteenth Allomar Conference on Circuits, Systems and Computers* (Pacific Grove, Calif., 1979), pp. 176–181, IEEE, New York, 1980. (See **81m:93004**) **93A15**
(with Özgüler, Bülent; Hüseyin, Özyay) Relative primeness of multidimensional polynomial matrices. *IEEE Trans. Circuits and Systems* **27** (1980), no. 8, 729–732. (Authors' summary) **81h:15012** 15A30 (93B05)
(with Hüseyin, Özyay) On decentralized stabilization of interconnected systems. *Automatica—J. IFAC* **16** (1980), no. 2, 205–209. (Authors' summary) **81j:93082** 93D15
- Sergin, E. (with van Nieuwenhuizen, P.) Renormalizability properties of antisymmetric tensor fields coupled to gravity. *Phys. Rev. D* (3) **22** (1980), no. 2, 301–307. (Authors' summary) **81c:83053** 83E99
- Sfices, Y. G. Strongly monotone solutions of retarded differential equations. *Canad. Math. Bull.* **22** (1979), no. 4, 403–412. (M. I. Kamenik) **81k:34065** 34K05
(with Palamides, P. K.; Staikos, Vasilios Anast.) Asymptotic behavior of Carathéodory systems. Anti-Lyapunov method. *J. Differential Equations* **36** (1980), no. 3, 442–457. (N. Onuchic) **81g:34062** 34D05 (34A10, 34C11)
- Sgarro, Andrea An informational divergence geometry for stochastic matrices. *Calcolo* **15** (1978), no. 1, 41–49. (Author's introduction) **81f:94010** 94A15 (15A51)
(with Longo, Giuseppe) The source coding theorem revisited: a combinatorial approach. *IEEE Trans. Inform. Theory* **25** (1979), no. 5, 544–548. (Authors' summary) **81a:94027** 94A29
(with Longo, Giuseppe) The error exponent for the testing of simple statistical hypotheses: a combinatorial approach. *J. Combin. Inform. System Sci.* **5** (1980), no. 1, 58–67. (Kesar Singh) **81m:62040** 62F05 (62B10, 94A24)
- Sgibner, M. S. (with Rogozin, B. A.) Banach algebras of absolutely continuous measures on the real line. (Russian) *Funktsional. Anal. i Prilozhen.* **11** (1977), no. 3, 92–93. (G. M. Fel'dman) **81a:43006** 43A20 (43A32, 46J10)
(with Rogozin, B. A.) Banach algebras of measures on the line. (Russian) *Sibirsk. Mat. Zh.* **21** (1980), no. 2, 160–169, 239. (V. Losert) **81c:43003** 43A10 (46J20)
- Sgro, J. A. Interpolation fails for the Souslin-Kleene closure of the open set quantifier logic. *Proc. Amer. Math. Soc.* **78** (1980), no. 4, 568–572. (Alan Mekler) **81m:03048** 03C80 (54A99)
- Ultraproduct invariant logics. *Proc. Amer. Math. Soc.* **79** (1980), no. 4, 635–638. (S. R. Kogalovskii) **81h:03066** 03C20 (03C95)
- Sgurev, Vasil S. (with Vasiliev, Vasil S.) Optimization of a closed dynamic transportation system with limited capacity. (Bulgarian. Russian and English summaries) *Problemi Tehn. Kibernet.* **10** (1980), 16–23. (Authors' summary) **81h:90082** 90B35
- Sha, Zhen Approximation of periodic continuous functions by operators. (Chinese. English summary) *Acta Math. Sinica* **22** (1979), no. 1, 54–68. (Author's summary) **81b:42015** 42A10
The saturation of a multidimensional spline approximation. (Chinese. English summary) *Acta Math. Sinica* **22** (1979), no. 2, 140–145. (Author's summary) **81d:41012** 41A15
- el-Shaarawi, A. H. See El-Shaarawi, A. H.
- Shaban, S. A. Change point problem and two-phase regression: an annotated bibliography. (French summary) *Internat. Statist. Rev.* **48** (1980), no. 1, 83–93. (From the text) **81j:62143** 62J99
- Shablov, V. L. See Šablov, V. L.
- Shadwick, W. F. Noether's theorem and Steudel's conserved currents for the sine-Gordon equation. *Lett. Math. Phys.* **4** (1980), no. 3, 241–248. (A. Degasperis) **81j:58049** 58F07 (35Q20, 78A10, 81C05)
- Shaeffer, David G. (with Golubitsky, Martin) Boundary conditions and mode jumping in the buckling of a rectangular plate. *Comm. Math. Phys.* **69** (1979), no. 3, 209–236. (R. A. Plastock) **81k:35019** 35B32 (49G05, 58E07)
- Shafast, Ahmed Unique factorization and Fermat's last property in groupoidal domains. *Period. Math. Hungar.* **9** (1978), no. 4, 299–315. (From the introduction) **81g:08008** 08A40
Homomorphisms, homomorphic relations and power algebras. *Period. Math. Hungar.* **11** (1980), no. 2, 89–94. (M. S. Burgin) **81i:08002** 08A05 (18B99)
Consistency in categorical languages for algebras. *Z. Math. Logik Grundlag. Math.* **26** (1980), no. 3, 205–207. (Andreas Blass) **81j:03061** 03C99 (18A99)
- Shafat, Lotfollah (with Azarbar, Bahman) Field solution for radial waveguides with annular discontinuities. *IEEE Trans. Microwave Theory Tech.* **27** (1979), no. 11, 883–890. (A. Ishimaru) **81e:78036** 78A50
- Shafer, Douglas S. Topological equivalence of gradient vectorfields. *Trans. Amer. Math. Soc.* **258** (1980), no. 1, 113–126. (L. Reizig) **81a:58039** 58F14
- Shafer, Glenn Nonadditive probabilities in the work of Bernoulli and Lambert. *Arch. Hist. Exact Sci.* **19** (1978/79), no. 4, 309–370. (I. J. Good) **81f:01012** 01A50 (60A05)
- Shafer, Robert E. On quadratic approximation. II. *Univ. Beograd. Publ. Elektrotehn. Fak. Ser. Mat. Fiz.* No. 602-633 (1978), 163–170 (1979). (A. Sharma) **81m:41011** 41A20 (41A21)
- Shafer, Wayne J. On the existence and interpretation of value allocation. *Econometrica* **48** (1980), no. 2, 467–476. (M. S. Stifman) **81h:90036** 90A15
- Shaffer, D. H. (with Coffman, Charles V.; Duffin, Richard J.) The fundamental mode of vibration of a clamped annular plate is not of one sign. *Constructive approaches to mathematical models* (Proc. Conf. in honor of R. J. Duffin, Pittsburgh, Pa., 1978), pp. 267–277, Academic Press, New York, 1979. (M. C. Singh) **81g:73077** 73K12
- Shafi, Q. (with Daniel, M.; Lazarides, G.) Nonabelian electric and magnetic flux in unified SU(5) gauge theory. *Phys. Lett. B* **91** (1980), no. 1, 72–76. (P. K. Smtz)
- 81g:81048** 81E10 (81G20)
- Shafii-Mossad, M. (with Zielezny, Z.) On hypoelliptic differential operators of constant strength. *Pacific J. Math.* **82** (1979), no. 1, 249–256. (Makhlouf Derridj) **81c:35032** 35H05
- Shafiiullah (with Lal, K. B.) On plane wave solutions of Israel and Trollope's new unified field theory. (Italian summary) *Istit. Lombardo Accad. Sci. Lett. Rend. A* **112** (1978), no. 2, 311–322 (1979). (L. K. Patel) **81i:83052** 83E99
- Shafranov, V. D. See Šafranov, V. D.
- Shafranski, Ya. M. See Šafranik, Ja. M.
- Shah, B. K. On the method of internal least squares. (French summary) *Biometrics* **35** (1979), no. 2, 497–502. (Jeffrey A. Robinson) **81a:62056** 62J02
- Shah, Jayant Insignificant limit singularities of surfaces and their mixed Hodge structure. *Ann. of Math.* (2) **109** (1979), no. 3, 497–536. (Jonathan M. Wahl) **81c:14021** 14J10 (14J17)
- Shah, K. R. (with Raghavarao, D.) A class of D_0 designs for two-way elimination of heterogeneity. *Comm. Statist. A—Theory Methods* **9** (1980), no. 1, 75–80. (K. G. Russell) **81h:62141** 62K99 (62K05)
- Shah, Manilal A property of generalized integral transform of two variables. *Synopsis. Math. Balkanica* **6** (1976), 186–193 (1978). (C. M. Joshi) **81e:44005** 44A20 (33A35)
Infinite series associated with generalized functions. *Karachi Univ. J. Sci.* **6** (1978), no. 1, 17–28. (P. Anandani) **81j:33006** 33A35
Certain generalized formulas on Kampé de Fériet's functions. *C. R. Acad. Bulgare Sci.* **33** (1980), no. 2, 171–174. (B. R. Bhoneal) **81h:33004** 33A30
- Shah, S. (with Brereton, M. G.) A gauge description of topological entanglements in polymers. *J. Phys. A* **13** (1980), no. 8, 2751–2762. (Authors' summary) **81c:82038** 82A42
- Shah, S. P. (with Sathe, Y. S.; Pradhan, Meena) Inequalities for the probability of the occurrence of at least m out of n events. *J. Appl. Probab.* **17** (1980), no. 4, 1127–1132. (J. Galambos) **81j:60015** 60C05 (60E15, 60G30)
- Shah, Shish L. (with Johnstone, Richard M.; Fisher, D. Grant) An extension of hyperstable adaptive control to nonminimum phase systems. *Internat. J. Control* **31** (1980), no. 3, 539–545. (Authors' summary) **81e:93057** 93C40 (93D20)
- Shah, Swarupchand M. (with Trimble, Selden Y.) On the zeros of univalent functions with univalent derivatives. *Ann. Mat. Pura Appl.* (4) **121** (1979), 309–317. (Ved Parkash Gupta) **81c:30027** 30C55
(with Bajpai, Shyam K.) Approximation and interpolation of entire functions and generalized orders. *Ann. Polon. Math.* **37** (1980), no. 2, 157–166. (O. P. Juneja) **81j:30058** 30E10 (30D10, 30D15)
- Shah, V. (with Chang, Kai Chiang; Tamir, T.) Scattering and guiding of waves by dielectric gratings with arbitrary profiles. *J. Opt. Soc. Amer.* **70** (1980), no. 7, 804–812. (Authors' summary) **81e:78026** 78A45
- Shah, Y. K. (with Jaiswal, M. C.) Probabilistic scheduling period inventory model for deteriorating items. *Gujarat Statist. Rev.* **6** (1979), no. 1, 9–16. (Authors' summary) **81f:90043** 90B05 (90B25)
- Shahabuddin, Mohd. A set of polynomials. *Ranchi Univ. Math. J.* **8** (1977), 17–28 (1978). (S. K. Chatterjee) **81i:33012** 33A45
- Shahidi, Freydoon On nonvanishing of L -functions. *Bull. Amer. Math. Soc. (N.S.)* **2** (1980), no. 3, 462–464. (Joe Repka) **81c:12020** 12A67 (10D40, 12A70, 22E55)
Whittaker models for real groups. *Duke Math. J.* **47** (1980), no. 1, 99–125. (Allan J. Silberger) **81d:22020** 22E50 (10D40, 12B27, 22E45)
- malek-Shahmirzadi, Massoud See Malek-Shahmirzadi, Massoud
- Shahshahani, Mehرداد (with Ross, Sheldon M.; Weiss, Gideon) On the number of component failures in systems whose component lives are exchangeable. *Math. Oper. Res.* **5** (1980), no. 3, 358–365. (Authors' summary) **81j:90055** 90B25
- Shail, R. Lamé polynomial solutions to some elliptic crack and punch problems. *Internat. J. Engng. Sci.* **16** (1978), no. 8, 551–563. (Author's summary) **81g:73110** 73M05
Orthogonal polynomial solutions to some mixed boundary value problems in elasticity. III. *Quart. J. Mech. Appl. Math.* **33** (1980), no. 2, 235–249. (Roger D. Low) **81k:73060** 73M05 (73U05)
On integral representations for Lamé and other special functions. *SIAM J. Math. Anal.* **11** (1980), no. 4, 702–723. (R. K. Gupta) **81h:33014** 33A55
- Shaling, Hu (with Srinivasan, V. K.) A theorem in Banach algebras and its applications. *Bull. Austral. Math. Soc.* **20** (1979), no. 2, 247–252. (A. M. Sinclair) **81c:46029** 46H05
(with Srinivasan, V. K.) On some Gel'fand-Mazur-like theorems in p -normed algebras. *Bull. Austral. Math. Soc.* **21** (1980), no. 2, 211–221. (W. Żelazko) **81f:46058** 46H20 (46J35)
- Shaked, Moshe Some concepts of positive dependence for bivariate interchangeable distributions. *Ann. Inst. Statist. Math.* **31** (1979), no. 1, 67–84. (Richard L. Dykstra) **81a:62048** 62H20 (62N05)
(with Zimmer, William J.; Ball, Clifford A.) A nonparametric approach to accelerated life testing. *J. Amer. Statist. Assoc.* **74** (1979), no. 367, 694–699. (Richard A. Johnson) **81d:62107** 62N05
- Shaker, B. S. (with Nayfeh, Ali Hasan; Kaiser, J. E.) Transmission of sound through nonuniform circular ducts with compressible mean flows. *AIAA J.* **18** (1980), no. 5, 515–525. (Authors' summary) **81a:76036** 76N10 (76Q05)
- Shakhil'dyan, V. V. See Šahil'djan, V. V.
- Shakhnov, I. F. See Šahnov, I. F.
- Shakhsharin, B. I. See Šakhtarin, B. I.
- Shalaby, Mohamed A. (with Schmeiser, Bruce Wayne) Acceptance/rejection methods for beta variate generation. *J. Amer. Statist. Assoc.* **75** (1980), no. 371, 673–678. (Ryszard Zieliński) **81k:65013** 65C10
- Shalen, Peter B. (with Jaco, William H.) Seifert fibered spaces in 3-manifolds. *Mem. Amer. Math. Soc.* **21** (1979), no. 220, viii + 192 pp. (Hugh M. Hilden) **81c:57010** 57N10
- Shaljo, Č. A. On the oscillatory and nonoscillatory nature of the solutions for a system of nonlinear differential equations. (Russian) *Differentsial'nye Uravneniya* **16** (1980), no. 8, 1523–1526, 1535–1536. (T. Canturija) **81k:34026** 34C10
- bar-Shalom, Yaakov See Bar-Shalom, Yaakov
- Shamaly, A. (with Ahmed, M. A.; Capri, A. Z.; Kobayashi, Masanori) Propagation of

- Yang-Mills fields. *Ann. Phys. (7)* 36 (1979), no. 1, 40-46. (Authors' summary) **81:01076** 81E10
- Shamash, Y. Note on the equivalence of the Routh and Hurwitz methods of approximation. *Internat. J. Control* 30 (1979), no. 5, 899-900. (Author's summary) **81:03082** 93D99 (93C05)
- Failure of the Routh-Hurwitz method of reduction. *IEEE Trans. Automat. Control* 25 (1980), no. 3, 313-314. (Günter Kern) **81:03068** 93D99
- Stable biased reduced order models using the Routh method of reduction. *Internat. J. Systems Sci.* 11 (1980), no. 5, 641-654. (Author's summary) **81:03054** 93D99
- Shamir, F. G. (with Gasanova, D. D.) On the optimization of annular plates resting on incompressible liquid. (Polish and Russian summaries) *Rozprawy Inż.* 27 (1979), no. 1, 191-204. (Robert Reiss) **81:03044** 73K99 (73E99, 73K10)
- Shamir, Adi On the cryptocomplexity of knapsack systems. *Conference Record of the Eleventh Annual ACM Symposium on Theory of Computing (Atlanta, Ga., 1979)*, pp. 118-129. ACM, New York, 1979. (Author's summary) **81:04054** 94B99 (68B99, 68C25)
- Factoring numbers in $O(\log n)$ arithmetic steps. *Inform. Process. Lett.* 8 (1979), no. 1, 28-31. (Author's introduction) **81:06066** 68C25 (03D15, 10A25)
- A linear time algorithm for finding minimum cutsets in reducible graphs. *SIAM J. Comput.* 8 (1979), no. 4, 645-655. (Kabekode V. S. Bhat) **81:06077** 68E10 (68C05, 68C25)
- On the power of commutativity in cryptography. *Automata, languages and programming (Proc. Seventh Internat. Colloq., Noordwijkerhout, 1980)*, pp. 582-595. *Lecture Notes in Comput. Sci.*, 85, Springer, Berlin, 1980. (Author's summary) **81:04031** 94B99 (68B99)
- Shamir, Elihu (with Snir, Marc) On the depth complexity of formulas. *Math. Systems Theory* 13 (1979/80), no. 4, 301-322. (Authors' summary) **81:06067** 68C25
- (with Schmidt, Jeanette) An improved program for constructing open hash tables. *Automata, languages and programming (Proc. Seventh Internat. Colloq., Noordwijkerhout, 1980)*, pp. 569-581. *Lecture Notes in Comput. Sci.*, 85, Springer, Berlin, 1980. (From the introduction) **81:06018** 68B15
- (with Eskin, Michael) Systèmes différentiels surdéterminés qui sont elliptiques dans un domaine. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 291 (1980), no. 9, A527-A530. (Authors' summary) **81:05117** 35N10 (32F20)
- Shampline, L. F. Evaluation of implicit formulas for the solution of ODEs. *BIT* 19 (1979), no. 4, 495-502. (Abbas I. Abdel-Karim) **81:05079** 65L05
- Implementation of implicit formulas for the solution of ODEs. *SIAM J. Sci. Statist. Comput.* 1 (1980), no. 1, 103-118. (David R. Hill) **81:05041** 65L05
- Shamrikov, B. M. See Šamrikov, B. M.
- Shamrikov, B. M. ★ The Atiyah-Singer index theorem. An introduction. *Lecture Notes in Mathematics*, 638. Springer-Verlag, Berlin-New York, 1978, v + 224 pp. ISBN 3-540-08660-9 (R. E. Stong) **81:05073** 58G10
- On the signature of Grassmannians. *Pacific J. Math.* 84 (1979), no. 2, 483-490. (Samuel A. Ilori) **81:05047** 57T15
- Shanbhag, D. N. (with Panaretos, J.) Some results related to the Rao-Rubin characterization of the Poisson distribution. *Austral. J. Statist.* 21 (1979), no. 1, 78-83. (V. Seshadri) **81:02028** 62E10 (60E05)
- Diagonality of the Bhattacharyya matrix as a characterization. (Russian summary) *Teor. Veroyatnost. i Primenen.* 24 (1979), no. 2, 424-427. (I. A. Melamed) **81:02013** 62E10
- (with Kotz, Samuel) Some new approaches to probability distributions. *Adv. in Appl. Probab.* 12 (1980), no. 4, 903-921. (Ramesh C. Gupta) **81:02024** 62E10 (62N05)
- Shanenson, Julius L. (with Cappell, Sylvain E.) Pseudofree actions. I. *Algebraic topology, Aarhus 1978 (Proc. Sympos., Univ. Aarhus, Aarhus, 1978)*, pp. 395-447. *Lecture Notes in Math.*, 763, Springer, Berlin, 1979. (Ian Hambleton) **81:05034** 57S17 (57R67)
- (with Cappell, Sylvain E.) A counterexample on the oozing problem for closed manifolds. *Algebraic topology, Aarhus 1978 (Proc. Sympos., Univ. Aarhus, Aarhus, 1978)*, pp. 627-634. *Lecture Notes in Math.*, 763, Springer, Berlin, 1979. (Ian Hambleton) **81:05033** 57R67
- (with Cappell, Sylvain E.) Link cobordism. *Comment. Math. Helv.* 55 (1980), no. 1, 20-49. (J. P. Levine) **81:05011** 57Q45
- (with Cappell, Sylvain E.) Fixed points of periodic maps. *Proc. Nat. Acad. Sci. U.S.A.* 77 (1980), no. 9, part 1, 5052-5054. (R. Schultz) **81:05029** 57S17 (57S15, 58F22)
- See also Lannes, Jean, 81:05016
- Shang, J. S. (with Buning, P. G.; Hankey, W. L.; Wirth, M. C.) Performance of a vectorized three-dimensional Navier-Stokes code on the CRAY-1 computer. *AIAA J.* 18 (1980), no. 9, 1073-1079. (From the summary) **81:06037** 76D05 (65V05, 76L05)
- Shank, H. Some parity results on binary vector spaces. *Ars Combin.* 8 (1979), 107-108. (Author's summary) **81:05073** 05C30
- (with Berman, Kenneth A.) Full 4-colorings of 4-regular maps. *J. Graph Theory* 3 (1979), no. 3, 291-294. (F. Bernhart) **81:05064** 05C15
- Shankar, Hari (with Bogda, Richard A.) Counterexamples for lower order of an analytic function. *Proc. Appl. Math. Sci.* 10 (1979), no. 1-2, 1-2. (L. R. Sons) **81:03005** 30B10 (30D35)
- (with Aborn, Bruce J.) Generalized growth for functions analytic in a finite disc. *Pure Appl. Math. Sci.* 12 (1980), no. 1-2, 83-94. (O. P. Juneja) **81:03005** 30B10 (30D15)
- Shankar, P. N. (with Sinha, U. N.) Weakly sheared, two-dimensional inviscid flows past bodies. (French summary) *J. Mécanique* 19 (1980), no. 1, 125-148. (Authors' summary) **81:07029** 76C05
- Shankar, R. Some novel features of the Gross-Neveu model. *Phys. Lett. B* 92 (1980), no. 3-4, 333-336. (J. S. Joel) **81:01058** 81E10 (22E70, 58F07, 81G25)
- Bohr-Sommerfeld quantization of pseudospin Hamiltonians. *Phys. Rev. Lett.* 45 (1980), no. 13, 1088-1091. (Author's summary) **81:01032** 81C35
- Shankland, Robert S. Conversations with Albert Einstein. *Einstein*, pp. 38-39. Harcourt Univ. Press, Cambridge, Mass., 1979. (See 81:01053) 01A70
- Shanno, D. F. Quadratic termination of conjugate gradient algorithms. *Extremal methods and systems analysis (Internat. Sympos., Univ. Texas, Austin, Tex., 1977)*, pp. 433-441. *Lecture Notes in Econ. and Math. Systems*, 174, Springer, Berlin, 1980. (Author's summary) **81:01043** 90C30
- On variable-metric methods for sparse Hessians. *Math. Comp.* 34 (1980), no. 150, 499-514. (M. T. Heath) **81:05077** 65K10 (15A57, 90C30)
- Shannon, A. G. (with Horadam, A. F.; Loh, R. P.) Divisibility properties of some Fibonacci-type sequences. *Combinatorial mathematics, VI (Proc. Sixth Austral. Conf., Univ. New England, Armidale, 1978)*, pp. 55-64. *Lecture Notes in Math.*, 748, Springer, Berlin, 1979. (Stanley J. Benkoski) **81:01016** 10A35
- (with Horadam, A. F.) Special recurrence relations associated with the sequence $\{w_n(a, b; p, q)\}$. *Fibonacci Quart.* 17 (1979), no. 4, 294-299. (E. Grosswald) **81:01016** 10A35
- A recurrence relation for generalized multinomial coefficients. *Fibonacci Quart.* 17 (1979), no. 4, 344-347. (G. L. Alexanderson) **81:05006** 05A10
- Generalized Fibonacci numbers as elements of ideals. *Fibonacci Quart.* 17 (1979), no. 4, 347-349. (John T. Hardy) **81:01017** 10A35
- A generalization of Hilton's partition of Horadam's sequences. *Fibonacci Quart.* 17 (1979), no. 4, 349-357. (David Lee Hilliker) **81:01018** 10A35 (10A40)
- Some lacunary recurrence relations. *Fibonacci Quart.* 18 (1980), no. 1, 73-79. (Péter Kiss) **81:01019** 10A35
- Shanthikumar, J. G. Some analyses on the control of queues using level crossings of regenerative processes. *J. Appl. Probab.* 17 (1980), no. 3, 814-821. (N. U. Prabhu) **81:06036** 60K25
- Shapiro, Alan E. Newton's "achromatic" dispersion law: theoretical background and experimental evidence. *Arch. Hist. Exact Sci.* 21 (1979/80), no. 2, 91-128. (Jon V. Pepper) **81:01017** 01A45 (01A50)
- The evolving structure of Newton's theory of white light and color. *Isis* 71 (1980), no. 257, 211-235. (M. Kline) **81:01018** 01A45 (78-03)
- Shapiro, C. P. (with Wardrop, Robert L.) Dynkin's identity applied to Bayes sequential estimation of a Poisson process rate. *Ann. Statist.* 8 (1980), no. 1, 171-182. (Wolfgang Winkler) **81:02139** 62L12 (62F15)
- (with Wardrop, Robert L.) Simultaneous Bayesian sequential estimation. *J. Amer. Statist. Assoc.* 75 (1980), no. 370, 359-365. (Rasul A. Khan) **81:02129** 62L12
- Shapiro, H. (with Tausky, Olga) Alternative proofs of a theorem of Moysil and Marcus on the numerical range of a square matrix. *Linear and Multilinear Algebra* 8 (1979/80), no. 4, 337-340. (Bryan E. Cain) **81:01034** 15A60 (15A57, 47A12)
- Shapiro, H. L. (with Smith, F. A.) Paracompactness in uniform spaces. *Proceedings of the 1978 Topology Conference (Univ. Oklahoma, Norman, Okla., 1978)*, I. *Topology Proc.* 3 (1978), no. 1, 179-197 (1979). (Anthony D'Aristotle) **81:04020** 54D20 (54E15)
- Shapiro, H. S. A counterexample in harmonic analysis. *Approximation theory (Papers, Vth Semester, Stefan Banach Internat. Math. Center, Warsaw, 1975)*, pp. 233-236. *Banach Center Publ.*, 4, PWN, Warsaw, 1979. (R. B. Burckel) **81:04047** 46J15 (43A20)
- Platetski-Shapiro, I. I. See Platetski-Shapiro, I. I.
- Shapiro, Jack (with Schechter, Martin; Snow, Morris) Solution of the nonlinear problem $Au = Nu(u)$ in a Banach space. *Trans. Amer. Math. Soc.* 241 (1978), 69-78. (Authors' summary) **81:07069** 47H15 (47H10)
- Shapiro, Jay R-sequences in fully bounded Noetherian rings. *Comm. Algebra* 7 (1979), no. 8, 819-831. (Robert Gordon) **81:06004** 16A12 (16A33)
- Quotient rings of a ring and a subring which have a common right ideal. *Proc. Amer. Math. Soc.* 80 (1980), no. 4, 537-543. (M. Teply) **81:06034** 16A63 (16A08)
- Shapiro, Jeffrey H. (with Yuen, Horace P.) Optical communication with two-photon coherent states. III. Quantum measurements realizable with photoemissive detectors. *IEEE Trans. Inform. Theory* 26 (1980), no. 1, 78-92. (Carl W. Helstrom) **81:04010** 94A05
- Shapiro, Jeremy F. ★ Mathematical programming: structures and algorithms. Wiley-Interscience [John Wiley & Sons], New York, 1979. xvi + 388 pp. ISBN 0-471-77886-9 (J. Parida) **81:05098** 90Cxx
- Nondifferentiable optimization and large scale linear programming. *International Symposium on Systems Optimization and Analysis (Rocquencourt, 1978)*, pp. 196-209. *Lecture Notes in Control and Information Sci.*, 14, Springer, Berlin, 1979. (C. A. Botzaris) **81:01031** 90C06
- Shapiro, Jesse M. Sequential analysis applied to testing the mean of a normal population with known coefficient of variation. *Comm. Statist. A—Theory Methods* 9 (1980), no. 1, 39-49. (Rasul A. Khan) **81:02125** 62L10
- Shapiro, Joel H. Zeros of random functions in Bergman spaces. (French summary) *Ann. Inst. Fourier (Grenoble)* 29 (1979), no. 4, vii, 159-171. (Charles Horowitz) **81:03054** 30H05 (60G99)
- Hausdorff measure and Carleson thin sets. *Proc. Amer. Math. Soc.* 79 (1980), no. 1, 67-71. (Benjamin Lépson) **81:02001** 28A05 (28A12, 30D55)
- Shapiro, Leonard Decentralized dynamics in duopoly with Pareto optimal outcomes. *Bell J. Econom.* 11 (1980), no. 2, 730-744. (Author's summary) **81:09023** 90A16
- Shapiro, Roy D. Variable block search with prior information. *European J. Oper. Res.* 4 (1980), no. 2, 124-131. (From the summary) **81:01014** 90B40 (65K99)
- Scheduling coupled tasks. *Naval Res. Logist. Quart.* 27 (1980), no. 3, 489-498. (Author's summary) **81:01016** 90B35
- Shapiro, V. E. See Šapiro, V. E.
- Shapiro, Victor L. Pressure, capacity, and the Navier-Stokes equations. *J. Math. Anal. Appl.* 65 (1978), no. 1, 236-246. (Howard Swann) **81:01036** 35Q10 (31B15)
- (with Welland, Grant V.) Sobolev spaces, the Navier-Stokes equations and capacity. *Harmonic analysis in Euclidean spaces (Proc. Sympos. Pure Math., Williams Coll., Williamstown, Mass., 1978)*, Part 1, pp. 369-375. *Sympos. Pure Math.*, XXXV, Part 1, Amer. Math. Soc., Providence, R.I., 1979. (J. Weidmann) **81:03083** 35Q10 (46E35)
- Saddle points and Ritz-Galerkin approximations. *SIAM J. Math. Anal.* 11 (1980), no. 3, 577-595. (J. H. M. Whitfield) **81:02015** 26E15 (58C20, 65J15, 90C30)
- Shapley, Lloyd S. (with Dubey, Pradeep) Mathematical properties of the Banzhaf power index. *Math. Oper. Res.* 4 (1979), no. 2, 99-131. (G. Owen) **81:01012** 90D35
- (with Maschler, M.; Peleg, Bezalel) Geometric properties of the kernel, nucleolus, and related solution concepts. *Math. Oper. Res.* 4 (1979), no. 4, 303-338. (G. Owen) **81:01010** 90D12

- Shar, Albert O. (with Copeland, Arthur H., Jr.) Homotopy nilpotency and associativity. *Proc. Amer. Math. Soc.* **80** (1980), no. 3, 487-490. (Guido Mislin) **81j:55007** 55P45
- adel Sharaf, Mohamed See Adel Sharaf, Mohamed
- Sharakhshane, A. A. See Sharakhshane, A. A.
- Sharma, G. P. On transformations of basic hypergeometric functions of three variables. *Ranchi Univ. Math. J.* **9** (1978), 39-46. (L. J. Slater) **81j:33002** 33A30
- Sharchevich, L. I. See Šarčević, L. I.
- Sharda A priority queueing problem with intermittently available phase type service. *Cahiers Centre Études Rech. Opér.* **21** (1979), no. 2, 191-204. (Brian Conolly) **81b:60100** 60K25 (90B22)
- Sharfuddin, A. (with Husain, Sayeed Izhar) On a semisymmetric connexion in almost contact manifolds. *Progr. Math. (Allahabad)* **12** (1978), no. 1-2, 101-113. (B. B. Sinha) **81e:53023** 53C15
- shawar Sharif, M. See Nawaz Sharif, M.
- el-Sharkaway, N. G. See El-Sharkaway, N. G.
- Sharma, A. S. (with Shukla, P. K.) Self-modulation of a wave-packet in a nonlinear dispersive medium. *Phys. Lett. A* **65** (1978), no. 4, 279-281. (Authors' summary) **81k:76093** 76K05 (35Q20, 76B15)
- Sharma, Ambikeshwar (with Mohapatra, Ram Narayan) Discrete exponential Abel-Euler splines. *J. Indian Math. Soc. (N.S.)* **42** (1978), no. 1-4, 367-379 (1979). (Jean Tzimbario) **81b:41016** 41A15
- (with Cavaretta, Alfred S., Jr.; Micchelli, Charles A.) Multivariate interpolation and the Radon transform. II. Some further examples. *Quantitative approximation (Proc. Internat. Sympos., Bonn, 1979)*, pp. 49-62, Academic Press, New York, 1980. (L. L. Schumaker) **81m:41037** 41A63 (41A05, 44A15)
- (with Cavaretta, Alfred S., Jr.; Varga, Richard S.) Lacunary trigonometric interpolation on equidistant nodes. *Quantitative approximation (Proc. Internat. Sympos., Bonn, 1979)*, pp. 63-80, Academic Press, New York, 1980. (H. Burkili) **81k:42004** 42A15 (42A55, 65D10)
- (with Cavaretta, Alfred S., Jr.; Micchelli, Charles A.) Multivariate interpolation and the Radon transform. *Math. Z.* **174** (1980), no. 3, 263-279. (L. L. Schumaker) **81m:41036** 41A63 (41A05, 44A15)
- (with Cavaretta, Alfred S., Jr.; Varga, Richard S.) Hermite-Birkhoff interpolation in the n th roots of unity. *Trans. Amer. Math. Soc.* **259** (1980), no. 2, 621-628. (Jean Tzimbario) **81j:34064** 30E05
- Sharma, Ashok K. Common fixed points of set-valued maps. (Russian summary) *Bull. Acad. Polon. Sci. Ser. Sci. Math.* **27** (1979), no. 5, 407-412. (Kok Keong Tan) **81a:54049** 54H25
- A generalization of Banach contraction principle to 2-metric spaces. *Math. Sem. Notes Kobe Univ.* **7** (1979), no. 2, 291-295. (Ju. G. Borisov) **81d:54038** 54H25 (47H09, 54E99)
- Sharma, B. B. On flexural vibrations of isotropic elastic circular plate according to Mindlin's theory. *Czechoslovak J. Phys. B* **29** (1979), no. 11, 1185-1188. (Szczepan Borkowski) **81c:73040** 73K10 (73D30)
- Sharma, B. L. On the algebraic properties of half-Bol loops. *Ann. Soc. Bruxelles Sér. I* **93** (1979), no. 4, 227-240 (1980). (H. Pfugfelder) **81j:20104** 20N05
- Bailey's formula for double series. *Kyungpook Math. J.* **19** (1979), no. 2, 241-243. (S. P. Goyal) **81c:33083** 33A30
- On the generalized function of two variables. II. *An. Univ. Bucuresti Mat.* **29** (1980), 85-96. (Editors) **81m:33002** 33A35
- Transformations of certain double series. *Kyungpook Math. J.* **20** (1980), no. 1, 111-115. (K. M. Saksena) **81j:40005** 40B05 (33A30, 40A99)
- Integrals involving Legendre and G -functions. *Kyungpook Math. J.* **20** (1980), no. 1, 129-134. (C. L. Parihar) **81j:44008** 44A20 (33A35)
- Sharma, Bin Dev (with Gupta, H. C.) Entropy as an optimal measure. (French summary) *Information theory (Proc. Internat. CNRS Colloq., Cachan, 1977) (French)*, pp. 151-159, Colloques Internat. CNRS, 276, CNRS, Paris, 1978. (Authors' summary) **81f:94013** 94A17
- (with Kaushik, Manohar Lal) Limited intensity random and burst-error-correcting codes with class-weight consideration. (German and Russian summaries) *Elektron. Informationsverarb. Kybernet.* **15** (1979), no. 5-6, 315-321. (Authors' summary) **81b:94050** 94B50
- (with Khanna, Ravinder Kumar) Integer characterization of binary and m -ary Gray codes. *J. Combin. Inform. System Sci.* **4** (1979), no. 3, 227-236. (From the summary) **81h:94014** 94A24 (94B60)
- (with Wasan, Siri Krishan) Weak cyclic codes. *Serdica* **5** (1979), no. 4, 321-326. (M. C. Cheng) **81f:94022** 94B15
- (with Khanna, Ravinder Kumar) On level-weight studies of binary and m -ary Gray codes. *Inform. Sci.* **21** (1980), no. 2, 179-186. (Jack K. Wolf) **81f:94015** 94A29
- Sharma, C. S. (with Sri Ranganathan, S.) A new proof of the Brillouin theorem. *Molecular Phys.* **40** (1980), no. 4, 1021-1023. (G. Fonte) **81g:81036** 81C99 (49H05, 81Hxx)
- Mackey's eighth axiom and quantum logics. *Phys. Lett. A* **80** (1980), no. 2-3, 135-139. (Authors' summary) **81k:81010** 81B10 (03G12)
- Sharma, Chandra Kinshore Linear flow of heat in an anisotropic finite solid moving in a conducting media. *Proceedings of the Conference on Mathematical Methods in Physics (Mysore, 1978), Part A*, pp. 220-227, Matscience Rep., 96, Inst. Math. Sci., Madras, 1979. (From the summary) **81g:80007** 80A20
- Sharma, H. N. The generalisations of third iterated Laplace transform as convolution transforms and their inverses. *Ranchi Univ. Math. J.* **9** (1978), 59-64. (R. G. Buschman) **81j:44007** 44A15
- Sharma, J. K. (with Swarup, Kanti) Time minimization in transportation problems. *New Zealand Oper. Res.* **6** (1978), no. 1, 75-88. (Authors' summary) **81f:90109** 90C35 (65K10)
- (with Sharma, M. M.) On mixed integer solutions to goal programming problems. *Indian J. Pure Appl. Math.* **11** (1980), no. 3, 314-320. (N. I. Janev) **81c:90062** 90C11
- (with Gupta, A. K.; Gupta, M. P.) Extension of simplex technique for solving fractional programming problem. *Indian J. Pure Appl. Math.* **11** (1980), no. 8, 961-968. (Authors' summary) **81c:90100** 90C32
- (with Mukunda, N.; Sudarshan, E. C. G.; Mehta, C. L.) Representations and properties of para-Bose oscillator operators. I. Energy position and momentum eigenstates. *J. Math. Phys.* **21** (1980), no. 9, 2386-2394. (F. R. Halpern) **81k:81033** 81C40 (17B10, 22E70, 81D05)
- Sharma, K. C. (with Sharma, R. C.) Suspended particles and the gravitational instability of a rotating plasma. *Astrophys. and Space Sci.* **71** (1980), no. 2, 325-332. (Authors' summary) **81c:76044** 76E20 (76E25, 85A05)
- Sharma, K. G. (with Beohar, B. K.) On Nörlund summability of Jacobi series. *Indian J. Pure Appl. Math.* **11** (1980), no. 11, 1475-1481. (H. M. Srivastava) **81j:40013** 40G05 (33A65, 42C10)
- Sharma, K. M. (with Singh, Niranjana) Convergence of certain cosine sums in a metric space — L. *Proc. Amer. Math. Soc.* **72** (1978), no. 1, 117-120. (Masako Izumi) **81d:42008** 42A20
- (with Singh, Niranjana) Convergence of a trigonometric series in the metric space L. (Arabic summary) *Arabian J. Sci. Engrg.* **4** (1979), no. 2, 137-140. (Tikam Singh) **81c:42013** 42A32 (40A05, 42A20)
- Sharma, M. M. (with Chandra, Prem) Criteria for the absolute convergence of Legendre series. *J. Indian Math. Soc. (N.S.)* **42** (1978), no. 1-4, 235-243 (1979). (B. R. Bhonsle) **81c:42035** 42C10 (33A40, 40E05)
- (with Chandra, Prem) On the absolute Riesz summability of Legendre series. *Indian J. Pure Appl. Math.* **10** (1979), no. 2, 191-203. (D. P. Gupta) **81c:42037a** 42C10
- (with Chandra, Prem) Corrigendum to: "On the absolute Riesz summability of Legendre series". *Indian J. Pure Appl. Math.* **10** (1979), no. 12, 1582-1583. (From the text) **81c:42037b** 42C10
- (with Sharma, J. K.) On mixed integer solutions to goal programming problems. *Indian J. Pure Appl. Math.* **11** (1980), no. 3, 314-320. (N. I. Janev) **81c:90062** 90C11
- Sharma, N. L. (with Bhutani, O. P.) Self-similar solutions of irrotational axially symmetric hypersonic flow equation. *J. Math. Phys. Sci.* **14** (1980), no. 1, 9-17. (A. Pozzi) **81i:76023** 76K05 (35A30, 35Q20)
- Sharma, P. L. (with Hicks, T. L.) Properties of z -spaces. The Proceedings of the 1979 Topology Conference (Ohio Univ., Athens, Ohio, 1979). *Topology Proc.* **4** (1979), no. 1, 109-113 (1980). (P. Fletcher) **81j:54044** 54E15
- (with Hicks, T. L.) Embedding discrete flows on \mathbb{R} in a continuous flow. *J. Math. Anal. Appl.* **74** (1980), no. 1, 31-40. (Helmut Ludescher) **81f:54023** 54H20 (54H15)
- Sharma, Pramod K. Divisibility and injectivity. *J. Indian Acad. Math.* **1** (1979), no. 2, 9-10. (Ahmad Haghighi) **81a:13010** 13C11
- Sharma, R. C. (with Thakur, K. P.) Rayleigh-Taylor instability of a composite mixture through porous medium. *Acta Phys. Acad. Sci. Hungar.* **46** (1979), no. 4, 247-252. (D. A. Nield) **81c:76040** 76E25 (76S05)
- Thermal instability through porous medium of compressible fluids. *J. Math. Phys. Sci.* **13** (1979), no. 6, 583-598. (Authors' summary) **81f:76021** 76E15 (76S05)
- (with Sharma, K. C.) Suspended particles and the gravitational instability of a rotating plasma. *Astrophys. and Space Sci.* **71** (1980), no. 2, 325-332. (Authors' summary) **81c:76044** 76E20 (76E25, 85A05)
- Sharma, R. K. Applications of Bailey's formula. *Nederl. Akad. Wetensch. Indag. Math.* **42** (1980), no. 3, 333-337. (L. J. Slater) **81j:33001** 33A30
- Sharma, R. R. (with Das, P. C.) Some Stieltjes integral inequalities. *J. Math. Anal. Appl.* **73** (1980), no. 2, 423-433. (E. F. Beckenbach) **81c:26014** 26D15
- Sharma, Ramesh (with Sinha, B. B.) Infinitesimal variations of hypersurfaces of an almost product and almost decomposable manifold. *Indian J. Pure Appl. Math.* **10** (1979), no. 8, 1009-1019. (David Blair) **81a:53026** 53B25 (53C15)
- Sharma, Rishi Ram (with Gaur, Madhukar) Radiative heat transfer effects on the regular reflection of a shock wave from a rigid wall. (Turkish summary) *J. Pure Appl. Sci.* **11** (1978), no. 1, 87-99 (1980). (Authors' summary) **81c:76050** 76L05 (80A20)
- (with Pandey, B. D.) On the growth and decay of acceleration waves in transient gas flows with vibrational relaxation. (German summary) *Acta Mech.* **33** (1979), no. 3, 171-178. (Authors' summary) **81f:76027** 76N15 (76L05)
- (with Singh, H. N.) The growth and decay of weak discontinuities in relativistic fluids with vibrational relaxation. *Acta Phys. Acad. Sci. Hungar.* **46** (1979), no. 3, 157-165. (Authors' summary) **81c:76058** 76Y05
- (with Singh, H. N.; Gaur, Madhukar) The growth and decay of weak waves in relativistic flows of dissociating gases. *J. Math. Phys.* **21** (1980), no. 5, 1246-1250. (R. F. Biljalov) **81g:76128** 76Y05 (76N15, 83C55)
- (with Singh, H. N.; Gaur, Madhukar) On the growth and decay of discontinuities in relativistic magnetohydrodynamics. *Phys. Scripta* **22** (1980), no. 3, 304-307. (Authors' summary) **81c:76095** 76Y05 (76L05, 76W05)
- See also Menon, V. V.; et al., **81j:76069**
- Sharma, S. D. (with Lishk, Sajjan Singh) Season determination through the science of scaterichies in Jaina School of Astronomy. *Indian J. Hist. Sci.* **12** (1977), no. 1, 33-44. (R. C. Gupta) **81a:01010** 01A32
- On two-dimensional finite Mathieu transforms. *Acta Cienc. Indica* **5** (1979), no. 4, 186-189. (R. P. Srivastava) **81c:44003** 44A15
- (with Singh, R. K.) Composition operators on a functional Hilbert space. *Bull. Austral. Math. Soc.* **20** (1979), no. 3, 377-384. (Eric Nordgren) **81c:47034** 47B38
- (with Singh, R. K.) Noncompact composition operators. *Bull. Austral. Math. Soc.* **21** (1980), no. 1, 125-130. (Eric Nordgren) **81m:47046** 47B38 (47B05)
- Multiple generalized prolate spheroidal wave transform and its application. *Kyungpook Math. J.* **20** (1980), no. 1, 121-127. (R. K. Gupta) **81g:44003** 44A05
- Sharma, Sushil (with Srivastava, K. K.) On absolute Cesàro summability of Laplace series. *Math. Ed. (Shivan)* **13** (1979), no. 2, 27-34. (John A. Fridy) **81b:42082** 42C10 (40G05)
- On absolute Nörlund summability factor of Legendre series. *Indian J. Pure Appl. Math.* **11** (1980), no. 5, 655-665. (N. Kishore) **81g:42029** 42C10 (40G05, 42A28)
- Sharma, T. N. (with Singh, Vimal) On the absolute stability of continuous-time nonlinear systems. *IEEE Trans. Automat. Control* **25** (1980), no. 2, 332-334. (Authors' summary) **81a:93068** 93D05
- Sharma, V. D. (with Shyam, Radhe) On the propagation of sonic waves in a dissociating gas. *Acta Phys. Acad. Sci. Hungar.* **46** (1979), no. 4, 299-308. (M. Honda) **81f:76034** 76N15 (76L05)
- On the behaviour of weak discontinuities in an electrically conducting gas. *Lett.*

- Nuovo Cimento (2) 27 (1980), no. 5, 129-132. (From the text) **81h:76063** 76W05 (76L05)
- (with Menon, V. V.) Correction to a paper of R. Ram concerning the behaviour of the solution of the Bernoulli equation: "A modification in the theorem of Bailey and Chen" [Nuovo Cimento B (11) 48 (1978), no. 1, 9-14; MR 80b:80008]. (Italian and Russian summaries) *Nuovo Cimento B* (11) 58 (1980), no. 1, 64-72. (Authors' summary) **81j:76069** 76N15
- Šarar, V. F. See Šarar, V. F.
- Sharp, David H. Radiation reaction in nonrelativistic quantum theory. *Foundations of radiation theory and quantum electrodynamics*, pp. 127-141, Plenum, New York, 1980. (See **81i:81002**) **81G10**
- A local gauge-invariant formulation of quantum electrodynamics. *Foundations of radiation theory and quantum electrodynamics*, pp. 183-194, Plenum, New York, 1980. (See **81i:81002**) **81L05** (81E99)
- (with Bender, Carl M.; Cooper, Fred; Guralnik, Gerald; Rose, Harvey A.) Strong coupling expansion for classical statistical dynamics. *J. Statist. Phys.* 22 (1980), no. 6, 647-660. (B. Derrida) **81h:82003** 82A05 (34F05)
- Sharp, R. T. (with Patera, J.) Generating function techniques pertinent to spectroscopy and crystal physics. *Recent advances in group theory and their application to spectroscopy* (Proc. NATO Adv. Study Inst., St. Francis Xavier Univ., Antigonish, N.S., 1978), pp. 219-248, NATO Adv. Study Inst. Ser., Ser. B: Physics, 43, Plenum, New York, 1979. (T. Janssen) **81i:20017** 20C35 (22E70, 81G40, 82A60)
- (with Patera, J.; Slansky, R.) On a new relation between semisimple Lie algebras. *J. Math. Phys.* 21 (1980), no. 9, 2335-2341. (J. F. Cornwell) **81i:17004** 17B20 (81C40)
- (with Patera, J.) Generating functions for plethysms of finite and continuous groups. *J. Phys. A* 13 (1980), no. 2, 397-416. (M. K. F. Wong) **81e:22031** 22E70 (20C35, 81C40)
- (with Couture, M.) Reduction of enveloping algebras of low-rank groups. *J. Phys. A* 13 (1980), no. 6, 1925-1945. (Philip Huddleston) **81i:17006** 17B35 (81C40)
- Sharp, Rodney Y. Necessary conditions for the existence of dualizing complexes in commutative algebra. *Séminaire d'Algebra Paul Dubreil 31ème année* (Paris, 1977-1978), pp. 213-229, *Lecture Notes in Math.*, 740, Springer, Berlin, 1979. (P. Schenzel) **81d:13013** 13D25 (14B15)
- Sharpe, R. W. $K_2(\mathbb{Z}/5)$ is generated by relations among 2×2 matrices. *Algebraic topology, Waterloo, 1978* (Proc. Conf., Univ. Waterloo, Waterloo, Ont., 1978), pp. 158-169, *Lecture Notes in Math.*, 741, Springer, Berlin, 1979. (Alan Candiotti) **81e:13015** 13D15 (12A62)
- Sharpley, Robert C. (with DeVore, Ronald A.; Riemenschneider, Sherman D.) Weak interpolation in Banach spaces. *J. Funct. Anal.* 33 (1979), no. 1, 58-94. (Colin Bennett) **81i:46040** 46E35 (41A65)
- Sharvy, Richard Transitivity and conditionals. *Logique et Anal. (N.S.)* 22 (1979), no. 87, 347-351. (John R. Chidgey) **81i:03015a** 03B05 (03B60)
- Errata: "Transitivity and conditionals". *Logique et Anal. (N.S.)* 22 (1979), no. 88, 527. (Editors) **81i:03015b** 03B05
- Shashani, A. O. (with Aguirre-Ramirez, G.) A numerical solution for integral equations. *Internat. J. Numer. Methods Engng.* 15 (1980), no. 10, 1575-1579. (Authors' summary) **81j:65132** 65R20
- Štarič, Anant R. (with Hendriks, Harrie) A splitting theorem for surfaces. *Topological structures, II* (Proc. Sympos. Topology and Geom., Amsterdam, 1978), Part 1, pp. 117-121, *Math. Centre Tracts*, 115, Math. Centrum, Amsterdam, 1979. (T. B. Rushing) **81j:57006** 57N05
- (with Williams, Jeffrey George; Zvengrowski, Peter) Kinks in general relativity. *Internat. J. Theoret. Phys.* 19 (1980), no. 1, 1-23. (George S. Whiston) **81k:83035** 83C99
- Some cancellation theorems. *J. Austral. Math. Soc. Ser. A* 30 (1980/81), no. 1, 87-97. (N. G. Šahovaja) **81k:20046** 20F06 (20F18)
- Štatalov, V. V. See Štatalov, V. V.
- Štatalov, S. Kh. See Štatalov, V. V.
- Shaw, Howard (with McKenna, P. J.) The structure of the solution set of some nonlinear problems. (Italian summary) *Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur.* (8) 65 (1978), no. 6, 239-243 (1979). (J. Daneš) **81k:47087** 47H15
- On semigroups of weakly antilocal operators. *Applicable Anal.* 10 (1980), no. 2, 127-129. (G. R. Wood) **81h:47038** 47F05 (35B30, 81C05)
- Shaw, J. K. (with Prather, Carl L.) Zeros of successive derivatives and iterated operators on analytic functions. *Proc. Amer. Math. Soc.* 79 (1980), no. 2, 225-232. (R. P. Boas, Jr.) **81c:30014** 30C15
- On the oscillatory behavior of singular Sturm-Liouville expansions. *Trans. Amer. Math. Soc.* 257 (1980), no. 2, 483-505. (Johannes Elschner) **81h:34020** 34B25 (42C15)
- Shaw, L. (with Hsu, C. L.; Tyan, S. G.) Optimal replacement of parts having observable correlated stages of deterioration. *Naval Res. Logist. Quart.* 27 (1980), no. 3, 359-373. (Authors' summary) **81i:90096** 90B25 (62N05)
- Shaw, Mary Abstraction and verification in ALPHARD: design and verification of a tree handler. *Langages et traducteurs (Papers, IRIA Sem., Rocquencourt, 1977)*, pp. 135-155, IRIA, Rocquencourt, 1977. (See **80c:68002**) **68B10**
- Shaw, Peter B. (with Whitfield, George) Breakdown of perturbation theory for the deformation potential polaron. *Phys. Rev. B* (3) 21 (1980), no. 10, 4349-4356. (Authors' summary) **81c:82024** 82A55 (81C12)
- Shaw, R. P. (with Kaul, Raj K.) Interfacial elastic parameters in torsional vibrations of a periodic structured cylindrical rod. *Internat. J. Solids and Structures* 16 (1980), no. 9, 777-783. (Authors' summary) **81f:73030** 73K12
- Shaw, Sen Yen See Hsiao, Sheng Yen
- Shawki, G. S. A. (with Elzoughby, A. A.; Metwalli, S. M.) Linearized ridge-path method for function minimization. *J. Optim. Theory Appl.* 30 (1980), no. 2, 161-179. (K. G. Murty) **81e:90087** 90C30 (65K10)
- Ščepnikov, V. V. See Ščepnikov, V. V.
- Ščepnikov, M. B. See Ščepnikov, M. B.
- Shea, Daniel F. (with Essén, Mattis) On some questions of uniqueness in the theory of symmetrization. *Ann. Acad. Sci. Fenn. Ser. A I Math.* 4 (1979), no. 2, 311-340. (E. F. Beckenbach) **81d:30002** 30A10 (31A15)
- Shearer, James B. A simple counterexample to a conjecture of Rota. *Discrete Math.* 28 (1979), no. 3, 327-330. (E. Rodney Canfield) **81a:05009** 05A17 (06A10)
- (with Kleitman, Daniel J.) Further gossip problems. *Discrete Math.* 30 (1980), no. 2, 151-156. (Richard T. Bumby) **81e:05008** 05C99
- A graded algebra with a nonrational Hilbert series. *J. Algebra* 62 (1980), no. 1, 228-231. (J. P. Jans) **81b:16002** 16A03 (14M99, 16A62)
- Shearer, M. On the null spaces of linear Fredholm operators depending on several parameters. *Math. Proc. Cambridge Philos. Soc.* 84 (1978), no. 1, 131-142. (Author's summary) **81f:47018** 47A53 (47A55)
- One-parameter perturbations of bifurcation from a simple eigenvalue. *Math. Proc. Cambridge Philos. Soc.* 88 (1980), no. 1, 111-123. (R. A. Plastock) **81h:58027** 58E07 (47H15)
- Secondary bifurcation near a double eigenvalue. *SIAM J. Math. Anal.* 11 (1980), no. 2, 365-389. (R. A. Plastock) **81e:58031** 58E07 (47H15)
- Shedetsky, John J. Delay testing LSI logic. *FTCS-8 (Eighth Ann. Internat. Conf. Fault-Tolerant Comput., Toulouse, 1978)*, pp. 159-164, IEEE, New York, 1978. (Author's summary) **81e:94043** 94C10 (68A05)
- Shee, S. C. (with Teh, H. H.) Colour graphs and inverse semigroups. *Southeast Asian Bull. Math.* 3 (1979), no. 2, 254-269. (J. Dénes) **81f:05096** 05C25 (20B25)
- Sheehan, J. (with Rousseau, C. C.) A class of Ramsey problems involving trees. *J. London Math. Soc.* (2) 18 (1978), no. 3, 392-396. (Stefan A. Burr) **81e:05103** 05C55
- (with Holton, D. A.) On Sylow graphs. *J. Austral. Math. Soc. Ser. A* 28 (1979), no. 1, 27-38. (M. E. Watkins) **81h:05057** 05C25
- (with Faudree, R. J.; Schelp, R. H.) Ramsey numbers for matchings. *Discrete Math.* 32 (1980), no. 2, 105-123. (J. E. Graver) **81k:05076** 05C55
- Sheets, Ronald P. The synthetic derived functors of a functor. *J. Pure Appl. Algebra* 18 (1980), no. 3, 293-313. (Gavin Wraith) **81m:18013** 18G50 (18G10)
- Sheffer, I. M. On a class $W[k, s; C_0]$ of polynomial sets. I. *SIAM J. Math. Anal.* 11 (1980), no. 2, 228-241. (W. A. Al-Salam) **81d:33011** 33A70 (05A15, 34B30)
- Shell-Small, T. The Hadamard product and linear transformations of classes of analytic functions. *J. Analyse Math.* 34 (1978), 204-239 (1979). (S. M. Shah) **81h:30023** 30C45 (30C55)
- Shelman, Jon Target mass corrections in the QCD parton model. *Nuclear Phys. B* 171 (1980), no. 3, 445-470. (Author's summary) **81h:81138** 81G05
- Šelinauskas, R. I. See Šelinauskas, R. I.
- Shelton, Mark Boundary behavior of automorphic forms and transitivity for the modular group. *Illinois J. Math.* 24 (1980), no. 3, 440-451. (Peter J. Nicholls) **81j:30079** 30F35 (10D12)
- Transitivity for the modular group. *Math. Proc. Cambridge Philos. Soc.* 88 (1980), no. 3, 409-423. (G. M. Ljan) **81k:10038** 10D07 (30F35)
- Shelah, Saharon Remarks on λ -collectionwise Hausdorff spaces. *Proceedings of the 1977 Topology Conference (Louisiana State Univ., Baton Rouge, La., 1977)*, II. *Topology Proc.* 2 (1977), no. 2, 583-592 (1978). (William G. Fleissner) **81f:03060** 03E35 (54A25, 54D15)
- ★Classification theory and the number of nonisomorphic models. *Studies in Logic and the Foundations of Mathematics*, 92, North-Holland Publishing Co., Amsterdam-New York, 1978. xvi + 544 pp. ISBN 0-7204-0757-5 (Daniel Lascar) **81a:03030** 03C45 (03-02)
- (with Devlin, Keith J.) A note on the normal Moore space conjecture. *Canad. J. Math.* 31 (1979), no. 2, 241-251. (Peter J. Nyikos) **81d:54022** 54E30 (03E35)
- (with Gurevich, Yuri) Modest theory of short chains. II. *J. Symbolic Logic* 44 (1979), no. 4, 491-502. (Daniel Lascar) **81a:03030b** 03C85 (03B25, 03D35)
- Weakly compact cardinals: a combinatorial proof. *J. Symbolic Logic* 44 (1979), no. 4, 559-562. (E. C. Milner) **81e:04009** 04A20 (03E55)
- (with Makowsky, J. A.) The theorems of Beth and Craig in abstract model theory. I. The abstract setting. *Trans. Amer. Math. Soc.* 256 (1979), 215-239. (W. Hodges) **81h:03041** 03C80 (03C95)
- On a problem of Kurosh, Jónsson groups, and applications. *Word problems, II* (Conf. on Decision Problems in Algebra, Oxford, 1976), pp. 373-394, *Studies in Logic and Foundations of Math.*, 95, North-Holland, Amsterdam, 1980. (G. Cherlin) **81j:20047** 20F06 (03C60)
- (with Rubin, Matatyahu) On the elementary equivalence of automorphism groups of Boolean algebras; downward Skolem-Löwenheim theorems and compactness of related quantifiers. *J. Symbolic Logic* 45 (1980), no. 2, 265-283. (Martin Weese) **81h:03078** 03C80 (03C85, 03G05, 06E05)
- Independence of strong partition relation for small cardinals, and the free-subset problem. *J. Symbolic Logic* 45 (1980), no. 3, 505-509. (L. Bukovsky) **81k:03050** 03E35 (03E05)
- Shelomov, N. A. See Šelomov, N. A.
- Shelton, Diana Orbital integrals for $GL_2(\mathbb{R})$. *Automorphic forms, representations and L-functions* (Proc. Sympos. Pure Math., Oregon State Univ., Corvallis, Ore., 1977), Part 1, pp. 107-110, *Proc. Sympos. Pure Math., XXXIII, Amer. Math. Soc., Providence, R.I.*, 1979. (Stephen Gelbart) **81f:22017** 22E30 (10D40)
- Notes on L-indistinguishability (based on a lecture of R. P. Langlands). *Automorphic forms, representations and L-functions* (Proc. Sympos. Pure Math., Oregon State Univ., Corvallis, Ore., 1977), Part 2, pp. 193-203, *Proc. Sympos. Pure Math., XXXIII, Amer. Math. Soc., Providence, R.I.*, 1979. (Joe Reppka) **81m:12018** 12A67 (10D40, 22E50)
- Orbital integrals and a family of groups attached to a real reductive group. *Ann. Sci. École Norm. Sup. (4)* 12 (1979), no. 1, 1-31. (Wulf Rossmann) **81k:22014** 22E45 (22E46)
- Shelton, Robert Critical points of harmonic functions on domains in \mathbb{R}^3 . *Trans. Amer. Math. Soc.* 261 (1980), no. 1, 137-158. (George M. Rassias) **81k:58022** 58E05 (49F05)
- Shemanske, Tom (with Hijikata, Hiroaki; Pizer, Arnold) The basis problem for modular forms on $\Gamma_0(N)$. *Proc. Japan Acad. Ser. A Math. Sci.* 56 (1980), no. 6, 280-284. (Hiroshi Saito) **81k:10045** 10D25
- Shen, C. N. Sensitivity coefficient of exterior ballistics with velocity square damping. *Transactions of the Twenty-Fifth Conference of Army Mathematicians* (Johns Hopkins

- Univ., Baltimore, Md., 1979), pp. 267-282, *ARO Rep.* 80, 1, U. S. Army Res. Office, Research Triangle Park, N.C., 1980. (See 80m:73002) 70D99 (70N05)
- Shen, Chao Liang On the classification of the ordered groups associated with the approximately finite-dimensional C^* -algebras. *Duke Math. J.* 46 (1979), no. 3, 613-633. (Ola Bratteli) 81h:46076 46L05 (06F20)
- (with Effros, Edward G.) Approximately finite C^* -algebras and continued fractions. *Indiana Univ. Math. J.* 29 (1980), no. 2, 191-204. (P. A. Fillmore) 81g:46076 46L05 (06F20)
- Shen, M. C. (with London, S.) Free oscillation in a rotating spherical shell. *Phys. Fluids* 22 (1979), no. 11, 2071-2080. (M. C. Singh) 81e:76077 76U05
- Shen, Shan Fu Unsteady separation according to the boundary layer equation. *Advances in applied mechanics*, Vol. 18, pp. 177-220, Academic Press, New York, 1978. (C. R. Illingworth) 81h:76018 76D15
- Shen, Sing Yao See Shen, Xin Yao
- Shen, V. Y. (with Kafura, D. G.) An algorithm to design the memory configuration of a computer network. *J. Assoc. Comput. Mach.* 25 (1978), no. 3, 365-377. (From the summary) 81a:68008 68A05
- Shen, Xie Chang The problem of best approximation by rational functions with preassigned poles. (Chinese) *Acta Math. Sinica* 21 (1978), no. 1, 86-90. (Author's introduction) 81h:41016 41A20
- (with Lou, Yuan Ren) Best approximation by rational functions in H_p spaces ($p > 1$). (Chinese, English summary) *Beijing Daxue Xuebao* No. 1 (1979), 58-72. (Yung-Ming Chen) 81h:30071 30E10 (30D55, 41A10, 41A17, 41A20)
- On the best approximation of functions in the E_p ($1 < p < +\infty$) space by rational functions with preassigned poles. (Chinese, English summary) *Chinese Ann. Math.* 1 (1980), no. 1, 51-62. (Author's summary) 81j:41026 41A20 (46E15)
- Approximation and expansion by rational functions in certain class of domains. A translation of *Kexue Tongbao* (Chinese) 25 (1980), no. 3, 97-101. *Kexue Tongbao* (English) 25 (1980), no. 2, 97-102. (Jean Tzimbarario) 81h:30067 30E10
- Shen, Xin Yao On new homotopy invariants. I. A short exact sequence. (Chinese, English summary) *Acta Math. Sinica* 21 (1978), no. 3, 253-262. (K.-T. Chen) 81e:55022a 55Q55 (55S99)
- On new homotopy invariants. II. Two short exact sequences. (Chinese, English summary) *Acta Math. Sinica* 21 (1978), no. 4, 327-346. (K.-T. Chen) 81e:55022b 55Q55 (55S99)
- Shen, Y. R. (with Oudar, J.-L.) Nonlinear spectroscopy by multiresonant four-wave mixing. *Phys. Rev. A* (3) 22 (1980), no. 3, 1141-1158. (Authors' summary) 81g:78007 78A10 (81K05)
- Shen, You Ding A "natural" enumeration of nonnegative rational numbers—an informal discussion. *Amer. Math. Monthly* 87 (1980), no. 1, 25-29. (M. S. Cheema) 81i:10017 10A35 (10A32)
- Sheng, C. L. (with Das, Sunil R.; Ch'en, Jên; Lin, T.) Magnitude ordering of degree complements of certain node pairs in an undirected graph and an algorithm to find a class of maximal subgraphs. *Comput. Electr. Engrg.* 6 (1979), no. 3, 139-151. (R. J. McElice) 81h:68078 68E10 (05C40)
- Sheng, Gang A simple proof of Bieberbach conjecture for sixth coefficient. *Sci. Sinica* 23 (1980), no. 1, 1-15. (Hiroshi Haruki) 81g:30026 30C50
- Sheng, Lillian T. (with Rathie, Pushpa N.) On the measurable solutions of certain functional equations. *Czechoslovak Math. J.* 30(105) (1980), no. 3, 418-425. (A. Smajdor) 81m:39011 39B20
- Shenoy, Prakash P. A two-person non-zero-sum game model of the world oil market. *Appl. Math. Modelling* 4 (1980), no. 4, 295-300. (Author's summary) 81f:90037 90A30 (90D45)
- A three-person cooperative game formulation of the world oil market. *Appl. Math. Modelling* 4 (1980), no. 4, 301-307. (Author's summary) 81f:90038 90A30 (90D45)
- On committee decision making: a game theoretical approach. *Management Sci.* 26 (1980), no. 4, 387-400. (Y. C. Ho) 81j:90146 90D12 (90D30)
- Shepard, Roger N. Multidimensional scaling, tree-fitting, and clustering. *Science* 210 (1980), no. 4468, 390-398. (Author's summary) 81j:92028 92A27 (62P15)
- Shepardson, Fred (with Marsten, Roy E.) A Lagrangean relaxation algorithm for the two duty period scheduling problem. *Management Sci.* 26 (1980), no. 3, 274-281. (Authors' summary) 81j:90073 90B35
- Shephard, G. C. (with Grünbaum, Branko) Tilings with congruent tiles. *Bull. Amer. Math. Soc. (N.S.)* 3 (1980), no. 3, 951-973. (J. J. Burckhardt) 81k:51014 51F15 (05B45, 10E40, 52A25, 82A60)
- Shephard, J. G. Cautious nonlinear optimisation: a new technique for allocation problems. *J. Oper. Res. Soc.* 31 (1980), no. 11, 993-1000. (Author's summary) 81j:90038 90A30 (90C08)
- Shepherd, J. J. On the asymptotic solution of the Reynolds equation. *SIAM J. Appl. Math.* 34 (1978), no. 4, 774-791. (Barry Bernstein) 81e:76058 76N99 (76D05)
- Shepherd-Barrow, N. I. On a problem of Ernst Kunz concerning certain characteristic functions of local rings. *Arch. Math. (Basel)* 31 (1978/79), no. 6, 562-564. (Maria Grazia Marinarì) 81e:13012 13H10
- Shepherdson, J. C. Utility theory based on rational probabilities. *J. Math. Econom.* 7 (1980), no. 1, 91-113. (Author's summary) 81a:90039 90A10
- Shepp, L. A. (with Slepian, D.; Wyner, Aaron D.) On prediction of moving-average processes. *Bell System Tech. J.* 59 (1980), no. 3, 367-415. (A. Morris Walker) 81g:60041 60G25 (62M20, 94A17)
- (with Benel, V. E.; Witsenhausen, Hans S.) Some solvable stochastic control problems. *Stochastics* 4, no. 1, 39-83 (1980/81). (H.-J. Engelbert) 81k:93004 93E20
- Sher, George What makes a lottery fair? *Noûs* 14 (1980), no. 2, 203-216. (Peter H. Farquhar) 81m:03010 03A05 (90D12)
- Sher, Richard B. (with Hollingsworth, John G.) Closed manifolds are of simple shape. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math. Astronom. Phys.* 26 (1978), no. 3, 287-290. (Authors' summary) 81f:57008 57N25
- (with Boxer, Laurence) Borsuk's fundamental metric and shape domination. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math. Astronom. Phys.* 26 (1978), no. 9-10, 849-853. (Jerzy Dydak) 81e:54030 54F43 (54B20)
- Sheriff, Hanif D. (with Shetty, C. M.) A finitely convergent algorithm for bilinear programming problems using polar cuts and disjunctive face cuts. *Math. Programming* 19 (1980), no. 1, 14-31. (Authors' summary) 81e:90062 90C05 (65K05)
- (with Bazaraa, Mokhtar S.) Benders' partitioning scheme applied to a new formulation of the quadratic assignment problem. *Naval Res. Logist. Quart.* 27 (1980), no. 1, 29-41. (Authors' summary) 81a:90073 90B05 (90C10)
- (with Shetty, C. M.) On the generation of deep disjunctive cutting planes. *Naval Res. Logist. Quart.* 27 (1980), no. 3, 453-475. (Charles E. Blair) 81k:90082 90C25 (90C05)
- Sheriff, Hanif H. (with Dhalwal, Ranjit S.) Generalized thermoelasticity for anisotropic media. *Quart. Appl. Math.* 38 (1980/81), no. 1, 1-8. (Authors' summary) 81j:73062 73U05
- Sheriff, Hanan H. (with Chehata, C. G.) Embedding theorems for operator groups. *Math. Sci.* 4 (1979), no. 2, 99-104. (S. Andreadakis) 81c:20027 20F99 (20E06)
- Sheriff, Soraya (with Hamad, Hanan) On the ordinary and the absolute Tauberian constants for Hausdorff transformations. *Indian J. Pure Appl. Math.* 7 (1976), no. 10, 1091-1095. (A. Meir) 81a:40007 40E20
- Sherk, F. A. A translation plane of order 27 with a small translation complement. *Geom. Dedicata* 9 (1980), no. 3, 307-316. (T. G. Ostrom) 81i:51001 51A40 (51E15)
- Sherman, A. H. (with Bank, Randolph E.) Algorithmic aspects of the multilevel solution of finite element equations. *Sparse Matrix Proceedings 1978 (Sympos. Sparse Matrix Comput., Knoxville, Tenn., 1978)*, pp. 62-89, SIAM, Philadelphia, Pa., 1979. (Ian Gladwell) 81g:65144 65N30 (65F10)
- Sherman, Bernard (with Singh, Vijay P.) A mathematical model of a reservoir. *Proceedings of the First International Conference on Mathematical Modeling (St. Louis, Mo., 1977)*, Vol. IV, pp. 2235-2246, Univ. Missouri-Rolla, Rolla, Mo., 1977. (Authors' summary) 81j:92048 92A17 (86A05)
- Sherman, Larry (with Stanhouse, Bryan) A note on information in the loan evaluation process. *J. Finance* 34 (1979), no. 5, 1263-1269. (Authors' summary) 81j:90019 90A10
- Sherrie, M. (with Pollard, J. H.) Application of matrix methods to pension funds. *Scand. Actuar. J.* 1980, no. 2, 77-95. (Jean Lemaire) 81f:62152 62P05 (90A09)
- Sherwood, H. Isomorphically isometric probabilistic normed linear spaces. *Stochastica* 3 (1979), no. 2, 71-77. (B. Schweizer) 81f:60017 60B99 (46B99)
- Sherwood, J. Frank, III (with Triffet, T.) Synaptic connectivity in a dynamical brain model. *Proceedings of the First International Conference on Mathematical Modeling (St. Louis, Mo., 1977)*, Vol. II, pp. 819-828, Univ. Missouri-Rolla, Rolla, Mo., 1977. (Authors' summary) 81m:92027 92A09
- Shestakov, A. I. (with Killen, J.; Schnack, D. D.) Linear and nonlinear calculation of resistive magnetohydrodynamic instabilities. *Computing methods in applied sciences and engineering (Proc. Fourth Internat. Sympos., Versailles, 1979)*, pp. 305-324, North-Holland, Amsterdam, 1980. (Authors' summary) 81k:76026 76E25 (65N05)
- Shestopal, M. G. See Šestopal, M. G.
- Sheth, L. H. (with Prasanna, Shanti) A remark on a paper: "On a class of normaloid operators" [Math. Z. 124 (1972), 199-202; MR 45 #944] by V. I. Istrătescu. *Indian J. Pure Appl. Math.* 11 (1980), no. 2, 212-214. (Authors' summary) 81k:47034 47B20
- (with Acharya, J. D.) Essentially (R), essentially (H_p) and essentially spectraloid operators on Hilbert space. *Indian J. Pure Appl. Math.* 11 (1980), no. 11, 1420-1423. (C. R. Putnam) 81m:47035 47B20 (47A10, 47A12)
- Shetty, C. M. (with Bazaraa, Mokhtar S.; Goode, Jamie J.) On the convergence of a class of algorithms using linearly independent search directions. *Math. Programming* 18 (1980), no. 1, 89-93. (Authors' summary) 81a:90131 90C30
- (with Sherali, Hanif D.) A finitely convergent algorithm for bilinear programming problems using polar cuts and disjunctive face cuts. *Math. Programming* 19 (1980), no. 1, 14-31. (Authors' summary) 81e:90062 90C05 (65K05)
- (with Sherali, Hanif D.) On the generation of deep disjunctive cutting planes. *Naval Res. Logist. Quart.* 27 (1980), no. 3, 453-475. (Charles E. Blair) 81k:90082 90C25 (90C05)
- Shen, Sheng Shiang See Hsi, Shih Hsiung
- Shevchuk, Yu. P. See Ševčuk, Ju. P.
- Shevelev, Yu. D. See Ševčuk, Ju. D.
- Shi, He (with Xu, Yi Chao; Hao, Bai Lin) A closed form approximation for the 3-dimensional Ising model. (Chinese, English summary) *Acta Phys. Sinica* 27 (1978), no. 1, 47-62. (Authors' summary) 81i:82073 82A67 (82A15)
- Shi, Shu Zhong Une généralisation des "bons treillis". (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 12, A527-A530. (R. G. Stoneham) 81f:10062 10K05 (65C05, 65D30)
- Remarques sur le gradient généralisé. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 291 (1980), no. 7, A443-A446. (Author's summary) 81j:58018 58C20 (49A51, 90C30)
- Shi, Song Liang A concrete example of the existence of four limit cycles for plane quadratic systems. *Sci. Sinica* 23 (1980), no. 2, 153-158. (H. I. Freedman) 81f:34037 34C05 (58F21)
- Shi, Xian Liang Some inequalities for the derivative of a cubic spline. (Chinese, English summary) *Acta Math. Sinica* 22 (1979), no. 5, 546-555. (Charles K. Chui) 81e:41027 41A15
- (with Yu, Xiang Ming) Cesàro means of negative degree of Fourier series. (Chinese) *Acta Math. Sinica* 22 (1979), no. 6, 762-765. (Yung-Ming Chen) 81h:42039 42A24
- Asymptotic expansions of some linear operators. (Chinese) *Kexue Tongbao* 24 (1979), no. 12, 529-532. (Yung-Ming Chen) 81e:41033 41A35 (42A10)
- Shiba, Masakazu Abel's theorem for analytic mappings of an open Riemann surface into compact Riemann surfaces of genus one. *J. Math. Kyoto Univ.* 18 (1978), no. 2, 305-325. (M. Nakai) 81h:30082 30F30
- Shibahara, Masao (with Tateno, Shigeaki; Kuroyanagi, Osamu) Diffraction of steady stress waves by arbitrary shaped discontinuities in elastic medium. *Bull. JSME* 23 (1980), no. 178, 493-500. (Authors' summary) 81f:73031 73D25
- Shibata, Akira (with Mayuyama, Toshihiro; Mizutani, Masahiro; Saitō, Nobuhiko) The nature of chaos in a simple dynamical system. *Z. Naturforsch. A* 34 (1979), no. 11, 1283-1289. (P. J. Holmes) 81a:58037 58F13 (58F11)
- (with Saitō, Nobuhiko) Time delays and chaos in two competing species. *Math. Biosci.* 51 (1980), no. 3-4, 199-211. (J. M. Cushing) 81m:92054 92A17 (58F13)
- Shibata, Keiichi (with Mohri, Masayuki) Conformal structures on the real n-torus. *Osaka*

- J. Math.* 17 (1980), no. 1, 137-164. (J. Ferrand) **81d:53024** 53C15 (30C60, 53C70)
- Shibata, Masaharu** (with Kinoshita, Kozo; Takamatsu, Yuzo) Test generation for combinational circuits by structure description functions. *FTCS-10 (Tenth Internat. Sympos. Fault-Tolerant Comput., Kyoto, 1980)*, pp. 152-154, IEEE, New York, 1980. (See **81m:94002**) 94C05
- Shibata, Rie** Asymptotically efficient selection of the order of the model for estimating parameters of a linear process. *Ann. Statist.* 8 (1980), no. 1, 147-164. (E. J. Hannan) **81c:62099** 62M09 (62M10)
- Shibata, Toshio** (with Akimoto, Yuko) Some equivalents of the Brouwer's fixed point theorem. *TRU Math.* 15 (1979), no. 2, 51-54. (Krishna M. Das) **81a:55002** 55M20 (54H25)
- Shibata, Yoshihiro** A characterization of the hyperbolic mixed problems in a quarter space for differential operators with constant coefficients. *Publ. Res. Inst. Math. Sci.* 15 (1979), no. 2, 357-399. (Maria Cinquini-Cibrario) **81i:35100** 35L35
- Liouville type theorem for a system $\{P(D), B(D), j=1, \dots, p\}$ of differential operators with constant coefficients in a half space. *Publ. Res. Inst. Math. Sci.* 16 (1980), no. 1, 61-104. (V.-V. Olariu) **81g:35016** 35G99 (35B40, 47F05)
- Shibuya, Toshiyuki** (with Koizumi, Takashi; Suzuki, Kazuyoshi) The torsion of a hollow cylinder with two or infinite parallel external circular cracks. *Bull. JSME* 23 (1980), no. 179, 637-643. (Authors' summary) **81d:73005** 73M05
- (with Hara, Toshiaki; Koizumi, Takashi; Nakahara, Ichiro) An asymmetric mixed boundary value problem of the elastic half-space under shear by an annular rigid punch. *Bull. JSME* 23 (1980), no. 181, 1064-1071. (Authors' summary) **81g:73010** 73C35
- Shidlovskiy, V. I.** See **Shidlovskiy, V. I.**
- Shieh, L. S.** (with Wai, W. B.; Yates, R. E.) A geometric series approach for approximation of transition matrices in quadratic synthesis. *Trans. ASME Ser. G J. Dynamic Systems Measurement Control* 102 (1980), no. 3, 193-197. (Authors' summary) **81i:93013** 93B50
- Shields, Allen L.** Approximation by compact operators and the space $H^\infty + C$. *An. Ştiinţ. Univ. "Al. I. Cuza" Iaşi Sect. I a Mat. (N.S.)* 25 (1979), suppl., 169-170. (M. S. Ramanujan) **81m:47024** 47A55 (41A35, 47B05)
- (with Axler, Sheldon; Berg, I. David; Jewell, Nicholas) Approximation by compact operators and the space $H^\infty + C$. *Ann. of Math. (2)* 109 (1979), no. 3, 601-612. (B. Fiala) **81h:30053** 30H05 (46E15, 47D15)
- (with Pearcey, Carl) Almost commuting matrices. *J. Funct. Anal.* 33 (1979), no. 3, 332-338. (M. P. Drazin) **81i:15018** 15A27 (47A30)
- (with Axler, Sheldon; Jewell, Nicholas) The essential norm of an operator and its adjoint. *Trans. Amer. Math. Soc.* 261 (1980), no. 1, 159-167. (Yasuo Watatani) **81i:47007** 47A30 (41A35)
- See also **Levin, B. Ja.** **81h:30011**
- Shields, D. N.** (with Barrett, K. E.; Demunshi, G.) A minimax principle for the Navier-Stokes equations. *Numerical analysis of singular perturbation problems (Proc. Conf., Math. Inst., Catholic Univ., Nijmegen, 1978)*, pp. 401-408, Academic Press, London, 1979. (Dorđe Đukić) **81d:76024** 76D05
- Shields, M. W.** (with Lauer, P. E.) A formal semantics for concurrent systems. *Automata, languages and programming (Sixth Colloq., Graz, 1979)*, pp. 571-584, *Lecture Notes in Comput. Sci.*, 71, Springer, Berlin, 1979. (From the introduction) **81f:68025** 68B10
- (with Lauer, P. E.) Verifying concurrent system specifications in COSY. *Mathematical foundations of computer science, 1980 (Proc. Ninth Sympos., Rydzyna, 1980)*, pp. 576-586, *Lecture Notes in Comput. Sci.*, 88, Springer, Berlin, 1980. (See **81h:68003**) 68B20
- Shier, D. R.** (with Gilsinn, J.; Hoffman, K.; Jackson, Richard H. F.; Leyendecker, E.; Saunders, P.) Methodology and analysis for comparing discrete linear L_1 approximation codes. Computations for least absolute values estimation. *Comm. Statist. B—Simulation Comput.* 6 (1977), no. 4, 399-413. (See **81h:62127**) 90C05
- (with Domich, P.; Lawrence, Jim) Generators for discrete polynomial L_1 approximation problems. *J. Res. Nat. Bur. Standards* 84 (1979), no. 6, 455-465. (Helmuth Brass) **81h:65012** 65D10
- (with Hoffman, K. L.) A test problem generator for discrete linear L_1 approximation problems. *ACM Trans. Math. Software* 6 (1980), no. 4, 587-593. (Authors' summary) **81m:65042** 65D99 (65K05)
- (with Witzgall, Christoph) Arc tolerances in shortest path and network flow problems. *Networks* 10 (1980), no. 4, 277-291. (Authors' summary) **81k:90034** 90B10
- Shifflet, Ray C.** (with Clapp, Michael H.) A necessary and sufficient condition for the equivalence of the topologies of uniform and compact convergence. *Canad. Math. Bull.* 22 (1979), no. 4, 467-470. (T. Thrivikraman) **81c:54020** 54C35
- (with Deland, Paul N.) Covariance linear functionals on doubly stochastic measures. *Applicable Anal.* 10 (1980), no. 3, 213-220. (Robert Kertz) **81g:60005** 60J99 (47B99)
- (with Clapp, Michael H.) A Birkhoff theorem for doubly stochastic matrices with vector entries. *Stud. Appl. Math.* 62 (1980), no. 3, 273-279. (Adolf Rhodius) **81f:15032** 15A51
- Shifman, Michael A.** See **Shifman, M. A.**
- Shiga, Hiromori** One attempt to the K_3 modular function f . *Ann. Scuola Norm. Sup. Pisa Cl. Sci. (4)* 6 (1979), no. 4, 609-635. (Werner Kleinert) **81c:32028** 32G20 (14J25, 32N05)
- Shiga, Hiroo** Notes on links of complex isolated singular points. *Kodai Math. J.* 3 (1980), no. 1, 44-47. (Edgar H. Brown, Jr.) **81f:57039** 57R99 (14B05, 32B30)
- Shiga, Hiroshige** On the boundary values of analytic functions on bordered Riemann surfaces. (Japanese summary) *Acta Human. Sci. Univ. Sangio Kyotien. Natur. Sci. Ser. No. 9* (1980), 11-28. (M. H. Heins) **81m:30049** 30F99
- Shiga, Kiyoshi** (with Takeuchi, Shigeru) Equivariant fibrations of homogeneous complex manifolds. *Bull. Fac. Gen. Ed. Gifu Univ.* No. 15 (1979), 14-19. (A. L. Oniščik) **81h:32018** 32M10
- Shigekawa, Ichiro** Absolute continuity of probability laws of Wiener functionals. *Proc. Japan Acad. Ser. A Math. Sci.* 54 (1978), no. 8, 230-233. (Author's introduction) **81m:60097** 60H05 (28C20, 60J65)
- Shigemitsu, J.** (with Kogut, John B.; Pearson, R. P.) The string tension, confinement and roughening in SU(3) Hamiltonian lattice gauge theory. *Phys. Lett. B* 98 (1981), no. 1-2, 63-68. (From the summary) **81k:81078** 81E99 (81-04)
- Shigemoto, K.** Gauge nonfixing calculation of the effective potential in the intense Yang-Mills fields. *Lett. Nuovo Cimento* (2) 27 (1980), no. 11, 348-352. (From the text) **81e:81077** 81E10
- Yang-Mills theory without gauge fixing. (Italian summary) *Nuovo Cimento A* (11) 55 (1980), no. 4, 401-408. (Author's summary) **81f:81044** 81E10 (58D25)
- Shih, Hui Jan** (with Lin, Kuang Nan) Free subsemigroups and filters of a semigroup of languages. *Soochow J. Math.* 5 (1979), 79-84. (A. Adám) **81j:20100** 20M35
- (with Chu, Ta Nien) Monoids of languages admitting ring structure. *Semigroup Forum* 19 (1980), no. 2, 127-132. (From the text) **81a:68080** 68F05 (20M35)
- Shih, Keng-ye** Existence of certain canonical models. *Duke Math. J.* 45 (1978), no. 1, 63-66. (Ichiro Satake) **81d:10020** 10D20 (20G30)
- Construction of arithmetic automorphic functions for special Clifford groups. *Nagoya Math. J.* 76 (1979), 153-171. (T. Ono) **81b:10017** 10D20
- Shih, Mou Hsiang** Fixed points for mappings majorized by real functionals. *Hokkaido Math. J.* 9 (1980), no. 1, 18-35. (J. Danel) **81g:54068** 54H25 (47H10, 54E50)
- Bolzano's theorem in several complex variables. *Proc. Amer. Math. Soc.* 79 (1980), no. 1, 32-34. (J. T. Davidov) **81f:32035** 32H99
- Shih, Shu Chung** See **Shi, Shu Zhong**
- Shih, Weishu** Une remarque sur les équations du type de Boltzmann. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 22, A1073-A1076. (Takayuki Nôno) **81m:80087** 58G35 (45K05, 82A40)
- Shih, Yen Ping** (with Chang, Wên T'ao) Low sensitivity control system design by continued fraction. (Chinese summary) *J. Chinese Inst. Engrs.* 2 (1979), no. 2, 115-121. (Authors' summary) **81j:93024** 93B35
- (with Hwang, Chyi; Ku, Wei Kang) Parameter estimation of delay systems via block pulse functions. *Trans. ASME Ser. G J. Dynamic Systems Measurement Control* 102 (1980), no. 3, 159-162. (Authors' summary) **81i:93023** 93C45
- Shihlin, I. S.** See **Šiklin, I. S.**
- Shilleto, J.** (with Ruoff, D.) Recursive polygons. (Italian summary) *Boll. Un. Mat. Ital. B* (5) 15 (1978), no. 3, 968-981. (Cyril W. L. Garner) **81f:51015** 51M20 (51F15)
- Shillcock, Yossi** Edge-disjoint branching in directed multigraphs. *Inform. Process. Lett.* 8 (1979), no. 1, 24-27. (László Lovász) **81f:05112** 05C40 (05C20, 68E10)
- Multiterminal 0-1 flow. *SIAM J. Comput.* 8 (1979), no. 3, 422-430. (András Frank) **81c:90043** 90B10 (68C25, 68E10)
- (with Aspöqvist, Bengt) A fast algorithm for solving systems of linear equations with two variables per equation. *Linear Algebra Appl.* 34 (1980), 117-124. (M. Brannigan) **81m:65043** 65F05 (05C99, 15A06)
- Shima, A.** (with Tsujino, T.) The behavior of bubbles in an Ellis fluid. *Rep. Inst. High Speed Mech. Tôhoku Univ.* 42 (1980), 25-41. (Authors' summary) **81k:76004** 76A05
- (with Tsujino, T.) The behavior of bubbles in a Carreau model fluid. *Rep. Inst. High Speed Mech. Tôhoku Univ.* 42 (1980), 43-58. (Authors' summary) **81k:76005** 76A05
- Shima, Kazumori** (with Kasuya, Masahiro) Topology of zero Riemann curvature flat space in supergravity. *Phys. Lett. B* 93 (1980), no. 3, 303-307. (M. J. Perry) **81f:83031** 83C99 (53B50)
- Shima, Masamichi** (with Kawakami, Masaaki; Tokumaru, Hidekatsu) Theory of invariance and its applications. I. Invariance for nonlinear systems with controls appearing linearly. (Japanese. English summary) *Systems and Control* 23 (1979), no. 10, 994-1001. (Authors' summary) **81i:93029** 93B99 (34H05)
- Shimada, Hideo** (with Matsumoto, Makoto) On Finsler spaces with 1-form metric. II. Berwald-Moor's metric $L = (y^1 y^2 \dots y^n)^{1/2}$. *Tensor (N.S.)* 32 (1978), no. 3, 275-278. (Hassan Akbar-Zadeh) **81m:53035** 53B40
- Finsler spaces of recurrent torsion and constant curvature. *Res. Rep. Kishiro Tech. College* 13 (1979), 173-180. (Siegfried Steiner) **81c:53033** 53B40
- On Finsler spaces with the metric $L = \sqrt{a_{ij} x^i x^j y^1 y^2 \dots y^n}$. *Tensor (N.S.)* 33 (1979), no. 3, 365-372. (W. Wrona) **81h:53027** 53B40
- Shimada, Ippai** Gibbsian distribution on the Lorenz attractor. *Progr. Theoret. Phys.* 62 (1979), no. 1, 61-69. (L. A. Bunimovich) **81e:80037** 58F13 (28D20)
- Shimada, K.** (with Katsura, S.) Phase boundaries between paramagnetic and the antiferromagnetic phases and between the paramagnetic and the spin-flop phases of the Heisenberg-Ising model. *Phys. Status Solidi (B)* 102 (1980), no. 1, 163-177. (Authors' summary) **81k:82059** 82A67 (82A25)
- Shimada, Nobuo** (with Shimakawa, Kazuhisa) Delooping symmetric monoidal categories. *Hiroshima Math. J.* 9 (1979), no. 3, 627-645. (J. P. May) **81e:55014** 55P47
- Shimada, Ryosaku** (with Aoe, Junichi; Yamamoto, Yoneo) Practical method for reducing precedence parsers. *Systems-Comput.-Controls* 9 (1978), no. 3, 54-62 (1980). (Authors' summary) **81i:68120** 68F25
- Shimakawa, Kazuhisa** (with Shimada, Nobuo) Delooping symmetric monoidal categories. *Hiroshima Math. J.* 9 (1979), no. 3, 627-645. (J. P. May) **81e:55014** 55P47
- Shimakawa, Norio** The first eigenvalues of an operator related to selection in population genetics. *Proc. Japan Acad. Ser. A Math. Sci.* 56 (1980), no. 1, 4-8. (K. E. Swick) **81c:92005** 92A10 (35P15)
- Shimazaki, Hiroyuki** Simultaneous optimization of absolute and relative errors in Chebyshev approximation on an interval. *Mem. Fac. Sci. Kyushu Univ. Ser. A* 33 (1979), no. 1, 201-207. (From the introduction) **81i:41023** 41A50 (41A28)
- Shimbo, Masaru** (with D'Ambrosio, Ubiratan; Krivolein, L. E.; Mangeron, Dumitru Ion) Méthode unitaire d'étude de différentes classes de problèmes "bien posés" concernant certains systèmes intégraux-différentiels non linéaires aux opérateurs polyvibrants et aux autocontrôles dans les limites d'intégration. (English and Romanian summaries) *Bul. Univ. Galați Fasc. II Mat. Fiz. Mec. Teoret.* 2 (1979), 7-15. (Thomas S. Angell) **81f:45020** 45K05 (93C20)
- (with Yamanoi, Takahiro; Sato, Yoshiharu; Kawaguchi, Michiaki) On the definition of three-way correlation coefficient. *Tensor (N.S.)* 33 (1979), no. 3, 343-346. (Jana Zvárová) **81k:62079** 62H20
- Shimemura, Eisajiro** (with Uchida, Kenkō) On certainty equivalence in linear-quadratic control problems with nonlinear measurements. *Inform. and Control* 41 (1979), no. 2, 119-135. (Authors' summary) **81c:93095** 93E20
- (with Uchida, Kenkō) On a class of linear-quadratic stochastic team control problems. *Optimization techniques (Proc. Ninth IFIP Conf., Warsaw, 1979)*, Part 1,

- pp. 184-192, *Lecture Notes in Control and Information Sci.*, 22, Springer, Berlin, 1980. (Tamer Başar) **81m:93091** 93E20 (90A99)
- Shimi, I. N. See Zuckerman, Dror, **81j:90059**
- Shimizu, Akiohito Construction of a solution of linear stochastic evolution equations on a Hilbert space. *Proceedings of the International Symposium on Stochastic Differential Equations (Res. Inst. Math. Sci., Kyoto Univ., Kyoto, 1976)*, pp. 385-395, Wiley, New York, 1978. (M. Métivier) **81f:60088** 60H15
- Shimizu, Kiyotaka (with Aiyoshi, Eitaro) Necessary conditions for min-max problems and algorithms by a relaxation procedure. *IEEE Trans. Automat. Control* **25** (1980), no. 1, 62-66. (Guy Cohen) **81d:49022** 49D20 (90C25)
- Shimizu, Ryoichi Solution to a functional equation and its application to some characterization problems. *Sankhyā Ser. A* **40** (1978), no. 4, 319-332. (E. Lukacs) **81j:60021** 60E05 (39B20, 62E10)
- On a lack of memory property of the exponential distribution. *Ann. Inst. Statist. Math.* **31** (1979), no. 2, 309-313. (George Marsaglia) **81f:62026** 62E10
- A characterization of the exponential distribution. *Ann. Inst. Statist. Math.* **31** (1979), no. 3, 367-372. (M. Sreehari) **81j:62034** 62E10
- Functional equation with an error term and the stability of some characterizations of the exponential distribution. *Ann. Inst. Statist. Math.* **32** (1980), no. 1, 1-16. (Peter Flusser) **81f:62027** 62E10
- Shimizu, T. (with Morikawa, N.) Chaos and limit cycles in the Lorenz model. *Phys. Lett. A* **66** (1978), no. 3, 182-184. (Authors' summary) **81k:58048** 58F13 (70K10, 76E20, 86A10)
- Limit cycles and constants of motion in dissipative systems. *Phys. Lett. A* **69** (1978/79), no. 6, 379-381. (From the text) **81k:58043** 58F13 (34C05)
- A periodic solution of the Lorenz equation in the high Rayleigh number limit. *Phys. Lett. A* **71** (1979), no. 4, 319-322. (From the text) **81m:58054** 58F13 (76F99)
- Shimodaira, Kazuo (with Noguchi, Taisuke; Michiaki, Yoshimasa; Matsuzaki, Toshio; Kuwabara, Hideo; Suzuki, Hideo; Takagi, Shigeo; Matsuoaka, Motohisa; Oya, Shinichi) Perspective of study of history of mathematics. (Japanese) Special issue on the 20th anniversary of Sōgakuishi Kenkyū. *Sōgakuishi Kenkyū* No. 80 (1979), 3-75. (K. Inoue) **81b:01008** 01A27
- Shimono, T. (with Saito, T.) Linear-response theory for an impinged charged particle in turbulent plasma. (Italian and Russian summaries) *Nuovo Cimento B* (11) **56** (1980), no. 1, 72-86. (F. C. Auluck) **81f:82027** 82A45 (76X05)
- Shimokawa, Shigeru Characterization of semigroups by their ideals. *Proceedings of the 3rd Symposium on Semigroups (Inter-Univ. Sem. House of Kansai, Kobe, 1979)*, pp. 61-68, Osaka Univ., Osaka, 1980. (Jerzy W. Grzymala-Busse) **81h:20093** 20M12
- Shimomura, Naohisa A theorem on the fixed point set of a unipotent transformation on the flag manifold. *J. Math. Soc. Japan* **32** (1980), no. 1, 55-64. (S. I. Gel'fand) **81d:14028** 14M15 (15A04)
- Shimomura, Shun On a Pfaffian system containing parameters. *Funkcial. Ekvac.* **22** (1979), no. 1, 95-119. (Antoinette Sec) **81h:58069** 58A17 (32L05, 34A20)
- Shimomura, Tsutomu (with Oda, Moriya; Womack, Baxter F.) Concept structure and its distortion in the communication and formation process of morality concept. *Fuzzy sets (Proc. Sympos. Policy Anal. Inform. Systems, Duke Univ., Durham, N.C., 1980)*, pp. 369-389, Plenum, New York, 1980. (Authors' summary) **81i:92027** 92A25
- Shimony, Uri Regularity in linear electric networks of general symmetry. *IEEE Trans. Circuits and Systems* **27** (1980), no. 10, 976-978. (Author's summary) **81i:94026** 94C05
- Shimosaka, Haruo (with Iguchi, Masakazu) Motions of a stretched string under a moving load. *J. Fac. Engng. Univ. Tokyo Ser. B* **35** (1979/80), no. 3, 369-388. (Authors' summary) **81d:70018** 70J99 (65M05)
- Shimookan, Takio (with Kuriyama, Sennosuke) The optimal substitution policy under the substitutable two-commodity inventory system. *Mem. Osaka Inst. Tech. Ser. A* **24** (1979/80), no. 2, 159-170. (Authors' summary) **81h:90066** 90B05
- Shimura, Goro Automorphic forms and the periods of abelian varieties. *J. Math. Soc. Japan* **31** (1979), no. 3, 561-592. (Reinhard Bölling) **81j:10034** 10D20 (10D25)
- On some problems of algebraicity. *Proceedings of the International Congress of Mathematicians (Helsinki, 1978)*, pp. 373-379, Acad. Sci. Fennica, Helsinki, 1980. (A. N. Andrianov) **81f:10038** 10D20 (12A67)
- The arithmetic of certain zeta functions and automorphic forms on orthogonal groups. *Ann. of Math.* (2) **111** (1980), no. 2, 313-375. (A. I. Vinogradov) **81g:10041** 10D21 (10H10)
- Shimura, Michio A limit theorem for conditional random walk. *Tsukuba J. Math.* **3** (1979), no. 2, 81-101. (Douglas P. Kennedy) **81d:60070** 60J15 (60F05)
- Shinar, J. (with Gutman, Shaul) Three-dimensional optimal pursuit and evasion with bounded controls. *IEEE Trans. Automat. Control* **25** (1980), no. 3, 492-496. (Authors' summary) **81d:90123** 90D26
- Shindo, Y. Singular stresses in a soft ferromagnetic elastic solid with two coplanar Griffith cracks. *Internat. J. Solids and Structures* **16** (1980), no. 6, 537-543. (Authors' summary) **81b:73049** 73R05 (73M05)
- Shiner, Roger A. Aisthēsis, nous and phronēsis in the practical syllogism. *Philos. Stud.* **36** (1979), no. 4, 377-387. (From the text) **81h:03004** 03-03 (01A20, 03A05)
- Shingai, Ryoza Periodic behavior of one-dimensional uniform threshold circuits. *Inform. Sci.* **19** (1979), no. 1, 33-65. (Author's summary) **81a:94052** 94C05
- A model for the formation of direction-selective cells in developing retina. *IEEE Trans. Systems Man Cybernet.* **10** (1980), no. 9, 575-580. (Author's summary) **81i:92008** 92A09
- Shingledacker, Clark A. (with Ringelsen, Richard D.) A digraph model of behavior under stress. *Proceedings of the Tenth Southeastern Conference on Combinatorics, Graph Theory and Computing (Florida Atlantic Univ., Boca Raton, Fla., 1979)*, pp. 823-831, Congress. Numer., XXIII-XXIV, Utilitas Math., Winnipeg, Man., 1979. (Guy Jumarie) **81d:94049** 94C15 (92A25)
- Shiojo, Tsuneo (with Matayoshi, Seitaro) Two-magnon bound states in the linear Heisenberg magnet with first and second neighbour anisotropic exchange interactions. (Japanese. English summary) *Bull. College Sci. Univ. Ryukyus* No. 28 (1979), 15-26. (Authors' summary) **81j:82031a** 82A67 (35Q20)
- (with Matayoshi, Seitaro) Effective Hamiltonian approach to the Heisenberg ferromagnet with uniaxial anisotropy energy. (Japanese. English summary) *Bull. College Sci. Univ. Ryukyus* No. 28 (1979), 27-33. (Authors' summary) **81j:82031b** 82A67 (35Q20)
- Shinnaka, Shinji (with Barnes, Casper W.) Block-shift invariance and block implementation of discrete-time filters. *IEEE Trans. Circuits and Systems* **27** (1980), no. 8, 667-672. (Authors' summary) **81h:93043** 93C35 (93C45)
- ei Shinnawy, El Said See El Shinnawy, El Said
- Shinoda, Ken-ichi The characters of Weil representations associated to finite fields. *J. Algebra* **66** (1980), no. 1, 251-280. (David B. Surowski) **81k:20017** 20C15 (20G05)
- Shinohara, Yaichi On the signature of a link with two bridges. *Kwansei Gakuin Univ. Annual Stud.* **25** (1976), 111-119. (Kenneth A. Perko, Jr.) **81k:57005** 57M25
- Note on the signature of alternating links. *Kwansei Gakuin Univ. Annual Stud.* **26** (1977), 121-127. (Bradd Evans Clark) **81d:57009** 57M25
- Note on the Minkowski unit of knots. *Kwansei Gakuin Univ. Annual Stud.* **27** (1978), 169-171. (Bradd Evans Clark) **81d:57010** 57M25
- Shintani, Hisayoshi On errors in the numerical solution of ordinary differential equations by step-by-step methods. *Hiroshima Math. J.* **10** (1980), no. 2, 469-494. (E. R. Hansen) **81j:65083** 65L05
- Shintani, Meien Structures of conserved currents and mass spectra for scalar fields: an approach to the generalization of the Goldstone theorem. (French summary) *Canad. J. Phys.* **58** (1980), no. 4, 463-471. (Author's summary) **81k:81054a** 81D20 (81D15)
- Structures of conserved currents and mass spectra for scalar fields. II. A covariant formulation of the generalization of the Goldstone theorem. (French summary) *Canad. J. Phys.* **58** (1980), no. 6, 763-767. (Author's summary) **81k:81054b** 81D20 (81D15)
- Shintani, Takuro On special values of zeta functions of totally real algebraic number fields. *Proceedings of the International Congress of Mathematicians (Helsinki, 1978)*, pp. 591-597, Acad. Sci. Fennica, Helsinki, 1980. (K. Ramachandra) **81i:12016** 12A95 (10D24, 10D25, 12A67)
- Shiohama, Katsuhiko Topology of positively curved manifolds with a certain diameter. *Minimal submanifolds and geodesics (Proc. Japan-United States Sem., Tokyo, 1977)*, pp. 217-228, North-Holland, Amsterdam, 1979. (S. Dediū) **81g:53030** 53C20 (57R99)
- Convex sets and convex functions on complete manifolds. *Proceedings of the International Congress of Mathematicians (Helsinki, 1978)*, pp. 443-447, Acad. Sci. Fennica, Helsinki, 1980. (V. T. Fomenko) **81f:53030** 53C20 (53C40)
- Shiota, Yasumobu (with Izumisawa, Masataka; Sekiguchi, Takeshi) Remark on a characterization of BMO-martingales. *Tōhoku Math. J.* (2) **31** (1979), no. 3, 281-284. (Roger L. Jones) **81h:60063** 60G44
- Shiotani, Minoru See Shiotani, Minoru
- Shioya, Shunsuke (with Araki, Hidekazu; Matsuda, Mitsumasa) On the thermal stresses of an infinite plate with an infinite row of circular inclusions under uniform heat flow. *Bull. JSME* **23** (1980), no. 180, 849-856. (Authors' summary) **81f:73052** 73U05 (73C40)
- Štíplina, L. B. See Štíplina, L. B.
- Shrahata, Shingo An approach to a one-sided test in the bivariate normal distribution. *Biometrika* **65** (1978), no. 1, 61-67. (Author's summary) **81g:62096** 62H15
- Tests of homogeneity for ordered alternatives in the normal populations. *Bull. Math. Statist.* **18** (1978/79), no. 3-4, 61-68. (Arthur Cohen) **81g:62097** 62H15
- Rank tests for the k-sample problem with restricted alternatives. *Comm. Statist. A—Theory Methods* **9** (1980), no. 10, 1071-1086. (André Antille) **81k:62060** 62C10 (62G20)
- Shiral, Kokko (with Matsumoto, Kazuo) A note on elimination of function symbols in the intuitionistic predicate calculus. *Rep. Fac. Sci. Shizuoka Univ.* **14** (1979), 13-20 (1980). (Giovanni Criscuolo) **81f:03018** 03B20 (03F55)
- Shiral, Susumu A remark on the corestriction-deflation sequence. *Math. Rep. Toyama Univ.* **2** (1979), 23-32. (S. P. Demuškin) **81k:12029** 12G05 (20J05)
- Shiraiishi, Toshio (with Sasaki, Masafumi) Confidence limits for reliability and MTBF of k-out-of-n:G system. *Systems-Comput.-Controls* **9** (1978), no. 2, 21-25. (Authors' summary) **81i:90094** 90B25 (62N05)
- Shirakura, Masaki Conformal transformation of row of flat-plates into row of circular cylinders. *Bull. JSME* **23** (1980), no. 181, 1116-1123. (Authors' summary) **81g:76006** 76B05
- Shirakura, Teruhiro (with Kuwada, Masahide) Covariance matrices of the estimates for balanced fractional 2^m factorial designs of resolution $2t+1$. *J. Japan Statist. Soc.* **6** (1976), no. 2, 27-31. (Authors' summary) **81m:62146** 62K15
- Alias balanced and alias partially balanced fractional 2^m factorial designs of resolution $2t+1$. *Ann. Inst. Statist. Math.* **31** (1979), no. 1, 57-65. (U. B. Paik) **81f:62121** 62K15
- On the norm of alias matrices in balanced fractional 2^m factorial designs of resolution $2t+1$. *J. Statist. Plann. Inference* **3** (1979), no. 4, 337-345 (1980). (S. K. Tharthare) **81g:62135** 62K15 (62K05)
- Necessary and sufficient condition for a balanced array of strength $2t$ to be a balanced fractional 2^m factorial design of resolution $2t$. *Austral. J. Statist.* **22** (1980), no. 1, 69-74. (K. Vijayan) **81k:62134** 62K10 (05B05)
- Shirey, James On the theorem of Helley [Helly] concerning finite-dimensional subspaces of a dual space. *Pacific J. Math.* **86** (1980), no. 2, 571-577. (M. M. Day) **81k:46010** 46B10 (52A07, 52A35)
- Shirkot, K. S. (with Singh, Surjit) Two-phase flow heat transfer in a circular pipe when the inlet temperature varies periodically with time. *Acta Phys. Acad. Sci. Hungar.* **46** (1979), no. 4, 237-245. (Authors' summary) **81c:80021** 80A20 (76T05)
- Shirkov, D. V. See Širkov, D. V.
- Shirley, Edward S. A flaw in Chisholm's foundationalism. *Philos. Stud.* **38** (1980), no. 2, 155-160. (David W. Miller) **81k:03011b** 03A05
- Shirokov, M. I. See Širokov, M. I.
- Shiroya, Taira On a parametrix for the hyperbolic mixed problem with diffractive lateral boundary. II. *Hokkaido Math. J.* **9** (1980), no. 1, 1-17. (Tommaso Ruggeri) **81c:35079** 35L20 (35L67)
- Shirshov, A. A. See Širšov, A. A.
- Shiryayev, A. See Širjajev, A. N.
- Shisha, Oved See Turán memorial volume, **81j:41001**
- Shishkin, P. G. See Šiškin, P. G.
- Shiu, P. A Brun-Titchmarsh theorem for multiplicative functions. *J. Reine Angew. Math.*

- 313 (1980), 161-170. (A. I. Vinogradov) **81h:10065** 10H25
The maximum orders of multiplicative functions. *Quart. J. Math. Oxford Ser. (2)* **31** (1980), no. 122, 247-252. (J. Knopfmacher) **81h:10059** 10H25
- Shiba, Jun Shoyang (with Huang, Chih Ping) A note on a complete residue system in the integral quaternions. *Sci. Sinica Ser. A* **5** (1979), 193-196. (I. Danicic) **81i:10001** 10A10
(with Kuipers, L.) On a criterion for uniform distribution of a sequence in the ring of Gaussian integers. *Rev. Roumaine Math. Pures Appl.* **25** (1980), no. 7, 1059-1063. (Harald Rindler) **81m:10070** 10F40 (12A05)
- Shiba, S. G. S. (with Muscati, Z. A. H.) A new one-step majority logic decodable binary code. (French and German summaries) *Digital Process.* **5** (1979), no. 3-4, 283-285. (Authors' summary) **81k:94034** 94B30
- Shivakumar, P. N. (with Chew, K. H.; Williams, J. J.) Error bounds for the truncation of infinite linear differential systems. *J. Inst. Math. Appl.* **25** (1980), no. 1, 37-51. (Uri Ascher) **81a:34012** 34A45 (34A35, 34G10)
- Shivamoggi, Bhimsen K. Method of matched asymptotic expansions—asymptotic matching principle for higher approximations. *Z. Angew. Math. Mech.* **58** (1978), no. 8, 354-356. (From the introduction) **81f:34057** 34E05 (76D10)
- Inviscid stability of magnetogasdynamics parallel flows. *Acta Mech.* **35** (1980), no. 3-4, 291-294. (From the text) **81e:76041** 76E25
- Hydromagnetic capillary instability of a liquid jet with an axial flow. *Appl. Sci. Res.* **36** (1980), no. 1, 77-80. (Author's summary) **81h:76034** 76E25
- Shivpat, Saroj (with Chhadha, S. S.) Multiparametric linear fractional functionals programming. *Cahiers Centre Études Rech. Opér.* **20** (1978), no. 1, 103-108. (K. Swarup) **81e:90101** 90C32
- Shinya, Mitsutaka (with Matsumoto, Hiroyuki; Nakahara, Ichiro) Viscoelastic half-space subjected to impact torsion by a rigid cylinder. *Bull. JSME* **23** (1980), no. 178, 510-515. (Authors' summary) **81g:73053** 73F15
- Shklyarsky, S. S. See Shklyarsky, S. S.
- Shklyarsky, F. I. See Shklyarsky, F. I.
- Shiller, Eli (with Smith, Stephen A.; Chambers, John C.) Optimal inventories based on job completion rate for repairs requiring multiple items. *Management Sci.* **26** (1980), no. 8, 849-852. (Authors' summary) **81i:90068** 90B05
- Shloman, S. B. See Shloman, S. B.
- Shmakov, Yu. I. See Šmakov, Ju. I.
- Shmatkova, A. A. See Šmatkova, A. A.
- Shun'yan, B. L. See Šun'jan, B. L.
- Shul'd, H. Global error estimation for the implicit trapezoidal rule. *BIT* **20** (1980), no. 1, 120-121. (John Todd) **81e:65042** 65L05
- Shulder, Steven (with Harnad, John; Vinet, L.) Solution to Yang-Mills equations on M^4 invariant under subgroups of $O(4, 2)$. *Complex manifold techniques in theoretical physics (Proc. Workshop, Lawrence, Kan., 1978)*, pp. 219-230. *Res. Notes in Math.*, **32**, Pitman, San Francisco, Calif., 1979. (J. H. Rawnsley) **81e:81070** 81E10 (35Q20, 53C05, 53C80)
(with Harnad, John; Tafel, Jacek) Group actions on principal bundles and dimensional reduction. *Lett. Math. Phys.* **4** (1980), no. 2, 107-113. (Daniel A. Akyempong) **81k:53043** 53C30 (81E10)
See also Geometrical and topological methods in gauge theories, **81e:81005**
- Shulman, M. G. See Šulman, M. G.
- Shueh, Mohd. (with Sinha, B. B.) Curvature tensor of special quarter symmetric metric connexion in an almost contact metric manifold. *Aligarh Bull. Math.* **5/6** (1975/76), 19-23 (1977). (Lieven Vanhecke) **81e:53039** 53C15 (53B20)
- Shoemaker, Christine A. (with Rovinsky, Robert B.; Todd, Michael J.) Determining optimal use of resources among regional producers under differing levels of cooperation. *Oper. Res.* **28** (1980), no. 4, 859-866. (Authors' summary) **81h:90022** 90A11
- Shoemaker, E. M. The ultimate load interaction surface. (German summary) *Z. Angew. Math. Phys.* **30** (1979), no. 3, 456-467. (P. P. Teodorescu) **81g:73039** 73E05
- Shogan, Andrew W. A single server queue with arrival rate dependent on server breakdowns. *Nucl. Res. Logist. Quart.* **26** (1979), no. 3, 487-497. (L. R. Goel) **81a:60114** 60K25 (90B22)
- Shoji, Kunitaka Completely right injective semigroups. *Math. Japon.* **24** (1979/80), no. 6, 609-615. (H. D'Alarcao) **81g:20119** 20M10
(with Yamada, Miyuki) On H -compatible quasi-orthodox semigroups. *Mem. Fac. Sci. Shimane Univ.* **13** (1979), 1-9. (N. R. Reilly) **81k:20093** 20M10
(with Yamada, Miyuki) Orthodox semigroups on which Green's relations are compatible. *Mem. Fac. Sci. Shimane Univ.* **13** (1979), 11-16. (N. R. Reilly) **81k:20094** 20M10
- Self-injective nonsingular semigroups. *Proceedings of the 3rd Symposium on Semigroups (Inter-Univ. Sem. House of Kansai, Kobe, 1979)*, pp. 69-78. *Osaka Univ. Osaka*, 1980. (K. S. S. Nambooripad) **81h:20005** 20M10 (20M50)
(with Yamada, Miyuki) D^* -simple inverse semigroups. *J. Algebra* **65** (1980), no. 2, 317-327. (M. Yamada) **81h:20084** 20M10
- Shoji, Toshiaki On the Springer representations of the Weyl groups of classical algebraic groups. *Comm. Algebra* **7** (1979), no. 16, 1713-1745. (G. Lusztig) **81h:20077a** 20C11 (20G05)
Correction to: "On the Springer representations of the Weyl groups of classical algebraic groups". *Comm. Algebra* **7** (1979), no. 18, 2027-2033. (G. Lusztig) **81h:20077b** 20C11 (20G05)
- On the Springer representations of Chevalley groups of type F_4 . *Comm. Algebra* **8** (1980), no. 5, 409-440. (David B. Surowski) **81h:20013** 20C15 (20G05)
- Shokin, Yu. I. See Šokin, Ju. I.
- Shokurov, Vladimir See Šokurov, Vladimir
- Sholl, Howard A. (with Derivoglu, Bulent I.) Theory and design of mixed-mode sequential machines. *IEEE Trans. Comput.* **29** (1980), no. 7, 639-648. (Authors' summary) **81i:68061** 68D15
- Shonkewitz, Ronald (with Faulkner, Gary D.) Kernel dilation in reproducing kernel Hilbert space and its application to moment problems. *Pacific J. Math.* **77** (1978), no. 1, 103-115. (A. Devinatz) **81a:46030** 46E20 (44A60, 47A20, 47B50)
(with Thompson, Maynard) A model for common source epidemics. *Proceedings of the Second International Conference on Mathematical Modelling (St. Louis, Mo., 1979)*, Vol. I, II, pp. 1065-1074. *Univ. Missouri-Rolla, Rolla, Mo., 1980.* (Authors' summary) **81m:92047** 92A15
- Shor, L. A. See Šor, L. A.
- Shor, N. Z. See Šor, N. Z.
- Shorack, Gaten R. The weighted empirical process of row independent random variables with arbitrary distribution functions. *Statist. Neerlandica* **33** (1979), no. 4, 169-189. (M. D. Burke) **81a:60037** 60F05 (62G30)
- Shore, Graham M. Radiatively induced spontaneous symmetry breaking and phase transitions in curved spacetime. *Ann. Physics* **128** (1980), no. 2, 376-424. (Author's summary) **81m:81034** 81D20 (83C99)
- Shore, Richard A. (with Lerman, Mannel; Soare, Robert I.) r -maximal major subsets. *Israel J. Math.* **31** (1978), no. 1, 1-18. (Authors' summary) **81g:03049** 03D25
The homogeneity conjecture. *Proc. Nat. Acad. Sci. U.S.A.* **76** (1979), no. 9, 4218-4219. (C. G. Jockusch, Jr.) **81a:03046** 03D30
(with Nerode, Anil) Reducibility orderings: theories, definability and automorphisms. *Ann. Math. Logic* **18** (1980), no. 1, 61-89. (C. G. Jockusch, Jr.) **81k:03040** 03D30 (03D35)
 $\mathcal{E}^*(K)$ and other lattices of recursively enumerable sets. *Proc. Amer. Math. Soc.* **80** (1980), no. 1, 143-146. (C. G. Jockusch, Jr.) **81h:03008** 03D25
- Shore, Robert W. A Bayesian approach to the spectral analysis of stationary time series. *Bayesian analysis in economic theory and time series analysis*, pp. 83-180. *Stud. Bayesian Econometrics*, 2, North-Holland, Amsterdam, 1980. (P. A. Moretini) **81h:62174** 62M15 (62F15)
- Shore, Terence R. On the local limit theorem for independent nonlattice random variables. *Ann. Probab.* **6** (1978), no. 4, 563-573. (Author's summary) **81h:60035** 60F05 (60G50)
- Shores, Thomas S. (with Chouinard, Leo G., II; Hardy, Bonnie R.) Arithmetical and semihiereditary semigroup rings. *Comm. Algebra* **8** (1980), no. 17, 1593-1652. (Hubert Grassmann) **81k:20098** 20M25 (13D99, 13F99)
- Shorey, T. N. On the greatest prime factor of $(ax^m + by^n)$. *Acta Arith.* **36** (1980), no. 1, 21-25. (A. Pethő) **81h:10023** 10B15 (10H99)
(with Balasubramanian, R.) On the equation $a(x^m - 1)/(x - 1) = b(y^n - 1)/(y - 1)$. *Math. Scand.* **46** (1980), no. 2, 177-182. (B. Stolt) **81m:10022** 10B15
See also Schmidt, Wolfgang M., **81d:10047**
- Shorrock, R. W. (with Rizvi, M. Haseeb) A note on matrix-convexity. (French summary) *Canad. J. Statist.* **7** (1979), no. 1, 39-41. (George Marsaglia) **81h:15024** 15A52 (62H10)
- Shorrock, B. (with Atkinson, W.; Charlesworth, P.) Competition on a divided and ephemeral resource. *J. Animal Ecology* **48** (1979), no. 3, 899-908. (Authors' summary) **81m:92055** 92A17
- Short, Edward (with Baker, Christopher T. H.; Makrogiou, Athena) Regions of stability in the numerical treatment of Volterra integro-differential equations. *SIAM J. Numer. Anal.* **16** (1979), no. 6, 890-910. (E. N. Houssis) **81h:65121** 65R20
- Shortt, Joseph (with Wilson, Thomas C.) An $O(\log n)$ algorithm for computing general order- k Fibonacci numbers. *Inform. Process. Lett.* **10** (1980), no. 2, 68-75. (From the introduction) **81a:68053** 68C25 (10A35)
- Shostak, R. (with Pease, M.; Lamport, Leslie) Reaching agreement in the presence of faults. *J. Assoc. Comput. Mach.* **27** (1980), no. 2, 228-234. (Authors' summary) **81e:68057** 68C40 (68B20)
- Shouman, S. M. (with Özişik, M. N.) Transient heat conduction in an anisotropic medium in cylindrical coordinates. *J. Franklin Inst.* **309** (1980), no. 6, 457-472. (Authors' summary) **81e:80009** 80A20
- Shpilevski, Edward See Špilevski, Ė. K.
- Shramchenko, B. L. See Šramčenka, B. L.
- Shrayber, A. A. See Šraber, A. A.
- Shreebhat, R. M. On generalised Brannan polynomials. *C. R. Acad. Bulgare Sci.* **32** (1979), no. 9, 1183-1185. (J. P. Singhal) **81h:33020** 33A65
A Jacobi polynomial integral. *Nepali Math. Sci. Rep.* **5** (1980), no. 1, 1-3. (J. P. Singhal) **81m:33010** 33A65
- Shreve, Steven E. Resolution of measurability problems in discrete-time stochastic control. *Stochastic control theory and stochastic differential systems (Proc. Workshop, Deutsch. Forschungsgemeinschaft, Univ. Bonn, Bad Honnef, 1979)*, pp. 580-587. *Lecture Notes in Control and Information Sci.*, 16, Springer, Berlin, 1979. (Author's summary) **81j:93065** 93E20 (90C40)
(with Doshi, Bharat) Strong consistency of a modified maximum likelihood estimator for controlled Markov chains. *J. Appl. Probab.* **17** (1980), no. 3, 726-734. (M. Iosifescu) **81k:62120** 62M05
- Shreve, Warren E. Oscillation in first order matrix differential equations with lag. *Differential and integral equations (Proc. Seventh Midwest Conf., Univ. Missouri, Rolla, Mo., 1978)*, pp. 106-111. *Univ. Missouri-Rolla, Rolla, Mo., 1980.* (G. Ladas) **81m:34104** 34K15 (34C10)
- Shrikhande, Mohan (with Raghavarao, D.) A generalization of special partially balanced designs to higher associate class designs. *Ars Combin.* **6** (1978), 97-111. (Authors' summary) **81g:05029** 05B05
(with Bose, R. C.) On a class of partially balanced incomplete block designs. *J. Statist. Plann. Inference* **3** (1979), no. 2, 91-99. (I. M. Chakravarti) **81f:05040** 05B30
(with Haemers, Willem) Some remarks on subdesigns of symmetric designs. *J. Statist. Plann. Inference* **3** (1979), no. 4, 361-366 (1980). (Henry Beker) **81m:05034** 05B05
- Shrikhande, S. S. (with Singhi, N. M.) Some problems in graph theory. *Proceedings of the Symposium on Graph Theory (Indian Statist. Inst., Calcutta, 1976)*, pp. 286-298. *ISI Lecture Notes, 4*, Macmillan of India, New Delhi, 1979. (Editors) **81a:05105** 05C65 (05B05)
(with Singhi, N. M.) Embedding of orthogonal arrays of strength two and deficiency greater than two. *J. Statist. Plann. Inference* **3** (1979), no. 4, 367-379 (1980). (Arnold Neumaier) **81h:05029** 05B15 (05B30)
(with Naik, R.; Rao, Siddani Bhaskara; Singhi, N. M.) Intersection graphs of k -uniform hypergraphs. Combinatorial mathematics, optimal designs and their applications (Proc. Sympos. Combin. Math. and Optimal Design, Colorado State Univ., Fort Collins, Colo., 1978). *Ann. Discrete Math.* **6** (1980), 275-279. (F. Sterboul)

- 81m:05104 05C65
- Shrikhande, V. L. (with Mital, D. P.; Ray, L. M.) On minimal canonical realization from input-output data sequences. *IEEE Trans. Automat. Control* 25 (1980), no. 2, 309-312. (Authors' introduction) 81i:93022 93B15
- Shrivastava, R. M. (with Singh, F.) Some new generating relations for generalized Horn functions. *Indian J. Pure Appl. Math.* 7 (1976), no. 11, 1247-1252. (Authors' summary) 81k:33002 33A30
- Shrivastava, K. K. (with Sharma, Sushil) On absolute Cesàro summability of Laplace series. *Math. Ed. (Sivan)* 13 (1979), no. 2, 27-34. (John A. Fridy) 81b:42002 42C10 (40C05)
- Shrivastava, Keshav N. Magnon-photon interaction in ferromagnets. *Phys. B + C* 100 (1980), no. 1, 59-66. (From the summary) 81a:82039 82A55
- Stieles, V. M. See Stelen, V. M.
- Stillman, M. S. See Stillman, M. S.
- Stukin, L. V. See Stukin, L. V.
- Shu, Song Guo The synthesis of the most reliable control system. (Chinese. English summary) *Acta Automat. Sinica* 6 (1980), no. 1, 8-17. (Author's summary) 81j:90057 90B25
- Shu, Yong Hua See Xu, Yong Hua
- Shub, Michael (with Fried, David) Entropy, linearity and chain-recurrence. *Inst. Hautes Études Sci. Publ. Math.* No. 50 (1979), 203-214. (D. Newton) 81a:58033 58F09 (28D20)
- Shubert, Bruno O. (with Larson, Harold J.) ★ Probabilistic models in engineering sciences. Vol. I. Random variables and stochastic processes. John Wiley & Sons, New York-Chichester-Brisbane, 1979. x + 544 pp. ISBN 0-471-01751-5 (Editors) 81k:60004 60-01
- Shubik, M. (with Van der Heyden, L.) Logrolling and budget allocation games. *Internat. J. Game Theory* 7 (1978), no. 3-4, 151-162. (Authors' summary) 81h:90015 90A08 (90D30)
- Shubladze, A. M. See Shubladze, A. M.
- Shuchat, Alan Infrabarreled spaces, linear operators and vector measures. *Bull. Soc. Roy. Sci. Liège* 48 (1979), no. 5-8, 153-157. (Paul Lewis) 81d:46002 46A07
- Shu-Chung, Shih See Shi, Shu Zhong
- Shucker, David S. Davidson's generalization of the Fényes-Nelson stochastic model of quantum mechanics. *Lett. Math. Phys.* 4 (1980), no. 1, 61-65. (G. A. Skorobogatov) 81g:81020 81C20
- Shugan, Steven M. (with Hauser, John R.) Intensity measures of consumer preference. *Oper. Res.* 28 (1980), no. 2, 278-320. (From the summary) 81a:90020 90A06
- Shugard, William J. (with Weeks, John D.) Renormalized finite-cluster method for lattice models. I. Site renormalization and star cluster expansions. *Phys. Rev. B* (3) 22 (1980), no. 11, 5245-5258. (Authors' summary) 81i:82074 82A67
- Shukhman, I. G. See Shukman, I. G.
- Shukla, D. P. Certain properties of the $B_{1/2}^{(q)}$ function. *Math. Student* 45 (1977), no. 3, 63-67 (1979). (Author's introduction) 81h:33002 33A30
- Shukla, J. B. (with Parihar, R. S.; Rao, B. R. P.; Gupta, S. P.) Effects of peripheral-layer viscosity on peristaltic transport of a bio-fluid. *J. Fluid Mech.* 97 (1980), no. 2, 225-237. (Authors' summary) 81a:76053 76Z05 (92A09)
- Shukla, Kripa Shankar Glimpses from the *Āryabhaṭa-siddhānta*. Proceedings of the Symposium on the 1500th Birth Anniversary of Āryabhaṭa I (New Delhi, 1976). *Indian J. Hist. Sci.* 12 (1977), no. 2, 181-186. (A. K. Bag) 81c:01014 01A32
- Shukla, P. (with Švrakić, N. M.) Universality classes of Ising models. *Phys. Lett. A* 69 (1978/79), no. 3, 167-168. (Authors' summary) 81h:82053 82A67 (82A05)
- Shukla, P. K. (with Sharma, A. S.) Self-modulation of a wave-packet in a nonlinear dispersive medium. *Phys. Lett. A* 65 (1978), no. 4, 279-281. (Authors' summary) 81k:76093 76X05 (35Q20, 76B15)
- (with Bujarbaru, S.) Magnetosonic shocks in nonlinear dispersive media. *Astrophys. and Space Sci.* 69 (1980), no. 2, 515-519. (Authors' summary) 81h:76009 76W05 (76L05, 85A20)
- Shukla, Ram Kumar (with Lakshminarayana, G.) Bending of a compressible circular block into a spherical shell. (Romanian summary) *Bul. Inst. Politehn. Iași Sect. I* 24(28) (1978), no. 3-4, 103-107. (A. J. M. Spencer) 81b:73006 73C50 (73L99)
- Shukla, S. K. (with Mohanty, S. P.; Sridharan, M. R.) On cyclic permutation groups and graphs. *J. Math. Phys. Sci.* 12 (1978), no. 5, 409-416. (D. R. Lick) 81h:05080 05C25
- Shukla, S. L. (with Dwivedi, S. P.; Bhargava, G. P.) On some classes of meromorphic univalent functions. *Rev. Roumaine Math. Pures Appl.* 25 (1980), no. 2, 209-215. (S. K. Bajpai) 81g:30016 30C45
- Shukla, Y. S. (with Dixit, S. S.) On a sequence of Fourier coefficients. *Jñānabha* 7 (1977), 21-24. (Hiroshi Hirokawa) 81f:42004 42A16 (42A24)
- Shukuzawa, Osamu (with Yokota, Ichiro) Noncompact simple Lie group $E_{6(6)}$ of type E_6 . *J. Fac. Sci. Shinshu Univ.* 14 (1979), no. 1, 1-13. (Dragomir Ž. Đoković) 81g:22023a 22E60 (17B25, 22E15)
- (with Yokota, Ichiro) Noncompact simple Lie groups $E_{6(-14)}$ and $E_{6(2)}$ of type E_6 . *J. Fac. Sci. Shinshu Univ.* 14 (1979), no. 1, 15-28. (Dragomir Ž. Đoković) 81g:22023b 22E60 (17B25, 22E15)
- Shulberg, G. W. Spectral resolvents and decomposable operators. *Operator theory and functional analysis (Papers, Summer Meeting, Amer. Math. Soc., Providence, R.I., 1978)*, pp. 71-84. *Res. Notes in Math.*, 38, Pitman, San Francisco, Calif., 1979. (B. L. Wadwa) 81g:47034 47B40
- Shuler, Kurt E. (with Montroll, Elliott W.) Dynamics of technological evolution: random walk model for the research enterprise. *Proc. Nat. Acad. Sci. U.S.A.* 76 (1979), no. 12, 6030-6034. (Authors' summary) 81a:93004 93A10 (93E25)
- Smith, C. S. F. Birkhoff interpolation of entire functions. *J. Approx. Theory* 28 (1980), no. 3, 260-266. (A. Sharma) 81h:30040 30E05
- Stillman, Z. P. See Stillman, Z. P.
- Stukina, I. L. See Stukina, I. L.
- Smitt, Ernest Disjoint triangular sets. *Ann. of Math.* (2) 111 (1980), no. 1, 67-94. (Bernard Baumann) 81c:28030 20D99
- Smutz, Frederic W. (with Alfsen, Erik M.; Hanche-Olsen, Harald) State spaces of C^* -algebras. *Acta Math.* 144 (1980), no. 3-4, 267-305. (C. Martin Edwards) 81g:46074 46L05 (17C65, 46H99, 46L30)
- Smutz, Harris S. Operational calculus for functions of two variables. *SIAM J. Math. Anal.* 9 (1978), no. 4, 660-666. (Author's summary) 81f:44013 44A45 (44A10)
- Shum, K. P. (with Hoo, C. S.) Ideals and radicals in topological semigroups. *Southeast Asian Bull. Math.* 3 (1979), no. 2, 140-150. (M. Satyanarayana) 81e:22001 22A20
- (with Hoo, C. S.) Prime radical theorem on ordered semigroups. *Semigroup Forum* 19 (1980), no. 1, 87-94. (Bernard L. Madison) 81f:06020 06F05 (20M11)
- (with Kwan, S. Y.) Lattices of order ideals on ordered semigroups. *Semigroup Forum* 19 (1980), no. 2, 151-175. (C. Sri Hari Nagore) 81c:06018 06F05 (20M10)
- abu-Shumays, I. K. See Abu-Shumays, I. K.
- Šumovský, A. S. See Šumovský, A. S.
- Shundo, Shudō A procedure for classifying the intermediate propositional logics and its application to the finite slices. *J. Tsuda College No. 10* (1978), 1-8. (Author's introduction) 81f:03036 03B55
- Šur, D. (with Horowitz, I.) Control of uncertain van der Pol plant. *Internat. J. Control* 31 (1980), no. 2, 199-219. (Authors' summary) 81h:93028 93C10 (93B50)
- Šura-Bura, A. E. See Šura-Bura, A. E.
- Šura-Bura, Mikhail R. (with Erkov, A. P.) The early development of programming in the USSR. *A history of computing in the twentieth century*, pp. 137-196. Academic Press, New York, 1980. (See 81f:68002) 68-03 (01A65, 68B05)
- Šurjak, Edward V. See Šurjak, E. V.
- Šustor, A. P. See Šustor, A. P.
- Šutts, G.-J. Angular momentum coordinates and their use in zonal, geostrophic motion on a hemisphere. *J. Atmospheric Sci.* 37 (1980), no. 5, 1126-1132. (Author's summary) 81c:86011 86A10
- Švabjuk, V. I. See Švabjuk, V. I.
- Švachka, A. B. See Švachka, A. B.
- Švarts, A. S. See Švarc, A. S.
- Švartsburg, A. B. See Švarchuk, A. B.
- Škany, Radhe (with Sharma, V. D.) On the propagation of sonic waves in a dissociating gas. *Acta Phys. Acad. Sci. Hungar.* 46 (1979), no. 4, 299-308. (M. Honda) 81f:76034 76N15 (76L05)
- Šhymasundar, R. K. Precedence-regular grammars. *Internat. J. Comput. Math.* 7 (1979), no. 3, 173-186. (Author's summary) 81c:68095 68F05 (68F25)
- On the covering of syntax-directed translations for context-free grammars. *Proc. Indian Acad. Sci. Sect. A Math. Sci.* 88 (1979), no. 1, 1-19. (Rani Siromoney) 81c:68063 68F05
- Šhyr, H. J. See Ših, Hui Jun
- Šan Ši See Šan Ši
- Silbertin-Blanc, C. Normal closure of one-variable equations in free groups. *Proc. Amer. Math. Soc.* 80 (1980), no. 1, 34-38. (R. B. J. T. Allenby) 81h:20035 20E05
- Silbiski, Wojciech (with Jeleniewski, Tadeusz) Flow and structural problems in the technical design. (Polish and Russian summaries) *Prace Nauk. Inst. Cybernet. Tech. Politech. Wrocław. Ser. Konfer.* No. 18 *Projekowanie III*, t.1 (1978), 193-201. (Authors' summary) 81c:90042 90B10 (90B05, 93C55)
- Silbrskii, K. S. (with Bularas, Driss) Centraffine invariants of a quadratic differential system. (Russian) *Bul. Akad. Štiințe RSS Moldoven.* 1979, no. 1, 8-17, 94. (W. Wrona) 81a:53015 53A55 (34A25)
- Dynamical systems. (Russian) Algebraic invariants of dynamical systems. *Mat. Issled.* No. 55 (1980), 78-87, 150. (Editors) 81m:58029 58Fxx (28D99, 54H20)
- Silbold, K. (with Piguet, O.; Schweda, M.) Radiative mass generation in perturbation theory and the renormalization group. *Nuclear Phys. B* 168 (1980), no. 2, 337-353. (Authors' summary) 81d:81110 81G25 (81D20, 81E15)
- (with Clark, T. E.; Piguet, O.) The gauge invariance of the supercurrent in supersymmetric QED. *Nuclear Phys. B* 169 (1980), no. 1-2, 77-87. (Authors' summary) 81h:81200 81L05
- (with Clark, T. E.; Piguet, O.) The renormalized supercurrents in supersymmetric QED. *Nuclear Phys. B* 172 (1980), no. 1, 201-223. (Authors' summary) 81h:81155 81G25
- Silbony, Nessim (with Hakim, Monique) Ensembles pics pour $A^m(\bar{D})$. *Colloque d'Analyse Harmonique et Complexe*, 10 pp. (not consecutively pagged). *Univ. Aix-Marseille I, Marseille*, 1977. (Thomas Blomp) 81i:32012 32E30 (32F25)
- (with Wong, Pit Mann) Capacité et propriétés globales d'ensembles analytiques. *Colloque d'Analyse Harmonique et Complexe*, 11 pp. (not consecutively pagged). *Univ. Aix-Marseille I, Marseille*, 1977. (L. I. Ronkin) 81d:32035 32H25 (32A22)
- (with Diederich, Klas) Strange complex structures on Euclidean space. *J. Reine Angew. Math.* 311/312 (1979), 397-407. (A. Hirschowitz) 81b:32005 32E10 (53B35)
- (with Gamelin, T. W.) Subharmonicity for uniform algebras. *J. Funct. Anal.* 35 (1980), no. 1, 64-108. (Michael von Renteln) 81f:46062 46J10 (32E25)
- (with Hakim, Monique) Spectre de $A(\bar{D})$ pour des domaines bornés faiblement pseudoconvexes réguliers. (English summary) *J. Funct. Anal.* 37 (1980), no. 2, 127-135. (T. W. Gamelin) 81g:46072 46J15 (32E20, 32E25)
- Silbony, Robin Studies in the robustness of multidimensional scaling: perturbational analysis of classical scaling. *J. Roy. Statist. Soc. Ser. B* 41 (1979), no. 2, 217-229. (Masashi Okamoto) 81g:62115 62H99 (62P15)
- A vector identity for the Dirichlet tessellation. *Math. Proc. Cambridge Philos. Soc.* 87 (1980), no. 1, 151-155. (Roger E. Miles) 81g:52008 52A25 (60D05, 62-07)
- The Dirichlet tessellation as an aid in data analysis. *Scand. J. Statist.* 7 (1980), no. 1, 14-20. (Author's summary) 81d:62007 62-07 (52A22, 62H30)
- Silbony, Masaaki Generalized hypergeometric, digamma and trigamma distributions. *Ann. Inst. Statist. Math.* 31 (1979), no. 3, 373-390. (Ramesh C. Gupta) 81i:62033 62E15 (60E05)
- Multivariate digamma distribution. *Ann. Inst. Statist. Math.* 32 (1980), no. 1, 25-36. (B. K. Shah) 81i:62094 62H10
- Sichel, Martin Unsteady transonic nozzle flow with heat addition. *AIAA J.* 19 (1981), no. 2, 165-171. (Author's summary) 81m:76029 76H05
- Siecher, J. (with Adams, M. E.; Babai, László) Automorphism groups of finite distributive lattices with a given sublattice of fixed points. *Monatsh. Math.* 90 (1980), no. 4, 259-266. (B. Zelinka) 81m:06024 06D05 (20B25)
- Sielak, Józef Extremal plurisubharmonic functions in C^N . *Komplexe Analysis und Anwendung auf partielle Differentialgleichungen (Tagung, Martin-Luther-Universität,*

- Halle, 1976). *Wiss. Beitr. Martin-Luther-Univ. Halle-Wittenberg* **M 27** (1977), 58-62. (From the text) **81h:32026** 32F05
- Siddiqui, Asimullah (with Khan, Ahmad) Orthogonality in 2-normed spaces. *Aligarh Bull. Math.* **5/6** (1975/76), 63-74 (1977). (M. M. Day) **81a:46024** 46B99 (46C99)
- Siddiqui, Rafat Nabil On determination of the jump of a function of Wiener's class. (Arabic summary) *J. Univ. Kuwait Sci.* **4** (1977), 15-24. (Douglas Kurtz) **81d:42010** 42A24 (40C05)
- Siddiqui, Z. U. (with Ahmad, Z. U.) Absolute summability factors of infinite series by Nörlund means. *Indian J. Pure Appl. Math.* **11** (1980), no. 6, 737-748. (Hiroshi Hirokawa) **81h:40010** 40G05 (40F05)
- Sidisko, M. I. (with Burlachenko, V. P.) Solution by an approximation method of a Cauchy problem for a hyperbolic equation. (Russian) *Studies in the theory of approximation of functions and their applications* (Russian), pp. 25-28, 186, *Akad. Nauk Ukrain. SSR, Inst. Mat., Kiev*, 1978. (N. Cristescu) **81c:65047** 65M99 (35L20)
- (with Burlachenko, V. P.) On improving the solutions of integral inequalities of the Gronwall-Bellman type. (Russian) *Ukrain. Mat. Ž.* **32** (1980), no. 4, 538-545. (A. A. Martynuk) **81m:26010** 26D15 (35B99)
- Sideri, Enrico The convergence of algorithms for functional linear programming. (Italian. English summary) *Boll. Un. Mat. Ital. A* (5) **16** (1979), no. 3, 510-516. (Szymon Dolecki) **81d:90070** 90C05
- Sidharth, B. G. (with Abdel-Hafez, Ahmed) On the bound states for higher angular momenta. *Acta Phys. Polon. A* **56** (1979), no. 5, 577-581. (Authors' summary) **81c:81050** 81F05
- (with Abdel-Hafez, Ahmed) Bounds for the phase-shifts of modified Coulomb potentials. *Acta Phys. Polon. A* **57** (1980), no. 3, 287-293. (Authors' summary) **81c:81110** 81F05
- Silba, Gurubaran S. (with Weinert, Howard L.) Vector-valued Lg-splines. I. Interpolating splines. *J. Math. Anal. Appl.* **70** (1979), no. 2, 505-529. (L. L. Schumaker) **81c:41028** 41A15 (65D07)
- Silb, Avram Some properties of a generalization of the Richardson extrapolation process. *J. Inst. Math. Appl.* **24** (1979), no. 3, 327-346. (T. N. L. Patterson) **81c:65011** 65B05 (65D30)
- Convergence properties of some nonlinear sequence transformations. *Math. Comp.* **33** (1979), no. 145, 315-326. (Author's summary) **81h:65003** 65B10 (40A05, 41A25)
- Some aspects of two-point Padé approximants. *J. Comput. Appl. Math.* **6** (1980), no. 1, 9-17. (H.-J. Runckel) **81h:41015** 41A21 (30B70, 65D15)
- Extrapolation methods for oscillatory infinite integrals. *J. Inst. Math. Appl.* **26** (1980), no. 1, 1-20. (V. Totik) **81m:40002** 40A10 (42A38, 44A15, 65B99, 65R10)
- Numerical quadrature and nonlinear sequence transformations; unified rules for efficient computation of integrals with algebraic and logarithmic endpoint singularities. *Math. Comp.* **35** (1980), no. 151, 851-874. (S. Dubuc) **81h:65017** 65D30 (41A55)
- Sikhi, Said On weak permutability between groups. *J. Algebra* **63** (1980), no. 1, 186-225. (J. Wiegold) **81h:20041** 20E34
- Silichovskiy, M. The inclination changes in the problem of two triaxial rigid spheroids. *Celestial Mech.* **22** (1980), no. 4, 343-355. (Author's summary) **81m:70023** 70F15 (70E15)
- Silovskii, A. B. Arithmetic properties of E-function values at algebraic points. (Russian) *Dokl. Akad. Nauk SSSR* **248** (1979), no. 1, 50-55. (S. V. Kotov) **81c:10049** 10F35
- Arithmetic properties of the values of analytic functions of certain classes. (Russian) *Yestnik Moskov. Univ. Ser. I Mat. Meh.* **1979**, no. 6, 24-31. (S. A. Stepanov) **81d:10025** 10F35
- On the arithmetic properties of values of E-functions connected with algebraic equations in the rational function field. (Russian) *Dokl. Akad. Nauk SSSR* **251** (1980), no. 4, 808-812. (J. B. Roberts) **81g:10050** 10F35 (33A35)
- Silovskii, V. I. (with Fedorov, S. M.) Synthesis of a multidimensional discrete control system from a standard model by matching state vectors. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* **1979**, no. 2, 175-180, 223 (Russian); translated as *Engr. Cybernetics* **17** (1979), no. 2, 105-111 (1980). (Authors' summary) **81h:93031** 93C35 (93C55)
- Silvey, S. J. Functions which operate on the real part of a uniform algebra. *Pacific J. Math.* **80** (1979), no. 1, 265-272. (Per Hag) **81h:46009** 46J10
- Silovskii, A. F. Turán I-graphs and Ramsey numbers. (Russian) *Dokl. Akad. Nauk SSSR* **251** (1980), no. 4, 805-808. (Pavel Tomasta) **81h:05080** 05C65
- Classes of hypergraphs and probability inequalities. (Russian) *Dokl. Akad. Nauk SSSR* **254** (1980), no. 3, 540-543. (Daniel Turzik) **81h:05105** 05C65 (60C05)
- Letter to the editors: "Finite partially ordered sets and their corresponding permutation sets" [*Mat. Zametki* **4** (1968), 511-518; *MR* **39** #5430] by S. S. Kisilicyn. (Russian) *Mat. Zametki* **27** (1980), no. 4, 667. (Editors) **81c:06003** 06A10
- Silovskii, S. A. (with Bergman, R. M.; Tovstik, P. E.) Construction of solutions of the equations for free vibration of a cylindrical shell of variable thickness along the directrix. *Izv. Akad. Nauk SSSR Meh. Toerd. Tela* **14** (1979), no. 4, 146-154 (Russian); translated as *Mech. Solids* **14** (1979), no. 4, 127-134. (Authors' summary) **81h:73045** 73L20
- Silovskii, T. M. On the question of constructing time-optimal control for certain dynamical systems. (Russian) *Dynamics of control systems (Third All-Union Chelovo Conf., Irkutsk, 1977)* (Russian), pp. 258-262, 343, "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. (Author's summary) **81c:93059** 93C50 (49A36)
- Silovskii, François Sur l'équation tensorielle $AX + XA = H$. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **286** (1978), no. 1, A71-A73. (Author's summary) **81c:73007** 73B10
- Silovskii, A. A. (with Mizin, I. A.) Algorithmic procedures for synthesis of the structure of communications network. (Russian) Problems of information exchange in computer networks. *Voprosy Kibernet. (Moscow)* No. 57 (1979), 78-97. (Authors' summary) **81c:94039** 94C10
- Silovskii, I. M. (with Timofeev, V. V.) Analysis of nonlinear automatic control systems in a resonance region. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* **1979**, no. 3, 175-183, 223 (Russian); translated as *Engr. Cybernetics* **17** (1979), no. 3, 128-135 (1980). (Authors' summary) **81g:93047** 93C10 (70K30)
- Silovskii, N. A. The choice of initial approximations of the solutions of regularized equations in bifurcation theory. (Russian) *Differential and integral equations*, No. 4 (Russian), pp. 180-190, 318, *Irkutsk. Gos. Univ., Irkutsk*, 1976. (See **80i:90004** 58E07 (47H15))
- The method of continuation with respect to the parameter in the neighborhood of a branch point. (Russian) *Questions in applied mathematics* (Russian), pp. 109-113, *Sibirsk. Energet. Inst., Akad. Nauk SSSR Sibirsk. Otdel., Irkutsk*, 1977. (S. Burýšek) **81g:65066** 65J05 (47H15, 58C15, 58E07)
- Integral systems of branching of degenerate differential equations. (Russian) *Questions in applied mathematics* (Russian), pp. 177-179, *Sibirsk. Energet. Inst., Akad. Nauk SSSR Sibirsk. Otdel., Irkutsk*, 1977. (A. Corduneanu) **81f:34065** 34G20 (58E07)
- Regularization of an inverse boundary value problem. (Russian) *Application of the methods of functional analysis to problems of mathematical physics and numerical analysis* (Russian), pp. 123-128, *Akad. Nauk SSSR Sibirsk. Otdel., Inst. Mat., Novosibirsk*, 1979. (J. Miklíček) **81m:35136** 35R30
- Siebenmann, L. On vanishing of the Rohlin invariant and nonfinitely amphicheiral homology 3-spheres. *Topology Symposium, Siegen 1979* (Proc. Sympos., Univ. Siegen, Siegen, 1979), pp. 172-222, *Lecture Notes in Math.*, **788**, Springer, Berlin, 1980. (G. Peter Scott) **81c:57011** 57N10
- Sieber, Helmut Die Berechnung von π nach Cusanus—ein Verfahren für Taschenrechner. *Praxis Math.* **21** (1979), no. 12, 354-358. (Wolfgang Boehm) **81g:51003** 51-04 (01A35, 51N20)
- Siebert, H. (with Gawronski, Wolfgang; Trautner, Rolf) An inclusion relation for Abel, Borel, and Lambert summability. *Canad. J. Math.* **32** (1980), no. 3, 695-702. (John A. Fridy) **81h:40010** 40G10
- Siedentop, H. K. H. (with Müller, A. M. K.) On the relation between k-body interaction and k-particle density. *Phys. Lett. A* **81** (1981), no. 1, 5-8. (Authors' summary) **81m:82014** 82A15 (47A70)
- Sieghahn, Per E. M. (with Roos, Björn; Taylor, Peter R.) A complete active space SCF method (CASSCF) using a density matrix formulated super-CI approach. *Chem. Phys.* **48** (1980), no. 2, 157-173. (From the summary) **81d:81121** 81G55
- Siegel, Andrew F. The noncentral chi-squared distribution with zero degrees of freedom and testing for uniformity. *Biometrika* **66** (1979), no. 2, 381-386. (M. Huklová) **81c:62017** 62E15 (62M07)
- Siegel, Carl Ludwig On the history of the Frankfurt Mathematics Seminar. Address given on June 13, 1964, in the Mathematics Seminar of the University of Frankfurt on the occasion of the 50th anniversary of the Johann-Wolfgang-Göthe-University Frankfurt. *Math. Intelligencer* **1** (1978/79), no. 4, 223-230. (L. Neuwirth) **81a:01049** 01A74
- Siegel, G. Uniqueness of symmetric distribution functions defined on bounded sets and its applications. (Russian summary) *Teor. Veroyatnost. i Primen.* **24** (1979), no. 4, 831-834. (R. A. Horn) **81c:60018** 60E10 (60E07)
- Siegel, Howard Jay A model of SIMD machines and a comparison of various interconnection networks. *IEEE Trans. Comput.* **28** (1979), no. 12, 907-917. (Author's summary) **81c:68113** 68J05 (68B20, 68C40)
- The theory underlying the partitioning of permutation networks. *IEEE Trans. Comput.* **29** (1980), no. 9, 791-801. (O. D'Antona) **81c:68006** 68A05
- Siegel, Jerrold (with Calder, Allan) Kan extensions of homotopy functors. *J. Pure Appl. Algebra* **12** (1978), no. 3, 253-269. (John Roy Dennett) **81h:58032** 55P65 (18A40, 55N05)
- (with Calder, Allan) Homotopy and uniform homotopy. II. *Proc. Amer. Math. Soc.* **78** (1980), no. 2, 288-290. (Harold Hastings) **81c:55029** 55R99 (55U35)
- Siegel, W. Off-shell central charges. *Nuclear Phys. B* **173** (1980), no. 1, 51-58. (Author's summary) **81j:81064** 81G20
- Hidden ghosts. *Phys. Lett. B* **93** (1980), no. 1-2, 170-172. (Author's summary) **81d:81111** 81G25 (83E99)
- Inconsistency of supersymmetric dimensional regularization. *Phys. Lett. B* **94** (1980), no. 1, 37-40. (Author's summary) **81f:81053** 81E15
- On-shell $O(N)$ supergravity in superspace. *Nuclear Phys. B* **177** (1981), no. 2, 325-332. (Author's summary) **81m:83045** 83E99 (81G20)
- Siegmund, David Sequential χ^2 and F tests and the related confidence intervals. *Biometrika* **67** (1980), no. 2, 389-402. (R. A. Wijnman) **81j:62162** 62L10 (62F25)
- (with Lai, Tze Leung; Levin, Bruce; Robbins, Herbert) Sequential medical trials. *Proc. Nat. Acad. Sci. U.S.A.* **77** (1980), no. 6, part 1, 3135-3138. (Authors' summary) **81c:62089** 62L05 (62P10, 92A07)
- Siegmund-Schultze, R. See Wessling, Hans, **81c:01001**
- Siekman, J. (with Bauer, H. F.; Metten, St.) Dynamic behavior of distensible fluid lines carrying a pulsating incompressible liquid. (German and Russian summaries) *Z. Angew. Math. Mech.* **60** (1980), no. 5, 221-234. (Authors' summary) **81j:73055** 73J05 (76Z05)
- Siekman, Jörg Matching under commutativity. *Symbolic and algebraic computation (EUROSAM '79, Internat. Sympos., Marseille, 1979)*, pp. 531-545, *Lecture Notes in Comput. Sci.*, **72**, Springer, Berlin, 1979. (Author's summary) **81g:68052** 68C05
- Sielken, Robert L., Jr. (with Burdick, Richard K.) Variance estimation based on a superpopulation model in two-stage sampling. *J. Amer. Statist. Assoc.* **74** (1979), no. 366, part 1, 438-440. (Pramod K. Pathak) **81h:62015** 62D05
- Sieniaszko, Wojciech Branched continued fractions for double power series. *J. Comput. Appl. Math.* **6** (1980), no. 2, 121-125. (E. Frank) **81k:30006** 30B70 (32A05, 40A15, 65D15)
- Siemon, Helmut Reinhold Baer in memoriam. (German) *Praxis Math.* **22** (1980), no. 2, 55-56. (Editors) **81a:01041** 01A70
- Siems, Rolf (with Weyrich, Karl-Heinz) Phase transitions in 2-dimensional systems of migrating orientable lattice defects. *Z. Phys. B* **34** (1979), no. 1, 85-96. (Authors' summary) **81d:82068** 82A67 (82A60)
- Slankiewicz, R. Stability of white dwarfs undergoing spherically symmetric steady-state accretion. *Astronom. and Astrophys.* **85** (1980), no. 3, 295-301. (Author's summary) **81d:85001** 85A05
- di Sieno, Simonetta See Di Sieno, Simonetta
- Sierak, A. J. (with Hatch, R. L.) Nuclear hydrodynamics for ellipsoidal shapes. *Nuclear Phys. A* **341** (1980), no. 3, 513-531. (A. A. Arsen'ev) **81g:81110** 81G35 (81N05)
- Sierociński, Andrzej On the optimal choice from a sample drawn from a known distribution. *Demonstratio Math.* **11** (1978), no. 3, 663-674. (Z. Govindarajulu) **81k:60052** 60G40 (62L15)
- Sierpiński, Wacław See McFarkow, I. G., **81a:01038** and Correspondence: W. Sierpiński

- and N. N. Lazin. **81a:01030b**
- Sierra Rodero, Germán** (with Rañada, Antonio F.) Causality of wave equation and invariance of its hyperbolicity conditions. *Phys. Rev. D* (3) **22** (1980), no. 2, 385–390. (M. Martinis) **81j:81036** 81D25 (35L05)
- Silvert, C. E.** (with Burniston, E. E.) The H matrix for time-dependent problems in rarefied gas dynamics. (German summary) *Z. Angew. Math. Phys.* **30** (1979), no. 6, 1005–1010. (J. F. Clarke) **81b:76049** 76P05 (45F15)
- (with Maiorino, J. R.) The complete solution for the scattering of polarized light in a Rayleigh and isotropically scattering atmosphere. *Astrophys. and Space Sci.* **72** (1980), no. 1, 189–201. (Authors' summary) **81h:78023** 78A45 (85A25)
- Sifakis, Joseph** Realization of fault-tolerant systems by coding Petri nets. *FTCS-8 (Eighth Ann. Internat. Conf. Fault-Tolerant Comput., Toulouse, 1978)*, p. 205, IEEE, New York, 1978. (Author's summary) **81c:68040** 68D15 (68B20, 94B05)
- Deadlocks and livelocks in transition systems. *Mathematical foundations of computer science, 1980 (Proc. Ninth Sympos., Ryzyna, 1980)*, pp. 587–600, *Lecture Notes in Comput. Sci.* **88**, Springer, Berlin, 1980. (See **81k:68003**) 68B20 (68D90)
- Performance evaluation of systems using nets. *Net theory and applications (Proc. Adv. Course General Net Theory Processes Systems, Hamburg, 1979)*, pp. 307–319, *Lecture Notes in Comput. Sci.*, **84**, Springer, Berlin, 1980. (E. Pessa) **81j:68072** 68D90 (94C99)
- Sifman, M. A.** (with Vainstein, A. I.; Zaharov, V. I.) Can confinement ensure natural CP invariance of strong interactions? *Nuclear Phys. B* **166** (1980), no. 3, 493–506. (Jorge André Swieca) **81g:81097** 81G05 (81E10)
- Wilson loop in vacuum fields. *Nuclear Phys. B* **173** (1980), no. 1, 13–31. (Author's summary) **81h:81095** 81G05
- Sifria, M. A.** Line congruences in three-dimensional projective space. (Russian) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 170* (1979), 27 pp. (Vladislav Goldberg) **81b:53015** 53A25
- Sigal, C. Elliott** (with Pritsker, A. Alan B.; Solberg, James J.) The use of cutsets in Monte Carlo analysis of stochastic networks. *Math. Comput. Simulation* **21** (1979), no. 4, 376–384. (From the summary) **81a:90150** 90C35 (90C15)
- (with Pritsker, A. Alan B.; Solberg, James J.) The stochastic shortest route problem. *Oper. Res.* **28** (1980), no. 5, 1122–1129. (Authors' summary) **81i:90078** 90B15 (05C99)
- Sigal, I. M.** Mathematical foundations of quantum scattering theory for multiparticle systems. *Mem. Amer. Math. Soc.* **16** (1978), no. 209, iii + 147 pp. (Lawrence E. Thomas) **81a:81078** 81F10 (35P25)
- Number of eigenvalues of many-body Hamiltonians and Efimov's effect. *Mathematical problems in theoretical physics (Proc. Internat. Conf. Math. Phys., Lausanne, 1979)*, pp. 57–61, *Lecture Notes in Phys.*, **116**, Springer, Berlin, 1980. (From the introduction) **81m:81084** 81Hxx (81F10)
- Sigala, M.** (with Gaitanis, N.; Halatis, C.) Fail-safe counters. (French and German summaries) *Digital Process.* **5** (1979), no. 1–2, 43–57. (T. Rua) **81b:68063** 68D05 (68D20)
- Šiganov, I. S.** Some estimates connected with the stability of H. Cramér's theorem. (Russian. English summary) *Studies in mathematical statistics, 3. Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* **87** (1979), 187–195, 210–211, 215. (G. P. Čistjakov) **81f:60017** 60E05
- Sigillito, Vincent G.** (with Kuttler, J. R.) Explicit L_2 inequalities for parabolic and pseudoparabolic equations with Neumann boundary conditions. *Internat. J. Math. Math. Sci.* **1** (1978), no. 1, 21–29. (Authors' summary) **81e:35070** 35K70 (35K20)
- (with Elcrat, Alan R.) A spatial decay estimate for the Navier-Stokes equations. *Z. Angew. Math. Phys.* **30** (1979), no. 3, 449–455. (D. E. Edmunds) **81a:35086** 35Q10 (76D05)
- Sigmon, Timothy M.** (with Trivedi, Kishor S.; Wagner, Robert A.) Optimal selection of CPU speed, device capacities, and file assignments. *J. Assoc. Comput. Mach.* **27** (1980), no. 3, 457–473. (Authors' summary) **81f:68012** 68A05 (68B15)
- Sigmund, K.** (with Hofbauer, Josef; Schuster, P.) A note on evolutionary stable strategies and game dynamics. *J. Theoret. Biol.* **81** (1979), no. 3, 609–612. (Leo Jonker) **81d:92015** 92A15 (58F12, 90D40)
- Signevalski, V. A.** Model of a multiprogram computer with a high-priority program flow. (Russian) *Control of technical and organizational systems by application of computer technology (Russian)*, pp. 83–90, 228, "Nauka", Moscow, 1979. (Author's summary) **81f:68050** 68C15
- (with Kogan, Ja. A.) Estimate of productivity of a computer operation conveyor. *Avtomat. i Telemekh.* **1979**, no. 8, 150–160 (Russian); translated as *Automat. Remote Control* **40** (1979), no. 8, part 2, 1223–1231 (1980). (Authors' summary) **81a:93118** 93E99 (68A05)
- (with Kogan, Ja. A.) Performance evaluation of linear pipeline systems with multiple condition code circuits. (French summary) *RAIRO Inform.* **14** (1980), no. 1, 51–76. (Authors' summary) **81g:68006** 68A05 (94C99)
- Signoret, J. P.** (with Blin, A.; Carnino, A.; Georgin, J.-P.) Use of Markov processes for reliability problems. *Synthesis and analysis methods for safety and reliability studies (Proc. NATO Adv. Study Inst., Urbino, 1978)*, pp. 269–294, Plenum, New York, 1980. (See **81j:93006**) 93E03
- Sigorskii, V. P.** (with Koljada, Ju. V.) Exponential solution of a system of linear algebraic equations. (Russian) *Theoretical and applied questions of differential equations and algebra (Russian)*, pp. 119–122, 264, "Naukova Dumka", Kiev, 1978. (Józef Kalinowski) **81g:65044** 65F10 (65L05)
- (with Koljada, Ju. V.) Prediction of the number of iterations in methods of solving systems of algebraic equations. (Russian) *Theoretical and applied questions of differential equations and algebra (Russian)*, pp. 122–124, 265, "Naukova Dumka", Kiev, 1978. (Authors' summary) **81h:65045** 65H10 (65F10)
- (with Koljada, Ju. V.) Coordinatwise modifications of the Newton-Kantorovich type. (Russian) *Theoretical and applied questions of differential equations and algebra (Russian)*, pp. 124–128, 265, "Naukova Dumka", Kiev, 1978. (Authors' summary) **81h:65046** 65H10
- Sigrist, François** (with Félix, Yves; Lemaire, Jean-Michel) Sur les cônes itérés et la catégorie de Lusternik-Schnirelmann rationnelle. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **290** (1980), no. 19, A905–A907. (Authors' summary) **81e:55015** 55P62 (55M30)
- Šitaliev, N. I.** (with Gadžiev, N. M.) Approximation on rectifiable arcs in an integral metric. (Russian. Azerbaijani and English summaries) *Izv. Akad. Nauk Azerbaidžan. SSR Ser. Fiz.-Tehn. Mat. Nauk* **1979**, no. 2, 50–56. (V. A. Baskakov) **81c:30069** 30E10 (30D99)
- Šitoeva, V. V.** Construction of a model of representations of the general linear group over a finite field of odd characteristic. (Russian) *Uspehi Mat. Nauk* **34** (1979), no. 5(209), 233–234. (G. Lusztig) **81e:20048** 20G05
- Sild, S.** (with Das, K. P.) Nonlinear evolution of a three-dimensional transverse wave packet in a hot plasma including the effect of its interaction with an ion-acoustic wave. *Czechoslovak J. Phys. B* **30** (1980), no. 2, 153–166. (B. Buti) **81c:76057** 76X05
- Šijački, Djordje** (with Ne'eman, Yuval) Errata: "Unified affine gauge theory of gravity and strong interactions with finite and infinite $GL(4, R)$ spinor fields" [Ann. Physics **120** (1979), no. 2, 292–315; MR **80i:81060**]. *Ann. Physics* **125** (1980), no. 1, 227. (From the text) **81j:81024** 81C40
- (with Hehl, Friedrich W.) Towards a unified gauge theory of gravitational and strong interactions? *Gen. Relativity Gravitation* **12** (1980), no. 1, 83–90. (Author's summary) **81d:83053** 83E99
- Silbrand, J.** Bifurcation analysis of a nonlinear free boundary problem from plasma physics. *Asymptotic analysis*, pp. 76–93, *Lecture Notes in Math.*, **711**, Springer, Berlin, 1979. (W. F. Ames) **81c:35008** 35B32 (76X05)
- Šik, František** Schreier-Zassenhaus theorem for algebras. I. *Czechoslovak Math. J.* **30(186)** (1980), no. 2, 313–331. (Tadashi Ohkuma) **81c:08003** 08A05 (04A05, 20E15)
- A linear problem of the interval calculus. (Czech summary) *Ekon.-Mat. Obzr* **16** (1980), no. 1, 37–46. (Manfred W. Kracht) **81h:65045** 65G10 (15A06, 65F99)
- Šikina, E. V.** Isometric imbedding in E^3 of noncompact domains of nonpositive curvature. (Russian) *Mat. Zametki* **25** (1979), no. 5, 785–797, 800. (M. L. Gromov) **81a:53054** 53C42
- Šikin, G. N.** (with Zaicev, N. A.) Plane-symmetric interior solutions of the equations of general relativity in the presence of scalar and electromagnetic fields. (Russian) *Problemy Teor. Gravitacii i Element. Častic* **10** (1979), 50–54. (Lilja Lukeševič) **81c:83016** 83C20 (83C50)
- (with Krečev, V. G.) The closed Friedmann cosmological model with a nonlinear scalar field of the type of the Born-Infeld field. (Russian) *Problemy Teor. Gravitacii i Element. Častic* **10** (1979), 91–99. (K. S. Bhamra) **81c:83040** 83F05
- Šikina, I. S.** Evolution of plane-symmetric self-similar space-times containing perfect fluid. *Gen. Relativity Gravitation* **11** (1979), no. 6, 433–451 (1980). (Author's summary) **81d:83018** 83C15 (83C40)
- Sikora, Andrzej** (with Olbrot, Andrzej W.) On sensitivity minimization for linear control system. *Optimization techniques (Proc. Ninth IFIP Conf., Warsaw, 1979)*, Part I, pp. 342–349, *Lecture Notes in Control and Information Sci.*, **22**, Springer, Berlin, 1980. (Authors' summary) **81m:93027** 93B35 (93B50)
- Sikorski, Miron** (with Klempos, Ryszard) Algorithms for Weber's problem with set-inclusive constraints. *Wiss. Z. Tech. Univ. Dresden* **29** (1980), no. 2, 436–439. (E. Heil) **81k:90058** 90C05 (51M05)
- Sikorski, Piotr** (with Grzysiewicz, Andrzej) On some homomorphisms in Ehresmann groupoids. *Wyż. Szkoła Ped. Kraków. Roznik Nauk.-Dydakt. Prace Mat. No. 9* (1979), 55–66. (Phullendu Das) **81i:20110** 20N99 (39B50)
- Sikorski, K. P.** (with Kolmogorov, A. N.; Boltjanskii, V. G.; Verčenko, I. Ja.; Maslova, G. G.; Belousov, V. D.; Brovikov, I. S.; Gnedenko, B. V.; Čerkasov, R. S.; Švarcov, S. I.) Aleksei Ivanovič Markuševič. (Russian) *Mat. v Škole* **1979**, no. 5, 77–78. (Editor) **81a:01059** 01A70
- Šikova, R. N.** (with Mkrumjan, R. R.) Meromorphy of solutions of some classes of linear differential equations. (Russian) *Differencial'nye Uravnenija* **15** (1979), no. 12, 2274–2277, 2303. (J. D. Kečkić) **81d:34005** 34A20 (30D30)
- Silave, A. M.** (with Jakimov, A. V.) Periodic nonstationarity of noise in harmonic system. *Radiotekhn. i Elektron.* **24** (1979), no. 9, 1806–1811 (Russian); translated as *Radio Engng. Electron. Phys.* **24** (1979), no. 9, 62–66 (1980). (Authors' summary) **81k:94011** 94A12
- Silave, V. N.** (with Rozenfeld, T. K.) Boolean equations and decomposition of Boolean functions. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* **1979**, no. 1, 119–126, 220 (Russian); translated as *Engng. Cybernetics* **17** (1979), no. 1, 85–92 (1980). (Authors' summary) **81a:94064** 94C10
- Silave, A. M.** See **Silave, A. M.**
- Silave, V. N.** See **Silave, V. N.**
- Silberger, Allan J.** ★Introduction to harmonic analysis on reductive p -adic groups. Based on lectures by Harish-Chandra at the Institute for Advanced Study, 1971–1973. *Mathematical Notes*, **23**, Princeton University Press, Princeton, N.J.: University of Tokyo Press, Tokyo, 1979. iv + 371 pp. ISBN 0-691-08246-4. (J. Szmidt) **81m:22025** 22E30 (43A65, 43A80)
- Correction: "The Knapp-Stein dimension theorem for p -adic groups" [Proc. Amer. Math. Soc. **68** (1978), no. 2, 243–246; MR **58** #11245]. *Proc. Amer. Math. Soc.* **76** (1979), no. 1, 169–170. (Editors) **81m:22026** 22E50
- Complementary series for p -adic groups. I. *Trans. Amer. Math. Soc.* **259** (1980), no. 2, 589–598. (G. I. Ol'sanskii) **81e:22031** 22E50
- On Harish-Chandra's μ -function for p -adic groups. *Trans. Amer. Math. Soc.* **260** (1980), no. 1, 113–121. (J. Szmidt) **81h:22017** 22E50
- Silberger, D. M.** (with Ehrenfeucht, Andrzej) Universal terms of the form B^*A^* . *Algebra Universalis* **10** (1980), no. 1, 96–116. (A. A. Iskander) **81c:08012** 08B20 (05C20, 20M07)
- When is a term point universal? *Algebra Universalis* **10** (1980), no. 2, 135–154. (George Hutchinson) **81d:08007** 08A40
- Silbermann, Bernd** (with Elschner, Johannes) Eine Klasse entarteter gewöhnlicher Differentialgleichungen und das Kollokationsverfahren zu ihrer Lösung. *Czechoslovak Math. J.* **29(104)** (1979), no. 4, 551–563. (Author's review) **81b:47056** 47E05 (34B25, 65L10)
- Silde, O.** (with Golst, G.) Differential principles of mechanics derived from the equation of virtual power. (Russian. Estonian and German summaries) *Tartu Riikl. Ül. Toimetised* **No. 487** (1979), 75–81. (Authors' summary) **81m:70025** 70F99 (49H02)
- (with Haitin, A.) The motion of mechanical systems with account taken of coupling equations of a general type. (Russian. Estonian and German summaries) *Tartu Riikl. Ül. Toimetised* **No. 487** (1979), 95–100. (Authors' summary) **81b:70008** 70F99 (70F25)

- Šiljak, D. D.** Overlapping decentralized control. *Handbook of large scale systems engineering applications*, pp. 145-166, North-Holland, Amsterdam, 1979. (D. Obradović) **81c:93008** 93A15
(with Sezer, M. E.) Decentralized stabilization and structure of linear large-scale systems. *Thirteenth Asilomar Conference on Circuits, Systems and Computers* (Pacific Grove, Calif., 1979), pp. 176-181, IEEE, New York, 1980. (See **81m:93004**) 93A15
(with Ikeda, Masao; White, Dennis E.) Suboptimal decentralized control of systems with overlapping information sets. *Thirteenth Asilomar Conference on Circuits, Systems and Computers* (Pacific Grove, Calif., 1979), pp. 187-192, IEEE, New York, 1980. (See **81m:93004**) 93C05 (94A05)
(with Ikeda, Masao) On decentrally stabilizable large-scale systems. *Automatica—J. IFAC* 16 (1980), no. 3, 331-334. (Authors' summary) **81d:93050** 93D15 (93A15)
Reliable control using multiple control systems. *Internat. J. Control* 31 (1980), no. 2, 303-329. (Author's summary) **81a:93048** 93C35
- Šilkowski, Richard** A star-shaped condition for stability of linear retarded functional-differential equations. *Proc. Roy. Soc. Edinburgh Sect. A* 83 (1979), no. 3-4, 189-198. (K. Smítalová) **81c:34070** 34K20
- Silliman, William J.** (with Scriven, L. E.) Separating flow near a static contact line: slip at a wall and shape of a free surface. *J. Comput. Phys.* 34 (1980), no. 3, 287-313. (David F. Griffiths) **81b:76026** 76D15
- Šil'man, S. V.** (with Jastrebov, A. I.) Application of Liapunov functions to the investigation of multistep adaptive control processes. (Russian) *Problems of stability of motion, analytical mechanics and control of motion* (Third All-Union Cetaev Conf., Irkutsk, 1977) (Russian), pp. 203-211, 325, "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. (Authors' summary) **81g:93124** 93E15
- Šilo, A. P.** A critical case of p pairs of purely imaginary roots. (Russian) *Meh. Teor. Tela* No. 12 (1980), 90-92, 120. (O. Gürel) **81k:34035** 34D05
- Šilo, V. P.** Conditions for the exit of a diffusion process from a bounded region. (Russian) *Mathematical methods in operations research and reliability theory* (Russian), pp. 41-44, Akad. Nauk Ukrain. SSR, Inst. Kibernet., Kiev, 1978. (Eckhard Platen) **81f:60107** 60J60
- Šilov, G. E.** Дифференцирование функций в линейных пространствах. (Russian) [Differentiation of functions in linear spaces] Основы современного анализа. [Foundations of modern analysis] With a supplement, "Some questions on differential calculus in linear spaces" (Russian), by P. P. Zabreiko. *Jaroslavl. Gos. Univ., Yaroslavl*, 1978, 120 pp. (B. Sendov) **81c:26001** 26-01 (46G05, 58C20)
- Šiljanova, I. D.** Estimation of variables and parameters in stochastic systems described by differential equations in a singular case. (Russian) *Dokl. Akad. Nauk SSSR* 250 (1980), no. 3, 566-569. (M. M. Konstantinov) **81b:93070** 93E10
- Silva, Alessandro** (with Raimondo, Mario) The cohomology of an open subspace of a Stein space. *J. Reine Angew. Math.* 318 (1980), 32-35. (V. D. Golovin) **81c:32011** 32C35 (32E10)
- de Silva, Basil M.** A class of multivariate symmetric stable distributions. *J. Multivariate Anal.* 8 (1978), no. 3, 335-345. (I. V. Ostrovskii) **81a:60023** 60E07 (62H99)
- pereira da Silva, Clóvis** See Pereira da Silva, Clóvis
- das da Silva, J. A.** See Dias da Silva, J. A.
- Andrade e Silva, João** See Andrade e Silva, João
- Silva, M. A.** (with Som, M. M.) Complexified Vaidya's metric. *Internat. J. Theoret. Phys.* 18 (1979), no. 6, 411-418 (1980). (W. M. Baker) **81c:83015** 83C20 (53B50)
- crepo da Silva, M. R. M.** See Crespo da Silva, M. R. M.
- Andrade e Silva, Maria** See Andrade e Silva, Maria
- Silva-Filho, Y. V.** Average case analysis of region search in balanced k -d trees. *Inform. Process. Lett.* 8 (1979), no. 5, 219-223. (Vijay V. Raghavan) **81c:68018** 68B15 (68C25, 68H05)
- Silva-Galcz, P.** (with Chela-Flores, J.) Short-range potentials in the theory of strong gravity. *Nuovo Cimento B* (11) 56 (1980), no. 2, 302-312. (Authors' summary) **81d:83052** 83E99 (81G25)
- da Silva Lobo, Hamílcar** The "Hibbur haggadol" of Rabbi Abraham Zacut and the astronomical tables of Master Josef Vecino or Josef Qerub in the science of the explorations. (Spanish) *Proceedings of the First Spanish-Portuguese Mathematical Conference* (Madrid, 1973) (Spanish), pp. 556-562, Consejo Sup. Inc. Cient., Madrid, 1977. (H. W. Guggenheimer) **81m:01011** 01A40
- da Silva Porto, Paulo Ferreira, Jr.** (with Loibel, Gilberto Francisco) Relative finite determinacy and relative stability of function-germs. *Bol. Soc. Brasil. Mat.* 9 (1978), no. 2, 1-17. (James Damon) **81d:58017** 58C27
- da Silveira, Adel** See Da Silveira, Adel
- Silver, Charles** A simple strong completeness proof for sentential logic. *Notre Dame J. Formal Logic* 21 (1980), no. 1, 179-181. (P. Štěpánek) **81d:03010** 03B05
- Silver, Edward A.** (with Valqui Vidal, René Victor; de Werra, Dominique) A tutorial on heuristic methods. *European J. Oper. Res.* 5 (1980), no. 3, 153-162. (K. G. Murty) **81k:90109** 90C50
- Silver, Jack H.** Counting the number of equivalence classes of Borel and coanalytic equivalence relations. *Ann. Math. Logic* 18 (1980), no. 1, 1-28. (Keith Devlin) **81d:03051** 03E15
- Silverman, Bernard W.** Density estimation: are theoretical results useful in practice? *Asymptotic theory of statistical tests and estimation* (Proc. Adv. Internat. Sympos., Univ. North Carolina, Chapel Hill, N.C., 1979), pp. 179-203, Academic Press, New York, 1980. (Margaret P. Gessaman) **81f:62069** 62G05
Addendum to: "Weak and strong uniform consistency of the kernel estimate of a density and its derivatives" [Ann. Statist. 6 (1978), no. 1, 177-184; MR 57 #10904]. *Ann. Statist.* 8 (1980), no. 5, 1175-1176. (Editors) **81j:62080** 62G05
See also Good, I. J.; et al. **81g:62073**
- Silverman, Gerald Burton** Translation invariant Köthe spaces. *Illinois J. Math.* 24 (1980), no. 3, 412-425. (Aleksandr Mekler) **81i:46034** 46E30
- Silverman, Herb** A sufficient condition for regular growth of entire functions. *Rev. Roumaine Math. Pures Appl.* 23 (1978), no. 9, 1389-1392. (Chung-Chun Yang) **81k:30038** 30D35 (30D15)
(with Silvia, E. M.) The influence of the second coefficient on prestarlike functions. *Rocky Mountain J. Math.* 10 (1980), no. 3, 469-474. (S. Ruscheweyh) **81m:30014** 30C45
- Silverman, J.** (with Vickers, V. E.) A technique for generating specialized Gray codes. *IEEE Trans. Comput.* 29 (1980), no. 4, 329-331. (Authors' summary) **81a:94040** 94B60
- Silverman, L. M.** (with Jonckheere, E. A.) Spectral theory of linear control and estimation problems. *International Symposium on Systems Optimization and Analysis* (Rocquencourt, 1978), pp. 99-109, Lecture Notes in Control and Information Sci., 14, Springer, Berlin, 1979. (B. P. Molinari) **81c:93040** 93C05 (93C25)
(with Emre, E.) Partial model matching of linear systems. *IEEE Trans. Automat. Control* 25 (1980), no. 2, 280-281. (From the introduction) **81c:93038** 93C05
- Silverman, Ruth** (with Baildon, John D.) Combinatorial properties of Helly-type sets. *Proceedings of the Ninth Southeastern Conference on Combinatorics, Graph Theory, and Computing* (Florida Atlantic Univ., Boca Raton, Fla., 1978), pp. 77-84, Congress. Numer., XXI, Utilitas Math., Winnipeg, Man., 1978. (Marilyn Breen) **81k:52019** 52A35 (52A30)
(with Levinson, Henry) Topologies on finite sets. II. *Proceedings of the Tenth Southeastern Conference on Combinatorics, Graph Theory and Computing* (Florida Atlantic Univ., Boca Raton, Fla., 1979), pp. 699-712, Congress. Numer., XXIII-XXIV, Utilitas Math., Winnipeg, Man., 1979. (N. Hadživanov) **81c:54006** 54A10 (05A99)
(with Levinson, Henry) Generalizations of property B. *Second International Conference on Combinatorial Mathematics* (New York, 1978), pp. 349-353, Ann. New York Acad. Sci., 319, New York Acad. Sci., New York, 1979. (H. L. Abbott) **81j:05003** 05A05
- Silverstein, Jack W.** On the randomness of eigenvectors generated from networks with random topologies. *SIAM J. Appl. Math.* 37 (1979), no. 2, 235-245. (Giovanni Melzi) **81a:92005** 92A09 (94C99)
- Silverstein, Martin L.** (with Bender, Carl M.; Guralnik, Gerald) WKB approximation for quantum theory on a lattice. *Phys. Rev. D* (3) 20 (1979), no. 10, 2583-2591. (J.-L. Calais) **81c:16068** 81E99 (34E20)
Classification of coharmonic and coinvariant functions for a Lévy process. *Ann. Probab.* 8 (1980), no. 3, 539-575. (Ditlev Monrad) **81f:60058** 60G17 (60J30)
On the closability of Dirichlet forms. *Z. Wahrsch. Verw. Gebiete* 51 (1980), no. 2, 185-200. (M. Fukushima) **81g:60073** 60J45 (31C25)
- Silverster, John R.** A matrix method for solving linear congruences. *Math. Mag.* 53 (1980), no. 2, 90-92. (Lawrence Somer) **81i:10003** 10-01 (10B05)
- Silvester, P. P.** Software engineering aspects of finite elements. *Finite elements in electrical and magnetic field problems*, pp. 69-85, Wiley, Chichester, 1980. (H. R. Schwarz) **81m:65180** 65N30 (35-04, 68B99)
See also *Finite elements in electrical and magnetic field problems*, **81j:78009**
- Silvester, R.** (with Hsu, J. R. C.; Tsuchiya, Y.) Boundary-layer velocities and mass transport in short-crested waves. *J. Fluid Mech.* 99 (1980), no. 2, 321-342. (Authors' summary) **81g:76012** 76B15 (76D10)
- Silvia, E. M.** (with Silverman, Herb) The influence of the second coefficient on prestarlike functions. *Rocky Mountain J. Math.* 10 (1980), no. 3, 469-474. (S. Ruscheweyh) **81m:30014** 30C45
- Sim, Soon Klong** Free and projective S -systems with zero. *Nanta Math.* 11 (1978), no. 1, 35-37. (From the introduction) **81h:20006** 20M10
- Sima, V.** Comparison of some algorithms for solving the Lyapunov-type equations. (French and German summaries) *Rev. Roumaine Sci. Tech. Sér. Électrotech. Énergét.* 25 (1980), no. 2, 235-246, v. vii. (E. R. Hansen) **81k:65046** 65F30
- Simader, Christian G.** (with Louhivaara, Ilppo Simo) Über kooperative lineare partielle Differentialoperatoren: Fredholmische verallgemeinerte Dirichletprobleme und deren Klasseneinteilung. (Russian summary) *Complex analysis and its applications* (Russian), pp. 342-345, 668, "Nauka", Moscow, 1978. (M. H. Protter) **81m:35050** 35J40
- Simakia, I. N.** (with Pril'mak, V. G.; Roždestvenskii, B. L.) Numerical modeling of one-dimensional turbulence. (Russian. English summary) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 168* (1979), 27 pp. (Authors' summary) **81k:76033** 76F99
- Simanov, A. L.** A physical picture of the world and the concept of "state" as its element. (Russian) *Logico-methodological problems of the natural sciences and the social sciences* (Russian), pp. 72-83, "Nauka" Sibirsk. Otdel., Novosibirsk, 1977. (O. K. Davtjan) **81g:10005** 81B99 (00A25, 03A05)
- Šiman'skii, A.** See Szymanski, Andrzej
- Simbel, M. H.** (with Abul-Magd, A. Y.; Farag, M. Y. H.) Volume integrals and root-mean-square radii of the optical potential. (French summary) *Canad. J. Phys.* 58 (1980), no. 8, 1230-1237. (Authors' summary) **81c:81154** 81G25
- Šimečević, O. V.** (with Potapov, S. V.) Search algorithms for guaranteeing strategies on the basis of the method of game factorization. (Russian) *Mathematical models of behavior* (Russian), pp. 88-100, 126, Saratov. Gos. Univ., Saratov, 1978. (Authors' summary) **81b:90195** 90D42
See also *Mathematical models of behavior*, **81a:90005**
- Simeone, Bruno** A conic algorithm for the group minimization problem. *Cahiers Centre Études Rech. Opér.* 21 (1979), no. 4, 337-351. (Author's summary) **81b:90112** 90C10
(with Gallo, Giorgio; Hammer, Peter L.) Quadratic knapsack problems. *Combinatorial optimization. Math. Programming Stud.* No. 12 (1980), 132-149. (Richard S. Sacher) **81g:90065** 90C10 (90C09)
- Simeonov, S. V.** A statistical analysis of one-dimensional deformable systems with single and double nonlinearity. (Bulgarian. Russian and English summaries) *Teor. Prikl. Meh.* 10 (1979), no. 4, 5, 6, 22-36 (1980). (B. Vujanović) **81g:73066** 73H99
- Simeonova, D.** (with Čelankov, B.) Oscillations of a class of autonomous systems in the case of resonance of mixed second and third rank. (Bulgarian. Russian and English summaries) *Godišnik Vis. Učebn. Zaved. Tehn. Meh.* 16 (1975), no. 3, 25-33 (1978). (G. V. Hmelevskaja-Plotnikova) **81c:34032** 34C15 (70K30)
- Simha, R. R.** (with Choksi, J. R.) Measurable transformations on homogeneous spaces. *Studies in probability and ergodic theory*, pp. 269-286, *Advances in Math., Suppl. Studies*, 2, Academic Press, New York, 1978. (Richard Mosak) **81i:28005** 28A60
On Šiu's characterisation of domains of holomorphy. *J. Indian Math. Soc. (N.S.)* 42 (1978), no. 1-4, 127-130 (1979). (L. Andrew Campbell) **81f:32018** 32D05
Extension theorems in hyperbolic analysis. *Hyperbolic complex analysis* (Proc. All India Sem., Ramanujan Inst., Univ. Madras, Madras, 1977), pp. 43-52, *Publ. Ramanujan Inst.*, 4, Univ. Madras, Madras, 1979. (Marcus Wright) **81k:32012** 32B15
- Simić, Slavko** Proof of a hypothesis on some segments of harmonic series and a new

- hypothesis. *Mat. Vesnik* 3(16)(31) (1979), no. 1, 77-83. (Ian Anderson) **81m:10017** 10A40 (26A48)
- On a hypothesis of D. Adamović concerning asymptotic behaviour of some complex sequences. *Publ. Inst. Math. (Beograd) (N.S.)* 25(39) (1979), 167-178. (E. Stipančić) **81b:40062** 40A05
- Simić, Slobodan K.** (with Cvetković, Dragoš M.; Gutman, Ivan) On self-pseudo-inverse graphs. *Univ. Beograd. Publ. Elektrotehn. Fak. Ser. Mat. Fiz.* No. 602-633 (1978), 111-117 (1979). (J.-M. Goethals) **81j:05088** 05C70
- (with Cvetković, Dragoš M.; Doob, Michael) Some results on generalized line graphs. *C. R. Math. Rep. Acad. Sci. Canada* 2 (1980), no. 3, 147-150. (Editors) **81f:05136** 05C99
- Simionescu, Claudia Lidia** Optimal control for distributed parameter systems. *Systems theory (Proc. Nat. Conf., Univ. Braşov, Braşov, 1977) (Romanian)*, pp. 98-106. *Univ. Braşov, Braşov, 1978. (Stefan Mirică) 81c:49003* 49A22 (49-02, 93C20)
- An approximation to rate distortion. (Romanian summary) *Bul. Univ. Braşov Ser. C* 20 (1978), 133-150. (Toby Berger) **81b:94027** 94A34 (05B99)
- Optimal control and general systems. *Proceedings of the International Symposium on Applications of Mathematics in System Theory (Univ. Braşov, Braşov, 1978)*, I, pp. 81-98. *Univ. Braşov, Braşov, 1979. (M. M. Konstantinov) 81m:49025* 49B27 (49D15)
- See also *Proceedings: International Symposium on Applications of Mathematics in System Theory*, **81j:93006**
- Simis, Aron** Free resolutions of certain triply generated ideals. *Bol. Soc. Brasil. Mat.* 10 (1979), no. 1, 43-56. (Manfred Herrmann) **81b:13005** 13C10 (18G10)
- Slankin, M. M.** Recursive filtering with correlated state and measurement noises. *Avtomat. i Telemekh.* 1980, no. 1, 71-80 (Russian); translated as *Automat. Remote Control* 41 (1980), no. 1, part 1, 56-63. (Author's summary) **81h:93113** 93E11
- Slankin, T. E.** (with Wu, Julian J.) A numerical comparison between two unconstrained variational formulations. *Transactions of the Twenty-Fifth Conference of Army Mathematicians (Johns Hopkins Univ., Baltimore, Md., 1979)*, pp. 675-700. *ARO Rep.* 80, 1, U. S. Army Res. Office, Research Triangle Park, N.C., 1980. (See **80m:73002**) 73C99
- Unconstrained variational statements for initial and boundary-value problems. *Transactions of the Twenty-Fifth Conference of Army Mathematicians (Johns Hopkins Univ., Baltimore, Md., 1979)*, pp. 701-714. *ARO Rep.* 80, 1, U. S. Army Res. Office, Research Triangle Park, N.C., 1980. (See **80m:73002**) 49A05
- Simmons, Gustavus J.** An application of maximum-minimum distance circuits of hypercubes. *Combinatorial mathematics (Proc. Internat. Conf. Combinatorial Theory, Australian Nat. Univ., Canberra, 1977)*, pp. 290-299. *Lecture Notes in Math.*, 686, Springer, Berlin, 1978. (Derek Smith) **81b:05074** 05C45
- Almost all n -dimensional rectangular lattices are Hamilton-laceable. *Proceedings of the Ninth Southeastern Conference on Combinatorics, Graph Theory, and Computing (Florida Atlantic Univ., Boca Raton, Fla., 1978)*, pp. 649-661. *Congress. Numer., XXI, Utilitas Math., Winnipeg, Man., 1978. (Derek Smith) 81h:05075* 05C45
- (with Slater, Peter J.) The generalized Petersen graphs $G(n,4)$ are Hamiltonian for all $n \neq 8$. *Proceedings of the Tenth Southeastern Conference on Combinatorics, Graph Theory and Computing (Florida Atlantic Univ., Boca Raton, Fla., 1979)*, pp. 861-871. *Congress. Numer., XXIII-XXIV, Utilitas Math., Winnipeg, Man., 1979. (M. E. Watkins) 81c:05059* 05C45
- Simmons, Harry** The word and torsion problems for commutative Thue systems. *Word problems, II (Conf. on Decision Problems in Algebra, Oxford, 1976)*, pp. 395-400. *Studies in Logic and Foundations of Math.*, 95, North-Holland, Amsterdam, 1980. (F. B. Cannonito) **81k:20081** 20M05 (03D40)
- Simmons, Kim H.** (with Phares, Alain J.) Fibonacci numbers revisited: a combinatorics function point of view. *Amer. J. Phys.* 48 (1980), no. 2, 159-162. (G. L. Alexanderson) **81h:10016** 10A35
- Simmons, L. M., Jr.** (with Nieto, Michael Martin) Analytic coherent states for generalized potentials. *Foundations of radiation theory and quantum electrodynamics*, pp. 203-218. *Plenum, New York, 1980. (See 81h:81002)* 81C40 (81D99)
- Simons, D. J.** Lie groups and physics. *Representation theory of Lie groups (Proc. SRC/LMS Res. Sympos., Oxford, 1977)*, pp. 151-175. *London Math. Soc. Lecture Note Ser.*, 34, Cambridge Univ. Press, Cambridge, 1979. (See **81j:22001**) 22E70 (58F06)
- Simons, John Carson** A realist semantics for Cocchiarella's T^* . *Notre Dame J. Formal Logic* 21 (1980), no. 1, 1-32. (G. Asser) **81h:03010** 03B15 (03A05)
- Simons, Nathan F., Jr.** On stable homotopy in Frobenius categories. *Black mathematicians and their works*, pp. 183-193 (1 plate). *Dorrance, Ardmore, Pa., 1980. (R. M. Vogt) 81j:55024* 55U35 (18D99, 55P47)
- Simms, P. D.** On the solution of a partially structured nonlinear program. *J. Austral. Math. Soc. Ser. B* 21 (1979/80), no. 3, 283-292. (Author's summary) **81a:90144** 90C30 (90B10)
- Simó, Carlos** Toroidal stability in the field of a finite primary. (Spanish) *Proceedings of the First Spanish-Portuguese Mathematical Conference (Madrid, 1973) (Spanish)*, pp. 506-513. *Consejo Sup. Inv. Cient., Madrid, 1977. (From the summary) 81m:70034* 70M10 (58F40)
- On the Hénon-Poincaré attractor. *J. Statist. Phys.* 21 (1979), no. 4, 465-494. (Zbigniew Nitecki) **81j:58058a** 58F13 (70F99, 76F99)
- Invariant curves near parabolic points and regions of stability. *Global theory of dynamical systems (Proc. Internat. Conf., Northwestern Univ., Evanston, Ill., 1979)*, pp. 418-424. *Lecture Notes in Math.*, 819, Springer, Berlin, 1980. (Carl P. Simon) **81m:58035** 58F05 (58F10, 70F15, 70K20)
- Masses for which triple collision is regularizable. *Proceedings of the Sixth Conference on Mathematical Methods in Celestial Mechanics (Math. Forschungsinst., Oberwolfach, 1978)*, Part I. *Celestial Mech.* 21 (1980), no. 1, 25-36. (Author's summary) **81a:70010** 70F07 (58F99)
- (with Lière, Jaume) Oscillatory solutions in the planar restricted three-body problem. *Math. Ann.* 248 (1980), no. 2, 153-184. (George Bozia) **81f:70009** 70F07 (34C15, 58F05, 58F40)
- Simões-Pereira, J. M. S.** A comment on matroidal families. (French summary) *Problèmes combinatoires et théorie des graphes (Colloq. Internat. CNRS, Univ. Orsay, Orsay, 1976)*, pp. 385-387. *Colloques Internat. CNRS*, 260, CNRS, Paris, 1978. (Author's summary) **81h:05031** 05B35
- Simon** (with Campbell, J. A.) Symbolic computing with compression of data structures: general observations, and a case study. *Symbolic and algebraic computation (EUROSAM '79, Internat. Sympos., Marseille, 1979)*, pp. 503-513. *Lecture Notes in Comput. Sci.*, 72, Springer, Berlin, 1979. (Authors' summary) **81c:68042** 68C20 (68B15)
- Simon, A. M.** Une démonstration du théorème de Higman. *Neumann, Neumann, Bull. Soc. Math. Belg.* 28 (1976), no. 2, 111-113. (Editors) **81a:20044** 20F28
- Chaijib-Simon, Alice** See **Chaijib-Simon, Alice**
- Simon, B.** Bose quantum field theory as an Ising ferromagnet: recent developments. (Russian) Translated from the English by S. B. Slosman. *Euclidean quantum field theory (Russian)*, pp. 244-254. *Mat.: Noove Zarub. Nauke*, 12, "Mir", Moscow, 1978. (See **81f:81002**) 81E10 (82A05, 82A67)
- Maximal and minimal Schrödinger forms. *J. Operator Theory* 1 (1979), no. 1, 37-47. (Woodford W. Zachary) **81m:35104** 35P05 (81C10)
- (with Foley, R. D.) Some results on sojourn times in acyclic Jackson networks. *Management Sci.* 25 (1979), no. 10, 1027-1034 (1980). (Authors' summary) **81b:60101** 60K25
- (with Aizenman, Michael) Local Ward identities and the decay of correlations in ferromagnets. *Comm. Math. Phys.* 77 (1980), no. 2, 137-143. (J. R. Fontaine) **81k:82001** 82A05
- Brownian motion, L^p properties of Schrödinger operators and the localization of binding. *J. Funct. Anal.* 35 (1980), no. 2, 215-229. (Woodford W. Zachary) **81c:35033** 35J10 (47A40, 81C20)
- (with Alonso, Alberto) The Birman-Krein-Vishik theory of selfadjoint extensions of semibounded operators. *J. Operator Theory* 4 (1980), no. 2, 251-270. (W. Timmermann) **81m:47038** 47B25
- (with Hoffmann-Ostenhof, M.; Hoffmann-Ostenhof, Thomas) On the nodal structure of atomic eigenfunctions. *J. Phys. A* 13 (1980), no. 4, 1131-1133. (Mary Beth Ruskai) **81c:81007** 81C05 (35P10)
- (with Fröhlich, Jürg; Israel, Robert B.; Lieb, Elliott H.) Phase transitions and reflection positivity. II. Lattice systems with short-range and Coulomb interactions. *J. Statist. Phys.* 22 (1980), no. 3, 297-347. (Gerhard Hegerfeldt) **81h:82005** 82A05 (82A15, 82A25, 82A67)
- Mean field upper bound on the transition temperature in multicomponent ferromagnets. *J. Statist. Phys.* 22 (1980), no. 4, 491-493. (A. K. Rajagopal) **81c:82065** 82A67 (82A15)
- Decay of correlations in ferromagnets. *Phys. Rev. Lett.* 44 (1980), no. 8, 547-549. (Masuo Suzuki) **81g:82077** 82A67
- (with Miller, Keith) Quantum magnetic Hamiltonians with remarkable spectral properties. *Phys. Rev. Lett.* 44 (1980), no. 25, 1706-1707. (Authors' summary) **81d:81022** 81C10 (35P05, 82A42)
- (with Hoffmann-Ostenhof, M.; Hoffmann-Ostenhof, Thomas) Brownian motion and a consequence of Harnack's inequality: nodes of quantum wave functions. *Proc. Amer. Math. Soc.* 80 (1980), no. 2, 301-305. (G. Fonte) **81g:51019** 81C20 (35B05, 35J10, 60G40, 60J65)
- Simon, F.** (with Lippe, Wolfram-M.) Semantics for LISP without reference to an interpreter. *International Symposium on Programming (Proc. Fourth Internat. Sympos., Paris, 1980)*, pp. 240-255. *Lecture Notes in Comput. Sci.*, 83, Springer, Berlin, 1980. (Authors' summary) **81m:68020** 68B10
- Simon, Gary A.** Efficacies of measures of association for ordinal contingency tables. *J. Amer. Statist. Assoc.* 73 (1978), no. 363, 545-551. (Tom Leonard) **81d:62048** 62H17 (92A20)
- Simon, Gérard** ★Kepler—astronome, astrologue. (French) [Kepler—astronomer, astrologer] Bibliothèque des Sciences Humaines. [Library of the Human Sciences] Éditions Gallimard, Paris, 1979. 488 pp. (1 plate). (William R. Shea) **81f:01010** 01A45 (01A70, 85-03)
- Simon, Hans-Ulrich** Word problems for groups and contextfree recognition. *Fundamentals of computation theory (Proc. Conf. Algebraic, Arith. and Categorical Methods in Comput. Theory, Berlin/Wendisch-Rietz, 1979)*, pp. 417-422. *Math. Research*, 2, Akademie-Verlag, Berlin, 1979. (R. W. Gatterdam) **81d:20024** 20F10 (03D40, 68C25)
- Simon, Herbert A.** The uses of mathematics in the social sciences. *Proceedings of the First International Conference on Mathematical Modeling (St. Louis, Mo., 1977)*, Vol. 1, pp. 79-89. *Univ. Missouri-Rolla, Rolla, Mo., 1977. (J. S. Joel) 81k:00013 00A69 (68Gxx, 92-01)*
- The behavioral and social sciences. *Science* 209 (1980), no. 4452 Centennial Issue, 72-78. (Author's summary) **81d:92001** 92-01
- Simon, Isure** Conditions de finitude pour des semi-groupes. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 23, 1081-1082. (Author's summary) **81h:20007** 20M10
- Simon, Jacques** (with Pincon, G.) Extensions of representations and cohomology. *Rep. Math. Phys.* 16 (1979), no. 1, 49-77. (J. Gil de Lamadrid) **81k:22011** 22E45 (22D30, 81C40)
- (with Flato, Moshé) Linearization of relativistic nonlinear wave equations. *J. Math. Phys.* 21 (1980), no. 4, 913-917. (Martine J. Perrin) **81f:81033** 81D25 (22E70, 35A30, 58F06)
- Simon, Janos** (with Gill, John; Hunt, James) Deterministic simulation of tape-bounded probabilistic Turing machine transducers. *Theoret. Comput. Sci.* 12 (1980), no. 3, 333-338. (Authors' introduction) **81k:68040** 68C40 (68C25)
- Simon, Jiří** The lattice of normal subsemigroups of an abelian semigroup. (Czech. French summary) *Sb. Práci Ped. Fak. v Ostravě Ser. A* 14 (1979), no. 62, 3-8. (P. Gorišek) **81g:20125** 20M14
- Simon, Jonathan** How many knots have the same group? *Proc. Amer. Math. Soc.* 80 (1980), no. 1, 162-166. (L. Neuwirth) **81c:57009** 57M25
- Simon, Leon** A Hölder estimate for quasiconformal maps between surfaces in Euclidean space. *Acta Math.* 139 (1977), no. 1-2, 19-51. (From the introduction) **81h:30026** 30C60 (49F10, 53A10)
- (with Hardt, Robert M.) Boundary regularity and embedded solutions for the oriented Plateau problem. *Ann. of Math.* (2) 110 (1979), no. 3, 439-486. (João Lucas

- Marques Barbosa and H. Blaine Lawson) **81i:49031** 49F10 (49F20, 53A10)
(with Almgren, Frederick J., Jr.) Existence of embedded solutions of Plateau's problem. *Ann. Scuola Norm. Sup. Pisa Cl. Sci.* (4) **6** (1979), no. 3, 447-495. (João Lucas Marques Barbosa) **81i:49025** 49F10 (49F22, 53A10, 58E12)
(with Hardt, Robert M.) Boundary regularity and embedded solutions for the oriented Plateau problem. *Bull. Amer. Math. Soc. (N.S.)* **1** (1979), no. 1, 263-265. (R. N. Abdulaev) **81i:53012** 53A10 (35J65, 49F10)
- Simons, Norman R. An iterative treatment of double-mode pulsation. *Astrophys. J.* **237** (1980), no. 1, part 1, 175-186. (George Contopoulos) **81i:85004** 85A15
- Simons, P. On the concept of a conjugate function. *Fourier analysis and approximation theory (Proc. Colloq., Budapest, 1976)*, Vol. II, pp. 747-755. *Colloq. Math. Soc. János Bolyai*, 19, North-Holland, Amsterdam, 1978. (R. A. Hunt) **81i:42084** 42C10
On a maximal function. *Ann. Univ. Sci. Budapest. Eötvös Sect. Math.* **21** (1978), 41-44 (1979). (Author's introduction) **81i:42083** 42C10
- Simons, Udo (with Benko, Kornel; Kothe, Monika; Semmler, Klaus-Dieter) Eigenvalues of the Laplacian and curvature. *Colloq. Math.* **42** (1979), 19-31. (R. S. Millman) **81i:53028** 53C20 (10D24, 30F30)
- Simon, W. (with Beig, R.) Proof of a multipole conjecture due to Geroch. *Comm. Math. Phys.* **78** (1980/81), no. 1, 75-82. (Richard Hansen) **81i:83016** 83C20 (53C50, 58G05)
- Simoneau, Luca (with Saheban, F.; Friedman, A. D.) Concurrent computation and diagnosis in multiprocessor systems. *FTCS-9 (Ninth Annual Internat. Sympos. Fault-Tolerant Comput., Madison, Wis., 1979)*, pp. 149-156. *IEEE, New York, 1979*. (See **81i:94001**) **68B20**
(with Saheban, F.; Friedman, A. D.) Design of self-diagnosable multiprocessor systems with concurrent computation and diagnosis. *IEEE Trans. Comput.* **29** (1980), no. 6, 540-546. (Authors' summary) **81i:68025** **68B20**
(with Taylor, Herbert) Subgraphs smaller than the girth. *J. Graph Theory* **4** (1980), no. 1, 101-105. (W. D. Wallis) **81i:05054** **05C35**
- Simonenko, I. B. Convergence of Bieberbach polynomials in the case of a Lipschitz domain. (Russian) *Izv. Akad. Nauk SSSR Ser. Mat.* **42** (1978), no. 4, 870-878. (L. A. Akse'ev) **81i:30011** **30C35** (30C10)
Factorizations and local factorization of measurable functions. (Russian) *Dokl. Akad. Nauk SSSR* **250** (1980), no. 5, 1063-1066. (N. V. Rao) **81i:30075** **30E20**
(with Kozak, A. V.) Projection methods for solving multidimensional discrete convolution equations. (Russian) *Sibirsk. Mat. Z.* **21** (1980), no. 2, 119-127, 237. (V. Shev'uk and Alexander A. Pankov) **81i:47040** **47B37**
- Simons, V. C. (with Kaniavskas, J.; Rudzikas, Z. B.) On finding algebraic expressions for fractional parentage coefficients. (Russian. Lithuanian and English summaries) *Litovsk. Fiz. Sb.* **19** (1979), no. 5, 637-648, 741. (K. Kumar) **81i:81101** **81G30**
- Simonjan, A. M. Some aspects of uniaxial creep of metals. (Russian. Armenian and English summaries) *Izv. Akad. Nauk Armjan. SSR Ser. Meh.* **33** (1980), no. 2, 3-16, 77. (Author's summary) **81i:73042** **73E25**
- Simonjan, A. S. Lacunary series and conjugate functions. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* **1979**, no. 7, 76-79. (H. J. Landau) **81i:42049** **42A55** (42A50)
- Simonjan, L. A. See Simonjan, L.
- Simonjan, S. G. (with Bagdasarian, L. A.) Lacunae in the spectrum of a one-dimensional periodic Dirac operator with a potential of infinite smoothness. (Russian. Armenian summary) *Akad. Nauk Armjan. SSR Dokl.* **68** (1979), no. 4, 208-212. (C. Avramescu) **81i:34016** **34B25** (47E05, 81C05)
(with Bagdasarian, L. A.) Zones of instability of a one-dimensional periodic Dirac system. (Russian) *Differentsial'nye Uravnenija* **16** (1980), no. 3, 449-453, 572-573. (A. I. Kir'janen) **81i:34057** **34D05** (34B25)
- Simonjan, L. (with Krop, L. E.) Pure and Magnus varieties of linear representation of groups. (Russian) *A collection of papers on algebra (Russian)*, pp. 108-123. *Minist. Oborony SSSR*, 1978. (A. Kučulejs) **81i:20018** **20C99**
The correspondence between varieties of linear representations of groups and Lie algebras. (Russian) *A collection of papers on algebra (Russian)*, pp. 258-298. *Minist. Oborony SSSR*, 1978. (G. P. Kuklin) **81i:20020** **20C99** (17B10, 20E10)
- Simonov, Ju. A. Stability of three-dimensional nonrelativistic solitons. *Jadernaja Fiz.* **30** (1979), no. 4, 1148-1157 (Russian); translated as *Soviet J. Nuclear Phys.* **30** (1979), no. 4, 596-601. (Author's summary) **81i:81035** **81C05** (35Q20)
See also Feynman, Richard R.; et al., **81i:78001**
- Simonov, R. O. The textual aspect of the study of ancient Russian mathematics. (Russian. English summary) *History and methodology of the natural sciences*, No. XX (Russian), pp. 129-137. *Moskov. Gos. Univ., Moscow*, 1978. (Author's summary) **81i:01013** **01A35**
(with Popov, P. S.; Stjarkin, N. I.) Logic in Russia at the end of the fifteenth century. (Russian) *Ideas of natural science in Old Russia (Russian)*, pp. 98-112, "Nauka", Moscow, 1978. (Roman Murawski) **81i:01015** **01A35** (03-03)
- Simonov, V. M. Decomposition of complex systems by means of r -complete monadic morphisms. (Russian) Modeling languages and software for hybrid computer systems. *Voprosy Kibernet.* (Moscow) No. 46 (1978), 138-145. (Author's summary) **81i:68085** **68D37** (18B20, 93A99)
- Simonov, Yu. A. See Simonov, Ju. A.
- Simonovits, Andrius. Once more on expectations. (Hungarian. English and Russian summaries) *Szigma-Mat.-Közgazdasági Folyóirat* **12** (1979), no. 3-4, 245-248. (Author's summary) **81i:90050** **90A17** (90B05)
- Simonovits, M. (with Brown, W. G.; Erdős, Paul) On multigraph extremal problems. (French summary) *Problèmes combinatoires et théorie des graphes (Colloq. Internat. CNRS, Univ. Orsay, Orsay, 1976)*, pp. 63-66. *Colloques Internat. CNRS*, 260, CNRS, Paris, 1978. (See **80i:05005**) **05C35**
(with Bondy, J. A.) Longest cycles in 3-connected 3-regular graphs. *Canad. J. Math.* **32** (1980), no. 4, 987-992. (R. C. Entringer) **81i:05088** **05C38** (05C35)
- Simons, Barbara. A fast algorithm for multiprocessor scheduling. *21st Annual Symposium on Foundations of Computer Science (Syracuse, N.Y., 1980)*, pp. 50-53. *IEEE, New York*, 1980. (See **81i:68008**) **68C15**
On minimum circuits in a graph. *Proceedings of the West Coast Conference on Combinatorics, Graph Theory and Computing (Humboldt State Univ., Arcata, Calif., 1979)*, pp. 295-303. *Congress. Numer., XXVI, Utilitas Math., Winnipeg, Man.*, 1980. (Alon Itai) **81i:05067** **05C35**
- Simons, Gordon. Extensions of the stochastic ordering property of likelihood ratios. *Ann. Statist.* **8** (1980), no. 4, 833-839. (B. K. Ghosh) **81i:62008** **62A10** (62L10)
Sequential estimators and the Cramer-Rao lower bound. *J. Statist. Plann. Inference* **4** (1980), no. 1, 67-74. (Lionel Weiss) **81i:62166** **62L12** (62F10)
- Simons, S. Modified equations for heat conduction. *Phys. Lett. A* **66** (1978), no. 6, 453-455. (Author's summary) **81i:80007** **80A20** (82A70)
Is the solution of the Boltzmann equation positive? *Phys. Lett. A* **69** (1978/79), no. 4, 239-240. (Author's summary) **81i:82037** **82A40** (76F05)
On the sign of S for thermal conduction. *J. Phys. A* **13** (1980), no. 2, 767-769. (R. R. Huilgol) **81i:80003** **80A10** (35K05)
- Simons, Stephen. The use of polynomials in evaluating certain probabilistic integrals. *SIAM J. Math. Anal.* **11** (1980), no. 5, 771-786. (Author's summary) **81i:65153** **65U05** (62F07, 65D30)
- Simovici, Dan A. On the behaviour of time-variant semiautomata. *An. Ştiinţ. Univ. "Al. I. Cuza" Iaşi Sect. I a Mat. (N.S.)* **25** (1979), no. 1, 187-192. (A. Salomaa) **81i:68099** **68F10**
Semidmissible categories and context-sensitive languages. *An. Ştiinţ. Univ. "Al. I. Cuza" Iaşi Sect. I a Mat. (N.S.)* **26** (1980), no. 1, 155-161. (Ronald E. Prather) **81i:68064** **68F05**
- Simpon, Henry C. Stability of periodic solutions of nonlinear integro-differential systems. *SIAM J. Appl. Math.* **38** (1980), no. 3, 341-363. (J. M. Cushing) **81i:45017** **45J05** (34K15, 34K20)
- Simpon, I. C. Numerical integration over a semi-infinite interval, using the lognormal distribution. *Numer. Math.* **31** (1978/79), no. 1, 71-76. (Author's summary) **81i:65028** **65D30**
- Simpon, R. Bruce. Automatic local refinement for irregular rectangular meshes. *Internat. J. Numer. Methods Engrg.* **14** (1979), no. 11, 1665-1678. (Author's summary) **81i:65098** **65N30**
- Simpon, Robert G. (with Chiu, Ming Yee; Barrett, Harrison H.) Three-dimensional reconstruction from planar projections. *J. Opt. Soc. Amer.* **70** (1980), no. 7, 755-762. (Authors' summary) **81i:78006** **78A10**
- Simpon, Stephen G. Sets which do not have subsets of every higher degree. *J. Symbolic Logic* **43** (1978), no. 1, 135-138. (From the text) **81i:03054** **03D30**
- Sims, Brailey. A geometric proof for some simple cases of martingale convergence. *Austral. Math. Soc. Gaz.* **6** (1979), no. 2, 51-55. (Rolando Rebolledo) **81i:46056** **46G10** (60G42)
(with Dancer, E. N.) Weak-star separability. *Bull. Austral. Math. Soc.* **20** (1979), no. 2, 253-257. (Authors' summary) **81i:46030** **46B99**
- Sims, Charles C. Some group-theoretic algorithms. *Topics in algebra (Proc. 18th Summer Res. Inst., Austral. Math. Soc., Austral. Nat. Univ., Canberra, 1978)*, pp. 108-124. *Lecture Notes in Math.*, 697, Springer, Berlin, 1978. (Hale F. Trotter) **81i:20026** **20F05** (20B05)
Group-theoretic algorithms, a survey. *Proceedings of the International Congress of Mathematicians (Helsinki, 1978)*, pp. 979-985. *Acta Sci. Fennica, Helsinki*, 1980. (M. F. Newman) **81i:20001** **20-04**
- Sims, Craig S. (with D'Mello, M. R.) Adaptive deconvolution of seismic signals. *IEEE Trans. Geosci. Electron.* **16** (1978), no. 2, 99-103. (Authors' summary) **81i:93107** **93E10** (86A15, 93C40)
Reduced order modeling. *Thirteenth Asilomar Conference on Circuits, Systems and Computers (Pacific Grove, Calif., 1979)*, pp. 215-218. *IEEE, New York*, 1980. (See **81i:93004**) **93E03**
- Simson, Daniel (with Leszczyński, Zbigniew) On triangular matrix rings of finite representation type. *J. London Math. Soc.* (2) **20** (1979), no. 3, 396-402. (Kwangil Koh) **81i:16043** **16A64** (16A42)
(with Jensen, Christian U.) Purity and generalized chain conditions. *J. Pure Appl. Algebra* **14** (1979), no. 3, 297-305. (From the text) **81i:16016** **18E15** (16A50, 16A90)
(with Dowbor, Piotr) A characterization of hereditary rings of finite representation type. *Bull. Amer. Math. Soc. (N.S.)* **2** (1980), no. 2, 300-302. (Ju. A. Drozd) **81i:16037** **16A64**
(with Dowbor, Piotr) Quasi-Artin species and rings of finite representation type. *J. Algebra* **63** (1980), no. 2, 435-443. (Jitendra Manocha) **81i:16025** **16A48** (16A64)
- Simson, É. A. (with Bogomolov, S. I.; Smirnov, M. M.; Goglyta, T. Ju.) Free geometrically nonlinear oscillations of ring-shaped plates in the presence of static forces in the middle surface. (Russian) *Dinamika i Pročnôt' Matin* No. 31 (1980), 46-53, 2. (Authors' summary) **81i:73033** **73K12** (73D35)
- Sia, Kwai Sang (with Goodwin, Graham C.) Checkable conditions for identifiability of linear systems operating in closed loop. *IEEE Trans. Automat. Control* **25** (1980), no. 4, 722-729. (Authors' summary) **81i:93114** **93E12** (93C05)
(with Goodwin, Graham C.; Saluja, Kewal K.) Stochastic adaptive control and prediction—the general delay-colored noise case. *IEEE Trans. Automat. Control* **25** (1980), no. 5, 946-950. (Authors' summary) **81i:93078** **93E25**
(with Goodwin, Graham C.; Bitmead, Robert R.) An adaptive d -step ahead predictor based on least squares. *IEEE Trans. Automat. Control* **25** (1980), no. 6, 1161-1165. (Authors' summary) **81i:93072** **93E10** (90A20)
- ibn Sina, Abi 'Ali al-Husayn ibn 'Abdallah. See Ibn Sina, Abi 'Ali al-Husayn ibn 'Abdallah
- Sinaceur, Mohammed Alla. La méthode mathématique de Dedekind. (English summary) *Rev. Histoire Sci. Appl.* **32** (1979), no. 2, 107-142. (Joseph W. Dauben) **81i:01018** **01A55**
- Sinai, Ju. G. Ergodic properties of a Lorentz gas. (Russian) *Funktsional. Anal. i Prilozhen.* **13** (1979), no. 3, 46-59. (D. ter Haar) **81i:28018** **28D05** (82A40)
- Sinai, V. L. The generation of combustion noise by chemical inhomogeneities in steady, low-Mach-number duct flows. *J. Fluid Mech.* **99** (1980), no. 2, 383-397. (Author's summary) **81i:76091** **76Q05** (76N15, 80A25)
- Sinaiak, E. S. Uniform approximation by polynomials on a segment of a function of Mittag-Leffler type. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* **1980**, no. 4, 81-86. (É. O. Zeel') **81i:41012** **41A10**
- Sinclair, B. (with Aisagaliyev, S. A.) On the question of synthesis of a class of nonlinear systems. (Russian) *Collection of questions on mechanics and applied mathematics*

- (Russian), pp. 151-159, *Kazakh. Gos. Univ., Alma-Ata*, 1978. (Editors) **81f:93031**
93B50 (93D99)
- Sinclair, A. T. (with Davies, M. E.; Abalakin, V. K.; Cross, C. A.; Duncombe, R. L.; Masursky, H.; Morando, B.; Owen, T. C.; Seidelmann, P. K.; Wilkins, G. A.; Tjufflin, Y. S.) Report of the IAU Working Group on Cartographic Coordinates and Rotational Elements of the Planets and Satellites. *Celestial Mech.* **22** (1980), no. 3, 205-230. (Authors' summary) **81j:70069** 70F15
- Sinclair, Allan M. Cohen elements in Banach algebras. *Proc. Roy. Soc. Edinburgh Sect. A* **84** (1979), no. 1-2, 55-70. (B. E. Johnson) **81c:46044** 46J05
- Sinclair, D. K. (with Kogut, John B.) $1/Q$ expansions and the first order phase transition of the three-state Potts model in three dimensions. *Phys. Lett. A* **81** (1981), no. 2-3, 149-152. (Authors' summary) **81k:82018** 82A25
- Sinclair, J. B. (with Hirschberg, D. S.) Decentralized extrema-finding in circular configurations of processors. *Comm. ACM* **23** (1980), no. 11, 627-628. (Authors' summary) **81j:68040** 68B20 (68C25)
- Sinitslovskii, G. H. Differentiability and analyticity of univalent mappings. (Russian) *Dokl. Akad. Nauk SSSR* **249** (1979), no. 6, 1325-1327. (K. W. Lucas) **81d:30020** 30C45 (30C60)
- Sinclair, Jan (with Kramosil, Ivan) Statistical deducibility testing with stochastic parameters. *Kybernetika (Prague)* **14** (1978), no. 6, 385-396. (Gábor Dávid) **81h:68114** 68G15
- van Sinderen, Alfred W. See Van Sinderen, Alfred W.
- Sindjap, G. P. Numerical solution of a problem of irregular reflection of a weak shock wave from a rigid wall in an ideal gas. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* **20** (1980), no. 1, 249-254, 264. (Authors' summary) **81a:76034** 76L05
- Sinodal, O. I. (with Borghese, F.; Denti, P.; Toscano, G.) An addition theorem for vector Helmholtz harmonics. *J. Math. Phys.* **21** (1980), no. 12, 2754-2755. (Authors' summary) **81m:33004** 33A45
- Sindrić, O. N. The effect of inhomogeneity of material on the order of singularity of elastic solutions in the neighborhood of a vertex of angles. (Russian) Singular integrals, integral equations and their applications. *Trudy Tbilis. Mat. Inst. Razmadze Akad. Nauk Gruzii, SSR* **61** (1979), 60-67. (Petr Procházka) **81a:73012** 73C40
- Sine, Robert Spectral interpolation and a theorem of Tulcea. *Bull. Calcutta Math. Soc.* **70** (1978), no. 6, 371-373. (R. D. McWilliams) **81k:47015** 47A40 (47A10)
(with Campbell, Stephen L.; Faulkner, Gary D.) Isometries, projections and Wold decompositions. *Operator theory and functional analysis (Papers, Summer Meeting, Amer. Math. Soc., Providence, R.I., 1978)*, pp. 85-114, *Res. Notes in Math.*, **38**, Pitman, San Francisco, Calif., 1979. (T. Andó) **81k:47041** 47B38 (47A15)
- Sinervo, Jyrki (with Ylinen, Raimo; Ruuth, Sampo) On set theoretical and algebraic systems theory for linear differential and difference systems. Topics in systems theory. *Acta Polytech. Scand. Math. Comput. Sci. Ser. No. 31* (1979), 150-167. (J. E. Rubio) **81c:93035** 93C05 (93A05)
- Sinestrari, Eugenio (with Vernole, Paola) A hysteretic semilinear parabolic equation. (Italian summary) *Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur.* (8) **65** (1978), no. 1-2, 11-14 (1979). (Authors' introduction) **81g:35054** 35K55
- Singal, M. K. (with Mathur, Asha) A note on mildly compact spaces. *Kyungpook Math. J.* **19** (1979), no. 2, 165-168. (C. M. Pareek) **81k:54015** 54D30
(with Arya, Shashi Prabha) Another note on nearly paracompact spaces. *Mat. Vesnik* **31(6)(31)** (1979), no. 1, 85-88. (C. M. Pareek) **81k:54023** 54D20 (54D18)
(with Arya, Shashi Prabha) A decomposition of paracompactness. (Serbo-Croatian summary) *Glas. Mat. Ser. III* **15(35)** (1980), no. 1, 179-182. (O. T. Alas) **81j:54034** 54D18 (54D20)
(with Arya, Shashi Prabha) On the locally countable sum theorem. *Pacific J. Math.* **90** (1980), no. 1, 1-10. (K. Nagami) **81m:54031** 54D18
- Singal, R. P. A short note on a differential recursion formula for Appell's hypergeometric function F_3 . *SIAM J. Math. Anal.* **11** (1980), no. 2, 390-391. (R. G. Buschman) **81a:33006** 33A35
- Singha Rao, K. (with Venkateswara Rao, G.) Large amplitude supersonic flutter of panels with ends elastically restrained against rotation. *Comput. & Structures* **11** (1980), no. 3, 197-201. (Authors' summary) **81h:73025** 73J10 (65N30)
- Singare, S. M. (with Pachpatte, B. G.) Discrete generalized Gronwall inequalities in three independent variables. *Pacific J. Math.* **82** (1979), no. 1, 197-210. (I. Stamate) **81m:39006** 39A12 (26D15)
(with Pachpatte, B. G.) On some fundamental discrete inequalities of the Wendroff type. *An. Ştiinţ. Univ. "Al. I. Cuza" Iaşi Sect. I a Mat. (N.S.)* **26** (1980), no. 1, 87-94. (William N. Everitt) **81i:26021** 26D15
- Singer, Bernard Distribution-free methods for nonparametric problems: a classified and selected bibliography. *British J. Math. Statist. Psych.* **32** (1979), no. 1, 1-60. (Author's summary) **81k:62057** 62G05 (62G10, 62P15, 92A25)
- Singer, Burton (with Cohen, Joel E.) Estimating malaria incidence and recovery rates from panel surveys. *Math. Biosci.* **49** (1980), no. 3-4, 273-305. (Authors' summary) **81f:92026** 92A15 (62P10)
- Singer, Ivan On Banach spaces in which every M -basis is a generalized summation basis. *Approximation theory (Papers, VIth Semester, Stefan Banach Internat. Math. Center, Warsaw, 1975)*, pp. 237-240, *Banach Center Publ.*, **4**, PWN, Warsaw, 1979. (M. I. Kadec) **81a:46017** 46B15
Maximization of lower semicontinuous convex functionals on bounded subsets of locally convex spaces. I. Hyperplane theorems. *Appl. Math. Optim.* **5** (1979), no. 4, 349-362. (M. M. Cvetanov) **81d:49012** 49A50 (90C25)
A Fenchel-Rockafellar type duality theorem for maximization. *Bull. Austral. Math. Soc.* **20** (1979), no. 2, 193-198. (M. B. Suryanarayana) **81m:90089** 90C25
(with Papini, Pier Luigi) Best coapproximation in normed linear spaces. *Monatsh. Math.* **88** (1979), no. 1, 27-44. (Hans-Peter Helfrich) **81c:41080** 41A65 (46B20)
(with Bacopoulou, A.; Godini, G.) On infima of sets in the plane and best approximation, simultaneous and vectorial, in a linear space with two norms. *Special topics of applied mathematics (Proc. Sem., Ges. Math. Datenverarb., Bonn, 1979)*, pp. 219-239, *North-Holland, Amsterdam*, 1980. (Pier Luigi Papini) **81m:41039** 41A65 (65K05)
(with Franchetti, C.) Best approximation by elements of caverns in normed linear spaces. (Italian summary) *Boll. Un. Mat. Ital. B* (5) **17** (1980), no. 1, 33-43. (F. Deutsch) **81g:41043** 41A65 (46B99)
- Extension with larger norm and separation with double support in normed linear spaces. *Bull. Austral. Math. Soc.* **21** (1980), no. 1, 93-105. (Alan Shuchat) **81c:46024** 46B20 (46B10)
- Duality theorems for linear systems and convex systems. *J. Math. Anal. Appl.* **76** (1980), no. 2, 339-368. (S. Rowlewicki) **81k:90108** 90C48 (90C25)
- Singer, M. F. (with Haimo, F.; Treitkoff, Marvin D.) Remarks on analytic continuation. *Bull. London Math. Soc.* **12** (1980), no. 1, 9-12. (A. J. Lohwater) **81j:30009** 30B40 (03D40, 20F10)
- Singer, William M. On the localization of modules over the Steenrod algebra. *J. Pure Appl. Algebra* **16** (1980), no. 1, 75-84. (Stanley Kochman) **81h:55039** 55S10
Iterated loop functors and the homology of the Steenrod algebra. II. A chain complex for $\Omega_n^* M$. *J. Pure Appl. Algebra* **16** (1980), no. 1, 85-97. (J. P. May) **81h:55040** 55S10
- Singerman, David Symmetries and pseudosymmetries of hyperelliptic surfaces. *Glasgow Math. J.* **21** (1980), no. 1, 39-49. (C. MacLachlan) **81c:30080** 30F10 (20H10, 32G15)
- Singh, A. P. (with Tripathi, L. M.) On $(N, 1/(n+1))$ summability of the conjugate derived Fourier series. *Acta Cienc. Indica* **5** (1979), no. 4, 177-181. (Prem Chandra) **81f:42006** 42A24 (40G05, 42A50)
(with Tripathi, L. M.) On Nörlund summability of Fourier series and its conjugate series. *Indian J. Pure Appl. Math.* **11** (1980), no. 2, 198-207. (Anthony Holland) **81c:42014** 42A24 (42A50)
- Singh, Amar Operational relations related to a function defined by a generalized Rodrigues formula. *Publ. Inst. Math. (Beograd) (N.S.)* **24(38)** (1978), 151-162. (S. K. Chatterjee) **81h:33018** 33A70
- Singh, Anita On the exact distribution of the likelihood ratio criterion for testing $H: \mu = \mu_0$, $\Sigma = \sigma^2 I$. *Comm. Statist. B—Simulation Comput.* **9** (1980), no. 6, 611-619. (Author's summary) **81m:62033** 62E15 (62H15)
- Singh, Ashok K. Testing multiple slippages. (French summary) *Canad. J. Statist.* **6** (1978), no. 2, 201-218. (Author's summary) **81j:62020** 62C10 (62G10)
(with Gupta, Shanti S.) On rules based on sample medians for selection of the largest location parameter. *Comm. Statist. A—Theory Methods* **9** (1980), no. 12, 1277-1298. (Eve Bofinger) **81k:62030** 62F07
- Singh, Awadhesh Kumar On Kaehlerian concircular recurrent and Kaehlerian concircular symmetric spaces. *Indian J. Pure Appl. Math.* **10** (1979), no. 1, 74-83. (B. B. Sinha) **81j:53028** 53B35
(with Singh, U. P.) On neo-pseudo projective tensor fields. *Indian J. Pure Appl. Math.* **10** (1979), no. 10, 1196-1201. (B. B. Sinha) **81a:53031** 53B40
(with Prasad, Y. N.) Finite integration of certain products associated with the H -function of two variables. *Indian J. Pure Appl. Math.* **10** (1979), no. 12, 1497-1503. (Ram Kishore Saxena) **81b:33010** 33A35
(with Prasad, Y. N.) A new generalized function of r variables as kernel of integral transforms. (Turkish summary) *Istanbul Tek. Univ. Bül.* **32** (1979), no. 2, 72-89. (C. L. Koul) **81h:33006** 33A35 (44A20)
(with Prasad, Y. N.) Integrals with respect to parameter involving a new H -function of r complex variables. (Hindi. English summary) *Vijnana Parishad Amasandhan Patrika* **23** (1980), no. 1, 69-75. (R. K. Saxena) **81f:33004** 33A35
- Singh, B. P. (with Pandey, B. N.) On estimation of r th power of scale in exponential distribution from complete and censored samples. *Progr. Math. (Allahabad)* **12** (1978), no. 1-2, 51-57. (Authors' summary) **81c:62028** 62F10 (62N05)
- Singh, Bahadur Bayesian inference for comparing several treatment means under a Poisson model. *Comm. Statist. A—Theory Methods* **9** (1980), no. 11, 1137-1145. (Author's summary) **81g:62064** 62F15
- Singh, Balbir (with Jain, D. R.) On a space of analytic Dirichlet transformations of several complex variables. *Indian J. Pure Appl. Math.* **11** (1980), no. 5, 640-647. (P. K. Kamthan) **81f:46035** 46E10 (32A15)
- Singh, Baldev (with Pande, H. D.) Berwald's recurrent Finsler spaces of the first order. *Bull. Calcutta Math. Soc.* **71** (1979), no. 2, 94-102. (S. C. Rastogi) **81h:53026** 53B40
- Singh, Balwant Relations between certain numerical characters of singularities. *J. Pure Appl. Algebra* **16** (1980), no. 1, 99-108. (Jean Giraud) **81h:14010** 14E15
- Singh, Bhagat Slowly oscillating and nonoscillating trajectories in second order retarded sublinear equations. *Math. Japon.* **24** (1979/80), no. 6, 617-623. (John R. Graef) **81c:34067** 34K15 (34C15)
Peculiar oscillations in general functional equations with retardations. *Tamkang J. Math.* **10** (1979), no. 1, 59-66. (John R. Graef) **81c:34066** 34K15 (34C15)
Damped trajectories and slow oscillation in forced Liénard type functional equations. *Funkcial. Ekvac.* **23** (1980), no. 1, 63-81. (K. R. Schneider) **81m:34105** 34K15
Necessary and sufficient condition for eventual decay of oscillations in general functional equations with delays. *Hiroshima Math. J.* **10** (1980), no. 1, 1-9. (Erwin Kozakiewicz) **81c:34071** 34K20
- Singh, Brij M. (with Dhaliwal, Ranjit S.; Rokne, Jon) An axisymmetric external crack problem for an infinite medium with a cylindrical inclusion. *J. Engng. Math.* **13** (1979), no. 3, 235-247. (Authors' summary) **81j:73076** 73M05 (45B05, 73C40)
(with Dhaliwal, Ranjit S.) Dual integral equations with a trigonometric kernel. *Proc. Edinburgh Math. Soc. (2)* **22** (1979), no. 3, 213-215. (Klaus Deimling) **81h:45011** 45H05
(with Dhaliwal, Ranjit S.; Rokne, Jon) Diffraction of antiplane shear waves by a Griffith crack or a rigid strip lying at the interface of homogeneous and nonhomogeneous elastic half-spaces. *Acta Mech.* **37** (1980), no. 1-2, 137-144. (From the introduction) **81c:73081** 73M05
(with Dhaliwal, Ranjit S.) Diffraction of antiplane shear waves by two cracks in the presence of a magnetic field. *Appl. Sci. Res.* **36** (1980), no. 1, 41-59. (Authors' summary) **81h:73050** 73R05 (73D25, 73M05)
(with Dhaliwal, Ranjit S.) Triple trigonometric integral equations with an application. *Applicable Anal.* **10** (1980), no. 2, 83-92. (K. N. Srivastava) **81f:45011** 45F10 (73C99)
(with Moodie, T. Bryant; Haddow, J. B.) Closed-form solutions for finite-length crack moving in a strip under antiplane shear stress. *Acta Mech.* **38** (1981), no. 1-2, 99-109. (Authors' summary) **81m:73071** 73M05 (35C05)

- Singh, D. M. Generalised Gauss and Codazzi equations with regard to the induced connection in the subspaces of an areal space. *Bull. Calcutta Math. Soc.* 71 (1979), no. 2, 77-82. (S. C. Rastogi) **81k:53061** 53C60
- Singh, D. V. (with Verma, P. D. S.; Singh, K.) Couette flow of microthermopolar fluids between concentric rotating cylinders. *Acta Tech. ČSAV* 25 (1980), no. 3, 369-383. (Authors' summary) **81h:76003** 76A05
- Singh, Dinesh A simple proof of Bertrand's postulate. *Math. Student* 45 (1977), no. 3, 84 (1979). (Author's introduction) **81j:10009** 10A25
- Singh, F. (with Shrivastava, B. M.) Some new generating relations for generalized Horn functions. *Indian J. Pure Appl. Math.* 7 (1976), no. 11, 1247-1252. (Authors' summary) **81k:33002** 33A30
- Singh, Gulab (with Singh, K. P.) Symmetry properties of certain gravitational space-times. *Indian J. Pure Appl. Math.* 11 (1980), no. 6, 800-804. (Brian O. J. Tupper) **81f:83026** 83C50 (53B50)
- (with Prasad, Gunraj) Relativistic electromagnetic fluids and time-like FCRC mappings. I. *Indian J. Pure Appl. Math.* 11 (1980), no. 8, 1064-1071. (Ilija Lukačević) **81j:83028** 83C55
- Singh, H. N. (with Sharma, Rishi Ram) The growth and decay of weak discontinuities in relativistic fluids with vibrational relaxation. *Acta Phys. Acad. Sci. Hungar.* 46 (1979), no. 3, 157-165. (Authors' summary) **81c:76058** 76Y05
- (with Sharma, Rishi Ram; Gaur, Madhukar) The growth and decay of weak waves in relativistic fluids of dissociating gases. *J. Math. Phys.* 21 (1980), no. 5, 1246-1250. (R. F. Biljajlov) **81g:76128** 76Y05 (76N15, 83C55)
- (with Sharma, Rishi Ram; Gaur, Madhukar) On the growth and decay of discontinuities in relativistic magnetogasdynamics. *Phys. Scripta* 22 (1980), no. 3, 304-307. (Authors' summary) **81e:76095** 76Y05 (76L05, 76W05)
- Singh, Harshinder (with Buche, A. B.) On some analytic properties of the modified exponential-cosine operator. *Indian J. Pure Appl. Math.* 10 (1979), no. 8, 913-919. (S. Kurepa) **81j:47043** 47D05
- Singh, Hukam (with Dubey, R. S. D.) Finsler spaces with recurrent pseudocurvature tensor. *Proc. Indian Acad. Sci. Sect. A Math. Sci.* 88 (1979), no. 4, 363-367. (B. B. Sinha) **81h:53024** 53B40
- Singh, Ishwar On Sharma-Taneja's entropy of type (α, β) . *Indian J. Pure Appl. Math.* 9 (1978), no. 6, 564-569. (Author's summary) **81e:94010** 94A17
- Singh, J. (with Pandey, B. N.) A note on the use of known coefficients of variation in the estimation of common mean of two populations. *J. Indian Statist. Assoc.* 16 (1978), 141-144. (Authors' summary) **81j:62065** 62F10
- (with Bhatkulikar, S. G.) Shrunken estimation in Weibull distribution. *Sankhyā Ser. B* 39 (1978), no. 4, 382-393. (Vijaya Prakash Gupta) **81k:62037** 62F10 (62N05)
- Singh, J. B. (with Verma, B. G.) Self-similar magnetogasdynamics problems with radiative heat transfer. *Acta Phys. Acad. Sci. Hungar.* 46 (1979), no. 4, 309-317. (R. M. Gundersen) **81f:76051** 76W05 (76L05)
- (with Verma, B. G.) Magnetogasdynamics converging spherical detonation waves. *Astrophys. and Space Sci.* 72 (1980), no. 1, 133-142. (Authors' summary) **81h:76037** 76W05 (76L05)
- Singh, Jagbir (with Olikar, V. I.) On minimum variance unbiased estimation and characterization of probability densities. *Optimizing methods in statistics (Proc. Internat. Conf., Indian Inst. Tech., Bombay, 1977)*, pp. 435-442. Academic Press, New York, 1979. (I. A. Melamed) **81h:62019** 62E10 (62F10)
- Singh, K. (with Verma, P. D. S.; Singh, D. V.) Couette flow of microthermopolar fluids between concentric rotating cylinders. *Acta Tech. ČSAV* 25 (1980), no. 3, 369-383. (Authors' summary) **81h:76003** 76A05
- Singh, K. D. (with Agnihotri, R. K.) On an almost (e_1, e_2) -contact structure. *Demonstratio Math.* 12 (1979), no. 3, 679-688. (V. Mihova-Nehmer) **81d:53025** 53C15
- Singh, K. N. (with Lal, Shiva Narain) Generalised Lipschitz class of functions and the absolute summability of Fourier series by Nörlund means. *Proc. Amer. Math. Soc.* 81 (1981), no. 1, 41-49. (Tamotsu Tsuchikura) **81j:42017** 42A28 (40F05, 40G05)
- Singh, K. P. (with Singh, Gulab) Symmetry properties of certain gravitational space-times. *Indian J. Pure Appl. Math.* 11 (1980), no. 6, 800-804. (Brian O. J. Tupper) **81f:83026** 83C50 (53B50)
- Singh, Kanahya L. Generalized contractions and sequence of iterates. *Nonlinear equations in abstract spaces (Proc. Internat. Sympos., Univ. Texas, Arlington, Tex., 1977)*, pp. 439-462. Academic Press, New York, 1978. (Ju. G. Borisovič) **81h:47071** 47H09
- Sequence of iterates of generalized contractions. *Fund. Math.* 105 (1979/80), no. 2, 115-126. (K. Goebel) **81a:47057** 47H10
- Fixed-point theorems for contractive-type mappings. *J. Math. Anal. Appl.* 72 (1979), no. 1, 283-290. (Author's summary) **81j:54080** 54H25
- Singh, Kesar (with Babu, Gutti Jogesh; Ghosh, Malay) On rates of convergence to normality for q -mixing processes. *Sankhyā Ser. A* 40 (1978), no. 3, 278-293. (Reinhard Michel) **81h:60034** 60F05 (60F10)
- Singh, M. Group divisible second order rotatable designs. *Biometrical J.* 21 (1979), no. 6, 579-589. (Kishore Sinha) **81d:62087** 62K15
- On the reduction of bias of ratio estimator to a desired degree. *Biometrical J.* 21 (1979), no. 7, 645-647. (Author's summary) **81g:62020** 62D05
- (with Agarwal, S. K.; Goel, B. B. P. S.) Use of p -auxiliary variates in pps sampling. *Biometrical J.* 21 (1979), no. 8, 781-785. (Victor K. T. Tang) **81g:62013** 62D05
- (with Dey, A.) Block designs with nested rows and columns. *Biometrika* 66 (1979), no. 2, 321-326. (S. K. Tharthare) **81g:62131** 62K10
- (with Gupta, Vinod Kumar) On the estimation of mean parameter with random number of observations on each unit. (German summary) *Biometrical J.* 22 (1980), no. 1, 41-45. (G. S. Lingappaiah) **81g:62054** 62F10
- Singh, Masid G. (with Hassan, Mohammed F.) Synthesis of robust decentralised controllers for large scale systems. *Handbook of large scale systems engineering applications*, pp. 129-144. North-Holland, Amsterdam, 1979. (O. A. Sebakhly) **81e:93009** 93A15
- (with Titli, André) Large scale stochastic systems: identification, estimation and control. *Handbook of large scale systems engineering applications*, pp. 167-179. North-Holland, Amsterdam, 1979. (Jerry M. Mendel) **81h:93031** 93E10 (93E12, 93E20)
- (with Hassan, Mohammed F.) A new decentralised controller for large scale systems. *Internat. J. Systems Sci.* 11 (1980), no. 11, 1335-1350. (Authors' summary) **81h:93005** 93B50 (90A30)
- See also Bonnemay, A., **81h:34043** and *Handbook: Large scale systems engineering applications*, **81d:93004**
- Singh, Manohar (with Malik, S. K.) Modulational instability in a self-gravitating fluid column. *Astrophys. J.* 238 (1980), no. 1, part 1, 326-332. (Authors' summary) **81d:76052** 76E20 (85A30)
- (with Malik, S. K.) Nonlinear surface waves in self-gravitating fluids. *Quart. Appl. Math.* 38 (1980/81), no. 2, 235-240. (Charles J. Amick) **81h:76010** 76B15 (35B40, 76E20)
- Singh, Nam Prasad (with Anandani, P.) Some expansions for H -function in series involving Jacobi polynomials. *Comment. Math. Univ. St. Paul.* 28 (1980), no. 2, 163-167. (J. L. Fields) **81k:33004** 33A35
- (with Anandani, P.) Some inequalities for H -functions. II. *Indian J. Pure Appl. Math.* 11 (1980), no. 9, 1166-1169. (R. S. Dahiya) **81k:33005** 33A35
- A finite integral involving a Jacobi polynomial and a generalized H -function of two variables. *Indian J. Pure Appl. Math.* 11 (1980), no. 11, 1497-1503. (N. C. Jain) **81m:33003** 33A35
- A double integral involving the H -functions of one and two variables. *Pure Appl. Math. Sci.* 11 (1980), no. 1-2, 13-16. (K. C. Gupta) **81d:33003** 33A35
- Singh, Naunihal On the estimation of $\Pr(X_1 < Y < X_2)$. *Comm. Statist. A—Theory Methods* 9 (1980), no. 15, 1551-1561. (Author's summary) **81h:62055** 62F10
- Singh, Niranjali (with Sharma, K. M.) Convergence of certain cosine sums in a metric space — L. *Proc. Amer. Math. Soc.* 72 (1978), no. 1, 117-120. (Masako Izumi) **81d:42008** 42A20
- (with Sharma, K. M.) Convergence of a trigonometric series in the metric space L. (Arabic summary) *Arabian J. Sci. Engrg.* 4 (1979), no. 2, 137-140. (Tikam Singh) **81c:42013** 42A32 (40A05, 42A20)
- Singh, O. P. (with Rathore, R. K. S.) On convergence of derivatives of Post-Widder operators. *Indian J. Pure Appl. Math.* 11 (1980), no. 5, 547-561. (M. W. Müller) **81j:41035** 41A35 (41A28, 44A10)
- Singh, Padmakar (with Pandey, B. N.) Shrinkage estimation of scale in exponential distribution from censored samples. *Comm. Statist. A—Theory Methods* 9 (1980), no. 8, 875-882. (V. K. Srivastava) **81g:62056** 62F11
- Singh, R. K. (with Sharma, S. D.) Composition operators on a functional Hilbert space. *Bull. Austral. Math. Soc.* 20 (1979), no. 3, 377-384. (Eric Nordgren) **81c:47034** 47B38
- (with Kumar, Ashok) Compact composition operators. *J. Austral. Math. Soc. Ser. A* 28 (1979), no. 3, 309-314. (N. Tiia) **81g:47033** 47B38 (47B05)
- (with Sharma, S. D.) Noncompact composition operators. *Bull. Austral. Math. Soc.* 21 (1980), no. 1, 125-130. (Eric Nordgren) **81m:47046** 47B38 (47B05)
- (with Kumar, Ashok; Gupta, D. K.) Quasinormal composition operators on l^2 . *Indian J. Pure Appl. Math.* 11 (1980), no. 7, 904-907. (Warren R. Wogen) **81g:47030** 47B20 (47B37)
- Singh, R. M. (with Singh, R. P.; Singh, Y.) On the behavior of the short-range pair correlation function in a mixture of two-component plasma. *Astrophys. J.* 240 (1980), no. 2, part 1, 672-679. (Authors' summary) **81h:82050** 82A45 (76X05)
- Singh, R. P. (with Singh, R. M.; Singh, Y.) On the behavior of the short-range pair correlation function in a mixture of two-component plasma. *Astrophys. J.* 240 (1980), no. 2, part 1, 672-679. (Authors' summary) **81h:82050** 82A45 (76X05)
- Singh, Ranley S. Sequence-compound estimation in scale-exponential families and speed of convergence. *J. Statist. Plann. Inference* 2 (1978), no. 1, 53-62. (Author's summary) **81k:62012** 62C25 (62F10)
- Singh, Raghuvar (with Singh, U. P.) Some expansions of the generalized polynomial $M_n(x, y)$. *Progr. Math. (Allahabad)* 12 (1978), no. 1-2, 39-49. (B. R. Bhonsale) **81h:33019** 33A70 (33A30, 33A65)
- Singh, Ram (with Singh, Sunder) Integrals of certain univalent functions. *Proc. Amer. Math. Soc.* 77 (1979), no. 3, 336-340. (Carl P. McCarthy) **81h:30025** 30C45
- Singh, Ram-Nandan P. (with Johnson, Timothy L.) A functional expansion approach to the solution of nonlinear feedback systems. *Proceedings of the 1978 IEEE Conference on Decision and Control including the 17th Symposium on Adaptive Processes (San Diego, Calif., 1979)*, pp. 319-324. IEEE, New York, 1979. (Emmanuel Nicholas Barron) **81c:93040** 93C10
- Singh, Ramanand (with Mahalanabis, A. K.) On decentralized feedback stabilization of large-scale interconnected systems. *Internat. J. Control* 32 (1980), no. 1, 115-126. (Authors' summary) **81e:93064** 93D05 (93D15)
- Singh, Ranjil A necessary and sufficient condition for the absolute Cesàro summability of a series associated with Fourier series. *Jñānabha* 7 (1977), 48-52. (Włodzimierz LenSKI) **81j:42015** 42A24
- (with Pandey, R. N.) Integral representation for the generalized polynomial $\tilde{R}_n(x, y)$. *Acta Cienc. Indica* 4 (1978), no. 3, 304-308. (D. P. Gupta) **81h:33021** 33A70 (44A20)
- (with Pandey, R. N.) Recurrence relations for the polynomial set $S_n(x, y)$. (Hindi. English summary) *Vijnana Parishad Amusardhan Patrika* 23 (1980), no. 1, 17-24. (C. L. Koul) **81c:33014** 33A65
- Singh, S. D. (with Srivastava, A. N.) On a generalised polynomial set. *Acta Cienc. Indica* 6 (1980), no. 1, 21-26. (L. Debnath) **81h:33017** 33A65
- (with Hussain, M. A.; Srivastava, A. N.; Singh, S. N.) Operational derivation of generating relations of orthogonal polynomials related to ultraspherical and Hermite polynomials. *Indian J. Pure Appl. Math.* 11 (1980), no. 10, 1325-1328. (S. Saran) **81m:33008** 33A65 (33A45)
- (with Srivastava, A. N.; Singh, S. N.) Bilateral generating functions for a new class of generalized Legendre polynomials. *Internat. J. Math. Math. Sci.* 3 (1980), no. 2, 305-310. (B. D. Agrawal) **81h:33013** 33A45 (33A65)
- Singh, S. K. (with Sarangi, Sangappa Mallappa) Uniqueness theorems of meromorphic functions. *J. Indian Math. Soc. (N.S.)* 42 (1978), no. 1-4, 313-319 (1979). (Heinrich Begehr) **81c:30060** 30D35
- Singh, S. L. A note on the convergence of a pair of sequences of mappings. *Arch. Math. (Brno)* 15 (1979), no. 1, 47-51. (Kok Keong Tan) **81a:54050** 54H25
- (with Gupta, Vijay Kumar) On common fixed points of mappings. *J. Natur. Sci.*

- Math.* 19 (1979), no. 2, 239–245. (Schie Park) **81m:54062** 54H25
- Singh, S. N. (with Prasad, Y. N.) On a generalized multiple transform and its basic properties. *Bull. Calcutta Math. Soc.* 70 (1978), no. 4, 253–259. (S. D. Bajpai) **81m:44003** 44A30
- (with Srivastava, A. N.) Some generating relations connected with a function defined by a generalized Rodrigues formula. *Indian J. Pure Appl. Math.* 10 (1979), no. 10, 1312–1317. (From the summary) **81a:33018** 33A65
- (with Hussain, M. A.) Some properties of orthogonal polynomials related to Hermite polynomials. *Indian J. Pure Appl. Math.* 11 (1980), no. 8, 1018–1020. (V. M. Bhise) **81k:33012** 33A65
- (with Hussain, M. A.; Srivastava, A. N.; Singh, S. D.) Operational derivation of generating relations of orthogonal polynomials related to ultraspherical and Hermite polynomials. *Indian J. Pure Appl. Math.* 11 (1980), no. 10, 1325–1328. (S. Saran) **81m:33008** 33A65 (33A45)
- (with Srivastava, A. N.; Singh, S. D.) Bilateral generating functions for a new class of generalized Legendre polynomials. *Internat. J. Math. Math. Sci.* 3 (1980), no. 2, 305–310. (B. D. Agrawal) **81i:33013** 33A45 (33A65)
- (with Srivastava, A. N.) Generating functions for a new class of polynomials. (Hindi. English summary) *Vijnana Parishad Anusandhan Patrika* 23 (1980), no. 1, 43–48. (C. L. Parihar) **81j:05018** 05A15 (33A70)
- Singh, S. R. (with Pritchard, H. O.) A new unimolecular rate expression. *Chem. Phys. Lett.* 73 (1980), no. 1, 191–193. (Authors' summary) **81e:80014** 80A30
- (with Nuttall, J.) Continuation of partial-wave two-cluster atomic scattering amplitudes. *Comm. Math. Phys.* 72 (1980), no. 1, 1–13. (Authors' summary) **81d:81091** 81F10 (35P25)
- Singh, Sahib Thoro's conjecture and allied divisibility property of Lucas numbers. *Fibonacci Quart.* 18 (1980), no. 2, 135–137. (Robert M. McConnell) **81k:10023** 10A40
- Singh, Sahjendra N. (with Schy, A. A.) Output feedback nonlinear decoupled control synthesis and observer design for maneuvering aircraft. *Internat. J. Control* 31 (1980), no. 4, 781–806. (D. H. Chyung) **81e:93045** 93C10 (93B07)
- Singh, Shree Dhar (with Mishra, R. S.) On pseudo H -curvature tensors in a differentiable manifold V_m equipped with KH -structure. *Indian J. Pure Appl. Math.* 8 (1977), no. 12, 1525–1530. (M. Okumura) **81b:53019** 53B20
- Singh, Sahjit An R -stable ANR which is not FR -stable. *Fund. Math.* 103 (1979), no. 3, 177–182. (Jerzy Dydak) **81e:54016** 54C56 (54C55)
- Singh, Sunder (with Singh, Ram) Integrals of certain univalent functions. *Proc. Amer. Math. Soc.* 77 (1979), no. 3, 336–340. (Carl P. McCarty) **81e:30025** 30C45
- Singh, Surendra Pratap Decomposition in an areal space of the submetric class. *Ann. Fac. Sci. Univ. Nat. Zaire (Kinshasa) Sect. Math.-Phys.* 4 (1978), no. 1, 141–153. (Om P. Singh) **81g:53018** 53B40
- Some tensors in Finsler space. *Ann. Fac. Sci. Univ. Nat. Zaire (Kinshasa) Sect. Math.-Phys.* 4 (1978), no. 2, 205–216 (1979). (R. B. Misra) **81i:53028** 53B40
- Singh, Surjeet (with Beg, Afzal) Restricted balanced rings. *Arch. Math. (Basel)* 33 (1979/80), no. 2, 127–130. (Pushpa Gupta) **81d:16015** 16A35
- Singh, Sunjit (with Shirkot, K. S.) Two-phase flow heat transfer in a circular pipe when the inlet temperature varies periodically with time. *Acta Phys. Acad. Sci. Hungar.* 46 (1979), no. 4, 237–245. (Authors' summary) **81e:80013** 80A20 (76T05)
- Singh, T. R. P. Analytical studies on some statistical properties of mean values and their applications to sampling in one dimension. *J. Internat. Assoc. Math. Geol.* 10 (1978), no. 2, 169–193. (C. C. Tscherning) **81a:62093** 62M10
- Singh, Tikam On the partial sums of the series of Laguerre polynomials. *Jhānabha* 7 (1977), 53–56. (Jai Prakash Sharma) **81e:42039** 42C10
- Absolute Cesàro summability of Laguerre series. (Hindi. English summary) *Vijnana Parishad Anusandhan Patrika* 21 (1978), no. 4, 321–326. (P. D. Kathal) **81e:42043** 42A28 (40G05)
- The absolute Cesàro summability of Laguerre series. *Indian J. Pure Appl. Math.* 10 (1979), no. 4, 437–441. (D. N. Gupta) **81e:42085** 42C10 (40F05)
- Singh, Triokhi (with Rai, L. P.) Stationary axially symmetric Brans-Dicke-Maxwell fields. *Gen. Relativity Gravitation* 11 (1979), no. 1, 37–43. (B. K. Nayak) **81a:83030** 83D05
- (with Yadav, R. B. S.) An anisotropic magnetohydrodynamic universe in general relativity. *Indian J. Pure Appl. Math.* 11 (1980), no. 7, 917–930. (Sotirios Persides) **81f:83042** 83F05 (53B50)
- Singh, U. P. A note on the theory of nonlinear connections in Finsler spaces. *Progr. Math. (Allahabad)* 12 (1978), no. 1–2, 13–19. (S. Kawaguchi) **81g:53019** 53B40
- (with Singh, Raghuvar) Some expansions of the generalized polynomial $M_n(x, y)$. *Progr. Math. (Allahabad)* 12 (1978), no. 1–2, 39–49. (B. R. Bhonsle) **81h:33019** 33A70 (33A30, 33A65)
- (with Singh, Awadhesh Kumar) On neo-pseudo projective tensor fields. *Indian J. Pure Appl. Math.* 10 (1979), no. 10, 1196–1201. (B. B. Sinha) **81a:53031** 53B40
- Singh, V. B. (with Dwivedi, A. P.) Certain simultaneous dual integral equations associated with kernel of Fox. *Indian J. Mech. Math.* 16 (1978), no. 2, 1–7. (P. M. Gupta) **81e:45006** 45F10
- Singh, V. K. (with Sarma, V. L. N.; Lal, Nand) An example of a locally finite family. *Amer. Math. Monthly* 87 (1980), no. 2, 121–122. (Donald Plank) **81d:54030** 54G20
- Singh, V. N. See Singh, Valsava Nath
- Singh, Verinder Pal Converging detonation waves. *J. Indian Math. Soc. (N.S.)* 42 (1978), no. 1–4, 381–386 (1979). (Rishi Ram Sharma) **81f:76031** 76L05
- Singh, Vijay A. (with Gerry, Christopher C.) Path-integral formulation of scattering theory: central potentials. *Phys. Rev. D* (3) 21 (1980), no. 10, 2979–2985. (Authors' summary) **81j:81054** 81F05 (81C35)
- Singh, Vijay P. (with Sherman, Bernard) A mathematical model of a reservoir. *Proceedings of the First International Conference on Mathematical Modeling (St. Louis, Mo., 1977), Vol. IV*, pp. 2235–2246. Univ. Missouri-Rolla, Rolla, Mo., 1977. (Authors' summary) **81j:92048** 92A17 (86A05)
- Singh, Vijendra (with Kaul, B. N.) Best approximation by a saturation class of polynomial operators. *Pure Appl. Math. Sci.* 11 (1980), no. 1–2, 17–22. (Z. Ditzian) **81f:41028** 41A40 (40G05)
- Singh, Vijendra Pal (with Malaviya, Shashi D.) Transmission lines loaded at regular intervals. *IEEE Trans. Microwave Theory Tech.* 27 (1979), no. 10, 854–859. (Authors' summary) **81e:78012** 78A55 (78A40)
- Singh, Vikramaditya (with Gupta, R. S.) An extremal problem for functions with positive real part. *Indian J. Pure Appl. Math.* 8 (1977), no. 11, 1279–1297. (M. S. Robertson) **81d:30054** 30D50 (30C70)
- (with Campbell, Douglas M.) Valence properties of the solution of a differential equation. *Pacific J. Math.* 84 (1979), no. 1, 29–33. (A. W. Goodman) **81a:30066** 30C35
- Singh, Vikramaditya On the $[E, q]$ summation of the Fourier series. (Russian summary) *Math. Slovaca* 30 (1980), no. 1, 13–18. (L. Gogoladze) **81h:42009** 42A24
- Singh, Vimal (with Sharma, T. N.) On the absolute stability of continuous-time nonlinear systems. *IEEE Trans. Automat. Control* 25 (1980), no. 2, 332–334. (Authors' summary) **81a:93068** 93D05
- Singh, Virendra (with Raina, A. K.) Bounds on form factors and propagators. *Fortsch. Phys.* 27 (1979), no. 11–12, 561–579. (P. Achuthan) **81f:81004** 81G25
- (with Rampal, Anita; Biswas, S. N.; Datta, K.) A class of exact solutions for doubly anharmonic oscillators. *Lett. Math. Phys.* 4 (1980), no. 2, 131–134. (Authors' summary) **81e:81036** 81C05 (34A05)
- Singh, Vishwa Nath The inverse of a certain block matrix. *Bull. Austral. Math. Soc.* 20 (1979), no. 2, 161–163. (Authors' summary) **81c:15007** 15A09
- Singh, Y. (with Singh, R. M.; Singh, R. P.) On the behavior of the short-range pair correlation function in a mixture of two-component plasma. *Astrophys. J.* 246 (1980), no. 2, part 1, 672–679. (Authors' summary) **81h:82050** 82A45 (76X05)
- Singhal, A. (with Arya, Shashi Prabha) Separation axioms in bi-topological ordered spaces. (Serbo-Croatian summary) *Glas. Mat. Ser. III* 15(35) (1980), no. 1, 169–178. (C. V. Riecke) **81k:54018** 54D10 (54D15, 54E55)
- Singhal, B. M. A technique to evaluate the integrals involving product of orthogonal polynomials. *Indian J. Pure Appl. Math.* 7 (1976), no. 10, 1161–1165. (V. M. Bhise) **81a:33017** 33A65
- Singhal, J. P. See Thakare, Nimbakrishna, **81k:33015**
- Singhal, M. L. (with Maggu, P. L.; Das, Ghansham) On $n \times m$ flow-shop scheduling problem: an extension to Johnson's $n \times 3$ flow-shop scheduling problem. *J. Indian Stat. Statist. Oper. Res.* 1 (1980), no. 1–4, 15–20. (From the text) **81k:90050** 90B35
- Singh Gautam, S. K. (with Bajpai, Shyam K.; Bajpai, S. S.) Generalizations of growth constants. I. *Ann. Polon. Math.* 37 (1980), no. 1, 13–24. (S. M. Shah) **81g:30034** 30D15 (30D20)
- Singhi, N. M. (with Shrikhande, S. S.) Some problems in graph theory. *Proceedings of the Symposium on Graph Theory (Indian Statist. Inst., Calcutta, 1976)*, pp. 286–298. ISI Lecture Notes, 4, Macmillan of India, New Delhi, 1979. (Editors) **81a:05105** 05C65 (05B05)
- (with Shrikhande, S. S.) Embedding of orthogonal arrays of strength two and deficiency greater than two. *J. Statist. Plann. Inference* 3 (1979), no. 4, 367–379 (1980). (Arnold Neumaier) **81e:05029** 05B15 (05B30)
- (with Naik, R.; Shrikhande, S. S.; Rao, Siddani Bhaskara) Intersection graphs of k -uniform hypergraphs. Combinatorial mathematics, optimal designs and their applications (Proc. Sympos. Combin. Math. and Optimal Design, Colorado State Univ., Fort Collins, Colo., 1978). *Ann. Discrete Math.* 6 (1980), 275–279. (F. Sterboul) **81m:05104** 05C65
- Singkofer, Karen (with Nagle, R. Kent) Solvability of nonlinear elliptic boundary value problems using a priori estimates. *Differential equations (Proc. Eighth Fall Conf., Oklahoma State Univ., Stillwater, Okla., 1979)*, pp. 235–247. Academic Press, New York, 1980. (C. P. Gupta) **81i:35074** 35J65 (35J40, 47H15)
- (with Nagle, R. Kent) Equations with unbounded nonlinearities. *Nonlinear Anal.* 4 (1980), no. 6, 1189–1201. (V. Lakshmikantham) **81m:34083** 34G20 (47H15, 58E07)
- Singmaster, David (with Souppouris, D. J.) A constrained isoperimetric problem. *Math. Proc. Cambridge Philos. Soc.* 83 (1978), no. 1, 73–82. (Authors' review (Zbl 371:52003)) **81i:52011** 52A40
- Arranging a dartboard. *Bull. Inst. Math. Appl.* 16 (1980), no. 4, 93–97. (Norman Biggs) **81j:05005** 05A05
- Singnervalla, Nozer D. (with Proschan, Frank) Accelerated life testing—a pragmatic Bayesian approach. *Optimizing methods in statistics (Proc. Internat. Conf., Indian Inst. Tech., Bombay, 1977)*, pp. 385–401. Academic Press, New York, 1979. (Moshe Shaked) **81h:62111** 62N05
- hoàng xuân sinh See Hoàng Xuân Sinh
- Sinha, A. K. (with Sinha, M. S. P.; Rajamani, V. S.) Identification of nonlinear distributed system using Walsh functions. *Internat. J. Control* 32 (1980), no. 4, 669–676. (Authors' summary) **81j:93023** 93B30 (93C20)
- Sinha, A. S. C. Enzyme kinetics with backward reaction. *Proceedings of the First International Conference on Mathematical Modeling (St. Louis, Mo., 1977), Vol. II*, pp. 1075–1081. Univ. Missouri-Rolla, Rolla, Mo., 1977. (J. P. Kernevez) **81m:92028** 92A09 (34C05)
- Theory of cone methods for null controllability of nonlinear control systems. *IEEE Trans. Automat. Control* 24 (1979), no. 4, 628–630. (B. I. Anan'ev) **81a:93021** 93B05 (93C10, 93D99)
- Lapunov functions for a class of large-scale systems. *IEEE Trans. Automat. Control* 25 (1980), no. 3, 558–560. (Authors' summary) **81g:93080** 93D05 (93A15)
- High-order stiffly stable methods for analysis of nonlinear circuits and systems. *Internat. J. Systems Sci.* 11 (1980), no. 8, 1001–1009. (W. S. Loud) **81i:65062** 65L05 (93C10)
- Sinha, Agam Nath (with Sen, Pranab Kumar) Progressively censored tests for multiple regression based on weighted empirical distributions. *Calcutta Statist. Assoc. Math.* 28 (1979), no. 109–112, 57–82. (G. K. Bhattacharyya) **81k:62061** 62G10 (62N05)
- Sinha, B. B. (with Shoenb, Mohd.) Curvature tensor of special quarter symmetric metric connexion in an almost contact metric manifold. *Aligarh Bull. Math.* 5/6 (1975/76), 19–23 (1977). (Lieven Vanhecke) **81e:53039** 53C15 (53B20)
- (with Narain, D.) On almost paracontact manifold. *Aligarh Bull. Math.* 5/6 (1975/76), 55–61 (1977). (Lieven Vanhecke) **81e:53040** 53C15 (53B20)
- (with Rai, S. P.) Infinitesimal affine transformations of the cotangent bundles with Sasaki metric. *Ann. Fac. Sci. Univ. Nat. Zaire (Kinshasa) Sect. Math.-Phys.* 4 (1978), no. 1, 121–129. (Jean-Marie Morvan) **81a:53017** 53B20

- parameters of the Kalman filter. *Internat. J. Systems Sci.* **11** (1980), no. 6, 711-720. (Authors' summary) **81f:93078** 93E12
- On almost contact metric manifold with semisymmetric metric connexion. *Progr. Math. (Allahabad)* **12** (1978), no. 1-2, 1-11. (S. I. Husain) **81h:53054** 53C40
- (with Sharma, Ramesh) Infinitesimal variations of hypersurfaces of an almost product and almost decomposable manifold. *Indian J. Pure Appl. Math.* **10** (1979), no. 8, 1009-1019. (David Blair) **81a:53026** 53B25 (53C15)
- (with Prasad, Guiraj) Relativistic magnetofluids and spacelike conformal mapping. *Ann. Inst. H. Poincaré Sect. A (N.S.)* **32** (1980), no. 1, 15-20. (Gérard A. Maugin) **81e:76094** 76Y05 (76W05)
- Sinha, Boteswar P. (with Macphie, Robert H.) Translational addition theorems for spheroidal scalar and vector wave functions. *Quart. Appl. Math.* **38** (1980/81), no. 2, 143-158. (F. M. Arscott) **81g:33002** 33A55
- Sinha, Bhabini (with Srimani, P. K.; Pal, A.) Fail-safe realisation of sequential machines with a new two-level MOS module. *Comput. Electr. Engrg.* **7** (1980), no. 3, 163-173. (Authors' summary) **81m:68042** 68D15 (68A05, 94C30)
- Sinha, Bikas Kumar On a property of quantile vectors in multivariate samples. (Portuguese) *Proceedings of the 3rd National Symposium on Probability and Statistics (Inst. Mat. Estatist., Univ. São Paulo, São Paulo, 1978)* (Portuguese), pp. 90-92. Univ. São Paulo, São Paulo, 1979. (Authors' summary) **81k:60037** 60F05 (62E20, 62G30)
- Sinha, Bimal Kumar (with Ghosh, J. K.; Subramanyam, K.) Edgeworth expansions for Fisher-consistent estimators and second order efficiency. *Calcutta Statist. Assoc. Bull.* **28** (1979), no. 109-112, 1-18. (Dana Vorlíčková) **81k:62011a** 62E20 (62F12)
- (with Ghosh, J. K.; Subramanyam, K.) Addendum to "Edgeworth expansions for Fisher-consistent estimators and second order efficiency". *Calcutta Statist. Assoc. Bull.* **28** (1979), no. 109-112, 171. (Editors) **81k:62011b** 62E20 (62F12)
- (with Wieand, H. S.) Union-intersection test for the mean vector when the covariance matrix is totally reducible. *J. Amer. Statist. Assoc.* **74** (1979), no. 366, part 1, 340-343. (Dennis L. Young) **81a:62044** 62H15
- (with Ghosh, J. K.; Wieand, H. S.) Second order efficiency of the MLE with respect to any bounded bowl-shaped loss function. *Ann. Statist.* **8** (1980), no. 3, 506-521. (Masafumi Akahira) **81k:62057** 62F12 (62B10)
- (with Ghosh, Malay) On the robustness of least squares procedures in regression models. *J. Multivariate Anal.* **10** (1980), no. 3, 332-342. (C. R. Rao) **81k:62093** 62J05 (62F05)
- Sinha, D. K. (with Roy, S.) Mathematical model of an ecological resource problem. *Proceedings of the First International Conference on Mathematical Modeling (St. Louis, Mo., 1977)*, Vol. IV, pp. 2147-2155. Univ. Missouri-Rolla, Rolla, Mo., 1977. (Authors' summary) **81j:90037** 90A30 (92A17)
- Sinha, Kalyan B. (with Emch, Gérard G.) Weak quantization in a nonperturbative model. *J. Math. Phys.* **20** (1979), no. 7, 1336-1340. (I. K. Marek) **81g:81015** 81C12 (47B25, 81K05)
- (with Amrein, W. O.; Pearson, D. B.) Bounds on the total scattering cross section for N -body systems. (Italian and Russian summaries) *Nuovo Cimento A* (11) **52** (1979), no. 1, 115-131. (A. Corioveci) **81h:81110** 81F10 (47A40)
- (with Gustafson, Karl E.) On the Eisenbud-Wigner formula for time-delay. *Lett. Math. Phys.* **4** (1980), no. 5, 381-385. (W. O. Amrein) **81m:81055** 81F05
- Sinha, Kishore Partially balanced incomplete block designs and partially balanced weighing designs. *Ars Combin.* **6** (1978), 91-96. (Author's summary) **81g:05030** 05B05
- (with Saha, G. M.) Construction of some series of partially balanced weighing designs. *Utilitas Math.* **14** (1978), 279-286. (Jane W. Di Paola) **81a:05026** 05B30
- (with Saha, G. M.) On the construction of balanced and partially balanced ternary design. *Biometrical J.* **21** (1979), no. 8, 767-772. (Damaraju Raghavarao) **81g:62132** 62K10 (05B05)
- Balanced bipartite weighing designs with $v=k$. *Utilitas Math.* **16** (1979), 39-41. (Damaraju Raghavarao) **81e:05041** 05B05 (62K10)
- (with Mathur, S. N.; Nigam, A. K.) Kronecker sum of incomplete block designs. *Utilitas Math.* **16** (1979), 157-164. (Elizabeth J. Billington) **81f:05029** 05B05 (05B20)
- Sinha, M. S. P. (with Rajamani, V. S.; Sinha, A. K.) Identification of nonlinear distributed system using Walsh functions. *Internat. J. Control* **32** (1980), no. 4, 669-676. (Authors' summary) **81j:93023** 93B30 (93C20)
- Sinha, Prabhakant (with McKeown, Patrick G.) An easy solution for a special class of fixed charge problems. *Naval Res. Logist. Quart.* **27** (1980), no. 4, 621-624. (Authors' summary) **81m:90078** 90C10
- Sinha, R. S. (with Chowdhury, V. S. P.) Affine motion in recurrent Finsler spaces. II. *J. Math. Phys. Sci.* **13** (1979), no. 5, 437-443. (R. B. Misra) **81j:53034** 53B40
- Sinha, S. C. See *Proceedings: Midwestern Mechanics Conference*, **81m:73010**
- Sinha, S. K. (with Chakrabarti, B. K.; Roy, G. K.) Phonon modes in a disordered lattice. (German summary) *Phys. Status Solidi (B)* **99** (1980), no. 1, 297-303. (Authors' summary) **81d:82032** 82A42 (81Hxx)
- Sinha, T. N. (with Venkatramiah, S.) The equation $x^2 - Py^2 = 2z^2$: P , a Mersenne prime. *Indian J. Mech. Math.* **16** (1978), no. 2, 45-47. (E. L. Cohen) **81g:10030** 10B05
- Sinha, U. N. (with Shankar, P. N.) Weakly sheared, two-dimensional inviscid flows past bodies. (French summary) *J. Mécanique* **19** (1980), no. 1, 125-148. (Authors' summary) **81g:76029** 76C05
- Shleya, I. G. (with Piatnickaja, G. N.) Infinite turnpikes in a graph and optimal placement of figures of the same type in an infinite narrow strip. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* **19** (1979), no. 5, 1304-1312, 1358. (Authors' summary) **81d:52013** 52A45 (05C99, 90A99)
- Shnol'ev, V. A group-theoretic approach to the dynamics of multipin systems. VII. (Russian. Estonian and English summaries) *Eesti NSV Tead. Akad. Toimetised Füüs.-Mat.* **28** (1979), no. 3, 194-201. (From the summary) **81e:81073** 81G30 (20C35, 81D99)
- Shukla, V. A. (with Belousov, I. V.) Solutions of the two-zone equation of Kane's model of a semiconductor in an intensive electromagnetic wave field. (Russian. English summary) *Teoret. Mat. Fiz.* **45** (1980), no. 1, 122-131. (Authors' summary) **81k:82043** 82A55
- Shukla, V. F. Modulus of continuity of sample functions of homogeneous Gaussian random fields. (Russian) *Dokl. Akad. Nauk Ukrain. SSR Ser. A No. 2* (1980), 22-24, 95. (Author's summary) **81a:60067** 60G60 (60G15)
- Shuklov, N. S. ★Геометрические отображения римановых пространств. (Russian) [Geodesic mappings of Riemannian spaces] "Nauka", Moscow, 1979. 256 pp. (J. Vilms) **81g:53014** 53B20 (53B99)
- Šinkarenko, G. A. (with Savula, Ja. G.; Vovk, V. N.) A posteriori estimate of an approximate solution obtained by the finite element method in a problem of rod torsion. (Ukrainian. Russian summary) *Viznik L'viv. Derz. Univ. Ser. Meh.-Mat.* **12** (1977), 63-68, 96. (V. G. Korneev) **81h:65107** 65N15 (65N30)
- Sinkhorn, Richard Concerning the question of monotonicity of the permanent on the doubly stochastic matrices. *Linear and Multilinear Algebra* **8** (1979/80), no. 4, 323-328. (Peter M. Gibson) **81e:15004** 15A15 (15A51)
- Šinkin, V. N. A method of studying the stability of the second generalized method of Ljapunov using numerical computation. (Russian) *Vestnik Moskov. Univ. Ser. XV Vyčisl. Mat. Kibernet.* **1980**, no. 1, 36-43, 72-73. (W. S. Loud) **81h:65061** 65L07 (34D20)
- Šitko, G. I. Spectral functions of an integro-differential operator on a semiaxis. (Russian) *Functional Analysis*, No. 12 (Russian), pp. 143-151, *Uf'jansk. Gos. Ped. Inst., Uf'jansk*, 1979. (B. S. Rubin) **81k:47073** 47G05 (45J05)
- Sit, P. P. Cluster analysis, an introduction. *Computat. Lectures*, I, pp. 46-56, *Physica, Würzburg*, 1978. (G. Della Riccia) **81m:62115** 62H30
- Fernandez-Sintes, Julio See Fernandez-Sintes, Julio
- Sitot'ko, Michel Principles for distributing programs. *Semantics of concurrent computation (Proc. Internat. Sympos., Ecian, 1979)*, pp. 337-347, *Lecture Notes in Comput. Sci.*, 70, Springer, Berlin, 1979. (From the conclusion) **81f:68039** 68B20
- Sitonas, Robert (with Hrycak, Peter) Similarities in modeling between natural and social sciences. *Proceedings of the First International Conference on Mathematical Modeling (St. Louis, Mo., 1977)*, Vol. I, pp. 331-340. Univ. Missouri-Rolla, Rolla, Mo., 1977. (Authors' summary) **81j:90025** 00A69
- Sitotani, Minoru Recent topics in multivariate statistical analysis. (Japanese) *Systems and Control* **23** (1979), no. 4, 203-210. (Goro Nagase) **81k:62051** 62Hxx
- Šitnyy, D. Recurrence algorithms of statistical criterion for nonstationary detection of system with correlated noise. (Russian. Lithuanian and Russian summaries) *Trudy Akad. Nauk Litov. SSR Ser. B* **1980**, no. 3(118), 99-106. (H.-J. Engelbert) **81h:93067** 93E10 (62M99, 93E25)
- Šitškin, A. V. (with Malorov, S. A.; Rudenko, A. A.) A numerical method for solving systems of equations for the potential and charge carrier in semiconductors. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* **20** (1980), no. 1, 112-120, 261. (Gh. Adam) **81j:78021** 78A55 (65N20, 82A65)
- Šitškin, L. B. (with Grigorjan, A. K.) Effective algorithm for minimization of circuit complexity of underdetermined automata specified by nonbranching graphs. *Automat. i Telemekh.* **1979**, no. 10, 95-104 (Russian. English summary); translated as *Automat. Remote Control* **40** (1979), no. 10, part 2, 1479-1487 (1980). (Authors' summary) **81d:94047** 94C15 (68C25)
- Sitškin, A. S. Solution of two boundary value Dirichlet problems by the Monte Carlo method. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* **19** (1979), no. 2, 388-401, 556. (Author's summary) **81d:65008** 65C05
- Šitškin, I. G. (with Martynenko, M. D.) Fundamental solutions of metaharmonic equations in a finite-sheeted Riemann space. (Russian. English summary) *Vesci Akad. Nauk BSSR Ser. Fiz.-Mat. Nauk* **1979**, no. 3, 20-24, 140. (M. A. Atahodzev) **81h:30079** 30F15 (31D05)
- Sitškin, Timothy A. The orders of graphs with prescribed degree sets. *J. Graph Theory* **4** (1980), no. 3, 301-307. (S. F. Kapoor) **81g:05097** 05C99
- Šitšiviy, B. N. (with Tolmac, I. M.) Computation of two-dimensional electromagnetic fields in inductive MHD machine channels having an open magnetic conductor at finite Re_m numbers. I. *Magnit. Gidrodinamika* No. 4 (1979), 81-88 (Russian); translated as *Magnetohydrodynamics* **15** (1979), no. 4, 427-434 (1980). (L. Debnath) **81h:76064** 76W05 (45K05)
- Šipok, Jan Subalgebras and sublogics of ω -logics. (Russian summary) *Math. Slovaca* **28** (1978), no. 1, 3-9. (Alasdair Urquhart) **81g:03000** 03G25 (06E99)
- Integral with respect to a pre-measure. (Russian summary) *Math. Slovaca* **29** (1979), no. 2, 141-155. (V. N. Aleksjuk) **81j:28008** 28A12
- Nonlinear integrals. (Russian summary) *Math. Slovaca* **29** (1979), no. 3, 257-270. (J. Mařík) **81d:28005** 28A25
- Integral representations of nonlinear functionals. (Russian summary) *Math. Slovaca* **29** (1979), no. 4, 333-345. (Richard A. Alb) **81d:46052** 46G10 (28A25)
- On convergence groupoids. (Russian summary) *Math. Slovaca* **30** (1980), no. 2, 163-173. (John A. Hildebrandt) **81k:22003** 22A15 (20L15, 54H99)
- Šipka, Seppo (with Soisalon-Soininen, Elias) Characterizations of the LL(k) property (extended abstract). *Automata, languages and programming (Proc. Seventh Internat. Colloq., Noordwijkerhout, 1980)*, pp. 596-608, *Lecture Notes in Comput. Sci.*, 85, Springer, Berlin, 1980. (Authors' summary) **81k:68065** 68F25 (68C25)
- (with Soisalon-Soininen, Elias) A scheme for LR(k) parsing with error recovery. I. LR(k) parsing. *Internat. J. Comput. Math.* **8** (1980), no. 1, 27-42. (Authors' summary) **81a:68093a** 68F25
- (with Soisalon-Soininen, Elias) A scheme for LR(k) parsing with error recovery. II. Error recovery. *Internat. J. Comput. Math.* **8** (1980), no. 2, 107-119. (Authors' summary) **81a:68093b** 68F25
- (with Soisalon-Soininen, Elias) A scheme for LR(k) parsing with error recovery. III. Error correction. *Internat. J. Comput. Math.* **8** (1980), no. 3, 189-206. (Authors' summary) **81k:68123** 68F25
- Šiper, Michael (with Sakoda, William J.) Nondeterminism and the size of two-way finite automata. *Conference Record of the Tenth Annual ACM Symposium on Theory of Computing (San Diego, Calif., 1978)*, pp. 275-286, *ACM, New York*, 1978. (Joel I. Seiferas) **81e:68048** 68D35 (68C25, 68F10)
- Lower bounds on the size of sweeping automata. *Conference Record of the Eleventh Annual ACM Symposium on Theory of Computing (Atlanta, Ga., 1979)*, pp. 360-364, *ACM, New York*, 1979. (Kenneth B. Salomon) **81h:68068** 68C25 (68D05)
- (with Lichtenstein, David) GO is polynomial-space hard. *J. Assoc. Comput. Mach.* **27** (1980), no. 2, 393-401. (From the summary and text) **81h:68052** 68C25 (90D05)
- Halting space-bounded computations. *Theoret. Comput. Sci.* **10** (1980), no. 3, 335-338. (R. E. Ladner) **81e:68037** 68C40 (03D10)
- el-Sirafy, Ibrahim H. On the problem of stretched infinite plate weakened by a hole having

- arbitrary shape. *Indian J. Pure Appl. Math.* 11 (1980), no. 1, 13-19. (H. J. Weinitschke) **81b:73029** 73K10 (73C45)
- Siragusa, G. (with Bocchieri, P.; Loinger, A.) The role of the electromagnetic potentials in quantum mechanics. The Marton experiment. (Italian summary) *Nuovo Cimento A* (11) 56 (1980), no. 1, 55-72. (Authors' summary) **81c:81062** 81D99 (81L05)
- Širáň, Josef (with Horák, Peter) Note on a new coloring number of a graph. *J. Graph Theory* 4 (1980), no. 1, 111-113. (D. P. Geller) **81a:05049** 05C15
- On graphs containing many subgraphs with the same number of edges. (Russian summary) *Math. Slovaca* 30 (1980), no. 3, 267-268. (Author's summary) **81j:05101** 05C99
- Sirizidinov, S. H. (with Gafurov, M. U.; Komekov, B.) Some remarks on the strong law of large numbers for sums of a random number of summands. (Russian. Uzbek summary) *Izv. Akad. Nauk UzSSR Ser. Fiz.-Mat. Nauk* 1978, no. 4, 28-34, 94. (Authors' summary) **81i:60032** 60F15
- (with Formanov, S. K.) *Предельные теоремы для сумм случайных векторов, связанных в цепь Маркова. (Russian) [Limit theorems for sums of random vectors connected in a Markov chain] "Fan", Tashkent, 1979. 172 pp. (M. Iosifescu) **81m:60041** 60F05 (60F17, 60J10)
- (with Gafurov, M. U.) Some generalizations of the results of Erdős and Katz connected with the strong law of large numbers, and their applications. (Russian) *Kybernetika (Prague)* 15 (1979), no. 4, 272-292. (S. A. Book) **81c:60031** 60F15
- See also Random processes and mathematical statistics, **81a:60004** and Limit theorems, random processes and their applications, **81c:60001**
- Sirizidinov, F. G. (with Teregulov, I. G.) A geometrically nonlinear problem of the dynamics of a plastic shallow spherical shell. (Russian) *Dinamika Splošn. Sredy* No. 41 *Meh. Deformir. Tverd. Tela* (1979), 105-111, 134. (N. Cristescu) **81h:73046** 73L15 (73D05, 73E05)
- Sirizidinov, T. K. Stability of a set of processes. (Russian) *Problems of stability of motion, analytical mechanics and control of motion (Third All-Union Ceteao Conf., Irkutsk, 1977)* (Russian), pp. 25-38, 320, "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. (Author's summary) **81h:93086** 93D99
- Siret, J.-M. (with Michalec, G.; Bertrand, P.) On the use of aggregation techniques. *Handbook of large scale systems engineering applications*, pp. 20-37, North-Holland, Amsterdam, 1979. (Guy Jumarie) **81m:93010** 93A15 (93A13)
- Siretchi, George Ensembles précompacts et ensembles équicontinues dans les espaces d'applications. *Rev. Roumaine Math. Pures Appl.* 25 (1980), no. 4, 653-662. (A. Császár) **81i:54018** 54E15 (54C35)
- Širinkov, M. Construction of envelopes of holomorphy for multiple Hartogs domains. (Russian) *Mat. Zametki* 27 (1980), no. 1, 77-87, 158. (L. I. Ronkin) **81d:32022** 32D10 (32A07)
- Širjaev, A. N. (with Kabanov, Ju. M.; Lipcer, R. Š.) Necessary and sufficient conditions for absolute continuity of measures corresponding to point (counting) processes. *Proceedings of the International Symposium on Stochastic Differential Equations (Res. Inst. Math. Sci., Kyoto Univ., Kyoto, 1976)*, pp. 111-126, Wiley, New York, 1978. (Nicole El Karoui) **81j:60052** 60G30 (60G55)
- (with Kabanov, Ju. M.; Lipcer, R. Š.) Representation of integer-valued random measures and local martingales by means of random measures with deterministic compensators. (Russian) *Mat. Sb. (N.S.)* 111(153) (1980), no. 2, 293-307, 320. (Jean Mémin) **81f:60076** 60G57 (60G44, 60H05)
- Širjaev, V. D. A three-person cooperative differential game. (Russian. English summary) *Vestnik Leningrad. Univ. Mat. Meh. Astronom.* 1979, vyp. 4, 116-118, 125. (A. I. Subbotin) **81i:90225** 90D25
- Širkov, D. V. (with Gerdt, V. P.; Tarasov, O. V.) Analytic calculations on digital computers for applications in physics and mathematics. *Uspehi Fiz. Nauk* 130 (1980), no. 1, 113-147 (Russian); translated as *Soviet Phys. Uspekhi* 23 (1980), no. 1, 59-77. (Menachem Dishon) **81j:68047** 68C20 (65-04, 81C99, 83C99)
- Sirmanov, C. (with Vačov, D.) History of physics calendar for 1979. (Bulgarian) *Fiz.-Mat. Spis. B'lgar. Akad. Nauk.* 22(55) (1979), no. 2, 158-161. (Editors) **81c:01048** 01A70
- Širna, G. Partial solutions of a problem obtained from the Huang model with the aid of the Fatou averaging procedure. (Russian) *Vestnik Moskov. Univ. Ser. III Fiz. Astronom.* 21 (1980), no. 4, 60-66, 88. (B. Vujanović) **81m:70020** 70F10 (70F15)
- Sirois-Damais, Renée Quasi- and weakly-quasi-first-countable spaces. *Topology Appl.* 11 (1980), no. 2, 223-230. (B. T. Sims) **81g:54030** 54E35 (54D99, 54E99)
- Širokov, Ju. M. Algebra of one-dimensional generalized functions. (Russian. English summary) *Teoret. Mat. Fiz.* 39 (1979), no. 3, 291-301. (Ju. M. Zinov'ev) **81c:46033** 46F10 (17A70, 17B65, 81D99)
- Algebra of three-dimensional generalized functions. (Russian. English summary) *Teoret. Mat. Fiz.* 40 (1979), no. 3, 348-354. (Ju. M. Zinov'ev) **81c:46034** 46F10 (17A70, 17B65)
- Strongly singular potentials in one-dimensional quantum mechanics. (Russian. English summary) *Teoret. Mat. Fiz.* 41 (1979), no. 3, 291-302. (B. Hellwig) **81d:81018** 81C05 (34C05, 46F10)
- Strongly singular potentials in three-dimensional quantum mechanics. (Russian. English summary) *Teoret. Mat. Fiz.* 42 (1980), no. 1, 45-49. (I. Ju. Krivskii) **81d:81019** 81C05 (35J10, 46F10)
- Širokov, M. I. Minimally nonlocal quantum electrodynamics without potentials for bound electrons. *J. Phys. A* 13 (1980), no. 6, 2067-2077. (Author's summary) **81d:81138** 81L05
- Strictly localized states and particles. (Russian. English summary) *Teoret. Mat. Fiz.* 42 (1980), no. 2, 204-212. (M. Martinis) **81d:81045** 81E05
- Širokov, N. A. A remark concerning a problem of S. M. Nikol'skii. (Russian. English summary) Investigations on linear operators and the theory of functions, IX. *Zap. Naučn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 92 (1979), 312-313, 328. (Author's summary) **81b:30072** 30E10
- A constructive description of spaces of functions that are analytic in a multiply connected domain and continuous in its closure. (Russian. English summary) Investigations on linear operators and the theory of functions, IX. *Zap. Naučn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 92 (1979), 314-316, 328. (N. I. Skiba) **81i:46030** 46E15 (30D55)
- Širokov, V. S. J. Buridan's concept of infinitesimals. (Russian) *Istor.-Mat. Issled.* No. 23 (1978), 250-269, 359. (Stanislaw J. Surma) **81b:01010** 01A35
- Širokova, E. A. Univalence of solutions of intrinsic inverse boundary value problems in the case of parameters x and r . (Russian) *Trudy Sem. Kraev. Zadacham* No. 15 (1978), 185-190, 216. (P. Ju. Alekna) **81j:30070** 30E25
- Širovich, F. (with Degano, P.) Inductive generalization and proofs of function properties. *CL & CL-Comput. Linguist. Comput. Lang.* 13 (1979), 101-130. (Gianfranco Prin) **81f:68111** 68G15 (03B99, 68B10, 68C20)
- Širovich, L. (with Chong, T. H.) Approximate solution in gasdynamics. *Phys. Fluids* 23 (1980), no. 7, 1291-1295. (Authors' summary) **81d:76071** 76L05 (76N15)
- Širor, A. A. (with Pavlov, K. B.; Fedotov, N. A.) On the theory of flow of an incompressible viscous fluid in a channel of arbitrary section. *Izv. Akad. Nauk SSSR Meh. Židk. Gaza* 1980, no. 2, 124-128 (Russian); translated as *Fluid Dynamics* 15 (1980), no. 2, 274-278. (Authors' summary) **81i:76018** 76D05
- Šiškin, G. I. (with Titov, V. A.) Numerical solution of the Cauchy problem for an ordinary differential equation with a small parameter multiplying the derivative. (Russian) *Čisl. Metody Meh. Splošn. Sredy* 9 (1978), no. 7 *Vjazkaja Židkost'*, 112-121. (E. S. Čičkin) **81g:65103** 65L05
- The grid method for solving elliptic equations with discontinuous boundary conditions. (Russian) *Ž. Vychisl. Mat. i Mat. Fiz.* 19 (1979), no. 3, 640-651, 797. (E. Schechter) **81h:65092** 65N10
- Šiškin, P. G. (with Ilinskii, A. Ju.; Malaženko, S. V.; Storozhenko, V. O.; Temčenko, M. E.) Method of balancing rotating bodies on a string drive. *Izv. Akad. Nauk SSSR Meh. Tverd. Tela* 14 (1979), no. 5, 3-18 (Russian); translated as *Mech. Solids* 14 (1979), no. 5, 1-14. (Authors' summary) **81d:70006** 70E99
- Šiškov, A. E. Classical solvability of the Dirichlet problem for a strongly elliptic Monge-Ampère equation. (Russian) *Boundary value problems for partial differential equations (Russian)*, pp. 142-156, 168, "Naukova Dumka", Kiev, 1978. (S. Burýšek) **81a:35039** 35J65 (35D10, 53C45)
- Šišlakova, V. A. (with Mirkin, B. M.) Optimization and analysis of the sensitivity of continuous stochastic systems with discrete control. (Russian) *Optimization and adaptive control in large-scale systems (Russian)*, pp. 18-27, 105-106, "Ilim", Frunze, 1980. (Authors' summary) **81m:90083** 90C15
- Šitmarov, I. A. (with Maslov, V. P.) The T-product of hypoelliptic Hamiltonians. (Russian) *Proceedings of an All-Union Conference on Partial Differential Equations (Moscow State Univ., Moscow, 1976)* (Russian), pp. 156-160, Moscow. Gos. Univ., Meh.-Mat. Fakul'tet, Moscow, 1978. (See **80f:35002**) **47B38** (17B65, 58G15, 81C99)
- Šitmarov, Ju. E. Categorical quasivarieties of quasigroups. (Russian) *Algebra i Logika* 18 (1979), no. 5, 614-629, 633. (Ján Duplák) **81i:20104** 20N05 (08C15, 20L10)
- Sisser, Fern Sussower Elimination of bounds in optimization problems by transforming variables. *Math. Programming* 20 (1981), no. 1, 110-121. (Author's summary) **81j:90089** 90C30 (65K05)
- Sisto, Irene (with Selvaggi, Renata) Regularity of certain integral transforms relative to domains of class C^1 . (Italian. English summary) *Rend. Accad. Sci. Fis. Mat. Napoli* (4) 45 (1978), 393-410 (1979). (Hans-Jürgen Glaeske) **81c:44012** 44A30
- Sit, William Y. Differential dimension polynomials of finitely generated extensions. *Proc. Amer. Math. Soc.* 68 (1978), no. 3, 251-257. (Author's summary) **81f:12017** 12H05
- (with Goldfarb, Donald) Worst case behavior of the steepest edge simplex method. *Discrete Appl. Math.* 1 (1979), no. 4, 277-285. (R. N. Kaul) **81d:90067** 90C05 (65K05)
- Sitaram, Alladi Positive definite distributions on $K \setminus G/K$. II. *J. Indian Math. Soc. (N.S.)* 42 (1978), no. 1-4, 95-104 (1979). (P. C. Trombi) **81c:43024** 43A85 (22E30, 43A35)
- A note on $L^2(\Gamma \backslash SL(2, \mathbb{R}))$. *Michigan Math. J.* 26 (1979), no. 3, 325-331. (Audrey A. Terras) **81d:22018** 22E46 (10D40, 35P20, 47A40, 58G25)
- (with Bagchi, Somesh Chandra) Spherical mean periodic functions on semisimple Lie groups. *Pacific J. Math.* 84 (1979), no. 2, 241-250. (Pierre Eymard) **81j:43021** 43A90 (22E30, 22E46)
- Sitaramachandra Rao, Rudrabhatla (with Murty, G. Sri Rama Chandra) On Minsky's generalisation of a problem of Evelyn-Linfoot and Page in additive theory of numbers. *J. Reine Angew. Math.* 309 (1979), 92-99. (Cormel Pomerance) **81b:10030** 10H25
- (with Siva Rama Sarma, A.) Two identities due to Ramanujan. *Indian J. Pure Appl. Math.* 11 (1980), no. 9, 1139-1140. (D. R. Heath-Brown) **81i:10021** 10A99
- (with Kanemitsu, Shigeru) On a kind of divisor problem. II. *Proc. Japan Acad. Ser. A Math. Sci.* 56 (1980), no. 4, 183-184. (Editors) **81f:10056** 10H25
- (with Kanemitsu, Shigeru) On a conjecture of S. Chowla and of S. Chowla and H. Walum. III. *Proc. Japan Acad. Ser. A Math. Sci.* 56 (1980), no. 4, 185-187. (Editor) **81f:10057** 10H25
- Sitaramaya, M. Hyperbolic complex manifolds. *Hyperbolic complex analysis (Proc. All India Sem., Ramanujan Inst., Univ. Madras, Madras, 1977)*, pp. 53-79, Publ. Ramanujan Inst., 4, Univ. Madras, Madras, 1979. (Marcus Wright) **81b:32013** 32H15 (30F30)
- Differential-geometric study of a class of hypersurfaces in a complex torus. *Hyperbolic complex analysis (Proc. All India Sem., Ramanujan Inst., Univ. Madras, Madras, 1977)*, pp. 205-222, Publ. Ramanujan Inst., 4, Univ. Madras, Madras, 1979. (Shoshichi Kobayashi) **81f:32032** 32H20 (32J25, 53C55)
- Štenko, A. G. (with Kargin, A. Ju.) Nonlinear fluctuation-dissipation theorem for plasma in the case of a nonpotential field. (Russian. English summary) *Ukrain. Fiz. Ž.* 25 (1980), no. 3, 390-399, 519. (Vladimir L. Savel'ev) **81g:82052** 82A45
- Sitharama Iyengar, S. (with Wong, K. C.) A classical algorithm for product computations on a computer. *J. Tech. Bengal Engrg. College* 23 (1978), no. 1, 53-71. (Bernard Kolman) **81c:17001** 17-04
- (with Barrett, Dale R.) A modeling approach to the evaluation of internal sorting methods. *Inform. Sci.* 22 (1980), no. 2, 79-98. (Authors' summary) **81m:68048** 68E05
- Štítek, V. N. Investigation of the reliability of a complex system subjected to a nonstationary load. (Russian. English summary) *Issled. Operacii i ASU* No. 13 (1979), 84-91, 135. (B. Dimitrov) **81g:60096** 60K25
- Slu, Man Keung (with Mykkelveit, Johannes J.; Tong, Po) On the cycle structure of some nonlinear shift regular sequences. *Inform. and Control* 43 (1979), no. 2, 202-215. (B. Hazeltine) **81a:94037** 94B15
- (with Tong, Po) Generation of some de Bruijn sequences. *Discrete Math.* 31 (1980), no. 1, 97-100. (J. R. Griggs) **81j:05041** 05B30 (05A99)
- Siu, T. K. (with Leondes, C. T.) Identification both of the unknown plant and noise

- Sia, Yum Tong Some remarks on the complex-analyticity of harmonic maps. *Southeast Asian Bull. Math.* 3 (1979), no. 2, 240-253. (John C. Wood) **81b:58017** 58E20 (32H99, 53C55)
- The complex-analyticity of harmonic maps and the strong rigidity of compact Kähler manifolds. *Ann. of Math.* (2) 112 (1980), no. 1, 73-111. (M. Kalka) **81j:53061** 53C55 (32H99, 58E20)
- Curvature characterization of hyperquadrics. *Duke Math. J.* 47 (1980), no. 3, 641-654. (S. M. Webster) **81k:53060** 53C55 (32C10, 58E20)
- (with Yau, Shing Tung) Compact Kähler manifolds of positive bisectional curvature. *Invent. Math.* 59 (1980), no. 2, 189-204. (John C. Wood) **81h:58029** 58E20 (53C55)
- Kanis-Sinda, Maria See Kanis-Sinda, Maria
- Sivaramand, S. N. (with Surendran, K.) Stability of large scale systems—algebraic criteria. *Simulation of distributed-parameter and large-scale systems (Proc. IMACS European Simulation Meeting, Univ. Patras, Patras, 1979)*, pp. 149-153, North-Holland, Amsterdam, 1980. (Authors' summary) **81k:93058** 93D99 (93A15)
- Sivener, Nithiam T. (with Harris, Wesley L.) Numerical solutions of transonic flows by parametric differentiation and integral equation techniques. *AIAA J.* 18 (1980), no. 12, 1534-1536. (From the introduction) **81j:76058** 76H05 (65R20)
- Siva Rama Sarma, A. (with Sitaramachandra Rao, Rudrabhatla) Two identities due to Ramanujan. *Indian J. Pure Appl. Math.* 11 (1980), no. 9, 1139-1140. (D. R. Heath-Brown) **81i:10021** 10A99
- Skardiere, J. Lattice gas model for binary mixtures: miscibility of nematogens and solid-liquid equilibria. *J. Physique* 41 (1980), no. 10, 1081-1089. (Author's summary) **81i:82025** 82A25 (82A55)
- Sivashinsky, G. I. Turbulence in the motion of a free particle and de Broglie waves. *Lett. Nuovo Cimento* (2) 27 (1980), no. 15, 504-508. (From the text) **81e:81018** 81B05
- Sivashinsky, S. V. (with Ifin, E. M.) Differentiable solutions of symmetric systems in plane domains with irregular boundary. (Russian) Boundary value problems of mathematical physics and related questions in the theory of functions, 12. *Zap. Nauch. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 96 (1980), 80-83, 306. (David S. Tartakoff) **81j:35004** 35A05 (35R05)
- Sivazian, B. D. (with Mahoney, J. F.) Probability of shortage for Erlang distributed demand in a (σ, S) inventory problem. *SIAM J. Appl. Math.* 38 (1980), no. 1, 156-162. (Masafumi Sasaki) **81e:90036** 90B05 (90B15)
- Shvova, V. K. (with Vinogradova, T. K.) On the solution of minimax problems of control theory. (Russian) *Dynamics of control systems (Third All-Union Četaev Conf., Irkutsk, 1977)* (Russian), pp. 76-80, 338, "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. (V. F. Dem'janov) **81j:49004** 49A40 (49B40)
- Sia, H.-W. (with Ottmann, Th.; Rosenberg, Arnold L.; Wood, Derick) Node-visit optimal 1-2 brother trees. *Theoretical computer science (Fourth GI Conf., Aachen, 1979)*, pp. 213-221, *Lecture Notes in Comput. Sci.*, 67, Springer, Berlin, 1979. (Authors' summary) **81k:68047** 68E10
- Sier, Walter S. Representations of semigroups of idempotents. With a loose Russian summary. *Czechoslovak Math. J.* 30(105) (1980), no. 3, 369-375. (D. B. McAlister) **81k:20099** 20M30
- Sklor, V. S. (with Verlan', A. F.) The standard example method for determining the regularization parameter in the Lavrent'ev and Tikhonov methods. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A No. 6* (1979), 468-471, 495. (From the introduction) **81b:65054** 65J10
- Sub-Sironenko, Ju. A. See Sub-Sironenko, Ju. A.
- Sluk, G. I. (with Sižuk, P. I.) On the theory of special classes of analytic functions. (Russian) *Ukrain. Mat. Z.* 32 (1980), no. 2, 256-262, 286. (D. M. Campbell) **81e:30044** 30C99
- Sluk, P. I. (with Sižuk, G. I.) On the theory of special classes of analytic functions. (Russian) *Ukrain. Mat. Z.* 32 (1980), no. 2, 256-262, 286. (D. M. Campbell) **81e:30044** 30C99
- Slurova, A. B. A third degree stratifiable involution, generated by a straight line congruence (2, 4), in the space P_3 (Bulgarian. Russian and English summaries) *Godišnik Vist. Učebn. Zased. Prilozna Mat.* 13 (1977), no. 2, 147-154 (1978). (Vladislav Goldberg) **81e:51033** 51N15 (14N05, 51N35)
- Sjavrko, M. S. (with Iosipčuk, M. D.) Solution of a class of equations in functional derivatives by the method of successive approximations. (Russian) *Vestnik L'vov. Politehn. Inst. No. 141 Differencial'nye Uravnenija i ih Prilozhen.* (1980), 38-39, 116. (Authors' summary) **81i:65076** 65M99
- (with Odnovolova, T. N.) Representation of the solution of a class of nonlinear Fredholm equations by branching integral continued fractions. (Russian) *Vestnik L'vov. Politehn. Inst. No. 141 Differencial'nye Uravnenija i ih Prilozhen.* (1980), 86-88, 124. (Authors' summary) **81i:65106** 65R20 (45L10)
- Sjerve, Denis Homology isomorphisms. *Algebraic topology, Waterloo, 1978 (Proc. Conf., Univ. Waterloo, Waterloo, Ont., 1978)*, pp. 473-511, *Lecture Notes in Math.*, 741, Springer, Berlin, 1979. (S. Zdravkovska) **81b:55018** 55P15 (20J05)
- Sjoberg, Lars A recurrence relation for the β_n -function. *Bull. Géodésique* 54 (1980), no. 1, 69-72. (K. R. Koch) **81e:86002** 86A30 (42C10)
- Sjodin, T. Synchronization in special relativity and related theories. (Italian and Russian summaries) *Nuovo Cimento B* (11) 51 (1979), no. 2, 229-246. (Stere Ianus) **81f:83005** 83A05
- Sjolin, Per Equivalence of Haar and Franklin bases in L^p , $1 < p < \infty$. *Fourier analysis and approximation theory (Proc. Colloq., Budapest, 1976)*, Vol. II, pp. 757-762, *Colloq. Math. Soc. János Bolyai*, 19, North-Holland, Amsterdam, 1978. (See **80b:42001b**) 42C99
- An H^p inequality for strongly singular integrals. *Math. Z.* 165 (1979), no. 3, 231-238. (Kenneth F. Andersen) **81d:42030** 42B15 (42B30)
- Sjstrand, Johannes Sur certains complexes d'opérateurs pseudodifférentiels. *Équations aux dérivées partielles (Proc. Conf., Saint-Jean-de-Monts, 1977)*, pp. 181-189, *Lecture Notes in Math.*, 660, Springer, Berlin, 1978. (Author's introduction) **81k:58063** 58G15 (35S05, 47G05)
- Réflexion des singularités analytiques. *Journées: Équations aux Dérivées Partielles (Saint-Cast, 1979)*, Exp. No. 13, 8 pp., *École Polytech., Palaiseau*, 1979. (Jorge Hourie) **81k:58031** 35G15 (35A05, 35D10)
- Fourier integral operators with complex phase functions. *Seminar on Singularities of Solutions of Linear Partial Differential Equations (Inst. Adv. Study, Princeton, N.J., 1977/78)*, pp. 51-64, *Ann. of Math. Studies*, 91, Princeton Univ. Press, Princeton, N.J., 1979. (M. S. Agranović) **81b:58042** 58G15 (35S05, 47G05)
- (with Kashiwara, Masaki; Kawai, Takahiro) On a class of linear partial differential equations whose formal solutions always converge. *Ark. Mat.* 17 (1979), no. 1, 83-91. (Tapas Mazumdar) **81a:35004** 35A20 (35C10)
- Eigenvalues for hypoelliptic operators and related methods. *Proceedings of the International Congress of Mathematicians (Helsinki, 1978)*, pp. 797-801, *Acad. Sci. Fennica, Helsinki*, 1980. (William Margulies) **81k:35124** 35P20 (35S10, 58G25)
- Propagation of analytic singularities for second order Dirichlet problems. *Comm. Partial Differential Equations* 5 (1980), no. 1, 41-93. (Jorge Hourie) **81e:35031a** 35G15 (35D10, 58G16)
- Propagation of analytic singularities for second order Dirichlet problems. II. *Comm. Partial Differential Equations* 5 (1980), no. 2, 187-207. (Jorge Hourie) **81e:35031b** 35G15 (35D10, 58G16)
- Skabara, A. S. Quivers with relations and differential graded categories. (Russian) *Akad. Nauk Ukrain. SSR Inst. Mat. Preprint No. 43* (1978), 3-41. (Sheila Brenner) **81e:18012** 18D99 (16A64)
- Skagerstam, R. S. (with Stern, A.) Magnetic superconductors and the MIT bag model. *Z. Phys. C* 5 (1980), no. 4, 347-350. (Authors' summary) **81h:81187** 81J05 (81G05)
- Skakauskas, V. The existence and uniqueness of the solution for a system of integro-differential equations. (Russian. Lithuanian and English summaries) *Litovsk. Mat. Sb.* 19 (1979), no. 3, 81-84, 203. (Nina B. Maslova) **81e:45023** 45K05 (45F05)
- Skaleckaja, E. I. (with Frisman, E. Ja.; Šapiro, A. P.) ★Дискретные модели динамики численности популяций и оптимизация промысла. (Russian) [Discrete models of the dynamics of population size and of optimization of industrial production] "Nauka", Moscow, 1979. 165 pp. (G. S. Ladde) **81j:92001** 92A05 (90A30, 92A15, 93C55)
- Skalmierski, Bogdan (with Brückner, Damian; Podhorodzyński, Marian) Statistical characteristics of a random variable in a distributional formulation. (Polish. Russian and English summaries) *Zeszyty Nauk. Politech. Śląsk. Mat.-Fiz.* No. 29 (1979), 13-31. (Authors' summary) **81m:60006a** 60A99 (60E05)
- (with Brückner, Damian; Podhorodzyński, Marian) Statistical characteristics of a random vector in a distributional formulation. (Polish. Russian and English summaries) *Zeszyty Nauk. Politech. Śląsk. Mat.-Fiz.* No. 29 (1979), 33-50. (Authors' summary) **81m:60006c** 60A99 (60E05)
- (with Brückner, Damian; Podhorodzyński, Marian) Foundations of probability theory in a distributional formulation. (Polish. Russian and English summaries) *Zeszyty Nauk. Politech. Śląsk. Mat.-Fiz.* No. 29 (1979), 67-81. (Authors' summary) **81m:60006a** 60A99
- Skandalis, Georges (with Fack, Thierry) Structure des idéaux de la C^* -algèbre associée à un feuilletage. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 22, A1057-A1059. (Claude Schochet) **81h:46088** 46L55 (58G12)
- Skar, Sherwin J. (with Miller, Richard K.; Michel, Anthony N.) Periodic solutions of systems of ordinary differential equations. *Differential equations (Proc. Eighth Fall Conf., Oklahoma State Univ., Stillwater, Okla., 1979)*, pp. 51-64, *Academic Press*, New York, 1980. (M. K. Grammatikopoulos) **81h:34048** 34C25
- Synchronous solutions of power systems: existence, uniqueness and stability. *Quart. Appl. Math.* 38 (1980/81), no. 3, 331-342. (P. C. Parks) **81j:93052** 93D05 (34D05)
- Skarab, H. (with Schlittgen, R.; Buseck, K. H.; Apostolopoulos, N.) Sequentializing nonparametric tests. *Comstat Lectures, I*, pp. 57-92, *Physica, Würzburg*, 1978. (M. Huškova) **81f:62126** 62L10 (62G10)
- Skarżyński, Ryszard Torsional-flexural vibrations of an inhomogeneous thin-walled rod. (Polish. Russian and English summaries) *Rozprawy Inż.* 27 (1979), no. 2, 317-324. (J. Ignaczak) **81f:73031** 73K12
- Skatov, E. F. (with Kuprijanov, V. V.; Suvorov, B. V.) A generalized approach to a problem of the realizability of an invariant check system. (Russian) *Theory of invariance and its application (Proc. Fifth All-Union Conf., Kiev, 1976)*, Part 2 (Russian), pp. 410-423, "Naukova Dumka", Kiev, 1979. (O. E. Citiricki) **81m:93039** 93B99 (94A17)
- Skau, Christian F. Positive selfadjoint extensions of operators affiliated with a von Neumann algebra. *Math. Scand.* 44 (1979), no. 1, 171-195. (S. K. Berberian) **81d:46064** 46L10 (47B25)
- Skelboe, Stig Computation of the periodic steady-state response of nonlinear networks by extrapolation methods. *IEEE Trans. Circuits and Systems* 27 (1980), no. 3, 161-175. (From the summary) **81a:94053** 94C05
- Skelton, Robert E. Cost decomposition of linear systems with application to model reduction. *Internat. J. Control* 32 (1980), no. 6, 1031-1055. (Author's summary) **81k:93007** 93A15 (93C05)
- (with Hughes, Peter C.) Controllability and observability for flexible spacecraft. *J. Guidance Control* 3 (1980), no. 5, 452-459. (Authors' summary) **81f:93020** 93B05 (70M99, 93B07)
- (with Hughes, Peter C.) Controllability and observability of linear matrix-second-order systems. *Trans. ASME Ser. E J. Appl. Mech.* 47 (1980), no. 2, 415-420. (Authors' summary) **81g:93012** 93B05 (93B07)
- Skiba, A. K. Optimal growth with a convex-concave production function. *Econometrica* 46 (1978), no. 3, 527-539. (From the text) **81e:90029** 90A16
- Skiba, A. N. Formations with a given system of subformations. (Russian. English summary) *Dokl. Akad. Nauk BSSR* 23 (1979), no. 12, 1073-1076, 1149. (J. Wiegold) **81e:20006** 20D10
- Characterization of finite metanilpotent groups. (Russian) *Mat. Zametki* 27 (1980), no. 3, 345-351, 492. (I. D. Macdonald) **81i:20022** 20D10 (20D15)
- Skibenko, I. T. (with Popov, V. A.) Combinatorial approach to the classification of k -valued logical functions. *Kibernetika (Kiev)* 1979, no. 6, 15-18 (Russian); translated as *Cybernetics* 15 (1979), no. 6, 789-793 (1980). (From the text) **81j:05016** 05A15 (03B50, 94C10)
- Skif, M. I. (with Meliev, T. K.) Asymptotic representation of solutions of a system of second-order linear differential equations with a small parameter multiplying the highest derivative. (Russian) *Asymptotic methods in the theory of nonlinear oscillations (Proc. All-Union Conf. Asymptotic Methods in Nonlinear Mech., Kazitelli, 1977)* (Russian), pp. 262-269, 278, "Naukova Dumka", Kiev, 1979. (M. Švec) **81j:34019** 34A30 (34E05)

- (with Meliev, T. K.) Construction of the asymptotic solution for a system of second-order linear integro-differential equations of fractional rank. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* no. 9 (1979), 714-717, 777. (Erwin Kozakiewicz) **81c:45020** 45J05
- Skillcorn, David** Minimal sequences containing contiguous permutation subsequences. *Proceedings of the Ninth Manitoba Conference on Numerical Mathematics and Computing (Univ. Manitoba, Winnipeg, Man., 1979)*, pp. 393-397, *Congress. Numer., XXVII, Utilitas Math., Winnipeg, Man.*, 1980. (From the text) **81m:05007** 05A10 (68E99)
- (with Seberry, Jennifer) All directed BIBDs with $k=3$ exist. *J. Combin. Theory Ser. A* **29** (1980), no. 2, 244-248. (Authors' summary) **81h:05026** 05B05
- Skilljak, S. S.** (with Red'ko, V. N.) Syntactic structure of programming languages. *Programirovanie* 1979, no. 4, 3-15, 95 (Russian); translated as *Programming and Comput. Software* 5 (1979), no. 4, 225-235. (Authors' summary) **81c:68016** 68B10
- Skinner, L. A.** Note on the asymptotic behavior of multidimensional Laplace integrals. *SIAM J. Math. Anal.* **11** (1980), no. 5, 911-917. (John S. Lew) **81i:41026** 41A60 (44A10)
- Skjeggstad, O.** (with Frodeesen, A. G.; Tofte, H.) ★Probability and statistics in particle physics. *Universitetsforlaget, Bergen*, 1979. xiv+501 pp. ISBN 82-00-01906-3 (B. S. Nahapetian) **81e:81001** 81-01 (62-01, 81G99)
- Sklar, Abe** (with Schweizer, Berthold) Probabilistic information spaces. (French summary) *Information theory (Proc. Internat. CNRS Colloq., Cachan, 1977)* (French), pp. 485-494, *Colloques Internat. CNRS*, 276, CNRS, Paris, 1978. (Richard Moynihan) **81j:94006** 94A15 (60B99)
- (with Schweizer, Berthold) Unsolvability of the general "problème réciproque" for probabilistic and random information spaces. (French summary) *Information theory (Proc. Internat. CNRS Colloq., Cachan, 1977)* (French), pp. 495-501, *Colloques Internat. CNRS*, 276, CNRS, Paris, 1978. (T. N. Bhargava) **81j:94011** 94A15
- (with Rice, R. E.; Schweizer, Berthold) When is $f(f(x)) = ax^2 + bx + c$? *Amer. Math. Monthly* **87** (1980), no. 4, 252-263. (József Tabor) **81c:39005** 39B10 (30C10, 39B70)
- Sklar, Lawrence** Semantic analogy. *Philos. Stud.* **38** (1980), no. 3, 217-234. (From the introduction) **81j:03019** 03A05
- Sklar, Michael G.** (with Armstrong, Ronald D.) A linear programming algorithm for curve fitting in the L_∞ norm. *Numer. Funct. Anal. Optim.* **2** (1980), no. 2-3, 187-218. (M. Brannigan) **81j:65032** 65D10 (90C05)
- Skliar, P. E.** Solution of large scale linear programming problems using aggregation. (Russian) *Akad. Nauk Ukrain. SSR Inst. Kibernet. Preprint No. 50* (1978), 42 pp. (Z. Waksman) **81a:90108** 90C05
- Skliaruk, F. I.** (with Obrazcova, E. I.) Nonlinear parametric oscillations of a cylindrical tank with a fluid. *Izv. Akad. Nauk SSSR Meh. Teord. Tela* **14** (1979), no. 4, 133-145 (Russian); translated as *Mech. Solids* **14** (1979), no. 4, 115-126. (Author's summary) **81c:73035** 73J06 (73D35, 73L20)
- Skliarenko, E. G.** On the homology theory associated with Aleksandrov-Čech cohomology. (Russian) *Uspehi Mat. Nauk* **34** (1979), no. 6(210), 90-118. (Jože Vrabec) **81c:55006** 55N07 (55-02, 55M05, 55N05, 55N30, 55N40)
- Skliarenko, V. A.** Integration by parts in the SCP Burkil integral. (Russian) *Mat. Sb. (N.S.)* **112**(154) (1980), no. 4(8), 630-646. (J. Mafik) **81k:26009** 26A39
- Skliarevič, F. A.** Reliability figures for a system in a random medium with many states. *Avtomat. i Vychisl. Tehn. (Riga)* 1979, no. 3, 21-25, 91 (Russian); translated as *Automat. Control Comput. Sci.* **13** (1979), no. 3, 21-25. (Author's summary) **81k:60101** 60K25
- Skliarov, V. A.** (with Kirpichnikov, V. M.) On methods of description and synthesis of a class of microprogrammed automata. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* 1979, no. 1, 127-137, 221 (Russian); translated as *Engng. Cybernetics* **17** (1979), no. 1, 93-102 (1980). (Authors' summary) **81a:68063** 68D35
- Sklyarevich, F. A.** See Skliarevič, F. A.
- Sklyarov, V. A.** See Skliarov, V. A.
- Skobtsov, Yu. A.** See Skovcov, Ju. A.
- Skoda, Henri** Fibrés holomorphes à base et à fibre de Stein. *Colloque d'Analyse Harmonique et Complexe*, 15 pp. (not consecutively pagged), Univ. Aix-Marseille I, Marseille, 1977. (Y.-T. Siu) **81f:32021** 32E10 (32L05)
- Integral methods and zeros of holomorphic functions. *Proceedings of the International Congress of Mathematicians (Helsinki, 1978)*, pp. 675-683, *Acad. Sci. Fennica, Helsinki*, 1980. (Thomas Bloom) **81k:32005** 32A22 (32A15, 32F05)
- See also Séminaire: Pierre Lelong-Henri Skoda (Analyse), **81j:32003**
- Skof, Fulvia** On arithmetic, additive, almost-periodic functions. (Italian. English summary) *Riv. Mat. Univ. Parma* (4) **5** (1979), part 2, 827-836 (1980). (Henri Joris) **81k:10091** 10L10
- Sköllerma, Gunilla** Error analysis of finite difference schemes applied to hyperbolic initial-boundary value problems. *Math. Comp.* **33** (1979), no. 145, 11-35. (Jacques Couot) **81d:65059** 65N15
- Školnikov, P. L.** (with Kruglov, S. I.; Stražev, V. I.; Tolkačev, E. A.) Internal symmetry of the theory of a neutral vector field of general type. (Russian. English summary) *Vesci Akad. Nauk BSSR Ser. Fiz.-Mat. Nauk* 1979, no. 6, 53-56, 141. (J. Niederle) **81d:81000** 81E99 (81G20)
- (with Stražev, V. I.) On two-potential formulation of electrodynamics with magnetic monopoles. (Russian. English summary) *Acta Phys. Polon. B* **11** (1980), no. 3, 209-220. (Authors' summary) **81c:81188** 81L05
- Skopin, A. I.** See Rings and modules, **81c:00005**
- Skopin, M. A.** Approximation of a function by Fourier-Jacobi sums. (Russian. English summary) *Vestnik Leningrad. Univ. Mat. Meh. Astronom.* 1978, vyp. 4, 68-76, 151. (N. T. Anisimova) **81c:41040** 41A50
- Asymptotic formulas for the deviation of linear summability methods for double Fourier series. (Russian) Numerical methods and questions in the organization of calculations. *Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* **80** (1978), 189-196, 269. (O. D. Gabisonija) **81c:42028** 42B05
- Skordev, Dimit' G.** Algebraic generalization of a result of Böhm and Jacopini. (Russian) *C. R. Acad. Bulgare Sci.* **32** (1979), no. 2, 151-154. (Max I. Kanovič) **81d:03050** 03D99 (68C20)
- (with Petrov, Veselin P.) Combinatorial structures. (Russian) *Serdica* **5** (1979), no. 2, 128-148. (S. A. Berezin) **81j:03079** 03D75
- Skordev, G. S.** A coincidence theorem for Q -simplicial spaces. *C. R. Acad. Bulgare Sci.* **32** (1979), no. 3, 279-280. (L. Górniewicz) **81a:55003** 55M20
- On a coincidence of mappings of compact spaces in topological groups. *Fund. Math.* **104** (1979), no. 2, 111-125. (David C. Wilson) **81d:54039** 54H25 (55M20)
- Skorik, A. I.** Isometries of a class of ideal coordinate spaces. (Russian) *Teor. Funkcii Funkcional. Anal. i Priložen.* No. 34 (1980), 120-131, iv. (Z. Čanturia) **81j:47021** 47B37 (46A45)
- Skornjakov, L. A.** Group unars. (Russian. English summary) *Vestnik Moskov. Univ. Ser. I Mat. Meh.* 1977, no. 5, 65-69. (Author's review (Zbl 376:08004)) **81h:00005** 08A60 (20E99)
- Finite axiomatizability of the class of faithful modules. (Russian) *Colloq. Math.* **42** (1979), 365-366. (E. W. Kiss) **81h:03075** 03C60 (16A53)
- (with Egrova, D. P.) Cascade closure of magnetic monoids. *Math. Sem. Notes Kobe Univ.* **7** (1979), no. 1, 45-48. (E. M. Kublanova) **81d:20049** 20M07
- See also Faith, Carl C., **81a:16001**
- Skorobogat'ko, A. A.** (with Ljasko, I. I.; Pedorčenko, L. I.) Difference schemes for a class of parabolic equations with nonstationary nonlinear boundary conditions. (Russian. English summary) *Vychisl. Prikl. Mat. (Kiev) No. 40* (1980), 38-45, 158. (E. G. Djakovon) **81g:65133** 65N10
- Skorobogatov, V. A.** Matrices of layers and isometry of graphs. (Russian) *Vychisl. Sistemy No. 77* (1978), 20-23, 114. (Author's summary) **81g:05000** 05C50
- (with Bessonov, Ju. E.) Application of decomposition by levels in the search for cliques. (Russian) *Vychisl. Sistemy No. 77* (1978), 24-33, 114-115. (Jean-Marie Laborde) **81h:05003** 05C30
- Skorodinski, I. T.** Investigation of the third variation of a functional on singular controls. (Russian) *Differencial'nye Uravnenija* **16** (1980), no. 8, 1438-1444, 1533. (A. A. Pervozvanski) **81k:49010** 49B10
- Skorobod, A. V.** Stochastic differential equations for quasidiffusion processes. (Russian) *Asymptotic methods in the theory of nonlinear oscillations (Proc. All-Union Conf. Asymptotic Methods in Nonlinear Mech., Katsiveli, 1977)* (Russian), pp. 211-220, 271. "Naukova Dumka", Kiev, 1979. (R. Š. Lipcer) **81m:60119** 60H15 (35R60, 60J60)
- See also Random processes in problems of mathematical physics, **81h:60002**
- Skorobod, T. A.** Closure of stochastic semigroups. (Russian) *Probability distributions in infinite-dimensional spaces (Russian)*, pp. 144-153, 179. *Akad. Nauk Ukrain. SSR, Inst. Mat., Kiev*, 1978. (A. T. Bharucha-Reid) **81c:60075** 60H25 (47D99)
- Convergence of infinite products of independent random linear operators in a Hilbert space. (Russian. English summary) *Teor. Veroyatnost. i Primenen.* **24** (1979), no. 4, 808-813. (A. T. Bharucha-Reid) **81h:60090** 60H25 (47B10, 60B12)
- Skoug, D. L.** (with Johnson, G. W.) An L_p analytic Fourier-Feynman transform. *Michigan Math. J.* **26** (1979), no. 1, 103-127. (L. L. Lee) **81a:46050** 46C99 (42B10)
- (with Johnson, G. W.) Scale-invariant measurability in Wiener space. *Pacific J. Math.* **83** (1979), no. 1, 157-176. (S. A. Čobanjan) **81k:28016** 28C20 (58D20, 60B11)
- Skovcov, Ju. A.** (with Šperanskii, D. V.) Analytical construction of distinguishing sequences for discrete devices with memory. *Avtomat. i Telemekh.* 1980, no. 1, 122-130 (Russian. English summary); translated as *Automat. Remote Control* **41** (1980), no. 1, part 2, 97-104. (Authors' summary) **81g:94063** 94C10 (68D05)
- wachecka-Skowron, Anna** See Wachecka-Skowron, Anna
- Skowronski, Andrzej** The category of abelian Hopf algebras. *Fund. Math.* **107** (1980), no. 3, 167-193. (Bodo Pareigis) **81m:16014** 16A24 (14L17)
- Skrapek, W. A.** Instability results for fourth-order differential equations. *Proc. Roy. Soc. Edinburgh Sect. A* **85** (1980), no. 3-4, 247-250. (T. G. Proctor) **81g:34069** 34D20
- Skrižanov, M. M.** High-energy asymptotics of the potential scattering amplitude. (Russian) *Dokl. Akad. Nauk SSSR* **241** (1978), no. 2, 326-329. (Alexander Alenicyyn) **81a:35004** 35P25 (35B40)
- (with Vinogradov, A. I.) The number of lattice points inside the sphere with variable center. (Russian. English summary) *Analytic number theory and the theory of functions, 2. Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* **91** (1979), 25-30, 180. (Ekkhard Krätzel) **81j:10079** 10J25
- Skripko, A. I.** See Data processing and adaptation in automated systems of control of technological processes, **81c:93002**
- Skripnik, A. I.** On certain algebras connected with asymptotic methods of nonlinear mechanics. (Russian) *Ukrain. Mat. Ž.* **32** (1980), no. 2, 252-256, 287. (B. Geyer) **81c:70026** 70K99 (20M25)
- Skripnik, I. V.** Coercivity inequalities for pairs of linear elliptic operators. (Russian) *Boundary value problems for partial differential equations (Russian)*, pp. 107-118, 166. "Naukova Dumka", Kiev, 1978. (Piero Bassanini) **81d:35030** 35J40 (47B44)
- Topological characteristics of nonlinear elliptic problems. (Russian) *Boundary value problems for partial differential equations (Russian)*, pp. 118-125, 166. "Naukova Dumka", Kiev, 1978. (Mieczysław Altman) **81j:35049** 35J65 (58G20)
- Regularity of generalized solutions of quasilinear elliptic equations of arbitrary order. (Russian) *Proceedings of an All-Union Conference on Partial Differential Equations (Moscow State Univ., Moscow, 1976)* (Russian), pp. 216-219, *Moskov. Gos. Univ., Meh.-Mat. Fakul'tet, Moscow*, 1978. (See **80f:35002**) **35D10** (35J60)
- Solvability of boundary value problems for nonlinear elliptic equations that are not in the divergence form. (Russian. English summary) *Boundary value problems of mathematical physics and related questions in the theory of functions, 11. Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* **84** (1979), 243-251, 314, 320. (Ju. G. Borisovič) **81c:35051** 35J65 (58G10, 58G20)
- (with Daniljuk, G. I.) Partial regularity of generalized solutions of quasilinear parabolic systems. (Russian) *Dokl. Akad. Nauk SSSR* **250** (1980), no. 4, 790-793. (T. Stys) **81h:35012** 35D10 (35K55)
- Skripnik, M. O.** A class of elliptic systems. (Russian) *Boundary value problems for partial differential equations (Russian)*, pp. 126-130, 167. "Naukova Dumka", Kiev, 1978. (S. Buryšek) **81a:35033** 35J55
- The index of the Dirichlet problem for a class of elliptic systems. (Russian) *Boundary value problems for partial differential equations (Russian)*, pp. 130-132, 167. "Naukova Dumka", Kiev, 1978. (S. Buryšek) **81a:35034** 35J55 (58G10)
- Skripnik, V. M.** (with Šul'ga, Ju. N.) Servicing customers on a closed contour with bounded waiting time. (Russian) *Akad. Nauk Ukrain. SSR Inst. Kibernet. Preprint* 1978, no. 80. *Modelir. Optimiz. Proizvodst. Proc.*, 25-34, 50. (Authors' summary) **81g:60097** 60K25

- Skripnik, V. P.** Behavior of the solutions of systems with a transformed argument with small perturbation. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1979, no. 5, 52-57. (István Györfi) **81c:34057** 34K05
- Skrylova, E. V.** Degenerate congruences generated by a conic and a straight line. (Russian) *Kaliningrad. Gos. Univ. Differentsial'naja Geom. Mnogobraz. Figur* No. 9 (1978), 85-92, 139. (M. Decuyper) **81c:53015** 53A20 (53A25)
- A class of degenerate congruences generated by a quadric and a line. (Russian) *Kaliningrad. Gos. Univ. Differentsial'naja Geom. Mnogobraz. Figur* No. 10 (1979), 115-120, 164. (Josef Vala) **81i:53009** 53A20
- Skrypnik, I. V.** See **Skripnik, I. V.**
- Skrypnik, M. A.** See **Skripnik, M. O.**
- Skrypyk, Jerzy** The Laplace transform of stochastic distributions. (Polish. Russian and English summaries) *Zeszyty Nauk. Politech. Śląsk. Mat.-Fiz.* No. 36 (1979), 103-113. (R. Jajic) **81b:60052** 60G20
- Skubacevskij, A. L.** (with Kamenskij, G. A.; Myl'kis, A. D.) The minimum of a quadratic functional and linear boundary value problems of elliptic type with deviating arguments. (Russian) *Uspehi Mat. Nauk* 34 (1979), no. 3(207), 197-198. (I. Aganović) **81a:35094** 35R10 (35J20)
- (with Kamenskij, G. A.; Myl'kis, A. D.) On the minimum of a quadratic functional and on linear boundary value problems of elliptic type with deviating arguments. (Russian) *Differentsial'nye Uravnenija* 16 (1980), no. 8, 1469-1473, 1533. (Erich Miersemann) **81k:35044** 35J20 (49A22)
- Skubaska, E.** (with Grabowski, Józef) The maximal flow problem in a network with a variable structure. *Proceedings of the International Symposium on Applications of Mathematics in System Theory (Univ. Braşov, Braşov, 1978), II*, pp. 209-222, Univ. Braşov, Braşov, 1979. (See **81j:93006b**) 90B10
- Skula, Ladislav** On certain ideals of the group ring $\mathbb{Z}[G]$. *Arch. Math. (Brno)* 15 (1979), no. 1, 53-66. (M. E. Keating) **81i:12007** 12A57 (12A50, 20C05)
- Index of irregularity of a prime. *J. Reine Angew. Math.* 315 (1980), 92-106. (T. Lepistö) **81c:12014** 12A50 (10C07, 12A35)
- Skullerud, H. R.** (with Kumar, Kailash; Robson, R. E.) Kinetic theory of charged particle swarms in neutral gases. *Austral. J. Phys.* 33 (1980), no. 2, B, 343-448. (Authors' summary) **81i:82020** 82A40 (82A70)
- Skupień, Zdzisław** (with Wojda, A. Paweł) Extremal non-(p, q)-Hamiltonian graphs. *Studia Sci. Math. Hungar.* 10 (1975), no. 3-4, 323-328 (1978). (Editors) **81k:05073** 05C45
- On maximal non-Hamiltonian graphs. *Rostock. Math. Kolloq.* No. 11 (1979), 97-106. (Linda Lesniak-Foster) **81c:05060** 05C45
- Skuridina, A. M.** (with Pankov, A. R.) Recursive estimation of linear model parameters from several groups of measurements. *Avtomat. i Telemekh.* 1979, no. 9, 80-89. (Russian. English summary); translated as *Automat. Remote Control* 40 (1979), no. 9, part 1, 1323-1331 (1980). (Authors' summary) **81a:93091** 93E10 (62J05)
- Skuridin, V. I.** See *Processing of software and hardware for automatic control systems*, **81i:90007**
- Skvorcov, D. P.** Some propositional logics connected with Ju. T. Medvedev's concept of type of information. (Russian) *Semiotika i informatsionnaya sci.* No. 13 (Russian), pp. 142-149, *Akad. Nauk SSSR, Vsesojuz. Inst. Naučn. i Tehn. Informacii, Moscow*, 1979. (P. Štěpánek) **81j:03041b** 03B55
- Two generalizations of the concept of a finite problem. (Russian) *Studies in nonclassical logics and set theory (Russian)*, pp. 201-240, "Nauka", Moscow, 1979. (M. I. Dehraj) **81j:03060** 03C90 (03B60)
- Realizability and finite validity of propositional formulas with constraints on the occurrences of the implication sign. (Russian) *Mat. Zametki* 25 (1979), no. 6, 919-931, 958. (M. Rogava) **81j:03027** 03B20
- The connection of finite validity of certain propositional formulas with derivability in the Kreisel-Putnam system. (Russian. English summary) *Vestnik Moskov. Univ. Ser. I Mat. Meh.* 1980, no. 3, 29-32, 107. (G. E. Minc) **81i:03008** 03F25 (03B20)
- Skvorcov, V. A.** Null series with respect to a multiplicative system. (Russian. English summary) *Vestnik Moskov. Univ. Ser. I Mat. Meh.* 1979, no. 6, 63-67, 108. (W. R. Wade) **81b:43011** 43A75 (42C25)
- Walsh series that are convergent with respect to subsequences of partial sums. (Russian) *Mat. Zametki* 28 (1980), no. 1, 45-52, 167. (P. Simon) **81j:42049** 42C10 (42C25)
- Skym, Sven** (with Jones, Neil D.) Complexity of some problems concerning L systems. *Math. Systems Theory* 13 (1979/80), no. 1, 29-43. (Jan van Leeuwen) **81c:68067** 68F10 (68C25)
- Slabakov, E. V.** Design of completely self-checking combinational devices using residual codes. *Avtomat. i Telemekh.* 1979, no. 10, 133-141. (Russian. English summary); translated as *Automat. Remote Control* 40 (1979), no. 10, part 2, 1512-1519 (1980). (Author's summary) **81d:94052** 94C30
- Sladek, Andrej** Grothendieck and Witt groups in the reduced theory of quadratic forms. *Ann. Polon. Math.* 38 (1980), no. 1, 13-25. (Thomas C. Craven) **81m:10041** 10C05
- Sladký, Karel** Successive approximation methods for dynamic programming models. *Third Formator Symposium on Mathematical Methods for the Analysis of Large-Scale Systems*, pp. 171-189, Academia, Prague, 1979. (See **81j:90007**) 90C39
- On dynamic programming with separable utility criteria. (Russian summary) *Problemy Control Inform. Theory/Problemy Upravlen. Teor. Inform.* 8 (1979), no. 4, 271-295. (Author's summary) **81a:90152** 90C39
- Slahor, L'udomir** (with Chocholaty, Pavel) A numerical method to boundary value problems for second order delay differential equations. *Numer. Math.* 33 (1979), no. 1, 69-75. (Authors' summary) **81i:65065** 65L10 (34K10)
- Slangen, Ja. Ja.** The serial-parallel method for solving large-scale systems of difference equations in a homogeneous computer network. (Russian) *Systems analysis and simulation*, 1980 (Proc. Internat. Sympos., Berlin, 1980), pp. 237-241, Math. Research, 5, Akademie-Verlag, Berlin, 1980. (See **81j:93009**) 68C05
- Slansky, R.** (with Patera, J.; Sharp, R. T.) On a new relation between semisimple Lie algebras. *J. Math. Phys.* 21 (1980), no. 9, 2335-2341. (J. F. Cornwell) **81i:17004** 17B20 (81C40)
- Slater, B. H.** A fragment of new propositional logic. *Internat. Logic Rev.* No. 17-18 (1978), 121-133. (Douglas Walton) **81c:03011** 03B20
- Aristotle's propositional logic. *Philos. Stud.* 36 (1979), no. 1, 35-49. (A. G. Molland) **81b:03032** 03B60 (01A20, 01A55, 03-03, 03A05)
- Slater, John Clarke** ★The calculation of molecular orbitals. With a foreword by John W. D. Connolly. A Wiley-Interscience Publication. *John Wiley & Sons, New York-Chichester-Brisbane*, 1979. vii + 104 pp. ISBN 0-471-03181-X (J. Niederle) **81i:81001** 81-02 (81C05)
- Slater, L. J.** (with Pesaran, M. H.) ★Dynamic regression: theory and algorithms. Computers and their Applications, 5. Ellis Horwood Ltd., Chichester; Halsted Press [John Wiley & Sons], New York-Chichester-Brisbane, 1980. 363 pp. ISBN 0-85312-156-7 (Kenneth N. Berk) **81j:62184** 62M10 (62J05, 62P20, 90A20)
- Slater, Peter J.** Generating all permutations by graphical transpositions. *Ars Combin.* 5 (1978), 219-225. (Author's summary) **81c:05023** 05A99 (05C40)
- Soldering and point splitting. *J. Combin. Theory Ser. B* 24 (1978), no. 3, 338-343. (Author's summary) **81c:05093** 05C40
- (with Simmons, Gustavus J.) The generalized Petersen graphs $G(n, k)$ are Hamiltonian for all $n \geq 8$. *Proceedings of the Tenth Southeastern Conference on Combinatorics, Graph Theory and Computing (Florida Atlantic Univ., Boca Raton, Fla., 1979)*, pp. 861-871, Congress. Numer., XXIII-XXIV, Utilitas Math., Winnipeg, Man., 1979. (M. E. Watkins) **81c:05059** 05C45
- (with Maurer, Stephen B.) Minimally 2-edge-connected graphs. *Second International Conference on Combinatorial Mathematics (New York, 1978)*, pp. 377-382, Ann. New York Acad. Sci., 319, New York Acad. Sci., New York, 1979. (Linda Lesniak-Foster) **81b:05072** 05C40
- (with Cockayne, E. J.; Hedetniemi, Stephen T.) Matchings and transversals in hypergraphs, domination and independence in trees. *J. Combin. Theory Ser. B* 26 (1979), no. 1, 78-80. (J. W. Moon) **81a:05100** 05C65 (05C05)
- (with Vélaz, William Ylas) Permutations of the positive integers with restrictions on the sequence of differences. II. *Pacific J. Math.* 82 (1979), no. 2, 527-531. (N. G. de Bruijn) **81c:05001** 05A05
- (with Bange, David W.; Barkauskas, Anthony E.) Conservative graphs. *J. Graph Theory* 4 (1980), no. 1, 81-91. (A. G. Thomason) **81c:05089** 05C39
- Medians of arbitrary graphs. *J. Graph Theory* 4 (1980), no. 4, 389-392. (K. R. Parthasarathy) **81m:05125** 05C99 (05C05)
- Slatkin, Montgomery** Frequency- and density-dependent selection on a quantitative character. *Genetics* 93 (1979), no. 3, 755-771. (Author's summary) **81k:92038** 92A10
- Slattas, R. Ju.** A thin supporting surface of arbitrary elongation in an aperiodic flow around a bearing surface. (Russian) *Asymptotic methods in systems theory*, No. 9. (Russian), pp. 72-97, 238, Irkutsk. Gos. Univ., Irkutsk, 1976. (Author's summary) **81j:76006** 76B05
- Slavcev, Slavčo G.** Transient motion of a sphere from a state of rest in a viscous incompressible fluid. (Russian. English summary) *Annuaire Univ. Sofia Fac. Math. Méc.* 69 (1974/75), 21-30 (1979). (M. Yanowitch) **81b:76030** 76D30
- Slavík, Václav** (with Ježek, Jaroslav) Primitive lattices. (Russian summary) *Československ Mat. J.* 29(104) (1979), no. 4, 595-634. (G. Grätzer) **81c:06007** 06B05 (06B20)
- Slavjanov, S. Ja.** (with Farafonov, V. G.) The construction of the asymptotics of the eigenfunctions of Fredholm integral equations with a symmetric rapidly oscillating kernel. II. (Russian) *Scattering theory. Theory of oscillations (Russian)*, pp. 134-141, 186-187, *Probl. Mat. Fiz.*, 9, Leningrad. Univ., Leningrad, 1979. (S. Schwabik) **81f:45004** 45B05 (65R20)
- Slavov, A. A.** Application of path integrals to nonperturbative study of massive Yang-Mills theory. *Feynman path integrals (Proc. Internat. Colloq., Marseille, 1978)*, pp. 289-303, *Lecture Notes in Phys.*, 106, Springer, Berlin, 1979. (From the introduction) **81a:81058** 81E10 (81C35)
- Gauge invariant infrared regularization for nonabelian fields. *Phys. Lett. B* 98 (1981), no. 1-2, 57-58. (Editors) **81k:81000** 81E99 (81C35)
- Slavov, D. A.** (with Il'in, V. A.) S-matrix with nonlocal classical sources. (Russian. English summary) *Teoret. Mat. Fiz.* 43 (1980), no. 1, 39-47. (V. S. Ol'hovskij) **81g:81086** 81F15
- Slavuta, E. I.** General method of solving indeterminate second degree equations in Diophantus' *Arithmetica*. (Russian) *Istor.-Mat. Issled.* No. 24 (1979), 310-330, 388-389. (Daniel Coray) **81b:01002** 01A20 (10B05)
- Slavovskij, Jan J.** Deformable gyroscope in a non-Euclidean space classical, nonrelativistic theory. *Rep. Math. Phys.* 10 (1976), no. 2, 219-243. (From the summary) **81i:70006** 70E99 (58F05, 70C99)
- Slawny, J.** (with Holstytzky, W.) Phase transitions in ferromagnetic spin systems at low temperatures. *Comm. Math. Phys.* 66 (1979), no. 2, 147-166. (Michel Romerio) **81c:82010** 82A25 (82A15)
- Sleator, Daniel D. K. D. B.** A 2.5 times optimal algorithm for packing in two dimensions. *Inform. Process. Lett.* 10 (1980), no. 1, 37-40. (From the introduction) **81a:68052** 68C25 (52A45)
- Sleeman, B. D.** ★Multiparameter spectral theory in Hilbert space. *Research Notes in Mathematics*, 22. Pitman Publishing, Ltd., London-San Francisco, Calif., 1978. vii + 118 pp. ISBN 0-8224-8414-5 (F. H. Szafaraniec) **81b:47004** 47A10 (35P05)
- Klein oscillation theorems for multiparameter eigenvalue problems in ordinary differential equations. *Nieuw Arch. Wisk.* (3) 27 (1979), no. 3, 341-362. (Patrick J. Browne) **81b:34021** 34B25 (34C10)
- (with Browne, Patrick J.) Stability regions for multiparameter systems of periodic second order ordinary differential equations. *Proc. Roy. Soc. Edinburgh Sect. A* 84 (1979), no. 3-4, 249-257. (N. P. Bhatia) **81b:34044** 34D20 (34B25)
- (with Browne, Patrick J.) Bifurcation from eigenvalues in nonlinear multiparameter Sturm-Liouville problems. *Glasgow Math. J.* 21 (1980), no. 1, 85-90. (Jesús Hernández) **81c:34016** 34B25 (34B15)
- Instability of certain traveling wave solutions to the Fitz Hugh-Nagumo nerve axon equations. *J. Math. Anal. Appl.* 74 (1980), no. 1, 106-119. (J. Smoller) **81c:35066** 35K45 (35B35, 92A09)
- (with Browne, Patrick J.) Applications of multiparameter spectral theory to special functions. *Math. Proc. Cambridge Philos. Soc.* 87 (1980), no. 2, 275-283. (F. M. Arscott) **81d:33006** 33A60 (34B30, 47A70)
- Sleijpen, Gérard L. G.** The support of the Wiener algebra on strips. I, II. *Nederl. Akad. Wetensch. Indag. Math.* 42 (1980), no. 1, 61-74, 75-82. (J. W. Baker) **81j:43007** 43A20 (22A20)

- Steinikov, V. I.** (with Uberman, V. I.) ★ Исследование плотности аддитивных детектирующих числовых систем с помощью ЭЦБМ. (Russian) [Research on the density of additive detecting number systems by means of a computer] Preprint 10-78. *Akad. Nauk Ukrain. SSR, Fiz.-Tehn. Inst. Nizkikh Temperatur, Kharkov*, 1978. 60 pp. (Richard K. Guy) **81a:10067** 10L10
- Stenrod, M.** (with Ball, J. M.) Feedback stabilization of distributed semilinear control systems. *Appl. Math. Optim.* 5 (1979), no. 2, 169–179. (V. Sree-Hari-Rao) **81a:93070** 93D15 (47H15)
- Unstable viscoelastic fluid flows. *Nonlinear partial differential equations in engineering and applied science* (Proc. Conf., Univ. Rhode Island, Kingston, R.I., 1979), pp. 33–43. *Lecture Notes in Pure and Appl. Math.*, 54, Dekker, New York, 1980. (C. F. Chan Man Fong) **81f:76025** 76E99 (76A10)
- Stability of steady shearing flows subject to large shearing perturbations in a nonlinear viscoelastic fluid. *Proc. Roy. Soc. Edinburgh Sect. A* 85 (1980), no. 3–4, 251–262. (C. F. Chan Man Fong) **81f:76026** 76E99 (34D15, 76A10)
- Stepenčuk, K. M.** See **Stepenčuk, K. M.**
- Stepin, D.** (with Shepp, L. A.; Wyner, Aaron D.) On prediction of moving-average processes. *Bell System Tech. J.* 59 (1980), no. 3, 367–415. (A. Morris Walker) **81g:60041** 60G25 (62M20, 94A17)
- Stepin, G. Ja.** Rigorous solution of the problem of plane wave diffraction by a periodic structure with impedance boundary conditions. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 20 (1980), no. 2, 461–470, 551–552. (L. G. Chambers) **81e:78035** 78A45
- Stepin, L. I.** (with Saraiin, V. A.) Plane problem of the dynamics of a crack in an elastic solid. *Izv. Akad. Nauk SSSR Meh. Tverd. Tela* 14 (1979), no. 4, 54–73 (Russian); translated as *Mech. Solids* 14 (1979), no. 4, 46–62. (From the introduction) **81c:73052** 73M05
- Stepin, I. K.** Boolean systems. (Russian) *Uspehi Mat. Nauk* 34 (1979), no. 6(210), 188–191. (Author's summary) **81b:54040** 54H05 (54D30)
- Stepyan, L. I.** See **Stepin, L. I.**
- Siesarenko, A. P.** (with Rvačov, V. L.) ★ Алгебро-логические и проекционные методы в задачах теплообмена. (Russian) [Algebraic, logical and projection methods in heat exchange problems] "Naukova Dumka", Kiev, 1978. 138 pp. (RZMat 1978:6 B479) **81m:80006** 80A20
- Application of integral transformations and the structural method to the solution of a nonstationary three-dimensional heat conduction problem for a nonclassical domain. (Russian) *Theoretical and applied questions of differential equations and algebra* (Russian), pp. 218–222, 270, "Naukova Dumka", Kiev, 1978. (Author's summary) **81c:80014** 80A20
- Silesaričienė, R.** Some Diophantine approximations. (Russian. Lithuanian and English summaries) *Litovsk. Mat. Sb.* 19 (1979), no. 2, 189–197, 214. (S. V. Kotov) **81g:10068** 10K15
- Silinc, O.** Expansion of certain holomorphic functions (H) in increasing powers of a given polynomial. (Romanian. German summary) *Bul. Ştiinţ. Tehn. Inst. Politehn. "Traian Vuia" Timişoara* 23(37) (1978), no. 2, 96–98 (1979). (Wazir Hasan Abdi) **81m:30053** 30G35
- Sur une équation fonctionnelle cyclique pour une fonction vectorielle. *Bul. Ştiinţ. Tehn. Inst. Politehn. "Traian Vuia" Timişoara* 23(37) (1978), no. 2, 99–100 (1979). (József Tabor) **81i:39007** 39B40
- Sil'ko, A. M.** Special varieties of Jordan algebras. (Russian) *Mat. Zametki* 26 (1979), no. 3, 337–344, 492. (G. V. Dorofeev) **81c:17002** 17A15
- Silpenčuk, K. M.** On invertibility conditions in the theory of absolute summability of double series. (Russian) *Ukrain. Mat. Ž.* 32 (1980), no. 2, 189–194, 284. (H.-H. Körle) **81d:40002** 40B05 (40E05)
- Silenko, A. O.** String-matching in real time: some properties of the data structure. *Mathematical foundations of computer science, 1978* (Proc. Seventh Sympos., Zakopane, 1978), pp. 493–496. *Lecture Notes in Comput. Sci.*, 64, Springer, Berlin, 1978. (See **80b:68004**) **68B15**
- Computational complexity of string and graph identification. *Mathematical foundations of computer science, 1979* (Proc. Eighth Sympos., Olomouc, 1979), pp. 182–190. *Lecture Notes in Comput. Sci.*, 74, Springer, Berlin, 1979. (From the text) **81d:68048** 68C05 (68C25)
- Silva, Edward** (with Starzyk, Janusz) Topological analysis by hierarchic decomposition method. *Proceedings of the Fourth International Symposium on Network Theory* (Ljubljana, 1979), pp. 155–160, Georgi, Str.-Saphorin, 1979. (Authors' summary) **81c:94060** 94C15
- (with Starzyk, Janusz) Hierarchic decomposition method for the topological analysis of electronic networks. *Internat. J. Circuit Theory Appl.* 8 (1980), no. 4, 407–417. (Authors' summary) **81i:94045** 94C15 (90B35)
- Sit'kii, V. I.** A boundary value problem for two functions on a Riemann surface. (Russian) *Ukrain. Mat. Ž.* 31 (1979), no. 5, 588–592, 622. (P. Ju. Alekna) **81b:30077** 30E25
- The Carleman boundary value problem on a Riemann surface. (Russian) *Izv. Vys. Učebn. Zaved. Matematika* 1980, no. 3, 71–74. (Ju. L. Rodin) **81j:30071** 30E25
- Šitajin, G. G.** Philosophical analysis of conceptions of the constructive nature of mathematical thought. (Russian) *Methodological problems of mathematics* (Russian), pp. 211–229, "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. (I. Ruzsa) **81e:00012** 00A25 (03A05)
- Sljarsenčuk, V. E.** Bounded solutions of linear functional equations with linear transformations of the argument. (Russian) *Asymptotic behavior of solutions of functional-differential equations* (Russian), pp. 96–107, 156, *Akad. Nauk Ukrain. SSR, Inst. Mat.*, Kiev, 1978. (Henryk Adamczyk) **81i:45027** 45P05 (46N05)
- Invertibility of differential operators in the space of infinitely differentiable functions on the line. (Russian) *Differentsial'nye Uravnenija* 15 (1979), no. 10, 1796–1803, 1917. (Johannes Elschner) **81b:47057** 47E05 (34A35)
- Invertibility of almost periodic operators generated by discrete systems. (Russian) *Ukrain. Mat. Ž.* 31 (1979), no. 4, 460–463, 479. (Karol Baron) **81b:47042** 47B38
- Absolute exponential stability of linear differential equations of neutral type in a Banach space. (Russian) *Differentsial'nye Uravnenija* 16 (1980), no. 3, 462–469, 573. (D. Bobrowski) **81j:34098** 34D99 (34G10)
- Bounded solutions of nonlinear elliptic equations. (Russian) *Uspehi Mat. Nauk* 35 (1980), no. 1(211), 215–216. (E. M. Saak) **81e:35050** 35J60
- Sloan, D. M.** On boundary conditions for the numerical solution of hyperbolic differential equations. *Internat. J. Numer. Methods Engrg.* 15 (1980), no. 8, 1113–1127. (Alexander Doktor) **81g:65137** 65N10 (39A11)
- Sloan, Ian H.** (with Noussair, Ezzat S.; Burn, B. J.) Projection methods for equations of the second kind. *J. Math. Anal. Appl.* 69 (1979), no. 1, 84–103. (Authors' summary) **81i:65046** 65J10 (47H17)
- A review of numerical methods for Fredholm equations of the second kind. *Application and numerical solution of integral equations* (Proc. Sem., Australian Nat. Univ., Canberra, 1978), pp. 51–74. *Monographs and Textbooks on Mech. of Solids and Fluids (Mech.: Analysis)*, 6, Sijthoff & Noordhoff, Alphen aan den Rijn, 1980. (Frank G. Hagin) **81h:65133** 65R20 (45L10)
- The numerical solution of Fredholm equations of the second kind by polynomial interpolation. *J. Integral Equations* 2 (1980), no. 3, 265–279. (T. S. Papathodorou) **81m:65203** 65R20
- On choosing the points in product integration. *J. Math. Phys.* 21 (1980), no. 5, 1032–1039. (Author's summary) **81g:65029** 65D30
- (with Smith, William E.) Product integration with the Clenshaw-Curtis points: implementation and error estimates. *Numer. Math.* 34 (1980), no. 4, 387–401. (C. W. Clenshaw) **81g:65030** 65D30
- (with Smith, William E.) Product-integration rules based on the zeros of Jacobi polynomials. *SIAM J. Numer. Anal.* 17 (1980), no. 1, 1–13. (P. S. Chiang) **81h:65018** 65D30
- Sloane, A. A.** (with Farrell, P. A.; Hegarty, A. F.; Miller, John J. H.; O'Reilly, M. J.) Numerical results for singularly perturbed linear and quasilinear differential equations using a coarse grid. *Boundary and interior layers—computational and asymptotic methods* (Proc. Conf., Trinity College, Dublin, 1980), pp. 275–280. *Boole, Dán Laoghaire*, 1980. (From the introduction) **81m:65132** 65L10
- Sloane, N. J. A.** Codes over GF(4) and complex lattices. (French summary) *Information theory* (Proc. Internat. CNRS Colloq., Cachan, 1977) (French), pp. 273–283. *Colloques Internat. CNRS*, 276, CNRS, Paris, 1978. (Editors) **81g:94040** 94B60 (10E30)
- (with Odlyzko, A. M.) New bounds on the number of unit spheres that can touch a unit sphere in n dimensions. *J. Combin. Theory Ser. A* 26 (1979), no. 2, 210–214. (Peter Gruber) **81d:52010** 52A45 (05B40, 94B30)
- (with Graham, Ronald L.) Lower bounds for constant weight codes. *IEEE Trans. Inform. Theory* 26 (1980), no. 1, 37–43. (Philip Piret) **81d:94026** 94B60
- (with Pless, Vera; Ward, Harold N.) Ternary codes of minimum weight 6 and the classification of the self-dual codes of length 20. *IEEE Trans. Inform. Theory* 26 (1980), no. 3, 305–316. (Authors' summary) **81b:94033** 94B05
- Slobodnikova, L. V.** Estimation of expansion coefficients of a stationary random field on the basis of a system of Haar functions. *Avtomat. i Telemekh.* 40 (1979), no. 7, 62–67 (Russian. English summary); translated as *Automat. Remote Control* 40 (1979), no. 7, part 1, 996–1000. (Author's summary) **81a:62098** 62M99 (93E03)
- Slobodov, A.** On a control of a Markov chain under conditions with respect to the absolute stationary probabilities and cost. (German summary) *Z. Oper. Res. Ser. A-B* 24 (1980), no. 3, A73–A81. (Author's summary) **81d:90107** 90C40
- Słodkowski, Zbigniew** (with Fischer, Pal) Christensen zero sets and measurable convex functions. *Proc. Amer. Math. Soc.* 79 (1980), no. 3, 449–453. (Jaroslav Smítal) **81d:28013** 28C10 (39C05, 46A99)
- Sloman, Aaron** ★ The computer revolution in philosophy. Philosophy, science and models of mind. *Harvester Studies in Cognitive Science. Humanities Press, Atlantic Highlands, N.J.*, 1978. xvi + 304 pp. ISBN 0-391-00830-7 (Stewart Shapiro) **81i:00007** 00A25 (03A05, 68G99)
- Ślonecznyńska, Jerzy** (with Peradziński, Zbigniew) Finite-difference scheme for stationary Navier-Stokes equations with variable coefficients. *Nonlinear partial differential equations in engineering and applied science* (Proc. Conf., Univ. Rhode Island, Kingston, R.I., 1979), pp. 343–371. *Lecture Notes in Pure and Appl. Math.*, 54, Dekker, New York, 1980. (Christopher Caldwell) **81m:65164** 65N20 (35Q10, 76R99)
- Ślomiński, Leon** Bottleneck assignment problem: an efficient algorithm. (Polish and Russian summaries) *Arch. Automat. Telemekh.* 24 (1979), no. 4, 469–482. (Author's summary) **81b:68038** 68C05 (68C25)
- (with Krus, L.; Libura, M.) Resource distribution combinatorial models in air pollution problems. *Optimization techniques* (Proc. Ninth IFIP Conf., Warsaw, 1979), Part 2, pp. 513–523. *Lecture Notes in Control and Information Sci.*, 23, Springer, Berlin, 1980. (See **81j:49001b**) **90B05** (90A30)
- Slon'ovskii, R. V.** (with Nikitjuk, Ž. M.) Some applications of continued fractions to the solution of first-order differential equations. (Russian) *Vestnik L'ov. Politehn. Inst. No. 141* *Differentsial'nye Uravnenija i ih Prilozhen.* (1980), 69–71, 121. (Authors' summary) **81i:65060** 65L05
- (with Bandyrskiĭ, B. I.) The nonlinear formula of Mikeladze-Aitken. (Russian) *Vestnik L'ov. Politehn. Inst. No. 141* *Differentsial'nye Uravnenija i ih Prilozhen.* (1980), 81–82, 123. (Authors' summary) **81i:65018** 65D15 (65L05)
- Śloman, S. B.** (with Major, P.) A local limit theorem for the convolution of probability measures on a compact connected group. *Z. Wahrsch. Verw. Gebiete* 50 (1979), no. 2, 137–148. (Eberhard Siebert) **81h:60015** 60B15
- Phase transitions for two-dimensional models with isotropic short-range interactions and continuous symmetries. *Comm. Math. Phys.* 71 (1980), no. 2, 207–212. (A. Corciovei) **81h:82023** 82A25
- See also **Simon, B.** (See **81f:81002**)
- Ślowski, Roman** Two approaches to problems of resource allocation among project activities—a comparative study. *J. Oper. Res. Soc.* 31 (1980), no. 8, 711–723. (Author's summary) **81d:90062** 90B35 (90A11)
- Slucki, V. M.** The behavior of the solutions of elliptic equations in unbounded capillary regions. (Russian) *Differentsial'nye Uravnenija* 16 (1980), no. 5, 868–881, 956. (Ja. A. Roitberg) **81g:35032** 35J40 (49F99, 76B10)
- Sluckin, T. J.** (with Machlup, S.) Driven oscillations of a limit-cycle oscillator. *J. Theoret. Biol.* 84 (1980), no. 1, 119–134. (Authors' summary) **81d:00015** 80A30 (92A09)
- (with Evans, Richard B.) A density functional theory for inhomogeneous charged fluids. Application to the surfaces of molten salts. *Molecular Phys.* 40 (1980), no. 2, 413–435. (Authors' summary) **81e:82044** 82A50 (92A40)

- Shiglo, S. N. Continuous dependence of the state of a system on the control in parametric families of spaces. (Russian) *Izv. Vys. Ucheb. Zaved. Matematika* 1979, no. 10, 64-73. (T. K. Serazetdinov) **81c:93046** 93C25
- van der Stoks, A. Stability and the solution of least squares problems. (Dutch) *Nieuw Tijdschr. Wisk.* 66 (1978/79), no. 4, 251-264. (Editors) **81b:65038** 65F20
(with Zweerus, J. R.) An appraisal of some methods for computing Cauchy principal values of integrals. *Numerische Integratie (Tagung, Math. Forschungsinstit., Oberwolfach, 1978)*, pp. 264-287, *Internat. Ser. Numer. Math.*, 45, Birkhäuser, Basel, 1979. (Authors' summary) **81f:65023** 65D30
Computation and stability of solutions of linear least squares problems. *Proceedings, Bicentennial Congress Wiskundig Genootschap (Vrije Univ., Amsterdam, 1978)*, Part II, pp. 331-343, *Math. Centre Tracts*, 101, Math. Centrum, Amsterdam, 1979. (See **80d:00016b**) 65F20
(with Veltkamp, G. W.) Restoring rank and consistency by orthogonal projection. *Linear Algebra Appl.* 28 (1979), 257-278. (M. Stojaković) **81c:15066** 15A09
See also Analytical and numerical approaches to asymptotic problems in analysis, **81m:65005**
- Shimizu, M. J. (with Clarke, C. J. S.) Singular points and projective limits in relativity. *Comm. Math. Phys.* 71 (1980), no. 3, 289-297. (Mauro Francaviglia) **81f:83032** 83C99 (58A30)
- Slutz, D. R. (with Blasgen, M. W.; Astrahan, M. M.; Chamberlin, D. D.; Gray, James N.; King, W. F.; Lindsay, B. G.; Lorie, R. A.; Mehl, J. W.; Price, T. G.; Putzolu, G. R.; Schkolnick, M.; Selinger, P. G.; Strong, H. R.; Traiger, I. L.; Wade, B. W.; Yost, R. A.) System R: an architectural overview. *IBM Systems J.* 26 (1981), no. 1, 41-62. (Authors' summary) **81m:68079** 68H05
- Slutz, Ralph J. Memories of the Bureau of Standards' SEAC. *A history of computing in the twentieth century*, pp. 471-477, *Academic Press*, New York, 1980. (See **81f:68002**) 68-03 (01A65)
- Slutzki, Gloria Descriptive complexity of concurrent processes (preliminary version). *Mathematical foundations of computer science, 1980 (Proc. Ninth Sympos., Rydzyna, 1980)*, pp. 601-611, *Lecture Notes in Comput. Sci.*, 88, Springer, Berlin, 1980. (See **81c:68003**) 68B20
- Styk, V. A. Distortion theorems for a family of weakly univalent functions in a circle. (Russian) *Mat. Zametki* 27 (1980), no. 6, 927-933, 990. (R. Kühnau) **81m:30015** 30C45
- Szudzik, Constantin Equilibrium points for $2 \times n$ bimatrix games. *An. Ştiinţ. Univ. "Al. I. Cuza" Iaşi Sect. I a Mat. (N.S.)* 25 (1979), no. 1, 193-200. (G. A. Heuer) **81c:90111** 90D05
On the equilibrium points for bimatrix games. (German and Russian summaries) *Math. Operationsforsch. Statist. Ser. Optim.* 10 (1979), no. 3, 373-378. (G. A. Heuer) **81c:90112** 90D05
- Smaglina, T. I. Periodic Green function of a second-order differential equation in a Banach space. (Russian) *Approximate methods for investigating differential equations and their applications*, No. 4 (Russian), pp. 77-84, 136, *Kuibyshev. Gos. Univ., Kuibyshev*, 1978. (P. Talpalanu) **81g:34029** 34B27
- Smagin, S. Parabolic approximation of Navier-Stokes equations. (Russian) *Čisl. Metody Meh. Splošn. Sredy* 10 (1979), no. 1, 137-149. (V. P. Kalashnikov) **81c:76017** 76D05 (35Q10)
(with Kuznetsov, V. G.) Approximation of Navier-Stokes equations by equations of evolutionary type. (Russian) *Seminar on Numerical Methods for Solving Balance Equations (Berlin, 1980) (Russian)*, pp. 46-56, *Rep. 1980, 5*, Akad. Wiss. DDR, Berlin, 1980. (See **81j:65013**) 76D05 (65N99)
- Smaligic, A. (with Sayed, W. A.) Coulomb-like solutions for SU_2 gauge fields coupled to strong gravity. (Italian and Russian summaries) *Nuovo Cimento A* (11) 56 (1980), no. 4, 435-444. (Authors' summary) **81e:81105** 81E99 (83E99)
- Smajdor, Wilhelmina Analytic solutions of Schröder equation. *Publ. Math. Debrecen* 26 (1979), no. 3-4, 149-153. (K. Lajkó) **81f:39012** 39B70 (39B10)
- Smakov, Ju. I. (with Nasif, I. F.) Effect of the electric field on the flow of a dilute suspension of solid dielectric particles in a flat duct. A translation of *Gidromeh.* 36 (1977), 107-113. *Fluid Mech.—Soviet Res.* 8 (1979), no. 3, 129-137. (Authors' summary) **81b:76072** 76W05
- Small, Lance W. (with Herstein, I. N.) Some comments on prime rings. *J. Algebra* 60 (1979), no. 1, 223-228. (Robert Gordon) **81c:16003** 16A12 (16A19)
(with Amitsur, S. A.) Prime ideals in PI rings. *J. Algebra* 62 (1980), no. 2, 358-383. (Søren Jøndrup) **81c:16027** 16A38
- Small, T. See Shell-Small, T.
- Smallwood, J. The Cauchy problem in general relativity. III. On locally imbedding a family of null hypersurfaces. *J. Math. Phys.* 20 (1979), no. 3, 459-464. (Authors' summary) **81k:83010** 83C05 (53B50)
- Smale, Sverre O. The inductive step of the second Brauer-Thrall conjecture. *Canad. J. Math.* 32 (1980), no. 2, 342-349. (Andrzej Skowroński) **81h:16050** 16A64 (16A35)
- Smarenko, T. L. (with Makarov, V. L.; Gavriljuk, I. P.) The regularization of difference schemes for quasilinear elliptic equations in the strip. (Russian. English summary) *Vychisl. Prikl. Mat. (Kiev) No. 39* (1979), 94-101, 174. (Authors' summary) **81b:65090** 65N10
- Smarr, Larry L. Basic concepts in finite differencing of partial differential equations. *Sources of gravitational radiation (Proc. Workshop, Battelle Seattle Res. Center, Seattle, Wash., 1978)*, pp. 139-159, *Cambridge Univ. Press, Cambridge*, 1979. (See **81j:83017**) 83C05 (65M05, 65N05)
(with Eardley, Douglas M.) Time functions in numerical relativity. Marginally bound dust collapse. *Phys. Rev. D* (3) 19 (1979), no. 8, 2239-2259. (John Wainwright) **81h:83036** 83C99 (53B50)
See also Sources of gravitational radiation, **81j:83017**
- Smarszewski, Ryszard On characterization of Chebyshev optimal starting and transformed approximations by families having a degree. (Polish and Russian summaries) *Ann. Univ. Mariae Curie-Skłodowska Sect. A* 31 (1977), 111-118 (1979). (G. Meinardus) **81h:41034** 41A50
Some remarks on nonlinear Chebyshev approximation to functions defined on normal spaces. *J. Approx. Theory* 24 (1978), no. 2, 169-175. (Jack Williams) **81a:41039** 41A46 (41A50)
- Nonlinear Chebyshev approximations having restricted ranges. *J. Approx. Theory* 25 (1979), no. 1, 56-64. (Jack Williams) **81a:41029** 41A29 (41A50)
Chebyshev optimal starting approximation by families with the weak betweenness property. (Polish summary) *Zastos. Mat.* 16, no. 3, 485-495 (1979). (G. D. Taylor) **81b:41069** 41A50 (41A46)
- Šmatlov, B. A. (with Alešin, A. V.) Turnpike theorems with von Neumann border with terminal and target functions. (Russian) *Ekonom. i Mat. Metody* 16 (1980), no. 1, 194-198. (Authors' introduction) **81m:90037** 90A14 (90A16)
- Šmatkova, A. A. Dynamic contact problems that occur when a die moves along the boundary of a viscoelastic half-space. *Izv. Akad. Nauk SSSR Meh. Teord. Tela* 14 (1979), no. 3, 89-97 (Russian); translated as *Mech. Solids* 14 (1979), no. 3, 78-85. (Authors' summary) **81c:73056** 73T05 (73Fxx)
- Šmatok, S. A. (with Luk'janov, V. F.) ★ Вопросы теории взаимодействующих марковских систем. (Russian) [Questions on the theory of interacting Markov systems] "Vys. Škola", Minsk, 1979. 144 pp. (V. P. Belavkin) **81a:93112** 93E20 (60J99)
- Smednäs, Tom (with Engquist, Björn) Automatic computer code generation for hyperbolic and parabolic differential equations. *SIAM J. Sci. Statist. Comput.* 1 (1980), no. 2, 249-259. (Authors' summary) **81h:65003** 65-04 (65M05, 65V05)
- Smeets, Y. (with Cole, F.; Gochet, W.; van Asche, F.; Ecker, J. G.) Reversed geometric programming: a branch-and-bound method involving linear subproblems. *European J. Oper. Res.* 5 (1980), no. 1, 26-35. (Authors' summary) **81e:90095** 90C31 (90C30)
- Šmel'kin, A. L. (with Tavazze, A. D.) Subgroups of free pro-nilpotent groups. (Russian. Georgian and English summaries) *Sobšč. Akad. Nauk Gruz. SSR* 93 (1979), no. 2, 277-279. (Ju. I. Merzljakov) **81c:20035** 20E18 (17B30, 20F19)
- Smelov, V. A. Means of forming basis functions for multidimensional variational problems. (Russian) *Difference and variational-difference methods (Proc. Second Sem. Methods of Numer. Appl. Math., Novosibirsk, 1977) (Russian)*, pp. 111-117, *Akad. Nauk SSSR Sibirsk. Otdel. Vychisl. Centr. Novosibirsk*, 1977. (L. Mikolajczyk) **81g:65086** 65K10 (49B99)
Approximation of piecewise smooth functions by eigenelements of two Sturm-Liouville problems. (Russian) *Dokl. Akad. Nauk SSSR* 250 (1980), no. 3, 573-577. (V. A. Tkachenko) **81k:34020** 34B25 (41A30)
Symmetrization of an odd P_{2k+1} -approximation of a one-velocity transport equation. (Russian) *Ž. Vychisl. Mat. i Mat. Fiz.* 20 (1980), no. 1, 121-132, 261. (Authors' summary) **81a:82062** 82A70 (65P05)
- Smetek, Zygfryd An introduction to cohomology groups in the operational calculus. *Demonstratio Math.* 12 (1979), no. 1, 5-21. (Mircea Puta) **81m:44005** 44A40 (58A99)
- Smerage, Glen H. On the extension of complementary variables modeling theory to biology and ecology. *Problem analysis in science and engineering (Conf., Univ. Waterloo, Waterloo, Ont., 1975)*, pp. 427-462, *Academic Press*, New York, 1977. (See **80h:00004**) 92A17
Toward a theory of representation for biosystems and ecosystems. *Proceedings of the First International Conference on Mathematical Modeling (St. Louis, Mo., 1977)*, Vol. IV, pp. 2071-2080, *Univ. Missouri-Rolla, Rolla, Mo.*, 1977. (Authors' summary) **81j:92017** 92A09 (92A17)
- Smereka, I. P. Application of special Atab-functions to the construction of the periodic solution of a nonlinear wave equation. (Russian) *Asymptotic methods of nonlinear mechanics (Russian)*, pp. 134-138, 198, *Akad. Nauk Ukrain. SSR, Inst. Mat., Kiev*, 1979. (V. E. Korepin) **81d:35051** 35L25 (35B10)
Reduction in the mean square of a system of first-order essentially nonlinear equations to the standard form. (Russian) *Vestnik L'vov. Politehn. Inst. No. 141 Differencial'nye Uravnenija i ih Prilozhen.* (1980), 83-84, 124. (Authors' summary) **81g:34044** 34C20 (65L99)
- Šmerling, D. S. Distribution-free rank tests for incomplete blocks with an alternative of a priori ordering. (Russian) *Expert estimates. Voprosy Kibernet. (Moscow) No. 58* (1979), 52-65. (Authors' summary) **81c:62062** 62G10 (62K10)
- de Smet, H. (with Puystjens, R.) The Moore-Penrose inverse for matrices over skew polynomial rings. *Ring theory, Antwerp 1980 (Proc. Conf., Univ. Antwerp, Antwerp, 1980)*, pp. 94-103, *Lecture Notes in Math.*, 825, Springer, Berlin, 1980. (Susan Montgomery) **81m:15005** 15A09 (15A54, 16A08, 16A28)
- Smetanuk, Bohdan On the minimal critical set of a Latin square. *Utilitas Math.* 16 (1979), 97-100. (Editors) **81d:05015** 05B15
- Smeur, A. J. E. M. The Rule of False applied to the quadratic equation, in three sixteenth century arithmetics. *Arch. Internat. Hist. Sci.* 28 (1978), no. 102, 66-101. (P. Bockstaal) **81c:01015** 01A40
- Smickh, S. V. Eigenvectors and relative indices of positive operators. (Russian) *Qualitative and approximate methods for the investigation of operator equations*, No. 3 (Russian), pp. 171-183, *Jaroslavl. Gos. Univ., Jaroslavl*, 1978. (J. Danel) **81f:47054** 47H07 (55M25)
Conoids and linear operators that leave them invariant. (Russian) *Qualitative and approximate methods for the investigation of operator equations*, No. 4 (Russian), pp. 137-151, *Jaroslavl. Gos. Univ., Jaroslavl*, 1979. (P. P. Zabreiko) **81m:47054** 47B55 (46A40, 47A15)
- Šmidt, R. A. Subgroups of the general linear group over the field of quotients of a Dedekind ring. (Russian) *Rings and modules*, 2. *Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 94 (1979), 119-130, 152. (J. L. Brenner) **81f:20057** 20G35 (15A33)
- Šmigel'ska, Jolanta The Grunsky-Nehari inequality for univalent, symmetric and bounded functions. (Polish. Russian and English summaries) *Zeszyty Nauk. Politech. Śląsk. Mat.-Fiz. No. 34* (1979), 97-105. (E. Zlotkiewicz) **81c:30027** 30C55
Variational formulas in a class of univalent, symmetric and bounded functions. (Polish. Russian and English summaries) *Zeszyty Nauk. Politech. Śląsk. Mat.-Fiz. No. 34* (1979), 107-116. (Z. Lewandowski) **81d:30021** 30C45
- Šmigrev, E. F. Complements to invariant subgroups. (Russian) *Finite groups (Proc. Gomel Sem., Gomel, 1975-1977) (Russian)*, pp. 155-166, 176, "Nauka i Tehnika", Minsk, 1978. (Ja. G. Berković (Zbl 404:20011)) **81h:20022** 20D10
- Smiglecki, Marcin See Voisė, Waldemar, **81b:01013**
- Smirnov, A. B. (with Troickii, V. A.) Optimization of natural vibrational frequencies of curvilinear thin elastic rods. *Izv. Akad. Nauk SSSR Meh. Teord. Tela* 14 (1979), no. 5, 162-168 (Russian); translated as *Mech. Solids* 14 (1979), no. 5, 140-145. (From the

- introduction) **81d:73028** 73D99 (73K05)
- Smirnov, A. N. (with Ševčenko, V. N.) Martin's algorithm and regular cuts for integer linear programming. (Russian) *Ž. Vychisl. Mat. i Mat. Fiz.* **20** (1980), no. 2, 505–509, 553. (Authors' summary) **81c:90071** 90C10
- Smirnov, E. Ja. Control of the triaxial orientation of a solid body. (Russian) *Problems of stability of motion, analytical mechanics and control of motion (Third All-Union Cetero Conf., Irkutsk, 1977)* (Russian), pp. 281–290, 327, "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. (Author's summary) **81g:93076** 93C99 (70E05)
- Smirnov, E. P. (with Pančenko, V. A.) Generalized orthogonality relation for waveguides with anisotropic filling. *Radiotekhn. i Elektron.* **24** (1979), no. 5, 1066–1070 (Russian); translated as *Radio Engng. Electron. Phys.* **24** (1979), no. 5, 128–131 (1980). (From the text) **81h:78028** 78A50
- Smirnov, G. S. A remark on the uniqueness of the polynomial of best approximation in the L metric. (Ukrainian. English and Russian summaries) *Visnik Kirov. Univ. Ser. Mat. Mek. No. 19* (1977), 31–36, 149. (I. Marušciac) **81h:41074** 41A52
- Smirnov, Ju. F. (with Šustov, A. P.) Group theory of pseudo-oscillators. *J. Phys. A* **12** (1979), no. 12, 2399–2406. (L. S. Schulman) **81k:81035** 81C40 (22E43, 22E70) (with Ašerova, R. M.; Tolstol, V. N.) Description of a certain class of projection operators for complex semisimple Lie algebras. (Russian) *Mat. Zametki* **26** (1979), no. 1, 15–25, 156. (H. de Vries) **81h:17009** 17B10 (81C40)
- Smirnov, Ju. M. (with Agaronov, V. V.) Ljusternik-Snirel'man category for pro-categories. (Russian) *Dokl. Akad. Nauk SSSR* **246** (1979), no. 4, 777–779. (Maria Moszyńska) **81a:55006** 55M30 (54F43)
- Shape theory and continuous transformation groups. (Russian) *Uspehi Mat. Nauk* **34** (1979), no. 6(210), 119–123. (S. Mardesić) **81g:54034** 54F43 (54F40, 57S99)
- See also Kodama, Yukihiko, **81h:55008** and Domiaty, R. Z.; et al., **81h:33029**
- Smirnov, M. M. (with Bogomolov, S. I.; Simson, E. A.; Guglja, T. Ju.) Free geometrically nonlinear oscillations of ring-shaped plates in the presence of static forces in the middle surface. (Russian) *Dinamika i Pročnost' Malin* No. 31 (1980), 46–53, 2. (Authors' summary) **81h:73033** 73K12 (73D35)
- Smirnov, S. G. Immersions and imbeddings of smooth manifolds. (Russian) *Uspehi Mat. Nauk* **34** (1979), no. 6(210), 191–194. (Jože Vrabec) **81c:57033** 57R40 (57R42)
- Smirnov, S. V. Approximations of mappings into a group. (Russian) *Algebra i Logika* **17** (1978), no. 1, 86–101, 122. (From the introduction) **81h:41038** 41A65 (03H05)
- Smirnov, T. G. (with Elkin, V. I.; Pavlovskij, Ju. N.) The method of complete systems in aggregation problems. (Russian) *Upravljajemye Sistemy* No. 18 (1979), 26–38, 76. (Authors' summary) **81g:93002** 93A10
- Smirnov, V. A. Theory of quantification and ε -calculus. *Essays on mathematical and philosophical logic (Proc. Fourth Scandinavian Logic Sympos. and First Societ-Finnish Logic Conf., Jyväskylä, 1976)*, pp. 41–47, *Synthese Library*, 122, Reidel, Dordrecht, 1979. (M. Yasuhara) **81c:03010** 03B10 (03F55)
- Singular structure of the Feynman diagrams. (Russian. English summary) *Teoret. Mat. Fiz.* **41** (1979), no. 3, 330–335. (B. Geyer) **81c:81017** 81C30 (46F20) (with Bočarov, V. A.; Voilvilov, E. K.; Dragalin, A. G.) Some problems of the development of logic. (Russian) *Voprosy Filoz.* **1979**, no. 6, 102–114. (Stanisław J. Surma) **81i:03005** 03-03 (01A60, 03A05)
- Infrared and ultraviolet divergences of coefficient functions of Feynman diagrams as tempered distributions. (Russian. English summary) *Teoret. Mat. Fiz.* **44** (1980), no. 3, 307–320. (Author's summary) **81k:81027** 81C30
- Smirnov, Ye. P. See Smirnov, E. P.
- Smirnov, Yu. F. See Smirnov, Ju. F.
- Smirnova, N. L. (with Kuražkovskaja, V. S.; Belov, N. V.) Relations between structural types. Symmetry of covering of trigonal and quadratic networks by polygons and the corresponding layers of polyhedra. *Kristallografiya* **24** (1979), no. 5, 917–922 (Russian); translated as *Soviet Phys. Cryst.* **24** (1979), no. 5, 525–528 (1980). (J. J. Burckhardt) **81i:52014** 52A45 (82A60)
- Smirnova, V. B. (with Leonov, G. A.) The reduction method for integro-differential equations. (Russian) *Sibirsk. Mat. Ž.* **21** (1980), no. 4, 112–124, 237. (Stefan Balint) **81j:45014** 45J05
- Smít, C. F. On a distribution-free Behrens-Fisher test by Hettmansperger & Malin. *Biometrika* **67** (1980), no. 1, 241–242. (M. L. Tiku) **81f:62081** 62G10
- Smít, J. New recursive minor expansion algorithms, a presentation in a comparative context. *Symbolic and algebraic computation (EUROSAM '79, Internat. Sympos., Marseille, 1979)*, pp. 74–87, *Lecture Notes in Comput. Sci.*, 72, Springer, Berlin, 1979. (N. N. Abdelmalek) **81h:65027** 65F05 (65F40)
- Smít, J. C. Beware of averages! *Statist. Neerlandica* **33** (1979), no. 2, 65–71. (I. A. Melamed) **81h:62022** 62E15
- Smítalová, Kristína Asymptotic properties of solutions of delayed linear differential equations. (Slovak and Russian summaries) *Acta Fac. Rerum Natur. Univ. Comenian.* **34** (1979), 103–112. (Olusola Akinyele) **81h:34004** 34K15
- On a problem concerning a functional-differential equation. (Russian summary) *Math. Slovaca* **30** (1980), no. 3, 239–242. (Ioan I. Vrabie) **81m:34113** 34K30
- Smith, A. F. M. (with Spiegelhalter, D. J.) Bayes factors and choice criteria for linear models. *J. Roy. Statist. Soc. Ser. B* **42** (1980), no. 2, 213–220. (D. V. Lindley) **81j:62059** 62F05 (62J99)
- (with Cook, D. G.) Straight lines with a change-point: a Bayesian analysis of some renal transplant data. *J. Roy. Statist. Soc. Ser. C* **29** (1980), no. 2, 180–189. (Bert M. Steece) **81m:62189** 62P10 (62F15, 92A07)
- Smith, B. J. (with Jordan, H. F.) Implications of series-parallel sequencing rules. (German summary) *Computing* **19 (1977/78), no. 3, 189–201. (Authors' summary) **81c:68026** 68B20 (68A05)**
- Smith, Brent (with Pigno, Louis) Quantitative behavior of transforms with norm-bounded partial sums. *Amer. J. Math.* **102** (1980), no. 2, 321–326. (Douglas Kurtz) **81c:42015** 42A38 (42A16)
- (with Pigno, Louis) Almost idempotent measures on compact abelian groups. *J. Funct. Anal.* **38** (1980), no. 1, 61–70. (Benjamin B. Wells) **81j:43011** 43A25
- (with Pigno, Louis) A remark on the F. and M. Riesz theorem. *Proc. Amer. Math. Soc.* **79** (1980), no. 4, 585–586. (Takahiko Nakazi) **81f:43006** 43A17 (46J10)
- Hewlitt-Smith, C. H. See Llewellyn-Smith, C. H.
- Smith, Carey (with Redheffer, Raymond) On a surprising inequality of Goldberg and Straus. *Amer. Math. Monthly* **87** (1980), no. 5, 387–390. (A. E. Danese) **81e:15006** 15A39 (26D15)
- Smith, Cedric A. B. Estimating genetic correlations. *Ann. Human Genetics* **43** (1979/80), no. 3, 265–284. (Ju. I. Ljubić) **81i:92012** 92A10 (62P10)
- Further remarks on estimating genetic correlations. *Ann. Human Genetics* **44** (1980/81), no. 1, 95–105. (Klaus Hinkelmann) **81m:62190** 62P10 (92A10)
- Smith, Chris (with Mitchell, A. Richard) An existence theorem for weak solutions of differential equations in Banach spaces. *Nonlinear equations in abstract spaces (Proc. Internat. Sympos., Univ. Texas, Arlington, Tex., 1977)*, pp. 387–403, *Academic Press, New York*, 1978. (Michele Mininni) **81k:34059** 34G20 (47H10)
- Smith, Claudia (with Hoggatt, Verner E., Jr.) Roots of $(H-L)/15$ recurrence equations in generalized Pascal triangles. *Fibonacci Quart.* **18** (1980), no. 1, 36–42. (E. L. Cohen) **81g:10024** 10A35
- Smith, D. H. Perfect codes in the graphs O_3 and $L(O_3)$. *Glasgow Math. J.* **21** (1980), no. 2, 169–172. (Peter Hammond) **81k:94033** 94B25 (05C99)
- Smith, E. R. The dielectric constant of a lattice of polarisable spheres. *J. Phys. A* **13** (1980), no. 4, L107–L110. (Author's summary) **81a:82044** 82A60
- (with Perram, J. W.) The role of poles of the structure factor in determining properties of the hard sphere fluid. *J. Phys. A* **13** (1980), no. 6, 2219–2227. (Authors' summary) **81d:82008** 82A05 (82A50)
- Smith, Eric (with Bell, C. B.; Ramirez, F.) Wiener-Lévy models, spherically exchangeable time series and simultaneous inference in growth curve analysis. *Asymptotic theory of statistical tests and estimation (Proc. Adv. Internat. Sympos., Univ. North Carolina, Chapel Hill, N.C., 1979)*, pp. 127–145, *Academic Press, New York*, 1980. (Theo Gasser) **81k:62119** 62M05 (62P10)
- Smith, F. A. (with Shapiro, H. L.) Paracompactness in uniform spaces. *Proceedings of the 1978 Topology Conference (Univ. Oklahoma, Norman, Okla., 1978)*, *L. Topology Proc.* **3** (1978), no. 1, 179–197 (1979). (Anthony D'Aristotle) **81a:54020** 54D20 (54E15)
- Smith, F. R. See Ver Eecke, Paul, **81c:58001**
- Smith, F. T. (with Eagles, P. M.) The influence of nonparallelism in channel flow stability. *J. Engrg. Math.* **14** (1980), no. 3, 219–237. (Charles J. Amick) **81g:76060** 76E99
- (with Duck, P. W.) On the severe nonsymmetric constriction, curving or cornering of channel flows. *J. Fluid Mech.* **98** (1980), no. 4, 727–753. (Authors' summary) **81j:76030** 76D15
- (with Dennis, S. C. R.) Steady flow through a channel with a symmetrical constriction in the form of a step. *Proc. Roy. Soc. London Ser. A* **372** (1980), no. 1750, 393–414. (Authors' summary) **81j:76023** 76D05 (65P05)
- (with Bodonyi, R. J.) On the stability of the developing flow in a channel or circular pipe. *Quart. J. Mech. Appl. Math.* **33** (1980), no. 3, 293–320. (Authors' summary) **81k:76023** 76E05
- Smith, Furman H. (with Kimeldorf, George) Binomial searching for a random number of multinomially hidden objects. *Management Sci.* **25** (1979), no. 11, 1115–1126 (1980). (I. Gh. Ciobanu) **81i:90117** 90B40
- Smith, Gary (with Campbell, Frank) A critique of some ridge regression methods. With comments by Ronald A. Thisted, Donald W. Marquardt, R. Craig Van Nostrand, D. V. Lindley, Robert L. Obenchain, Lawrence C. Peele, Thomas P. Ryan, H. D. Vinod and Richard F. Gunst, and with a reply by the authors. *J. Amer. Statist. Assoc.* **75** (1980), no. 369, 74–103. (Colin L. Mallows) **81m:62131** 62J07
- Smith, Hal (with Schmitt, Klaus) On eigenvalue problems for nondifferentiable mappings. *J. Differential Equations* **33** (1979), no. 3, 294–319. (J. W. Macki) **81a:47061** 47H15 (34B25)
- (with Martelli, Mario; Schmitt, Klaus) Periodic solutions of some nonlinear delay-differential equations. *J. Math. Anal. Appl.* **74** (1980), no. 2, 494–503. (Ch. G. Philos) **81c:34056** 34K15
- (with Stuart, C. A.) A uniqueness theorem for fixed points. *Proc. Amer. Math. Soc.* **79** (1980), no. 2, 237–240. (Louis A. Talman) **81j:47062** 47H10 (54H25)
- Smith, H. V. On the location of the singularities of the function defined by a Dirichlet series. *Rend. Circ. Mat. Palermo* (2) **27** (1978), no. 3, 382–390. (J. R. Shackell) **81c:30005** 30B50
- The numerical approximation of a class of infinite integrals. *BIT* **19** (1979), no. 4, 549–551. (R. Franke) **81c:65031** 65D30
- Smith, Harry F. (with Hentzel, Irvin Roy; Kleinfeld, Erwin) The nucleus in alternative rings with idempotent. *Can. J. Math. Rep. Acad. Sci. Canada* **1** (1978/79), no. 1, 17–19. (Michael Rich) **81b:17012** 17D05
- (with Hentzel, Irvin Roy; Hogen, Leslie) Flexible derivation alternator rings. *Comm. Algebra* **8** (1980), no. 20, 1997–2014. (M. L. Tomber) **81m:17001** 17A30 (17A20)
- Finally generated solvable generalized $(-1, 1)$ algebras. *Houston J. Math.* **6** (1980), no. 1, 141–148. (Arie H. Boers) **81m:17002** 17A30
- Smith, I. M. See Survey of numerical methods for partial differential equations, **81i:65001**
- maynard Smith, J. See Maynard Smith, J.
- Smith, J. C. Collectionwise normality and expandability in quasi- k -spaces. *Topology (Proc. Fourth Colloq., Budapest, 1978)*, Vol. II, pp. 1111–1125, *Colloq. Math. Soc. János Bolyai*, 23, North-Holland, Amsterdam, 1980. (J. E. Vaughan) **81k:54022** 54D10 (54D15)
- Smith, J. E. See Smith, Jo E.
- Smith, J. H. (with Lewis, T. O.) Determining the effects of intraclass correlation on factorial experiments. *Comm. Statist. A—Theory Methods* **9** (1980), no. 13, 1353–1364. (B. C. Gupta) **81j:62157** 62K15
- Smith, J. MacGregor (with Liebman, Judith S.) An $O(n^2)$ heuristic algorithm for the directed Steiner minimal tree problem. *Appl. Math. Modelling* **4** (1980), no. 5, 369–375. (Authors' summary) **81i:90194** 90C35 (05C05, 68E10)
- Smith, J. Q. A generalization of the Bayesian steady forecasting model. *J. Roy. Statist. Soc. Ser. B* **41** (1979), no. 3, 375–387. (Tom Leonard) **81d:62031** 62F15 (62M20)
- Mixture catastrophes and Bayes decision theory. *Math. Proc. Cambridge Philos. Soc.* **86** (1979), no. 1, 91–101. (Leslie Lander) **81a:58016** 58C28 (62C10)
- Smith, J. Wolfgang Compactly generated submersions. *Houston J. Math.* **5** (1979), no. 3, 407–417. (Oscar Burlet) **81c:57030** 57R42
- (with Sekino, Junpei) Homology on the category of submersions. *Houston J. Math.* **5** (1979), no. 4, 565–601. (Oscar Burlet) **81k:55029** 55R20 (57R99)

- Smith, James E. Detection of faults in programmable logic arrays. *IEEE Trans. Comput.* 28 (1979), no. 11, 845-853. (Author's summary) **81a:94653** 94C10
 Measures of the effectiveness of fault signature analysis. *IEEE Trans. Comput.* 29 (1980), no. 6, 510-514. (From the summary) **81g:94079** 94C99
- Smith, Jeffrey H. (with Chae, So Bong) Remote points and G-spaces. *Topology Appl.* 11 (1980), no. 3, 243-246. (R. Grant Woods) **81m:54037** 54D35 (54D40)
- Smith, Jo E. The lattice of I -group varieties. *Trans. Amer. Math. Soc.* 257 (1980), no. 2, 347-357. (J. Kist) **81k:66026** 06F15 (06B20)
 See also **Ordered groups**. **81m:66001**
- Smith, K. T. (with Hamaker, C.; Solomon, D. C.; Wagner, S. L.) The divergent beam X-ray transform. *Rocky Mountain J. Math.* 10 (1980), no. 1, 253-283. (Gabor T. Herman) **81h:44003** 44A15 (68G10, 92A05)
- Smith, Kirby C. (with Maxson, Carlton J.) Simple near-ring centralizers of finite rings. *Proc. Amer. Math. Soc.* 75 (1979), no. 1, 8-12. (G. Betsch) **81c:16047** 16A76
 (with Maxson, Carlton J.) The centralizer of a set of group automorphisms. *Comm. Algebra* 8 (1980), no. 3, 211-230. (J. J. Malone) **81c:16048** 16A76
- Smith, M. J. The existence, uniqueness and stability of traffic equilibria. *Transportation Res. Part B* 13 (1979), no. 4, 295-304. (Author's summary) **81a:90089** 90B20
- Smith, M. W. A. (with Roberts, A. P.) The observability of initial- and lagging-state observers. *Inform. Sci.* 16 (1978), no. 2, 89-93. (Ethebert N. Chukwu) **81c:93018** 93B07 (93C45)
- Smith, Michel (with Young, Sam W.) Periodic homeomorphisms on T -like continua. *Fund. Math.* 104 (1979), no. 3, 221-224. (L. E. Ward, Jr.) **81a:54038** 54F62
 Large indecomposable continua with only one component. *Pacific J. Math.* 86 (1980), no. 2, 593-600. (József Krasinkiewicz) **81k:54062** 54F20
- Smith, P. Arnot (with Morrison, W. R. B.) A practical application of a network model. *Numerical simulation of fluid motion (Proc. Internat. Conf. Numerical Simulation of Fluid Dynamic Systems, Monash Univ., Melbourne, 1976)*, pp. 407-434, North-Holland, Amsterdam, 1978. (See **81a:76005**) 76-04 (65P05)
- Smith, P. F. Localization in non-Noetherian group rings. *Glasgow Math. J.* 21 (1980), no. 2, 151-163. (E. Formanek) **81c:20005** 20C07
 More on the AR property and chain conditions in group rings. *Israel J. Math.* 35 (1980), no. 3, 186-204. (J. E. Roseblade) **81c:20006** 20C07
- Smith, Patricia L. (with Smith, Philip W.) Empirical stopping rules for data fitting by splines. *Proceedings of the 1979 Army Numerical Analysis and Computers Conference (White Sands Missile Range, White Sands, N.M., 1979)*, pp. 449-456, ARO Rep. 79, 3, U. S. Army Res. Office, Research Triangle Park, N.C., 1979. (From the introduction) **81a:65021** 65D10 (65D07)
- Smith, Philip W. (with Barrow, David L.) Asymptotic properties of optimal quadrature formulas. *Numerische Integration (Tagung, Math. Forschungsinst., Oberwolfach, 1978)*, pp. 54-66, Internat. Ser. Numer. Math., 45, Birkhäuser, Basel, 1979. (B. Bojanov) **81a:41024** 41A55 (65D30)
 One-pass curve fitting. *Proceedings of the 1979 Army Numerical Analysis and Computers Conference (White Sands Missile Range, White Sands, N.M., 1979)*, pp. 441-448, ARO Rep. 79, 3, U. S. Army Res. Office, Research Triangle Park, N.C., 1979. (Author's summary) **81a:65022** 65D10
 (with Smith, Patricia L.) Empirical stopping rules for data fitting by splines. *Proceedings of the 1979 Army Numerical Analysis and Computers Conference (White Sands Missile Range, White Sands, N.M., 1979)*, pp. 449-456, ARO Rep. 79, 3, U. S. Army Res. Office, Research Triangle Park, N.C., 1979. (From the introduction) **81a:65021** 65D10 (65D07)
 (with Chui, Charles K.; Ward, J. D.) Monotone approximation by spline functions. *Quantitative approximation (Proc. Internat. Sympos., Bonn, 1979)*, pp. 81-98, Academic Press, New York, 1980. (David R. Hill) **81k:41006** 41A15 (41A25, 65D07)
 (with Chui, Charles K.; Ward, J. D.) Degree of L_p approximation by monotone splines. *SIAM J. Math. Anal.* 11 (1980), no. 3, 436-447. (J. Prasad) **81h:41019** 41A29 (41A15, 41A17)
 (with Chui, Charles K.) An application of spline approximation with variable knots to optimal estimation of the derivative. *SIAM J. Math. Anal.* 11 (1980), no. 4, 724-736. (Derek W. Arthur) **81g:41017** 41A15
- Smith, R. H. (with Mead, R.) The dynamics of discrete-time stochastic models of population growth. *J. Theoret. Biol.* 86 (1980), no. 4, 607-627. (Authors' summary) **81k:92051** 92A15 (58F13)
- Smith, R. M. Finite element solutions of the energy equation at high Péclet number. *Comput. & Fluids* 8 (1980), no. 3, 335-350. (Author's summary) **81h:76030** 76R05 (65N30)
- Smith, Robert A. The average order of a class of arithmetic functions over arithmetic progressions with applications to quadratic forms. *J. Reine Angew. Math.* 317 (1980), 74-87. (Bruce C. Berndt) **81j:10061** 10H10 (10C99)
 Estimates for exponential sums. *Proc. Amer. Math. Soc.* 79 (1980), no. 3, 365-368. (T. Ono) **81k:10059** 10G10
- Smith, Robin. The mathematical origins of Aristotle's syllogistic. *Arch. Hist. Exact Sci.* 19 (1978/79), no. 3, 201-209. (Giulio Cesare Jacobbe) **81f:01004** 01A20 (03-03)
- Smith, Ronald B. Buoyancy effects upon longitudinal dispersion in wide well-mixed estuaries. *Philos. Trans. Roy. Soc. London Ser. A* 296 (1980), no. 1421, 467-496. (Author's summary) **81e:66005** 86A05
 Linear theory of stratified hydrostatic flow past an isolated mountain. (Russian summary) *Teluz* 32 (1980), no. 4, 348-364. (Author's summary) **81j:76091** 76V05
- Smith, Russell A. Existence of nontrivial periodic solutions of certain nonautonomous ordinary differential equations. *J. Differential Equations* 33 (1979), no. 2, 147-158. (G. J. Butler) **81b:34036** 34C25
 Existence of periodic orbits of autonomous retarded functional-differential equations. *Math. Proc. Cambridge Philos. Soc.* 88 (1980), no. 1, 89-109. (R. B. Grafton) **81j:34132** 34K30
 Existence of periodic orbits of autonomous ordinary differential equations. *Proc. Roy. Soc. Edinburgh Sect. A* 85 (1980), no. 1-2, 153-172. (J. M. Cushing) **81c:34034** 34C25 (34H05, 58F22)
- Smith, Stephen A. (with Chambers, John C.; Shifer, Eli) Optimal inventories based on job completion rate for repairs requiring multiple items. *Management Sci.* 26 (1980), no. 8, 849-852. (Authors' summary) **81i:90068** 90B05
 (with Oren, Shmuel S.) Reliability growth of repairable systems. *Naval Res. Logist. Quart.* 27 (1980), no. 4, 539-547. (Authors' summary) **81m:62182** 62N05 (90B25)
- Smith, Stephen D. (with Hyatt, G. W.; Raghavan, T. E. S.) Game theory models of intermale combat in fiddler crabs (*Genus Uca*). *Applied game theory (Proc. Conf., Inst. Adv. Stud., Vienna, 1978)*, pp. 414-429, IHS—Studies, 1, Physica, Würzburg, 1979. (Authors' summary) **81d:90133** 90D45 (92A15)
 A characterization of orthogonal groups over GF(2). *J. Algebra* 62 (1980), no. 1, 39-60. (Ulrich Dempwolff) **81b:20017** 20D05 (10C30)
 A characterization of finite Chevalley and twisted groups of type E over GF(2). *J. Algebra* 62 (1980), no. 1, 101-117. (Ulrich Dempwolff) **81b:20018** 20D05
- Smith, T. H. C. A LIFO implicit enumeration algorithm for the asymmetric travelling salesman problem using a one-arborescence relaxation. *Combinatorial optimization. Math. Programming Stud.* No. 12 (1980), 108-114. (Author's summary) **81c:90044** 90B10 (90B40)
- Smith, T. M. F. (with Holt, D.; Tomberlin, T. J.) A model-based approach to estimation for small subgroups of a population. *J. Amer. Statist. Assoc.* 74 (1979), no. 366, part 1, 405-410. (J. Sedransk) **81f:62016** 62D05
- Smith, Tony E. Rationality of indecisive choice functions on triadic choice domains. *Methodological developments in social sciences. Theory and Decision* 10 (1979), no. 1-4, 113-129. (Dennis J. Packard) **81c:90006** 90A06
- rayward-Smith, V. J. See Rayward-Smith, V. J.
- Smith, W. See Smith, Wm. B.
- godfrey-Smith, William See Godfrey-Smith, William
- Smith, William E. (with Sloan, Ian H.) Product integration with the Clenshaw-Curtis points: implementation and error estimates. *Numer. Math.* 34 (1980), no. 4, 387-401. (C. W. Clenshaw) **81g:65030** 65D30
 (with Sloan, Ian H.) Product-integration rules based on the zeros of Jacobi polynomials. *SIAM J. Numer. Anal.* 17 (1980), no. 1, 1-13. (P. S. Chiang) **81h:65018** 65D30
- Smith, William R. (with Melnyk, Theodor W.) Perturbation theories for molecular fluids. I. The RAM and BLIP function theories for hard dumbbells. *Molecular Phys.* 40 (1980), no. 2, 317-331. (Authors' summary) **81k:82041** 82A50
- Smith, Wm. B. (with Chui, Charles K.; Ward, J. D.) Approximation by minimum norm interpolants in the disc algebra. *J. Approx. Theory* 27 (1979), no. 3, 291-295. (Ivan Singer) **81c:41038** 41A50 (41A25, 46J15)
- Smithies, F. See Hardy, Godfrey Harold. **81c:01028**
- Smithson, R. E. (with Sehgal, V. M.) A fixed point theorem for weak directional contraction multifunctions. *Math. Japon.* 25 (1980), no. 3, 345-348. (Salvio Massa) **81m:54081** 54H25 (54C60)
- Smith-Thomas, Barbara V. See Thomas, Barbara V. Smith
- Smits, T. H. M. On the coproduct of quadratic algebras. *Defti Progr. Rep.* 4 (1979), no. 4, 221-233. (Manuel Ojaguren) **81c:13005** 13B10
- Smokler, Howard E. See Studies in subjective probability. **81c:60003**
- Smolencov, N. K. The Maupertuis principle. (Russian) *Sibirsk. Mat. Ž.* 20 (1979), no. 5, 1092-1098, 1167. (M. Craioveanu) **81c:58018** 58D05 (58E30)
- Smolenski, Włodzisław On quasi-invariance of product measures. *Demonstratio Math.* 11 (1978), no. 3, 801-805. (Author's introduction) **81h:60044** 60G30 (28A35, 60B11)
- Smolin, Lee Gravitational radiative corrections as the origin of spontaneous symmetry breaking! *Phys. Lett. B* 93 (1980), no. 1-2, 95-100. (Author's summary) **81d:83054** 83E99 (83C45)
- Smoljaninov, V. V. ★ Математические модели биологических тканей. (Russian) [Mathematical models of biological tissues] Теоретическая и Прикладная Биофизика. [Theoretical and Applied Biophysics] "Nauka", Moscow, 1980. 368 pp. (L. I. Rubinstein) **81k:92017** 92A09
- Smoljanova, Z. A. On the question of the stability of a correct algorithm. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 20 (1980), no. 4, 1032-1039, 1086. (Author's summary) **81k:65009** 65B99 (90B35)
- Smoller, J. (with Tromba, Anthony J.; Wasserman, A.) Nondegenerate solutions of boundary value problems. *Nonlinear Anal.* 4 (1980), no. 2, 207-216. (Tassilo Küpper) **81b:34009** 34B05 (58F14)
- Smorodinsky, Ja. A. See Feynman, Richard R.; et al. **81a:78001a**; Feynman, Richard R.; et al. **81a:78001b**; Feynman, Richard R.; et al. **81a:78001c** and Feynman, Richard R.; et al. **81a:81001**
- Smorodinsky, Meir (with Ornstein, Donald S.) Continuous speed changes for flows. *Israel J. Math.* 31 (1978), no. 2, 161-168. (Authors' summary) **81i:28021** 28D15 (58F25)
 (with Keane, Michael) Finitary isomorphisms of irreducible Markov shifts. *Israel J. Math.* 34 (1979), no. 4, 281-286 (1980). (Andrés del Junco) **81k:28025** 28D20
- Smrz, P. K. A new unified field theory based on de Sitter gauge invariance. *Acta Phys. Polon. B* 10 (1979), no. 12, 1025-1030. (Author's summary) **81b:83011** 83E15 (53C80)
- Šmukler, A. I. Approximate calculation of the Fourier transform. (Russian) *Moskov. Inst. Inž. Železnodoroz. Transporta Trudy No. 640 Prikl. Mat. i Zadaci Železnodoroz. Transporta* (1979), 107-114, 156-157. (J. Kofroň) **81h:65140** 65T05
- Šmul'jan, B. L. Entropy model of an urban system. *Automat. i Telemekh.* 1979, no. 10, 70-83. (Russian. English summary; translated as *Automat. Remote Control* 40 (1979), no. 10, part 1, 1457-1468 (1980). (Author's summary) **81b:90051** 90A17
- Šmul'jan, Ju. L. (with Krein, M. G.) Stable sub-operators in 3-spaces. (Russian) *Linear operators. Math. Issled. No. 54* (1980), 67-83, 166. (Heinz Langer) **81k:47047** 47B50
- Šmyrl'skii, Ju. D. Variational problems of gas dynamics. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 20 (1980), no. 5, 1205-1220, 1358. (Author's summary) **81k:76051** 76N99 (49D15)
 (with Čarabč'jan, A. A.) Numerical methods in radiative gas dynamics. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 20 (1980), no. 5, 1249-1265, 1358. (Authors' summary) **81k:76049** 76N99
- Smyrnelis, Emmanuel P. Polarité et effilement dans les espaces biharmoniques. *Séminaire de Théorie du Potentiel, No. 3 (Paris, 1976/1977)*, pp. 252-276, *Lecture Notes in Math.*, 681, Springer, Berlin, 1978. (R. M. Hervé) **81a:31006** 31B30
 Sur les fonctions hyperharmoniques d'ordre 2. *Séminaire de Théorie du Potentiel, No. 3 (Paris, 1976/1977)*, pp. 277-294, *Lecture Notes in Math.*, 681, Springer, Berlin, 1978. (R. M. Hervé) **81a:31007** 31B30

- Support biharmonique et supports harmoniques associés. *Potential theory*, Copenhagen 1979 (Proc. Colloq., Copenhagen, 1979), pp. 289–298, *Lecture Notes in Math.*, 787, Springer, Berlin, 1980. (N. Boboc) **81m:31014** 31D05
- Smyrov, A. S. (with Klimko, A. S.) Properties of optimal transfers in central fields. (Russian) *Mechanics of controllable motion (Russian)*, pp. 37–50, 198, *Voprosy Meh. Protsess. Upravl.*, 3, Leningrad. Univ., Leningrad, 1979. (D. ter Haar) **81e:70033** 70M99 (34A10)
- Smyul'seva, L. G. The Laplace transforms of derivatives of functions of several variables. (Russian) *Control of dynamical systems (Russian)*, pp. 232–237, 322, Leningrad. Univ., Leningrad, 1978. (Hans-Jürgen Glaeske) **81b:44013** 44A30
(with Dol'nikov, V. V.) Optimal filtering in the presence of steady perturbations. (Russian) *Mathematical methods of optimization and structuring of systems (Russian)*, pp. 12–19, 181, Kaliningrad. Gos. Univ., Kaliningrad, 1979. (Authors' summary) **81k:93068** 93E11
- (with Malinina, T. B.) The factorization method in optimal filtering of a class of steady-state perturbations. (Russian) *Mathematical methods of optimization and structuring of systems (Russian)*, pp. 20–26, 181, Kaliningrad. Gos. Univ., Kaliningrad, 1979. (Authors' summary) **81k:93071** 93E11
- Smyth, N. F. (with Bryce, R. A.) A note on ranking tournaments. *Austral. Math. Soc. Gaz.* 7 (1980), no. 1, 5–10. (J. W. Moon) **81f:05085** 05C20
- Smyth, R. T. Maxima of partial sums and a monotone regression estimator. *Ann. Probab.* 8 (1980), no. 3, 630–635. (F. T. Wright) **81f:60048** 60F15 (62G05)
(with Gray, Lawrence F.; Wierman, John C.) Lower bounds for the critical probability in percolation models with oriented bonds. *J. Appl. Probab.* 17 (1980), no. 4, 979–986. (G. R. Grimmett) **81k:60104** 60K35 (82A42)
- Snashall, Thomas (with Irwin, John M.; Cellars, R.) The torsion product of totally projective p-groups. *Comment. Math. Univ. St. Paul.* 29 (1980), no. 1, 1–5. (E. A. Walker) **81j:20076** 20K40
(with Srihari, Sargur N.; White, Lee J.) An algorithm for determining identity of nearest-neighbor and potential function decision rules. *Pattern Recognition* 12 (1980), no. 5, 293–299. (Authors' summary) **81m:68075** 68G10
- Snashall, Victor P. Stable decompositions of classifying spaces with applications to algebraic cobordism theories. *Algebraic topology (Proc. Conf., Univ. British Columbia, Vancouver, B.C., 1977)*, pp. 123–157, *Lecture Notes in Math.*, 673, Springer, Berlin, 1978. (Donald W. Kahn) **81a:55027** 55R40 (55R35, 57R90)
(with Hodgkin, Luke) The K-theory of some more well-known spaces. *Illinois J. Math.* 22 (1978), no. 2, 270–278. (From the introduction) **81f:55014** 55Q50 (55N15, 55P47, 55R50)
(with Kochman, Stanley O.) On the stable homotopy of symplectic classifying and Thom spaces. *Algebraic topology, Waterloo, 1978 (Proc. Conf., Univ. Waterloo, Waterloo, Ont., 1978)*, pp. 394–448, *Lecture Notes in Math.*, 741, Springer, Berlin, 1979. (Donald W. Kahn) **81f:55013** 55Q10 (55N22)
(with Miller, Haynes) On the K-theory of the Kahn-Priddy map. *J. London Math. Soc.* (2) 20 (1979), no. 2, 339–342. (Stewart B. Priddy) **81b:55025** 55P47 (55N15)
On the localisation sequence in K-theory. *Proc. Amer. Math. Soc.* 79 (1980), no. 3, 359–364. (Jean-Louis Loday) **81f:18032** 18F25 (12B22)
- Snapper, Ernst An affine generalization of the Euler line. *C. R. Math. Rep. Acad. Sci. Canada* 1 (1978/79), no. 5, 279–281. (S. R. Mandan) **81b:51014** 51M05
Quadratic spaces over finite fields and codes. *J. Combin. Theory Ser. A* 27 (1979), no. 3, 263–268. (Vera Pless) **81k:10033** 10C05 (94B05)
- Sneddon, Ian N. Coupled problems in the linear theory of thermoelasticity. *Thermomechanics in solids (Proc. Sympos., Internat. Centre Mech. Sci., Udine, 1974)*, pp. 1–24, *CISM Courses and Lectures*, 223, Springer, Vienna, 1977. (See **80e:73072**) 73U05
- Recent applications of integral transforms in the linear theory of elasticity. *Trends in applications of pure mathematics to mechanics, Vol. II (Second Sympos., Kozubnik, 1977)*, pp. 307–325, *Monographs and Studies in Math.*, 5, Pitman, London, 1979. (R. P. Srivastava) **81e:73023** 73C99 (44A15)
- Sneed, Joseph D. ★The logical structure of mathematical physics. Second edition, revised. Pallas Paperbacks, 14, D. Reidel Publishing Co., Dordrecht-Boston, Mass.-London, 1979. xxv + 320 pp. ISBN 90-277-1056-2, 90-277-1059-7 (M. J. Mączyński) **81d:03008** 03A05 (81B05, 81B10)
(with Moulines, Carlos-Ulises) Suppes' philosophy of physics. *Patrick Suppes*, pp. 59–91, *Profiles*, 1, Reidel, Dordrecht, 1979. (See **80m:01040**) **81B05** (01A70, 03A05)
- Sneecov, B. E. (with Meleiko, V. P.; Švec, Marko; Dmitrieva-Arrago, L. R.; Paršina, G. V.; Julina, E. P.; Magazenzov, L. N.; Bogačenko, S. V.; Šešin, D. A.) A hydrodynamic model of the general circulation of the atmosphere. (Russian) *Trudy Glavn. Geofiz. Observator. No. 410 Dinamika Global. Atmosf. Processov i Prognoz Pogody* (1980), 3–33, 142. (Authors' summary) **81h:86006** 86A10 (76R05)
- Sneerson, L. M. Conditions under which finitely presented algebras are free. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1979, no. 7, 66–68. (A. Kuškulejs) **81g:16002** 16A06 (20F05)
- Šneiberg, I. Ja. (with Islamov, G. G.) Existence of nonnegative solutions of linear differential equations. (Russian) *Differentsial'nye Uravnenija* 16 (1980), no. 3, 387–394, 571. (Stefan Mirica) **81e:34023** 34C10 (34K15)
- Šneiderman, M. V. (with Burkov, V. N.; Pankova, L. A.) The problem of formation of expert groups. (Russian) *Expert estimates. Voprosy Kibernet. (Moscow) No. 58* (1979), 86–91. (Authors' summary) **81g:05001** 05A05
- Snell, E. J. (with Cox, David Roxbee) On sampling and the estimation of rare errors. *Biometrika* 66 (1979), no. 1, 125–132. (Ib Thomsen) **81f:62015** 62D05
- Snell, J. Laurie (with Kindermann, Ross P.) On the relation between Markov random fields and social networks. *J. Math. Sociol.* 7 (1980), no. 1, 1–13. (Alexander Mehlmann) **81k:92058** 92A20 (60K99, 82A05, 90A08)
- Snell, Mark K. (with Santner, Thomas J.) Small-sample confidence intervals for $p_1 - p_2$ and p_1/p_2 in 2×2 contingency tables. *J. Amer. Statist. Assoc.* 75 (1980), no. 370, 386–394. (Graham J. G. Upton) **81h:62102** 62H17
- Šnítalycký, Jędrzej Application of geometric quantization in quantum mechanics. *Differential geometrical methods in mathematical physics, II (Proc. Conf., Univ. Bonn, Bonn, 1977)*, pp. 357–367, *Lecture Notes in Math.*, 676, Springer, Berlin, 1978. (David J. Simms) **81c:58040** 58F06 (81M05, 83E15)
- Solider, Arthur David (with Davis, Harry F.) ★Introduction to vector analysis. Fourth edition. Allyn and Bacon, Inc., Boston, Mass.-London, 1979. x + 340 pp. ISBN 0-205-06598-8 (R. H. Bowman) **81e:26007** 26B12 (00A06, 15-01)
(with Kraus, Allan D.) A graph theoretical algorithm for evaluating arrays of extended surface. *Proceedings of the Tenth Southeastern Conference on Combinatorics, Graph Theory and Computing (Florida Atlantic Univ., Boca Raton, Fla., 1979)*, pp. 873–894, *Congress. Numer.*, XXIII–XXIV, Utilitas Math., Winnipeg, Man., 1979. (Editors) **81c:00015** 80A20 (94C15)
- Solider, Robert L. (with Farkas, Daniel R.) When is the augmentation ideal principal? *Arch. Math. (Basel)* 33 (1979/80), no. 4, 348–350. (Donald S. Passman) **81e:16008** 16A27
(with Farkas, Daniel R.) Induced representations of polycyclic groups. *Proc. London Math. Soc.* (3) 39 (1979), no. 2, 193–207. (J. E. Roseblade) **81d:20006** 20C07
Representation theory of polycyclic groups. *Ring theory and algebra, III (Proc. Third Conf., Univ. Oklahoma, Norman, Okla., 1979)*, pp. 407–414, *Lecture Notes in Pure and Appl. Math.*, 55, Dekker, New York, 1980. (J. E. Roseblade) **81k:20011** 20C07
- Solijders, T. A. B. ★Asymptotic optimality theory for testing problems with restricted alternatives. *Mathematical Center Tracts*, 113, Mathematisch Centrum, Amsterdam, 1979. xi + 265 pp. ISBN 90-6196-183-1 (G. Roussas) **81k:62028** 62F05 (62E20)
- Solir, Marc (with Shamir, Eliahu) On the depth complexity of formulas. *Math. Systems Theory* 13 (1979/80), no. 4, 301–322. (Authors' summary) **81h:68067** 68C25
- Solman, M. G. Quasi-invariant distributions on uniform arrays. *Problemy Peredaci Informacii* 15 (1979), no. 1, 85–90. (Russian); translated as *Problems Inform. Transmission* 15 (1979), no. 1, 64–68. (Masakiyo Miyazawa) **81e:60077** 60J10
- Soljatinovskaja, L. N. (with Vasil'ev, V. V.) Application of the Hilbert-Schmidt theory to the solution of linear integro-differential equations of a certain class. (Russian) *Application of the methods of functional analysis to problems of mathematical physics and numerical analysis (Russian)*, pp. 19–27, *Akad. Nauk SSSR Sibirsk. Otdel., Inst. Mat., Novosibirsk*, 1979. (M. Tvrdý) **81m:45016** 45J05
- Šol'č, ě. ě. Approximation of functions by homogeneous polynomials and series in homogeneous polynomials. (Russian) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 120* (1978), 16 pp. (Author's summary) **81k:41005** 41A10 (41A30)
- de Snoo, Hendrik S. V. (with Coddington, Earl A.) Differential subspaces associated with pairs of ordinary differential expressions. *J. Differential Equations* 35 (1980), no. 2, 129–182. (William N. Everitt) **81a:34021** 34B20 (34B25, 47E05)
- Snook, I. K. (with Gaylor, K. J.; van Megen, W. J.; Watts, R. O.) Dynamics of colloidal systems: time-dependent structure factors. *J. Phys. A* 13 (1980), no. 7, 2513–2520. (Authors' summary) **81e:82045** 82A50
- Snow, D. (with Huckleberry, Alan T.) Pseudoconcave homogeneous manifolds. *Ann. Scuola Norm. Sup. Pisa Cl. Sci.* (4) 7 (1980), no. 1, 29–54. (D. N. Ahiezer) **81f:32043** 32M10
- Snow, Morris (with Schechter, Martin; Shapiro, Jack) Solution of the nonlinear problem $Au = N(u)$ in a Banach space. *Trans. Amer. Math. Soc.* 241 (1978), 69–78. (Authors' summary) **81g:47069** 47H15 (47H10)
- Snyder, A. K. (with Wilansky, Albert) The Mazur-Orlicz bounded consistency theorem. *Proc. Amer. Math. Soc.* 80 (1980), no. 2, 374–375. (E. Järnäs) **81g:40004** 40H05
- Snyder, Chip A concept of Bernoulli numbers in algebraic function fields. *J. Reine Angew. Math.* 307/308 (1979), 295–308. (D. Suryanarayana) **81a:12016** 12A90 (10A99)
- Snyder, Donald L. (with Rhodes, Ian B.) Some implications of the cutoff-rate criterion for coded direct-detection optical communication systems. *IEEE Trans. Inform. Theory* 26 (1980), no. 3, 327–338. (Authors' summary) **81b:94013** 94A14
- Snyder, Lawrence (with Miller, Raymond E.; Pippenger, Nicholas; Rosenberg, Arnold L.) Optimal 2,3-trees. Preliminary version. *Proceedings of a Conference on Theoretical Computer Science (Univ. Waterloo, Waterloo, Ont., 1977)*, pp. 30–35, *Univ. Waterloo, Waterloo, Ont.*, 1978. (Authors' summary) **81h:68058** 68E10
(with Rosenberg, Arnold L.; Stockmeyer, Larry J.) Uniform data encodings. *Theoret. Comput. Sci.* 11 (1980), no. 2, 145–165. (Authors' summary) **81h:68059** 68E10
- Snyder, Ralph D. The safety stock syndrome. *J. Oper. Res. Soc.* 31 (1980), no. 9, 833–837. (Author's summary) **81h:90055** 90B05
- Snyder, W. E. (with Gruver, W. A.; Hedges, J. C.) Decentralized minimum-energy control and coordination of large scale linear systems. *Optimal Control Appl. Methods* 1 (1980), no. 1, 27–39. (Authors' summary) **81g:93006** 93A15 (93C05)
- So, Kimming (with Bruno, John; Jones, John W., III) Deterministic scheduling with pipelined processors. *IEEE Trans. Comput.* 29 (1980), no. 4, 308–316. (I. Gh. Ciobaia) **81i:90106** 90B35 (68C15)
(with Coffman, E. G. Jr.; Hofri, Micha; Yao, Andrew Chi Chih) A stochastic model of bin-packing. *Inform. and Control* 44 (1980), no. 2, 105–115. (Authors' summary) **81b:68016** 68B15 (68H05, 90B05)
- So, Kin Ming (with Narraway, John J.) On-line fault diagnosis of switching networks. Special issue on automatic analog fault diagnosis. *IEEE Trans. Circuits and Systems* 26 (1979), no. 7, 575–583. (R. Shirladze) **81c:94056** 94C10
- So, Yong Sian (with Pilz, Günter) Near-rings of polynomials and polynomial functions. *J. Austral. Math. Soc. Ser. A* 29 (1980), no. 1, 61–70. (Steve Ligh) **81d:16029** 16A76
- Soanes, Royce W., Jr. Efficient algorithms for continuous piecewise linear approximations with variable knots. *Transactions of the Twenty-Fifth Conference of Army Mathematicians (Johns Hopkins Univ., Baltimore, Md., 1979)*, pp. 105–118, *ARO Rep.* 80, 1, U. S. Army Res. Office, Research Triangle Park, N.C., 1980. (Author's summary) **81a:65023** 65D10
- Soardi, Paolo M. (with Giulini, Saverio; Travaglini, Giancarlo) A Cohen type inequality for compact Lie groups. *Proc. Amer. Math. Soc.* 77 (1979), no. 3, 359–364. (John F. Price) **81k:43009** 43A55 (22E30, 43A50)
- Soare, Mircea V. A general method of solving rectangular orthotropic plates. (Romanian) *Stud. Cerc. Mec. Apl.* 39 (1980), no. 2, 203–219. (P. P. Teodorescu) **81m:73052** 73K10
- Soare, Robert I. Recursively enumerable sets and degrees. *Bull. Amer. Math. Soc.* 84 (1978), no. 6, 1149–1181. (Stephen G. Simpson) **81g:03050** 03D25
(with Lerman, Manuel; Shore, Richard A.) r -maximal major subsets. *Israel J. Math.* 31 (1978), no. 1, 1–18. (Authors' summary) **81g:03049** 03D25

- Recursive enumerability. *Proceedings of the International Congress of Mathematicians (Helsinki, 1978)*, pp. 275-280, *Acad. Sci. Fennica, Helsinki*, 1980. (Viggo Stoltenberg-Hansen) **81i:03038** 03D25
- (with Lerman, Manuel) A decidable fragment of the elementary theory of the lattice of recursively enumerable sets. *Trans. Amer. Math. Soc.* **257** (1980), no. 1, 1-37. (Anne Leggett) **81i:03034** 03D25 (03B25)
- Sobolev, M. Prolongations in generalized pseudodynamical systems. *Zeszyty Nauk. Univ. Jagielloń. Prace Mat.* No. 21 (1979), 17-28. (J. Auslander) **81f:54024** 54H20 (34C35)
- Sobel, E. (with Imrey, Peter B.; Francis, M. E.) Analysis of categorical data obtained by stratified random sampling. *Comm. Statist. A—Theory Methods* **8** (1979), no. 7, 653-670. (V. P. Bhapkar) **81d:62044** 62H12 (62F12)
- Sobel, Joel Fair allocations of a renewable resource. *J. Econom. Theory* **21** (1979), no. 2, 235-248. (Colin W. Clark) **81e:90026** 90A16 (90D40)
- Sobel, Michael I. Kinetic theory derivation of the adiabatic law for ideal gases. *Amer. J. Phys.* **48** (1980), no. 10, 877-878. (Author's summary) **81i:82038** 82A40 (76P05)
- Sobel, Milton (with Gibbons, Jean D.; Olkin, Ingram) A subset selection technique for scoring items on a multiple choice test. *Psychometrika* **44** (1979), no. 3, 259-270. (S. Panapakpan) **81g:62046** 62F07 (62P15, 92A25)
- Sebey, R. J. (with Harper, B. A.; Stark, K. P.) Sensitivity analysis of a tropical cyclone surge model. *Numerical simulation of fluid motion (Proc. Internat. Conf. Numerical Simulation of Fluid Dynamic Systems, Monash Univ., Melbourne, 1976)*, pp. 371-381, North-Holland, Amsterdam, 1978. (See **81a:76005**) 76B15 (65P05, 76U05, 86A35)
- Sohby, M. I. (with Deif, Assem) The state matrix of networks containing lossy reactances. *Internat. J. Electron.* **47** (1979), no. 6, 603-608. (Authors' summary) **81e:94030** 94C05
- Sobieszko, H. (with Fung, K. Y.; Seebass, R.) Shock-free wing design. *AIAA J.* **18** (1980), no. 10, 1153-1158. (Authors' summary) **81h:76033** 76J99
- Sobieraj, Wiesław (with Dzygadlo, Zbigniew) A dynamic model of a helicopter rotor blade for vibration analysis by the finite element method. (Polish. English and Russian summaries) *Mechanics and computers*, Vol. 2 (Polish), pp. 165-176, PWN, Warsaw, 1980. (See **81m:73008**) 73J05
- Sobik, Fred Kombinatorische Aspekte der Codierungstheorie. Diskrete Mathematik und ihre Anwendungen in der Mathematischen Kybernetik (10. Arbeitssem. Gebiet Diskrete Math., Wilhelm-Pieck-Universität, Rostock, 1978). *Rostock. Math. Kolloq.* No. 10 (1978), 87-96. (From the text) **81c:94029** 94B05 (05B99)
- Sobirov, I. The existence of a second eigenvalue of a linear integral operator with a nonnegative kernel. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* **1980**, no. 1, 50-52. (M. Trudy) **81c:47051** 47G05 (45C05)
- Sobociński, Jacek (with Podsiadło, Antoni) Streams of information in the process of systematic modelling of complex technical objects on the example of vessel engines. *Optimization techniques (Proc. Ninth IFIP Conf., Warsaw, 1979), Part 2*, pp. 609-615, *Lecture Notes in Control and Information Sci.*, 23, Springer, Berlin, 1980. (See **81j:49001b**) 68J10
- Sobor, I. M. Erratum: "On the systematic search in a hypercube" [*SIAM J. Numer. Anal.* **16** (1979), no. 5, 790-793; MR **80f:65072**]. *SIAM J. Numer. Anal.* **16** (1979), no. 6, 1080. (Derek W. Arthur) **81c:65029** 65K10
- Soboleva, L. A. (with Pšenčnyĭ, B. N.) Acceleration of the convergence of the linearization method for a problem of conditional minimization. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* **20** (1980), no. 3, 605-614, 811. (Gerhard Telschow) **81g:65085** 65K10 (49D30, 90C30)
- Sobolev, S. L. Convergence of cubature formulas on various classes of periodic functions. (Russian) *Theory of cubature formulas and the application of functional analysis to problems of mathematical physics (Russian)*, pp. 122-140, 167, *Trudy Sem. S. L. Soboleva*, No. 1, 1976, Akad. Nauk SSSR Sibirsk. Otdel., Inst. Mat., Novosibirsk, 1976. (Author's summary) **81g:65041** 65D32
- On the asymptotic behavior of Euler polynomials. (Russian) *Dokl. Akad. Nauk SSSR* **245** (1979), no. 2, 304-308. (E. Riekstins) **81a:33022** 33A70 (26C10, 41A60)
- (with Krasovskii, N. N.; Tihonov, A. N.) Valentin Konstantinovič Ivanov (on the occasion of his seventieth birthday). (Russian) *Uspehi Mat. Nauk* **34** (1979), no. 2(206), 229-234. (Editors) **81g:01019b** 01A70
- V. I. Lenin and natural science. (Russian) *Mat. v Škole* **1980**, no. 2, 7-13. **81c:00013** 00A25 (01A70)
- See also Ljapunov, A. A., **81c:01033**; Partial differential equations, **81f:35005** and Theory of cubature formulas and the application of functional analysis to problems of mathematical physics, **81f:35006**
- Sobolev, V. A. (with Strigin, V. V.) The method of integral manifolds in the problem of the acceptability of the solution of precessional equations of gyroscopic systems. (Russian) *Problems of stability of motion, analytical mechanics and control of motion (Third All-Union Četnev Conf., Irkutsk, 1977)* (Russian), pp. 38-43, 320, "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. (Authors' summary) **81g:70003** 70E05 (34C29)
- Sobolev, V. L. (with Semionov, V. P.; Jacenko, A. A.) Nonequilibrium states in ferromagnetic substances upon nonresonant excitation of spin waves by alternating magnetic field. *Ž. Eksp. Teoret. Fiz.* **77** (1979), no. 6, 2324-2330 (Russian); translated as *Soviet Phys. JETP* **50** (1979), no. 6, 1119-1122 (1980). (From the summary) **81d:81128** 81Hxx
- Sobolev, V. V. (with Moskvina, V. G.; Seljahova, T. N.) Extremal properties of certain classes of functions with fixed first coefficients that map the half plane conformally onto itself. (Russian) *Sibirsk. Mat. Ž.* **21** (1980), no. 2, 139-154, 238. (Stanisław Walczak) **81d:30038** 30C70 (30C50)
- Sobolev, V. V. (with Loskutov, V. M.) Polarization of scattered radiation in the presence of internal sources. *Astrofizika* **15** (1979), no. 2, 241-252 (Russian); translated as *Astrophysics* **15** (1979), no. 2, 162-169. (Authors' summary) **81f:85003** 85A25
- Sobolevskii, P. E. ϵ -approximation of the Dirichlet problem by Neumann problems. (Russian) *Difference and variational-difference methods (Proc. Second Sem. Methods of Numer. Appl. Math., Novosibirsk, 1977)* (Russian), pp. 73-80, Akad. Nauk SSSR Sibirsk. Otdel., Vyčisl. Centr. Novosibirsk, 1977. (I. N. Molčanov) **81i:65099** 65N30
- (with Gurova, I. N.) L-characteristics of fractional powers of difference operators. (Russian) *Mat. Zametki* **25** (1979), no. 1, 123-137, 159. (Ju. V. Kostarčuk) **81k:47043** 47B39 (39A70)
- (with Alibekov, H. A.) Stability and convergence of high-order difference schemes of approximation for parabolic equations. (Russian) *Ukrain. Mat. Ž.* **31** (1979), no. 6, 627-634, 765. (Roman Stankiewicz) **81i:65040** 65J10
- (with Alibekov, H. A.) Stability and convergence of difference schemes of a high order of approximation for parabolic partial differential equations. (Russian) *Ukrain. Mat. Ž.* **32** (1980), no. 3, 291-300. (V. D. Glušenko) **81i:65100** 65M10
- Sobota, Z. Nonlinear functional relations and superposition principles in viscoelasticity. *J. Franklin Inst.* **308** (1979), no. 4, 423-443. (John M. Ball) **81i:73041** 73F99
- Sobouti, Y. (with Dixit, V. V.; Sarath, B.) Two basis sets for the g- and p-modes of self-gravitating fluids. *Astronom. and Astrophys.* **89** (1980), no. 3, 259-263. (Authors' summary) **81h:76028** 76E99 (49G10)
- Normal modes of rotating fluids. *Astronom. and Astrophys.* **89** (1980), no. 3, 314-335. (Author's summary) **81h:76059** 76U05 (76E10)
- Socha, Lesław Application of Yakubovich criterion for stability of nonlinear stochastic systems. *IEEE Trans. Automat. Control* **25** (1980), no. 2, 330-332. (Author's summary) **81a:93104** 93E15
- (with Klamka, Jerzy) Some remarks about stochastic controllability for delayed linear systems. *Internat. J. Control* **32** (1980), no. 3, 561-566. (Authors' summary) **81i:93035** 93E99
- Sochor, Antonín (with Vopěnka, Petr) Endomorphic universes and their standard extensions. *Comment. Math. Univ. Carolin.* **20** (1979), no. 4, 605-629. (Authors' summary) **81i:03083** 03E70 (03H05)
- Metamathematics of the alternative set theory. I. *Comment. Math. Univ. Carolin.* **20** (1979), no. 4, 697-722. (L. Bukovský) **81f:03066** 03E70
- (with Vopěnka, Petr) Revelments. *Comment. Math. Univ. Carolin.* **21** (1980), no. 1, 97-118. (L. Bukovský) **81f:03065** 03E70 (04A99)
- de Socio, Luciano (with Renno, Pasquale) On the boundary layer function in M.H.D. flows over a flat plate. II. (Italian summary) *Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur.* (8) **63** (1977), no. 5, 385-390 (1978). (Authors' summary) **81e:76085** 76W05
- (with D'Anna, Armando; Renno, Pasquale) Three-dimensional wave propagation in a semi-infinite relaxing continuum. *Mech. Res. Comm.* **7** (1980), no. 2, 71-76. (From the introduction) **81e:76074** 76T05 (73D99)
- Sočila-Socolescu, Rodica (see Chirila-Socolescu, Rodica)
- Sodano, P. (with Reina, C.; Martellini, Maurizio) A first order system of differential equations for covariant σ models. *J. Math. Phys.* **20** (1979), no. 12, 2619-2620. (Authors' summary) **81f:81065** 81E99 (53C05, 58E20)
- (with Martellini, Maurizio) Free quantum gravity in Carmeli's theory. *Phys. Rev. D* (3) **22** (1980), no. 6, 1325-1332. (M. J. Perry) **81f:83044** 83D05 (53B50, 83C45)
- Söderström, Torsten (with Stoica, Petre) Consistency properties of an identification method using the instrumental variable principle. (French and German summaries) *Rev. Roumaine Sci. Tech. Sér. Électrotech. Énerg.* **24** (1979), no. 2, 289-293, vii, viii. (Arunabha Bagchi) **81c:93087** 93E12
- On some adaptive controllers for stochastic systems with slow output sampling. *Methods and applications in adaptive control (Proc. Internat. Sympos., Ruhr-Univ. Bochum, Bochum, 1980)*, pp. 64-73, *Lecture Notes in Control and Information Sci.*, 24, Springer, Berlin, 1980. (See **81k:93038**) 93E10
- Spectral decomposition with application to identification. *Numerical techniques for stochastic systems (Conf., Gargnano, 1979)*, pp. 59-79, North-Holland, Amsterdam, 1980. (See **81f:93067**) 93E12
- Sodha, M. S. (with Patel, L. A.) Self-focusing of a laser beam in a magnetoplasma. (French summary) *Optica Acta* **27** (1980), no. 6, 783-797. (Authors' summary) **81h:78003** 78A10 (76X05)
- Sodini, Claudio (with Gallo, Giorgio) Extreme points and adjacency relationship in the flow polytope. *Calcolo* **15** (1978), no. 3, 277-288. (Kailash C. Kapur) **81d:90043** 90B10 (90C25)
- (with Gallo, Giorgio) Concave cost minimization on networks. *European J. Oper. Res.* **3** (1979), no. 3, 239-249. (L. E. Trotter, Jr.) **81c:90037** 90B10 (90C25, 90C35)
- (with Gallo, Giorgio; Sandi, Claudio) An algorithm for the min concave cost flow problem. *European J. Oper. Res.* **4** (1980), no. 4, 248-255. (Authors' summary) **81b:90069** 90B10
- Soeda, Takashi (with Nagamine, H.; Ohmatsu, Shigeru) The optimal filtering problem for a discrete-time distributed parameter system. *Internat. J. Systems Sci.* **10** (1979), no. 7, 735-749. (B. D. Donevski) **81b:93073** 93E11 (93C55)
- (with Ohmatsu, Shigeru; Kikuchi, Akira) The optimal smoothing estimators based on the Wiener-Hopf theory. *Internat. J. Systems Sci.* **10** (1979), no. 11, 1203-1217. (Agostino Villa) **81c:93078** 93E10 (93E11)
- (with Ohmatsu, Shigeru; Ohe, Synichiro) Fixed-interval smoothing for a linear distributed parameter system. *Internat. J. Systems Sci.* **10** (1979), no. 11, 1219-1233. (Agostino Villa) **81c:93079** 93E10 (93E11)
- (with Yoshimura, Toshio; Kiyota, Musanori) An adaptive control policy of discrete-time linear systems with random parameters. *Trans. ASME Ser. G, J. Dynamic Systems Measurement Control* **101** (1979), no. 4, 361-363. (Authors' summary) **81a:93052** 93C40
- (with Yoshimura, Toshio; Hirata, Kozo) Filter implementation for a linear stochastic distributed-parameter system with a moving boundary. *Internat. J. Systems Sci.* **11** (1980), no. 6, 731-741. (Authors' summary) **81f:93075** 93E11
- (with Watanabe, Keigo; Yoshimura, Toshio) Optimal nonlinear estimation for distributed-parameter systems via the partition theorem. *Internat. J. Systems Sci.* **11** (1980), no. 9, 1113-1130. (Authors' summary) **81j:93033** 93C20
- (with Konishi, Katsunobu; Inouchi, Kōji; Yoshimura, Toshio) Stable identification scheme for linear discrete-time systems. *Internat. J. Systems Sci.* **11** (1980), no. 11, 1265-1278. (Authors' summary) **81k:93074** 93E12
- Soeder, Heinrich (with Reinhardt, Fritz) ★dtv-Atlas zur Mathematik. Band 1. (German) [dtv-handbook of mathematics. Vol. 1] Grundlagen, Algebra und Geometrie. [Foundations, algebra and geometry] Third edition. Tafeln und Texte. [Tables and Texts] *Deutscher Taschenbuch Verlag, Munich*, 1978. 266 pp. ISBN 3-423-03007-0 (Editors) **81m:0002a** 00A05 (00A20)
- (with Reinhardt, Fritz) ★dtv-Atlas zur Mathematik. Band 2. (German) [dtv-handbook of mathematics. Vol. 2] Analysis und angewandte Mathematik. [Analysis and applied mathematics] Second edition. Tafeln und Texte. [Tables and

- Texts] *Deutscher Taschenbuch Verlag, Munich*, 1978, pp. i-xi and 274-498. ISBN 3-423-03008-9 (Editors) **81m:90002b** 00A05 (00A20)
- Soffel, Michael** (with Müller, Berndt; Greiner, Walter) Radiation and the structure of space-time. *Gen. Relativity Gravitation* 12 (1980), no. 4, 287-303. (Beverly K. Berger) **81f:83018** 83C35 (53B50)
- Soffer, A.** (with Horwitz, L. P.) On the existence of the wave operator in relativistic quantum scattering theory. *Helv. Phys. Acta* 53 (1980), no. 1, 112-118. (V. S. Ol'hovskij) **81m:81062** 81F20
- Sofonea, Liviu** (with Ionescu-Pallas, Nicholas) The cosmological universe as a self-controlled system. *Proceedings of the International Symposium on Applications of Mathematics in System Theory* (Univ. Braşov, Braşov, 1978), I, pp. 59-73. Univ. Braşov, Braşov, 1979. (See **81j:93006a**) **83F05**
- (with Ionescu-Pallas, Nicholas) New approach to gravitation and cosmology. (French summary) *Rev. Roumaine Phys.* 25 (1980), no. 1, 3-37. (R. C. Roeder) **81c:83035** 83D05 (83F05)
- (with Ionescu-Pallas, Nicholas) Time spending and space exploring in the framework of special relativity theory. (French summary) *Rev. Roumaine Phys.* 25 (1980), no. 3, 261-265. (M. Sachs) **81c:83037** 83C99 (83A05)
- Sofronov, E. T.** On the boundedness of the solutions of a system of three differential equations. (Russian) *Some questions of differential and integral equations and their applications*, No. 2 (Russian), pp. 78-85, 190. *Yakutsk. Gos. Univ., Yakutsk*, 1977. (Author's summary) **81c:34031** 34C11
- Soga, Hideo** Mixed problems in a quarter space for the wave equation with a singular oblique derivative. *Publ. Res. Inst. Math. Sci.* 15 (1979), no. 3, 631-651. (Philip Brenner) **81c:35095** 35L20
- Mixed problems for the wave equation with a singular oblique derivative. *Osaka J. Math.* 17 (1980), no. 1, 199-232. (Piero Bassanini) **81b:35048** 35L05 (35L20)
- Sogomonjan, E. S.** Construction of single-output self-checking control circuits. (Russian. English summary) *Elektronnoe Modelirovanie* 1980, no. 4, 26-32, 109. (Author's summary) **81c:94053** 94C05
- Sohi, N. S.** (with Goel, R. M.) On a subclass of univalent functions. *Tamkang J. Math.* 10 (1979), no. 2, 151-164. (T. H. MacGregor) **81c:30019** 30C45
- (with Goel, R. M.) On certain classes of analytic functions. *Indian J. Pure Appl. Math.* 11 (1980), no. 10, 1308-1324. (T. H. MacGregor) **81j:30024** 30C45
- On a subclass of p -valent functions. *Indian J. Pure Appl. Math.* 11 (1980), no. 11, 1504-1508. (Herb Silverman) **81m:30016** 30C45 (30C50)
- (with Goel, R. M.) A new criterion for p -valent functions. *Proc. Amer. Math. Soc.* 78 (1980), no. 3, 353-357. (David Styer) **81b:30020** 30C45
- Sohn, Hong K.** A discussion on the factor of technological change in production function. (Italian summary) *Riv. Mat. Sci. Econom. Social.* 3 (1980), no. 1, 35-44. (Author's summary) **81c:90024** 90A14 (62P20)
- Sohnius, Martin F.** (with Breitenlohner, Peter) Superfields, auxiliary fields and tensor calculus for $N=2$ extended supergravity. *Nuclear Phys. B* 165 (1980), no. 3, 483-510. (S. M. Christensen) **81c:83038** 83E99 (58A99)
- (with Stelle, K. S.; West, P. C.) Off-mass-shell formulation of extended supersymmetric gauge theories. *Phys. Lett. B* 92 (1980), no. 1-2, 123-127. (Authors' summary) **81g:81107** 81G25
- Sohrman, V. S.** (with Tuškin, T. A.) Parallelization of computational processes with loops and branchings. (Russian) Numerical methods and questions in the organization of calculations, 3. *Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 90 (1979), 210-226, 301. (Authors' summary) **81c:68027** 68B20 (68E10)
- Solberg, Ja. S.** Calculation of a topological invariant connected with the partitioning of figures into parts of smaller diameter. (Russian) *Mat. Zametki* 27 (1980), no. 4, 647-649, 671. (Z. Balogh) **81c:54008** 54B15
- Soffer, G. A.** (with Margulis, G. A.) Nonfree maximal subgroups of infinite index of the group $SL_2(\mathbb{Z})$. (Russian) *Uspehi Mat. Nauk* 34 (1979), no. 4(208), 203-204. (James E. Humphreys) **81k:20064** 20H05 (22E40)
- Soininen, Elias** See Soininen-Soininen, Elias
- Soininen, C. B.** Asymptotically optimal cubature formulas with nodes in a curvilinear lattice. (Russian) *Theory of cubature formulas and the application of functional analysis to problems of mathematical physics* (Russian), pp. 157-164, 167. *Trudy Sem. S. L. Soboleva*, No. 1, 1976, Akad. Nauk SSSR Sibirsk. Otdel., Inst. Mat., Novosibirsk, 1976. (Author's summary) **81d:41037** 41A55 (41A65, 65D32)
- Asymptotically optimal quadrature and cubature formulas in a finite domain. (Russian) *Mathematical analysis and related mathematical questions* (Russian), pp. 319-329, 355. "Nauka" Sibirsk. Otdel., Novosibirsk, 1978. (G. P. Ismatullayev) **81b:41081** 41A55 (65D32)
- Soininen-Soininen, Elias** (with Ukkonen, Eiko) A method for transforming grammars into LL(k) form. *Acta Inform.* 12 (1979), no. 4, 339-369. (I. M. Havel) **81f:68115** 68F05
- (with Koskimies, Kai) On a method of optimizing LR parsers. *Internat. J. Comput. Math.* 7 (1979), no. 4, 287-295. (Authors' summary) **81c:68091** 68F25
- On comparing LL(k) and LR(k) grammars. *Math. Systems Theory* 13 (1979/80), no. 4, 323-329. (Author's summary) **81f:68116** 68F05
- (with Sippu, Seppo) Characterizations of the LL(k) property (extended abstract). *Automata, languages and programming* (Proc. Seventh Internat. Colloq., Noordwijkerhout, 1980), pp. 596-608. *Lecture Notes in Comput. Sci.*, 85, Springer, Berlin, 1980. (Authors' summary) **81c:68065** 68F25 (68C25)
- On the space optimizing effect of eliminating single productions from LR parsers. *Acta Inform.* 14 (1980), no. 2, 157-174. (Author's summary) **81f:68098** 68F25
- (with Sippu, Seppo) A scheme for LR(k) parsing with error recovery. I. LR(k) parsing. *Internat. J. Comput. Math.* 8 (1980), no. 1, 27-42. (Authors' summary) **81c:68093a** 68F25
- (with Sippu, Seppo) A scheme for LR(k) parsing with error recovery. II. Error recovery. *Internat. J. Comput. Math.* 8 (1980), no. 2, 107-119. (Authors' summary) **81c:68093b** 68F25
- (with Sippu, Seppo) A scheme for LR(k) parsing with error recovery. III. Error correction. *Internat. J. Comput. Math.* 8 (1980), no. 3, 189-206. (Authors' summary) **81c:68123** 68F25
- Sokal, Alan D.** An improvement of Watson's theorem on Borel summability. *J. Math. Phys.* 21 (1980), no. 2, 261-263. (F. W. Hartmann) **81h:40011** 40G10 (81E10)
- Sokol, B. I.** (with Barvinskii, A. F.) Asymptotic solution of a nonlinear boundary value problem. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A No. 1* (1980), 22-26, 93. (V. G. Kolomoiey) **81c:35023** 35C10 (35L35)
- Sokół, J. A.** ★Метод дифференциального приближения. (Russian) [The method of differential approximation] "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. 222 pp. (Anton Hut'a) **81j:65002** 65-02
- (with Urušov, A. I.) Difference schemes in spaces of generalized functions and their differential representations. (Russian) *Dokl. Akad. Nauk SSSR* 248 (1979), no. 4, 810-813. (Authors' introduction) **81a:65009** 65M05
- (with Janenko, N. N.; Zaharov, Ju. N.) On the nonlinear acceleration of iterative schemes. *Computing methods in applied sciences and engineering* (Proc. Fourth Internat. Sympos., Versailles, 1979), pp. 113-132. North-Holland, Amsterdam, 1980. (From the introduction) **81j:65113** 65N10
- See also Numerical analysis, **81j:65007**
- Sokol, J.** (with Fiby, R.; Sudolský, Marián) Efficient resolution theorem proving in the propositional logic. *CL & CL—Comput. Linguist. Comput. Lang.* 13 (1979), 151-168. (J. A. Kalman) **81j:68112** 68G15 (03B35)
- Sokol, V. A.** (with Tyjanskij, N. T.) An approximate method for solving the linear time-optimal problem. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 20 (1980), no. 2, 277-288, 549. (Authors' summary) **81j:49018** 49D07 (49B36)
- Sokolov, O. I.** K -matrices equivalent to convergence for bounded sequences and K -matrices equivalent to Cesàro matrices for bounded sequences. (Russian) *Teor. Funkcii Funkcional. Anal. i Priložen. No. 34* (1980), 131-136, v. (H.-H. Körle) **81f:40004** 40C05 (40G05)
- Sokolnicki, Krzysztof** Characterizations of certain algebraic theories. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math.* 27 (1979), no. 3-4, 247-254. (H. A. Priestley) **81c:18009** 18C10 (03G20, 03G30, 06D99)
- Sokolov, A. A.** (with Aliev, A. N.; Gal'cov, D. V.) Rotating black hole in a strong magnetic field. (Russian) *Izv. Vysš. Učebn. Zaved. Fizika* 1980, no. 3, 7-12. (N. V. Mickevič) **81c:83010** 83C15 (53C80, 83C50, 83F05, 86A05)
- (with Aliev, A. N.; Gal'cov, D. V.) Interaction of charged particles with radiation in strong gravitational and magnetic fields. (Russian) *Vestnik Moskov. Univ. Ser. III Fiz. Astronom.* 21 (1980), no. 4, 10-16, 86. (Ilija Lukačević) **81m:83030** 83C50 (83C10)
- Sokolov, A. V.** (with Gol'din, V. Ja.; Kolpakov, A. V.) Methods for solving a system of stationary quasidiffusion equations. (Russian. English summary) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 80* (1978), 32 pp. (N. N. Janenko) **81b:65112** 65P05 (82A70)
- Sokolov, B. N.** (with Zarembo, A. T.) Optimal control of the point of suspension of a hanging load. *Izv. Akad. Nauk SSSR Meh. Tverd. Tela* 14 (1979), no. 2, 18-22. (Russian); translated as *Mech. Solids* 14 (1979), no. 2, 18-22. (Authors' summary) **81c:93043** 93C15
- Sokolov, B. V.** (with Kufarev, B. P.) Correspondence of boundaries in mappings of a sphere. (Russian) *Metric questions of the theory of functions and mappings*, No. VII (Proc. Fourth Colloq., Quasiconformal Mappings and their Generalizations, Donetsk, 1974) (Russian), pp. 93-104. "Naukova Dumka", Kiev, 1975. (See **80c:30023**) **54C99** (30D40)
- (with Kufarev, B. P.) Boundary correspondence in mappings of domains from \mathbb{R}^n . (Russian) *Dokl. Akad. Nauk SSSR* 243 (1978), no. 3, 568-571. (P. M. Tamrazov) **81b:31010** 31B15
- Sokolov, N. A.** The minimal residual method for equations with monotone operators. (Russian) *Qualitative and approximate methods for the investigation of operator equations*, No. 3 (Russian), pp. 184-193. *Jaroslavl. Gos. Univ., Yaroslavl*, 1978. (C. Ilioi) **81b:47006** 47H17 (47H05, 49D07)
- Sokolov, V. V.** Birationally isomorphic commutative rings of differential operators. (Russian) *Funkcional. Anal. i Priložen.* 12 (1978), no. 3, 88-89. (P. A. Kučment) **81f:47048** 47E05 (13N05, 14H99, 58F07)
- (with Sabat, A. B.) (L, A) -pairs and Riccati type substitution. (Russian) *Funkcional. Anal. i Priložen.* 14 (1980), no. 2, 79-80. (P. A. Kučment) **81k:35152** 35Q20 (34G20, 58F07)
- Sokolova, S. P.** (with Ašimov, A. A.) Stability of an automatic control system realizing stabilization and the derivation of a technological object from a break-down state. (Russian) *Theory of stability and its applications* (Russian), pp. 83-88, 299. "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. (Authors' summary) **81c:93066** 93D20 (93C57)
- Sokolovskij, T. D.** Symmetry of oscillations of a graphite lattice. (Russian. English summary) *Vesci Akad. Nauk BSSR Ser. Fiz.-Mat. Nauki* 1980, no. 5, 80-88, 142. (Author's summary) **81m:82037** 82A60 (20H15)
- Sokolovskij, V. Z.** (with Stojan, Ju. G.) ★Решение некоторых многоэкстремальных задач методом сужающихся окрестностей. (Russian) [Solution of some multiextremal problems by the method of restricting neighborhoods] "Naukova Dumka", Kiev, 1980. 207 pp. (Ulrich Eckhardt) **81c:65005** 65C05 (65-01, 90C10)
- Sokolovskij, Stefan** A uniform approach to applicative and imperative features in programming languages. *Mathematical foundations of computer science*, 1980 (Proc. Ninth Sympos., Rydzyna, 1980), pp. 612-626. *Lecture Notes in Comput. Sci.*, 88, Springer, Berlin, 1980. (See **81k:68003**) **68B05**
- Sokol'skij, A. G.** (with Markeev, A. P.) Method of studying periodic motions of Ljapunov and Hamiltonian systems and its realization on computer. (Russian. English summary) *Trudy Inst. Teoret. Astronom. No. 17* (1978), 62-68. (E. G. Al'breht) **81b:70011** 70H15 (34C25, 70J15)
- The stability of Hamiltonian systems with first-order resonance. (Russian) *Problems of stability of motion, analytical mechanics and control of motion* (Third All-Union Science Conf., Irkutsk, 1977) (Russian), pp. 63-69, 321. "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. (Author's summary) **81g:70020** 70H99 (58F05, 70K20)
- Sokurov, A. V.** The relationships between the Chern numbers of quasicomplex manifolds. (Russian) *Mat. Zametki* 26 (1979), no. 1, 137-148, 159. (P. S. Landweber) **81f:58001** 55N22 (55Q45, 57R20, 57R75)
- Topological applications of the tool of formal diffeomorphisms of the line. (Russian) *Uspehi Mat. Nauk* 34 (1979), no. 6(210), 210-215. (D. B. Fuks) **81j:58021** 55S25 (55N22, 55Q45)
- Sokurov, V. V.** (with Iskovskih, V. A.) Biregular theory of Fano 3-folds. *Algebraic*

- geometry (*Proc. Summer Meeting, Univ. Copenhagen, Copenhagen, 1978*), pp. 171-182, *Lecture Notes in Math.*, 732, Springer, Berlin, 1979. (S. L. Kleiman) **81a:14014** 14J30 (14M99)
- (with Bočvar, D. A.) Behavior of the likelihood functional for "tertium non datur" in certain sequences of logical matrices. (Russian) *Studies in nonclassical logics and set theory (Russian)*, pp. 330-344, "Nauka", Moscow, 1979. (Stanislaw J. Surma) **81j:03043** 03B60 (03G10)
- The existence of a line on Fano varieties. (Russian) *Izv. Akad. Nauk SSSR Ser. Mat.* 43 (1979), no. 4, 922-964, 968. (Miles Reid) **81k:14032** 14J30 (14M20)
- Sokurov, Vladimir See Ventcel', E. S., **81f:90119** and Ljubic, Ju. I.; et al., **81m:51029**
- Sokulova, M. R. Some cases of a mapping of two-dimensional surfaces. (Russian) *Kaliningrad. Gos. Univ. Differentsial'naja Geom. Mnogooobraz. Figur No. 10* (1979), 121-126, 164. (E. Pavlov) **81h:53004** 53A05 (53B20)
- Sokolov, E. B. (with Vuchkov, I. N.) The influence of experimental data on robustness to nonnormality of the F test in regression analysis. *Biometrika* 67 (1980), no. 2, 489-492. (Mir Masoom Ali) **81i:62135** 62K99 (62J99)
- Sola-Morales, J. On the continuation of the $-grad E$ flow of $H^1(S^1, M)$. *Arch. Math. (Basel)* 34 (1980), no. 2, 140-142. (Victor Bangert) **81h:58028** 58E10 (53C22)
- Solana Quirós, J. M. (with Acha, J. I.; Huertas, J. L.; Merino Rubio, J.) Synchronous counters composed entirely of J-K bistables. *Internat. J. Electron.* 48 (1980), no. 2, 175-188. (Authors' summary) **81a:94047** 94C15 (68D50)
- Solard, Richard M. (with Ross, G. Terry) A multicriteria approach to the location of public facilities. *European J. Oper. Res.* 4 (1980), no. 5, 307-321. (Authors' summary) **81g:90047** 90B05 (90C31)
- (with Ross, G. Terry; Zoltners, Andris A.) The bounded interval generalized assignment model. *Naval Res. Logist. Quart.* 27 (1980), no. 4, 625-633. (Authors' summary) **81m:90063** 90B35
- verdi i Solans, Ventura See Verdú i Solans, Ventura
- Solberg, James J. (with Sigal, C. Elliott; Pritsker, A. Alan B.) The use of cutsets in Monte Carlo analysis of stochastic networks. *Math. Comput. Simulation* 21 (1979), no. 4, 376-384. (From the summary) **81a:90150** 90C35 (90C15)
- (with Sigal, C. Elliott; Pritsker, A. Alan B.) The stochastic shortest route problem. *Oper. Res.* 28 (1980), no. 5, 1122-1129. (Authors' summary) **81i:90078** 90B15 (05C99)
- Soldator, A. P. On the Noether theory of operators. Wiener imbeddings of B-algebras. (Russian) *Differentsial'nye Uravnenija* 14 (1978), no. 1, 104-115, 190. (E. Gerlach) **81c:46042** 46H05 (45P05, 46M99, 47G05)
- Singular integral operators on the line. (Russian) *Differentsial'nye Uravnenija* 16 (1980), no. 1, 135-144, 189. (V. S. Piliđi) **81h:47062** 47G05 (45E05, 47A53)
- Soldator, E. A. (with Grečušnikov, V. N.; Iljuhin, V. V.; Kuz'min, E. A.; Belov, N. V.) The possibility of decomposition of a complex multidimensional function into its components. (Russian) *Dokl. Akad. Nauk SSSR* 248 (1979), no. 4, 872-874. (Editors) **81a:82066a** 82A99
- (with Kuz'min, E. A.; Iljuhin, V. V.; Belov, N. V.) A new algebraic approach to the decomposition of a one-dimensional function into a sum of exponential functions. (Russian) *Dokl. Akad. Nauk SSSR* 248 (1979), no. 5, 1116-1119. (Editors) **81a:82066b** 82A99
- (with Drozdov, Ju. N.; Iljuhin, V. V.; Kuz'min, E. A.; Belov, N. V.) On the determination of coefficients of the characteristic equation in the problem of decomposition of a noise-distorted function into a sum of exponential functions. (Russian) *Dokl. Akad. Nauk SSSR* 248 (1979), no. 6, 1341-1343. (Editors) **81a:82066c** 82A99
- sanx Solé, Maria See Sanx Solé, Maria
- Solér, François Sur les variétés harmoniques, radiatives ou récurrentes. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 13, A609-A612. (T. J. Willmore) **81h:53069** 53C50 (83C20)
- Soler, V. N. Approximation of Gaussian measures generated by stationary processes. I. (Russian. English summary) *Studies in statistical estimation theory, II. Zap. Načn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 79 (1978), 44-66, 99, 101. (G. M. Molčan) **81c:60047** 60G10 (94A17)
- Sollani, G. (with Leo, R. A.) Generalization of the concept of convergence in the sense of Poincaré for certain series of operators in a Banach space. (Italian summary) *Boll. Un. Mat. Ital. A (5)* 15 (1978), no. 2, 416-423. (Authors' summary) **81h:47013** 47A62 (47D05)
- (with Leo, M.; Leo, R. A.) Properties of a special function related to self-similar solutions of certain nonlinear wave equations. *Nonlinear evolution equations and dynamical systems (Proc. Meeting, Univ. Lecce, Lecce, 1979)*, pp. 264-275, *Lecture Notes in Phys.*, 120, Springer, Berlin, 1980. (Francesco Calogero) **81g:33007** 33A70 (35Q20)
- See also *Nonlinear evolution equations and dynamical systems*, **81f:35004**
- Söll, Horst Darstellung und Fortschreibung der monatlichen Haushaltseinkommen mit Spline-Funktionen. *Splinefunktionen in der Statistik*, pp. 43-65, *Sonderhefte zum Allgemeinen Statist. Arch.*, 14, Vandenhoeck & Ruprecht, Göttingen, 1978. (See **81c:62105**) 41A15
- Solter, M. (with Genizi, Abraham) Power derivation in an ANOVA model which is intermediate between the "fixed-effects" and the "random-effects" models. *J. Statist. Plann. Inference* 3 (1979), no. 2, 127-134. (M. L. Tiku) **81c:62082** 62J10
- Solomon, D. C. (with Hamaker, C.; Smith, K. T.; Wagner, S. L.) The divergent beam X-ray transform. *Rocky Mountain J. Math.* 10 (1980), no. 1, 253-283. (Gabor T. Herman) **81h:44003** 44A15 (68G10, 92A05)
- von Solms, S. H. Random context array grammars. *Information processing 80 (Proc. IFIP Congr., Tokyo/Melbourne, 1980)*, pp. 59-64, *IFIP Congress Ser.*, 8, North-Holland, Amsterdam, 1980. (See **81i:68009**) 68F05
- Modelling the growth of simple biological organisms using formal language theory. *Mathematical modelling in biology and ecology (Proc. Sympos., Pretoria, 1979)*, pp. 213-224, *Lecture Notes in Biomath.*, 33, Springer, Berlin, 1980. (Authors' summary) **81j:92007** 92A05 (68F99, 68J10)
- Rewriting systems with limited distance permitting context. *Internat. J. Comput. Math.* 8 (1980), no. 3, 223-231. (Author's summary) **81g:68113** 68F05
- Solov'ev, E. M. Stability and robustness of linear systems with respect to various classes of signals. *Automat. i Telemekh.* 1979, no. 9, 26-35. (Russian. English summary); translated as *Automat. Remote Control* 40 (1979), no. 9, part 1, 1278-1286 (1980). (Author's summary) **81a:93063** 93D99 (93C05)
- Solo, V. Some aspects of recursive parameter estimation. *Internat. J. Control* 32 (1980), no. 3, 395-410. (Author's summary) **81j:93057** 93E10 (62L20)
- Solodov, V. V. Mappings of a circle into foliations. (Russian) *Geometric methods in problems of analysis and algebra (Russian)*, pp. 100-107, *Jaroslavl. Gos. Univ., Yaroslavl*, 1978. (D. B. Fuks) **81h:57026** 57R30 (58F18)
- Solodovnikov, A. S. ★Systems of linear inequalities. Translated from the Russian by Lawrence M. Glasser and Thomas P. Branson. *Popular Lectures in Mathematics. University of Chicago Press, Chicago, Ill.-London*, 1980. viii + 81 pp. ISBN 0-226-76786-8 (Editors) **81d:90071** 90C05 (52A20)
- See also Kárteszi, Ferenc, **81f:05002**
- Solodovnikov, V. V. Automation of the design of automatic and automated systems of control of technological processes. (Russian) *Automat. Upravl. i Vychisl. Tekhnika No. 12* (1978), 5-19, 293. (Author's summary) **81a:93005** 93A10
- (with Filimonov, A. B.) Construction of regulators for objects with lags. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* 1979, no. 1, 168-177, 222. (Russian); translated as *Engng. Cybernetics* 17 (1979), no. 1, 131-139 (1980). (Authors' summary) **81a:93036** 93C05
- Solodovnikov, M. D. (with Kim, V. S.; Kuznetsov, V. V.) A multidimensional analogue of a formula of A. D. Aleksandrov. (Russian) *Questions of global geometry (Russian)*, pp. 40-42, *Leningrad. Gos. Ped. Inst., Leningrad*, 1979. (M. Decuyper) **81h:53063** 53C45
- Solomencov, E. D. See Pröbldorf, Siegfried, **81j:45005**
- Solomickii, N. I. A modified Newton-Kantorovich method for the approximate solution of nonlinear operator equations in locally convex spaces. (Russian) *Contemporary questions of applied mathematics and programming (Russian)*, pp. 119-122, 171, "Sintinca", Kishinev, 1979. (Author's summary) **81b:65059** 65J15 (47H17)
- Solomín, J. (with Schaposnik, F.) On the treatment of gauge zero modes in Yang-Mills theory. *Lett. Nuovo Cimento* (2) 27 (1980), no. 14, 467-471. (From the text) **81e:81075** 81E10 (81C35)
- Solomjak, B. M. Complete extensions of compact operators with preservation of class. (Russian) *Funkcional. Anal. i Prilozhen.* 14 (1980), no. 3, 93-94. (Constantin Niculescu) **81m:47030** 47B05
- Solomjak, M. Z. (with Birman, M. Š.) Asymptotic behavior of the spectrum of pseudodifferential operators with anisotropically homogeneous symbols. II. (Russian. English summary) *Vestnik Leningrad. Univ. Mat. Meh. Astronom.* 1979, vyp. 3, 5-10, 121. (A. I. Atanasov) **81b:47060** 47G05 (35S05)
- Solomon, D. I. A procedure for transforming mathematical programming problems with coupling constraints and variables. (Russian) *Mathematical modeling of economic systems. Mat. Issled. No. 52* (1979), 199-205, 225-226. (M. Mañas) **81c:90083** 90C30
- Generalized problems of linear fractional programming. (Russian) *Mathematical modeling of economic systems. Mat. Issled. No. 52* (1979), 206-215, 226. (M. Mañas) **81c:90086** 90C32
- Solomon, E. (with Yavin, Yaakov; Friedman, Menahem) Optimal control of a nonlinear noisy sine wave oscillator. (French and German summaries) *Internat. J. Non-Linear Mech.* 14 (1979), no. 3, 205-219. (Authors' summary) **81a:93041** 93C15
- Solomon, Frederick A renewal model with randomly selected parameters. *Ann. Probab.* 8 (1980), no. 3, 622-629. (Paul Embrechts) **81f:60119** 60K05
- Solomon, G. (with van Tilborg, H. C. A.) A connection between block and convolutional codes. *SIAM J. Appl. Math.* 37 (1979), no. 2, 358-369. (Philippe Piret) **81h:94037** 94B10 (94B05)
- Solomon, Herbert (with Brown, Mark; Stephens, Michael A.) Variance reduction in Monte Carlo simulation. *Proceedings of the Twenty-Fifth Conference on the Design of Experiments (Natick, Mass., 1979)*, pp. 89-101, *ARO Rep.* 80, 2, U. S. Army Res. Office, Research Triangle Park, N.C., 1980. (From the introduction) **81h:65096** 65C05
- Solomon, Jay M. (with Berger, Alan E.; Cirsant, Melvyn; Leventhal, Stephen H.; Weinberg, Bernard C.) Generalized OLC schemes for boundary layer problems. *Math. Comp.* 35 (1980), no. 151, 695-731. (C. Wayne Mastin) **81f:65057** 65L10 (65M10)
- Solomon, Louis (with Orlik, Peter) Combinatorics and topology of complements of hyperplanes. *Invent. Math.* 56 (1980), no. 2, 167-189. (M. Sebastiani) **81c:32015** 32C40 (05A99, 06B99)
- (with Orlik, Peter) Unitary reflection groups and cohomology. *Invent. Math.* 59 (1980), no. 1, 77-94. (Peter Giblin) **81f:32017** 32C40 (57S17)
- Solomon, Ronald M. Some standard components of sporadic type. *J. Algebra* 53 (1978), no. 1, 93-124. (U. Dempwolff (Zbl 382:20016)) **81h:20018** 20D08
- (with Finkelstein, Larry) Finite simple groups with a standard 3-component of type $Sp(2n, 2)$, $n \geq 4$. *J. Algebra* 59 (1979), no. 2, 466-480. (David C. Hunt) **81a:20021** 20D05 (20G99)
- (with Finkelstein, Larry) A presentation of the symplectic and orthogonal groups. *J. Algebra* 60 (1979), no. 2, 423-438. (Kok-Wee Phan) **81f:20061** 20G40
- (with Finkelstein, Larry) Standard components of type M_{12} and 3 . *Osaka J. Math.* 16 (1979), no. 3, 759-774. (Koichiro Harada) **81g:20033** 20D06
- (with Gilman, Robert) Finite groups with small unbalancing 2-components. *Pacific J. Math.* 83 (1979), no. 1, 55-106. (Koichiro Harada) **81g:20028** 20D05
- Solov, B. Ja. (with Rozinas, M. G.) Weakly semirecursive sets. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1979, no. 12, 48-50. (G. N. Kobzev) **81d:03046** 03D25
- Solov'ev, A. S. (with Lihovidov, V. N.; Fomin, V. N.) Convergence of a recurrent algorithm in a self-learning problem. (Russian. English summary) *Vestnik Leningrad. Univ. Mat. Meh. Astronom.* 1978, vyp. 3, 138-140, 159. (V. A. Kovalevskii) **81h:68004** 68G05
- Solomonik, V. A. A problem with a free boundary for a system of Navier-Stokes equations. (Russian) *Partial differential equations (Russian)*, pp. 127-140, 143, *Trudy Sem. S. L. Soboleva*, No. 2, 1978, *Akad. Nauk SSSR Sibirsk. Otdel., Inst. Mat., Novosibirsk*, 1978. (A. A. Arsen'ev) **81c:35106** 35Q10 (35R35, 76D05)
- On some initial-boundary value problems for the nonstationary Navier-Stokes system. (Russian) *Proceedings of an All-Union Conference on Partial Differential Equations (Moscow State Univ., Moscow, 1976)* (Russian), pp. 220-223, *Moskov. Gos. Univ., Meh.-Mat. Fakul'tet, Moscow*, 1978. (See **80f:35002**) 35Q10
- Solvability of three-dimensional problems with a free boundary for a system of

- steady-state Navier-Stokes equations. (Russian. English summary) Boundary value problems of mathematical physics and related questions in the theory of functions, 11. *Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* **84** (1979), 252–285, 315, 320. (A. A. Arsen'ev) **81m:35117** 35Q10 (26B35, 46E35)
- (with Hacırlan, A. G.) Estimates for solutions of parabolic initial-boundary value problems in weighted Hölder norms. (Russian) Boundary value problems of mathematical physics, 10. *Trudy Mat. Inst. Steklov.* **147** (1980), 147–155, 204. (Ja. A. Rolinberg) **81f:35060** 35K50 (35K45)
- (with Ladyženskaja, O. A.) Determination of solutions of boundary value problems for stationary Stokes and Navier-Stokes equations having an unbounded Dirichlet integral. (Russian) Boundary value problems of mathematical physics and related questions in the theory of functions, 12. *Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* **96** (1980), 117–160, 308. (P. Szeptycki) **81k:35132** 35Q10 (76D05)
- On the solvability of boundary and initial-boundary value problems for the Navier-Stokes equations in domains with noncompact boundaries. (Russian) Boundary value problems of mathematical physics and related questions in the theory of functions, 12. *Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* **96** (1980), 288–293, 312. (A. A. Arsen'ev) **81m:35118** 35Q10 (26B35, 46E35)
- Solopenko, V. I.** Exact solutions to the Orr-Sommerfeld equations and the substantiation of asymptotic methods in the theory of hydrodynamic stability. (Russian) *Dokl. Akad. Nauk SSSR* **249** (1979), no. 4, 799–803. (A. S. Silbergliet) **81g:76049** 76E05
- Solopenko, V. M.** Asymptotic representation of solutions of the Orr-Sommerfeld equation. (Russian) *Theoretical and applied questions of differential equations and algebra* (Russian), pp. 229–233, 271. "Naukova Dumka", Kiev, 1978. (Author's summary) **81c:76021** 76E05
- Existence and uniqueness of the solution of boundary value problems for generalized Prandtl equations. (Russian) *Physics and mechanics of nonlinear phenomena* (Russian), pp. 187–194, 212. "Naukova Dumka", Kiev, 1979. (Author's summary) **81g:35104** 35Q10 (76D05)
- Solov'ev, N. K.** Excitation of superradiant atomic state by a pulse of quantum field. *Optica Acta* **27** (1980), no. 3, 393–400. (Author's summary) **81d:81135** 81K05
- Solov'ev, A. A.** On the synthesis of optimal control of a conservative system with a fluid element. (Russian) *Dynamics of control systems (Third All-Union Cetaev Conf., Irkutsk, 1977)* (Russian), pp. 263–268, 343. "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. (Author's summary) **81f:93033** 93B50 (49C10)
- Solov'ev, A. D.** (with Kozlov, V. V.) Optimal servicing of renewable systems. I. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* **1978**, no. 3, 79–84 (Russian); translated as *Engng. Cybernetics* **16** (1978), no. 3, 62–66. (R. Subramanian) **81j:60090a** 60K10 (90B25)
- (with Kozlov, V. V.) Optimal servicing of renewable systems. II. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* **1978**, no. 4, 75–80 (Russian); translated as *Engng. Cybernetics* **16** (1978), no. 4, 53–58 (1979). (R. Subramanian) **81j:60090b** 60K10 (90B25)
- Solov'ev, Ju. P.** Quillen's constructions in Hermitian K-theory. (Russian) *Dokl. Akad. Nauk SSSR* **253** (1980), no. 2, 301–304. (A. A. Ranicki) **81k:18008** 18F25 (57R67)
- Solov'ev, M. A.** Ruelle's theorem and the theory of quasianalytic classes of functions. (Russian. English summary) *Teoret. Mat. Fiz.* **42** (1980), no. 1, 3–15. (D. Ja. Petrina) **81g:81044** 81E05 (46F12)
- Solov'ev, S. V.** (with Babaev, A. A.) A coherence theorem for canonical morphisms in Cartesian closed categories. (Russian. English summary) *Studies in constructive mathematics and mathematical logic, VIII. Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* **88** (1979), 3–29, 236. (E. B. Kacov) **81g:03074** 03F99 (03G30, 18A99)
- The increase in length of an L-derivation transformed into a natural deduction. (Russian. English summary) *Studies in constructive mathematics and mathematical logic, VIII. Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* **88** (1979), 192–196, 245. (S. Ju. Maslov) **81g:03065** 03F05
- Preservation of the equivalence of proofs under reduction of the formula depth. (Russian. English summary) *Studies in constructive mathematics and mathematical logic, VIII. Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* **88** (1979), 197–208, 245–246. (S. Ju. Maslov) **81g:03066** 03F05
- Solov'ev, A. D.** See **Solov'ev, A. D.**
- Solow, Anita E.** The square class invariant for quadratic forms and the classification problem. *Linear and Multilinear Algebra* **9** (1980), no. 1, 39–50. (K. Szymiczek) **81m:10033** 10C01 (10C04, 15A63)
- Solow, Daniel** Decomposability in fixed point computation with applications and acceleration techniques. *J. Math. Anal. Appl.* **71** (1979), no. 2, 558–579. (Ju. G. Borisov) **81a:55004** 55M20 (47H17, 65H99)
- Comparative computer results of a new complementary pivot algorithm for solving equality and inequality constrained optimization problems. *Math. Programming* **18** (1980), no. 2, 169–185. (From the summary) **81b:90138** 90C30
- Solpo, I. A.** A method for information exchange in games with nonconflicting interests. (Russian) *Mathematical models of behavior* (Russian), pp. 115–121, 127. Saratov. Gos. Univ., Saratov, 1978. (Author's summary) **81b:90146** 90D12
- Soltan, V. P.** (with Topalé, O. I.) Metric analogues of star-shaped sets. (Russian) *Contemporary questions of applied mathematics and programming* (Russian), pp. 122–128, 171. "Sitiica", Kishinev, 1979. (Z. Nădenik) **81k:52015** 52A30 (52A01)
- (with Topalé, O. I.) Star sets in the Cartesian product of metric spaces. (Russian) *Contemporary questions of applied mathematics and programming* (Russian), pp. 128–135, 171–172. "Sitiica", Kishinev, 1979. (Z. Nădenik) **81k:52016** 52A30 (52A01)
- Illumination of convex figures on the plane. (Russian) *Izv. Akad. Nauk Moldav. SSR Ser. Fiz.-Tehn. Mat. Nauk* **1979**, no. 2, 29–32, 94. (V. Medek) **81b:52003** 52A10
- A theorem on d -starlike sets. (Russian) *Topological spaces and algebraic systems. Mat. Issled.* **53** (1979), 122–125, 225. (Ju. A. Šaškin) **81k:52018** 52A30
- Star-shaped sets in the axiomatic theory of convexity. (Russian. Georgian and English summaries) *Sobšč. Akad. Nauk Gruz. SSR* **96** (1979), no. 1, 45–48. (Z. Nădenik) **81k:52017** 52A30 (52A01)
- Metrically extremal and boundary points of convex sets in a normed space. (Russian) *Linear operators. Mat. Issled.* **54** (1980), 155–163, 168. (T. Precupanu) **81k:46016** 46B20 (52A07, 52A25, 54E35)
- Soltanov, K. N.** Smooth solvability of some quasielliptic problems. (Russian. Azerbaijani and English summaries) *Izv. Akad. Nauk Azerbaidžan. SSR Ser. Fiz.-Tehn. Mat. Nauk* **1979**, no. 2, 61–67. (S. P. Gaveja) **81k:35088** 35K70
- Solvability of some nonlinear parabolic problems. (Russian) *Differentsial'nye Uravnenija* **16** (1980), no. 5, 882–887, 956–957. (V. Lakshmikantham) **81g:35048** 35K35 (35K65)
- Soltes, Vincenc** Oscillatory properties of solutions of a fourth-order nonlinear differential equation. (Russian summary) *Math. Slovaca* **29** (1979), no. 1, 73–82. (A. Halanay) **81a:34036** 34C10
- Som, B. K.** (with Gupta, M. R.; Dasgupta, Brahmananda) Exact solution of damped nonlinear Schrödinger equation for a parabolic density profile. *Phys. Lett. A* **69** (1978/79), no. 3, 172–174. (Authors' summary) **81h:76068** 76X05 (35Q20, 81C05)
- (with Gupta, M. R.; Dasgupta, Brahmananda) Description of the ion acoustic soliton by a Boussinesq-type equation. *Phys. Lett. A* **70** (1979), no. 3, 211–214. (Magdi M. Shourci) **81j:76106** 76X05 (35Q20, 76B25)
- (with Gupta, M. R.; Dasgupta, Brahmananda) Coupled nonlinear Schrödinger equation for Langmuir and dispersive ion acoustic waves. *Phys. Lett. A* **72** (1979), no. 2, 111–114. (E. G. Broadbent) **81j:76111** 76X05 (35Q20)
- Som, M. M.** (with Macedo, A.) The Lewis metric and flat space-time. *Gen. Relativity Gravitation* **11** (1979), no. 3, 217–222. (Richard Signal) **81a:83007** 83C05 (53C25)
- (with Silva, M. A.) Complexified Vaidya's metric. *Internat. J. Theoret. Phys.* **18** (1979), no. 6, 411–418 (1980). (W. M. Baker) **81c:83015** 83C20 (53B50)
- Somalvico, Marco** (with Mandrioli, Dino; Sangiovanni-Vincentelli, Alberto) Toward a theory of problem solving. *Topics in artificial intelligence*, pp. 47–167. *CISM Courses and Lectures*, 256. Springer, Vienna, 1978. (See **80a:68102**) 68G20
- (with Averkin, A. N.; Guida, Giovanni; Pospelov, D. A.) Generalized strategies in problem solvers. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* **1978**, no. 5, 71–83, 220 (Russian); translated as *Engng. Cybernetics* **16** (1978), no. 5, 55–63. (Masaharu Mizumoto) **81k:68072** 68G20 (94D05)
- (with Guida, Giovanni) A method for computing heuristics in problem solving. *Inform. Sci.* **19** (1979), no. 3, 251–259. (S. Amarel) **81b:68132** 68G20
- (with Guida, Giovanni) Algebraic properties of state-space approach to problem solving. *Internat. J. Comput. Math.* **8** (1980), no. 1, 43–50. (Authors' summary) **81a:68107** 68G20
- Somasundaram, D.** On the space of a certain class of entire functions of several complex variables. *Indian J. Pure Appl. Math.* **10** (1979), no. 11, 1437–1442. (P. S. Chee) **81g:32003** 32A15
- C-regular and C-normal spaces. *Acta Cienc. Indica* **6** (1980), no. 1, 32–35. (Teodor Przymusiński) **81j:54030** 54D10
- (with Balasubramanian, G.) Locally Lindelöf spaces. H. G. Forder 90th birthday volume. *Math. Chronicle* **9** (1980), 137–143. (B. K. Lahiri) **81g:54016** 54D20
- Somayajulu, G. R.** (with Doss, D. C.; Hartley, H. O.) An exact small sample theory for post-stratification. *J. Statist. Plann. Inference* **3** (1979), no. 3, 235–247. (David Bellhouse) **81h:62019** 62D05
- Somers, Janet** (with Adler, Ilan) The max-flow problem with parametric capacities. *Discrete Appl. Math.* **1** (1979), no. 4, 287–300. (Gerald Hammer) **81f:90047** 90B10 (90C31)
- Somma, Clelia** (with Bichara, Alessandro; Mazzocca, Francesco) On the classification of generalized quadrangles in a finite affine space AG(3, 2). (Italian summary) *Boll. Un. Mat. Ital. B* (5) **17** (1980), no. 1, 298–307. (Joseph A. Thas) **81h:51009** 51E20 (51E20)
- Somma, Roberto** (with Clarotti, C. A.; Contini, S.) Repairable multiphase systems—Markov and fault-tree approaches for reliability evaluation. *Synthesis and analysis methods for safety and reliability studies* (Proc. NATO Adv. Study Inst., Urbino, 1978), pp. 45–58. Plenum, New York, 1980. (See **81j:93008**) 93E03
- Some considerations on the Markov approach to reliability. *Synthesis and analysis methods for safety and reliability studies* (Proc. NATO Adv. Study Inst., Urbino, 1978), pp. 295–304. Plenum, New York, 1980. (See **81j:93008**) 93E03
- Sommen, F.** Representations of distributions in \mathbb{R}^2 by regular functions of a quaternion variable. *Simon Stevin* **53** (1979), no. 1–2, 131–150. (Heinrich Begehr) **81h:46044** 46F99 (26E05)
- (with Delanghe, Richard) Hypercomplex function theory and representation of distributions. *Functional analysis: surveys and recent results, II* (Proc. Second Conf. Functional Anal., Univ. Paderborn, Paderborn, 1979), pp. 167–182. North-Holland Math. Studies, 38. North-Holland, Amsterdam, 1980. (Klaus-Dieter Bierstedt) **81j:46059** 46E10 (30G35, 46F05, 46F20)
- Distributional boundary values of hypercomplex functions. *Bull. Soc. Roy. Sci. Liège* **49** (1980), no. 1–2, 97–103. (R. S. Pathak) **81k:46051** 46F20 (32A45)
- Sommer, Gustav** Analytic 2-particle structure and crossing constraints. *Complex analysis, microlocal calculus and relativistic quantum theory* (Proc. Internat. Colloq., Centre Phys. Les Houches, 1979), pp. 296–305. *Lecture Notes in Phys.*, 126. Springer, Berlin, 1980. (From the text) **81g:81089** 81F20 (81E05)
- Sommer, J.** Empirische Bayes-Schätzverfahren bei quadratischer Schadensfunktion. (English summary) *Proceedings in Operations Research, 9* (Eighth Annual Meeting. Deutsch. Gesellschaft Operations Res., Regensburg, 1979), pp. 261–266. Physica, Würzburg, 1980. (L. B. Klebanov) **81m:62049** 62F10 (62C12, 62F15)
- Sommer, Manfred** L_1 -approximation by weak Chebyshev spaces. *Approximation in Theorie und Praxis* (Proc. Sympos., Siegen, 1979), pp. 85–102. Bibliographisches Inst., Mannheim, 1979. (C. A. Micchelli) **81h:41023** 41A15
- Characterization of continuous selections for the metric projection for generalized splines. *SIAM J. Math. Anal.* **11** (1980), no. 1, 23–40. (D. E. Wulbert) **81a:41038** 41A45 (41A50, 41A65)
- Nonexistence of continuous selections of the metric projection for a class of weak Chebyshev spaces. *Trans. Amer. Math. Soc.* **260** (1980), no. 2, 403–409. (D. E. Wulbert) **81g:41046** 41A65 (41A50, 41A52)
- Sommer, R.** Control design for multivariable nonlinear time-varying systems. *Internat. J. Control* **31** (1980), no. 5, 883–891. (Author's introduction) **81d:93024** 93C10 (93B05)
- Sommerhalder, R.** Classes of languages proof against regular pumping. (French summary) *RAIRO Inform. Théor.* **14** (1980), no. 2, 169–180. (Author's summary) **81g:68114** 68F05
- Sommers, Paul** (with Lerner, D. E.) Introduction. *Complex manifold techniques in theoretical physics* (Proc. Workshop, Lawrence, Kan., 1978), pp. 1–4. Res. Notes in Math.

- 32, Pitman, San Francisco, Calif., 1979. (Editors) **81f:00009** 00A69 (32F99, 81E99, 83C99)
- Space spinors. *J. Math. Phys.* **21** (1980), no. 10, 2567–2571. (G. R. Alcock) **81k:81050** 81D25 (58D25, 83A05, 83C99)
- Sommerville, Duncan. See Rosenfeld, B. A. **81a:01040**
- Sommes, Andrew John. Complex subspaces of homogeneous complex manifolds. I. Transplanting theorems. *Duke Math. J.* **46** (1979), no. 3, 527–548. (M. Schneider) **81h:32034** 32J99 (14F25)
- Somorjai, Gábor. On asymptotic functions. *J. London Math. Soc.* (2) **21** (1980), no. 2, 297–303. (S. M. Shah) **81e:30040** 30D15
See also Halász, Gábor, **81k:01037**
- Somov, E. I. (with Zemljakov, A. S.; Sabitov, R. A.) Automated synthesis of hierarchical systems of control of motion with an application of Ljapunov vector-valued functions. (Russian) *Theory of stability and its applications* (Russian), pp. 264–271, 304. "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. (Pavel Krbec) **81d:34055** 34H05 (93C15)
- Soms, Andrew P. Rational bounds for the t -tail area. *J. Amer. Statist. Assoc.* **75** (1980), no. 370, 438–440. (S. K. Katti) **81k:62019** 62E15
(with Harris, Bernard) The use of the tetrachoric series for evaluating multivariate normal probabilities. *J. Multivariate Anal.* **10** (1980), no. 2, 252–267. (S. John) **81h:62117** 62H99
- le hang Son. See Le Hung Son
- nguyen quoc Son. See Nguyen Quoc Son
- Sonderman, David. Comparing semi-Markov processes. *Math. Oper. Res.* **5** (1980), no. 1, 110–119. (B. M. Kirstein) **81h:60111** 60K15
- Sondermann, Dieter. Uniqueness of mean maximizers and continuity of aggregate demand. *J. Math. Econom.* **7** (1980), no. 2, 135–144. (Carl P. Simon) **81f:90028** 90A14 (58E17)
- Sondow, J. (with Rothenberg, Melvin) Nonlinear smooth representations of compact Lie groups. *Pacific J. Math.* **84** (1979), no. 2, 427–444. (Czes Kosniowski) **81d:57033** 57S15
- Sone, Yoshio (with Onishi, Yoshimoto) Kinetic theory of slightly strong evaporation and condensation. Hydrodynamic equation and slip boundary condition for finite Reynolds number. *J. Phys. Soc. Japan* **47** (1979), no. 5, 1676–1685. (Carlo Cercignani) **81e:82034** 82A40 (76T05)
- Song, Guo Xuan (with Yang, Gui Tong) Approximate solutions of residual deformations for impulsively loaded rigid-plastic structures. (Chinese. English summary) *Acta Mech. Sinica* (Beijing) **1980**, no. 1, 57–65. (Authors' summary) **81j:73043** 73E99 (49H05)
- Song, Ji Oh (with Haug, Edward J.) Dynamic analysis of planar flexible mechanisms. *Comput. Methods Appl. Mech. Engrs.* **24** (1980), no. 3, 359–381. (Authors' summary) **81k:73051** 73K25 (70B15, 73C99)
- Song, Jian (with Yu, Jing Yuan) On the theory of distributed parameter systems with ordinary point-wise feedback control and measurement. *Sci. Sinica* 1979, Special Issue II on Math., 177–189. (J. P. Babary) **81m:93044** 93C20
- Song, Xing Chang (with Han, Qi Zhi; Sun, Hong Zhou) Irreducible representations of the graded Lie algebra $SU(2/1)$. A translation of Kexue Tongbao (Chinese) **25** (1980), no. 3, 105–110. *Kexue Tongbao* (English) **25** (1980), no. 3, 201–207. (Hans Tilgner) **81j:17008** 17A70 (81C40)
- Song, Young Joon (with Kikuchi, Noboru) Remarks on relations between penalty and mixed finite element methods for a class of variational inequalities. *Internat. J. Numer. Methods Engrs.* **15** (1980), no. 10, 1557–1561. (Petr Procházka) **81m:49008** 49A29 (49D30)
- Soni, B. (with Eisenfeld, Jerome) Linear algebraic computational procedures for system identification problems. *Proceedings of the First International Conference on Mathematical Modeling* (St. Louis, Mo., 1977), Vol. I, pp. 551–561, Univ. Missouri-Rolla, Rolla, Mo., 1977. (Authors' summary) **81m:92065** 92A40 (65T05, 92A05, 93B30)
- Soni, Kusum. On uniform asymptotic expansions of finite Laplace and Fourier integrals. *Proc. Roy. Soc. Edinburgh Sect. A* **85** (1980), no. 3–4, 299–305. (F. W. J. Olver) **81g:41039** 41A60
Exact error terms in the asymptotic expansion of a class of integral transforms. I. Oscillatory kernels. *SIAM J. Math. Anal.* **11** (1980), no. 5, 828–841. (John S. Lew) **81k:44003** 44A15 (41A60, 42A38)
- Soni, S. L. (with Prakash, Ved) On some results involving a generalized function of two variables. I. *Math. Ed. (Sivan)* **13** (1979), no. 4, A53–A64. (R. Kesarwani) **81i:33003** 33A30
- Soni, Jack. Class groups and Brauer groups. *Israel J. Math.* **34** (1979), no. 1–2, 97–105 (1980). (B. Fein) **81g:12012** 12A65 (12F20, 16A39)
 $SL(2, 5)$ and Frobenius Galois groups over \mathbb{Q} . *Canad. J. Math.* **32** (1980), no. 2, 281–293. (Robert Perlia) **81g:12009** 12A55 (12B15, 20C99)
- Sonnenschein, J. (with Consuel, R.) Modèles pseudo-markoviens. *Cahiers Centre Études Rech. Opér.* **21** (1979), no. 4, 315–318. (Gh. Oprisan) **81j:60140** 60K99 (60J27)
- Sonnenscheid, P. (with Wesseling, P.) Numerical experiments with a multiple grid and a preconditioned Lanczos type method. *Approximation methods for Navier-Stokes problems* (Proc. Sympos., Univ. Paderborn, Paderborn, 1979), pp. 543–562, *Lecture Notes in Math.*, 771, Springer, Berlin, 1980. (Authors' introduction) **81b:65117** 65P05 (65N05)
- Sonnerveld, György. Invariant sets in the theory of linear systems with bounded controls. *Proceedings of the International Symposium on Applications of Mathematics in System Theory* (Univ. Brasov, Brasov, 1978), II, pp. 49–58, Univ. Brasov, Brasov, 1979. (See **81j:93006b**) 93C05 (90D25, 93C15)
On the optimization of adaptive numerical algorithms of approximation. *Third Symposium on Operations Research* (Univ. Mannheim, Mannheim, 1978), Section I, pp. 581–595, *Operations Research Verfahren*, 31, Hain, Meisenheim, 1979. (From the text) **81h:65063** 65K10
- Sonntag, Otto. The mental and temperamental qualities of Haller's scientist. (Italian summary) *Physis—Riv. Internaz. Storia Sci.* **19** (1977), no. 1–4, 173–184 (1979). (D. J. Struik) **81a:01015** 01A50
- Soni, L. R. (with Campbell, Douglas M.) Hadamard gap series and normal functions. *Bull. London Math. Soc.* **12** (1980), no. 2, 115–118. (G. Piranian) **81d:30050** 30D45 (30B10)
- Sontag, Eduardo D. ★ Polynomial response maps. *Lecture Notes in Control and Information Sciences*, 13. Springer-Verlag, Berlin-New York, 1979. viii + 168 pp. ISBN 3-540-09393-1 (Edward W. Kamen) **81a:93024** 93B15 (14D20)
(with Rouchaleau, Yves) On the existence of minimal realizations of linear dynamical systems over Noetherian integral domains. *J. Comput. System Sci.* **18** (1979), no. 1, 65–75. (Authors' summary) **81h:93014** 93B15
On generalized inverses of polynomial and other matrices. *IEEE Trans. Automat. Control* **25** (1980), no. 3, 514–517. (Donald W. Robinson) **81j:15007** 15A09 (15A33)
- Sotol, Zolt. On a method for finding the equilibrium points of a bimatrix game. (Hungarian. English summary) *Alkalmaz. Mat. Lapok* **5** (1979), no. 1–2, 165–175. (F. Szidarovszky) **81j:90138** 90D05
- Sopina, E. P. Congruences of central quadrics in an affine space. (Russian) *Kaliningrad. Gos. Univ. Differentsial' naja Geom. Mnogooobraz. Figur* No. 10 (1979), 127–130, 163. (Leo Boček) **81j:53008** 53A15
- Sopokov, N. N. Boundary value problems for a third-order mixed equation in unbounded domains. (Bulgarian. Russian and French summaries) *Godinik Visl. Učebn. Zaved. Priložna Mat.* **14** (1978), no. 3, 7–20 (1979). (Author's summary) **81k:35124** 35M05
The Grevy problem for a third-order mixed equation with two lines of degeneracy. (Bulgarian. Russian and French summaries) *Godinik Visl. Učebn. Zaved. Priložna Mat.* **14** (1978), no. 3, 21–36 (1979). (Author's summary) **81k:35125** 35M05
A boundary value problem for a third-order mixed equation. (Bulgarian. Russian and French summaries) *Godinik Visl. Učebn. Zaved. Priložna Mat.* **14** (1978), no. 3, 37–48 (1979). (Author's summary) **81k:35126** 35M05
A boundary value problem for a third-order mixed equation with two lines of degeneracy. (Bulgarian. Russian and French summaries) *Godinik Visl. Učebn. Zaved. Priložna Mat.* **14** (1978), no. 3, 49–62 (1979). (Author's summary) **81k:35127** 35M05
A boundary value problem for the heat equation. (Russian) *C. R. Acad. Bulgare Sci.* **32** (1979), no. 8, 1027–1028. (R. R. Ahmerov) **81d:35038** 35K05
A boundary value problem for a third-order parabolic equation. (Russian) *C. R. Acad. Bulgare Sci.* **32** (1979), no. 9, 1171–1173. (Editors) **81k:35086** 35K60
Some boundary value problems for third-order parabolic equations. (Russian) *C. R. Acad. Bulgare Sci.* **33** (1980), no. 2, 159–161. (Ja. A. Roitberg) **81f:35058** 35K35
- Sopruncu, S. F. Lattices of nonstandard arithmetics. (Russian) *Studies in nonclassical logics and set theory* (Russian), pp. 146–173, "Nauka", Moscow, 1979. (Roman Murawski) **81j:03100** 03H15
See also Davis, Martin, **81e:03064**
- Sor, L. A. (with Ljubić, Ju. I.) ★ The kinematic method in geometrical problems. Translated from the Russian by Vladimir Shokurov [Vladimir Šokurov]. Little Mathematics Library. "Mir", Moscow, 1980. 56 pp. (O. Bottema) **81m:51029** 51N05 (70–01, 70B99)
(with Garmaš, V. A.) Stability of binary one-shot switching systems to single faults of switching elements. *Problemy Peredaci Informacii* **16** (1980), no. 1, 77–83 (Russian); translated as *Problems Inform. Transmission* **16** (1980), no. 1, 55–59. (Authors' summary) **81i:94035** 94C10
- Sor, N. Z. (with Ivanov, V. V.; Ljudevčenko, V. A.; Mihalevič, V. S.; Trubin, V. A.) Questions of increasing the effectiveness of algorithms for minimization of functions and mathematical programming. (Russian) *Akad. Nauk Ukrain. SSR Inst. Kibernet. Preprint No. 59* (1979), 55 pp. (E. G. Gol'fstein) **81j:90147** 90C10 (65K05, 90C05, 90C30)
(with Geršovič, V. I.) Family of algorithms for solving convex programming problems. *Kibernetika (Kiev)* **1979**, no. 4, 62–67 (Russian); translated as *Cybernetics* **15** (1979), no. 4, 502–508 (1980). (K. G. Murty) **81k:90083** 90C25
- Sorace, E. (with Giachetti, R.) Relativistic two-body interactions: a Hamiltonian formulation. *Nuovo Cimento B* (11) **56** (1980), no. 2, 263–301. (Authors' summary) **81d:70014** 70H05 (83A05)
- Sorarrain, Oscar M. (with Boggio R., Rafael; Ocampo, Julio C.) Continuous and discontinuous Markov-chain models for mastitis infection. *Math. Biosci.* **52** (1980), no. 3–4, 277–287. (Authors' summary) **81j:92041** 92A15 (60J20, 92A07)
- Sorba, P. (with Combe, Ph.; Sciarino, A.) On the directions of spontaneous symmetry breaking in $SU(n)$ gauge theories. *Nuclear Phys. B* **158** (1979), no. 2–3, 452–468. (H. Ezawa) **81k:01046** 81E10 (22E45, 81D20)
- Sorensen, D. C. The Q -superlinear convergence of a collinear scaling algorithm for unconstrained optimization. *SIAM J. Numer. Anal.* **17** (1980), no. 1, 84–114. (T. L. Freeman) **81k:65055** 65K10 (90C30)
- Sørensen, H. H. (with Hoppe, V.) Interface problems between finite element regions with dissimilar function spaces. *Mathematics of finite elements and applications, III* (Proc. Third MAFELAP Conf., Brunel Univ., Uxbridge, 1978), pp. 365–372, Academic Press, London, 1979. (R. D. Bhargava) **81k:65126** 65N30
- Sörensen, Kay (with Kist, Günter; Kroll, Hans-Joachim) Beispiel eines Körpers, der keinen Antiautomorphismus zulässt. *Mitt. Math. Gesellsch. Hamburg* **10**, no. 5, 345–348 (1977). (Stanley E. Payne) **81a:12021** 12E15 (51A30)
Projektive Abschließbarkeit von kinematischen Räumen. (English summary) *J. Geom.* **13** (1979), no. 2, 121–125. (Hellmuth Stachel) **81c:51025** 51J15 (70B99)
- Sørensen, Torben Smith. Instabilities induced by mass transfer, low surface tension and gravity at isothermal and deformable fluid interfaces. *Dynamics and instability of fluid interfaces* (Proc. Meeting, Tech. Univ. Denmark, Lyngby, 1978), pp. 1–74, *Lecture Notes in Phys.*, 105, Springer, Berlin, 1979. (See **81j:76045**) 76E20
(with Hennenberg, Marcel) Instability of a spherical drop with surface chemical reactions and transfer of surfactants. *Dynamics and instability of fluid interfaces* (Proc. Meeting, Tech. Univ. Denmark, Lyngby, 1978), pp. 276–315, *Lecture Notes in Phys.*, 105, Springer, Berlin, 1979. (See **81j:76045**) 76E99
See also *Dynamics and instability of fluid interfaces*, **81j:76045**
- Sorenson, H. W. (with Upadhyaya, B. R.) Bayesian discriminant approach to input signal selection in parameter estimation problems. *Inform. Sci.* **12** (1977), no. 1, 61–91. (Arunabha Bagchi) **81c:93082** 93E10 (62F15, 94A12)
- Sorenson, R. L. (with Steger, Joseph L.) Automatic mesh-point clustering near a boundary in grid generation with elliptic partial differential equations. *J. Comput. Phys.* **33** (1979), no. 3, 405–410. (Stephen W. Brady) **81k:65109** 65N05
- Soria, A. S. (with Ivanov, E. A.) The Wess-Zumino model as the linear σ model of spontaneously broken conformal and $OSp(1,4)$ supersymmetries. *Jadernaja Fiz.* **30** (1979), no. 3, 853–866 (Russian); translated as *Soviet J. Nuclear Phys.* **30** (1979), no. 3, 440–447. (Authors' summary) **81h:83013** 83E99 (22E70, 83C45)

- (with Ivanov, E. A.) Superfield formulation of $OSp(1,4)$ supersymmetry. *J. Phys. A* 13 (1980), no. 4, 1159-1188. (S. M. Christensen) **81a:3040** 83E99
- Sorin, S. A note on the value of zero-sum sequential repeated games with incomplete information. *Internat. J. Game Theory* 8 (1979), no. 4, 217-223. (Author's summary) **81a:90163** 90D05
- (with Ponsard, J.-P.) The LP formulation of finite zero-sum games with incomplete information. *Internat. J. Game Theory* 9 (1980), no. 2, 99-105. (Authors' summary) **81c:90117** 90D15 (90D10)
- Sorjones, Pekka On generalized resolvents of symmetric linear relations in a Pontryagin space. *Ann. Acad. Sci. Fenn. Ser. A I Math.* 4 (1979), no. 2, 365-370. (Björn Textorius) **81c:47041** 47B50
- Sorkin, L. P. A method for current identification of static models of control plants. *Avtomat. i Telemekh.* 1979, no. 10, 148-156. (Russian. English summary); translated as *Automat. Remote Control* 40 (1979), no. 10, part 2, 1524-1530 (1980). (Author's summary) **81c:93029** 93B30
- Sorkin, Rafael D. Erratum: "The triviality of continuous multipliers for the real line" [Internat. J. Theoret. Phys. 17 (1978), no. 5, 369-376; MR 80e:22011]. *Internat. J. Theoret. Phys.* 18 (1979), no. 10, 777 (1980). (Editors) **81d:22006** 22D10
- (with Friedman, John L.) Dyson spin and statistics: a fiber-bundle theory of interacting magnetic and electric charges. *Phys. Rev. D* (3) 20 (1979), no. 10, 2511-2525. (L. O'Riada) **81c:81065** 81G10 (53C05, 55P10, 78A35)
- (with Friedman, John L.) The unitary multiplicity-free representations of $SL_n(\mathbb{R})$. *J. Math. Phys.* 21 (1980), no. 6, 1259-1276. (N. Mukunda) **81c:81036** 81C40 (22E70)
- Sorokyt, N. I. (with Balidak, D. A.) Optimal control of a continual elastic system under the action of a nonconservative load. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* 1980, no. 6, 33-36, 92. (Z. Kępczowski) **81m:73053** 73K12 (49A22)
- Sorokina, I. M. (with Sorokina, T. G.; Lavrinenko, G. A.) A method of search for the unconditional minimum. (Russian) *Mathematical methods of optimization and structuring of systems* (Russian), pp. 106-113, 184-185, Kaliningrad. Gos. Univ., Kaliningrad, 1979. (Authors' summary) **81k:65075** 65K10 (90C30)
- (with Sorokina, T. G.; Lavrinenko, G. A.) A general algorithm for solution of systems of nonlinear equations and conditional minimization of functions. (Russian) *Mathematical methods of optimization and structuring of systems* (Russian), pp. 114-125, 185, Kaliningrad. Gos. Univ., Kaliningrad, 1979. (Authors' summary) **81k:65055** 65H10 (90C30)
- Sorokina, T. G. (with Sorokina, I. M.; Lavrinenko, G. A.) A method of search for the unconditional minimum. (Russian) *Mathematical methods of optimization and structuring of systems* (Russian), pp. 106-113, 184-185, Kaliningrad. Gos. Univ., Kaliningrad, 1979. (Authors' summary) **81k:65075** 65K10 (90C30)
- (with Sorokina, I. M.; Lavrinenko, G. A.) A general algorithm for solution of systems of nonlinear equations and conditional minimization of functions. (Russian) *Mathematical methods of optimization and structuring of systems* (Russian), pp. 114-125, 185, Kaliningrad. Gos. Univ., Kaliningrad, 1979. (Authors' summary) **81k:65055** 65H10 (90C30)
- Sorokinski, V. M. Growth of analytic characteristic functions of probability laws. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1979, no. 9, 48-52. (G. P. Čistjakov) **81h:60023** 60E10
- Sorokov, S. I. (with Levickii, R. R.) The dynamics of a simple antiferroelectric model with order-disorder transition. I. Formulation of a diagram method. (Russian. English summary) *Ukrain. Fiz. Ž.* 24 (1979), no. 12, 1814-1821, 1945. (M. Lawrence Glasser) **81c:82020a** 82A25 (82A42)
- (with Levickii, R. R.) The dynamics of a simple antiferroelectric model with order-disorder transition. II. Correlation functions and polarization waves. (Russian. English summary) *Ukrain. Fiz. Ž.* 25 (1980), no. 1, 10-18, 166. (M. Lawrence Glasser) **81c:82020b** 82A25 (82A42)
- Soslovskii, V. A. Closed equation for the probability distribution of velocity and temperature differences between two points in an isotropically turbulent stream of an incompressible fluid. *Inž.-Fiz. Ž.* 36 (1979), no. 6, 972-979. (Russian); translated as *J. Engng. Phys.* 36 (1979), no. 6, 634-639. (J. D. Atkinson) **81c:76046** 76F05 (60H15)
- Soslovskii, A. See Naimark, M. A.; et al., **81b:22001**
- Soslovskii, A. N. Critical equivalence of functions. (Russian) *Uspehi Mat. Nauk* 35 (1980), no. 1(211), 221. (Peter Giblin) **81c:32024** 32B30
- Subalgebra of invariants of the local ring of a zero-dimensional complete intersection. (Russian) *Uspehi Mat. Nauk* 35 (1980), no. 4(214), 213-214. (Vasilie Brînzănescu) **81k:14041** 14M10 (13F25)
- Sosna, A. On methods of calculating stresses in bellows. (Russian) *Dinamika i Pročnost' Matin* No. 31 (1980), 135-141, 4. (Author's summary) **81h:73059** 73U05
- Sosnin, N. V. (with Dreizin, Ju. A.; Myščekaja, E. E.; Favorskii, A. P.) Numerical modelling of stationary plasma configurations by the variational approach. (Russian. English summary) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 104* (1979), 33 pp. (Authors' summary) **81d:76115** 76X05 (65Cxx, 82A45)
- Sosnovskii, A. Finite-dimensional approximation theory with application to stabilization of systems with time delay. *Functional differential systems and related topics* (Proc. First Internat. Conf., Białeogóra, 1979), pp. 317-326, Higher College Engrg., Zielona Góra, 1980. (B. G. Pachpatte) **81m:41022** 41A35 (93D99)
- Sosnovskii, A. Excitation functions for edge-sensitive inputs of logical elements. (French and German summaries) *Digital Process.* 6 (1980), no. 1, 35-54. (Author's summary) **81d:94044** 94C10
- Sosninski, A. See Sosninski, A.
- Sostak, A. P. (with Bregman, Ju. H.) Some topological theorems of Ramsey. (Russian) *Topological spaces and their mappings* (Russian), pp. 3-13, 150, Latv. Gos. Univ., Riga, 1979. (W. Kulp) **81g:54004** 54B15 (54A25)
- Sosulin, Ju. G. (with Tartakovskii, A. G.; Fisman, M. M.) Sequential detection of a correlated Gaussian signal in white noise. *Radiotekhn. i Elektron.* 24 (1979), no. 4, 720-732. (Russian); translated as *Radio Engng. Electron. Phys.* 24 (1979), no. 4, 43-53. (Authors' summary) **81a:94020** 94A12
- Sotina, N. B. (with Fominyh, V. V.) Symmetric cavity flow around a wedge in the presence of a source on the wedge or in the flow. (Russian) *Izv. Akad. Nauk SSSR Meh. Židk. Gaza* 1979, no. 6, 137-141. (M. Yanowich) **81h:76007** 76B10
- Sotirov, V. H. Non-finitely-approximable intuitionistic modal logics. (Russian) *Mat. Zamečki* 27 (1980), no. 1, 89-94, 158. (Jerzy Perzanowski) **81b:03024** 03B45
- Sotkov, G. M. (with Zalkov, R. P.) Quantum dynamics of the relativistic membrane. *C. R. Acad. Bulgare Sci.* 32 (1979), no. 9, 1187-1190. (From the text) **81a:81145** 81M05 (53B50, 81G05)
- (with Stojanov, D. C.) On the conformal invariance in quantum electrodynamics. *J. Phys. A* 13 (1980), no. 8, 2807-2816. (Authors' summary) **81c:81205** 81L05 (81D25)
- Sotnikenko, M. A. (with Felčenko, S. F.) Splitting of systems of second-order differential equations with two small parameters. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* No. 9 (1979), 704-707, 777. (Snezana Hristova) **81g:34045** 34C20
- Asymptotic solutions of a differential equation in Banach space. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* 1980, no. 7, 29-33, 97. (D. Balnov) **81i:34051** 34E05 (34G10)
- Soto, F. (with Claverie, P.; Pesquera, L.) Existence of a constant stationary solution for the hydrogen atom problem in stochastic electrodynamics. *Phys. Lett. A* 80 (1980), no. 2-3, 113-116. (G. S. Agarwal) **81m:81095** 81L05 (78A99, 81C20)
- Sotolosa, Hector See Hevia Soto, Hector
- Soto Andrade, Jorge La transformación de Shintani et les caractères singuliers des groupes $SL_n(\mathbb{F}_q)$, n premier. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 289 (1979), no. 13, A629-A632. (Author's summary) **81d:20040** 20C40 (22E50)
- Sotomayor, Jorge Stability of contractive endomorphisms. (Portuguese) *Proceedings of the Eleventh Brazilian Mathematical Colloquium* (Poços de Caldas, 1977), Vol. II (Portuguese), pp. 629-631, *Inst. Mat. Pura Apl., Rio de Janeiro*, 1978. (See **80c:00010a**) 58F10
- (with Gutiérrez, Carlos) Champs de vecteurs stables sur les variétés à singularités simples. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 291 (1980), no. 4, A287-A290. (Authors' summary) **81j:58052** 58F10
- Soto Vargas, C. W. Use of new identities between hypergeometric functions of several variables for the calculation of the matrix elements of relativistic electron-nucleus scattering processes. (Spanish) *Cienc. Tecn.* 2 (1978), no. 1, 13-26. (N. Hayek Cali) **81k:81109** 81G30 (33A30, 81F20)
- Sotres, David A. (with Ghosh, Malay) On Bahadur's representation of sample quantiles for nonstationary mixing processes. *Calcutta Statist. Assoc. Bull.* 27 (1978), no. 105-108, 23-36 (1979). (Sam Gutmann) **81f:60038** 60F05 (60F15, 62G30)
- (with Ghosh, Malay) Asymptotic properties of linear functions of order statistics for nonstationary mixing processes. *Calcutta Statist. Assoc. Bull.* 28 (1979), no. 109-112, 19-36. (P. K. Sen) **81k:60038** 60F05 (60G30)
- Sotskii, B. A. (with Stojarov, A. D.; Dmitriev, V. A.) Electromagnetic fields with identical coherence properties. (Russian. English summary) *Dokl. Akad. Nauk BSSR* 24 (1980), no. 11, 989-991, 1052-1053. (K. Wódkiewicz) **81m:81091** 81K05
- Sotnikov, Ju. N. Scheduling on mixed graphs with a limited maximum penalty. (Russian. English summary) *Vestn. Akad. Nauk BSSR Ser. Fiz.-Mat. Nauk* 1980, no. 2, 37-41, 140. (Author's summary) **81d:90063** 90B35
- Sotteau, D. (with Bermond, J.-C.; Germa, A.; Heydemann, M. C.) Girth in digraphs. *J. Graph Theory* 4 (1980), no. 3, 337-341. (L. Cacetta) **81i:05073** 05C20
- Souček, Jiří (with Kačur, Jozef) Direct variational methods in nonreflexive spaces. (Russian summary) *Math. Slovaca* 29 (1979), no. 3, 209-226. (Helmut Kaul) **81a:49020** 49F05 (49A27)
- (with Kačur, Jozef) Functions of measures and a variational problem of the type of the nonparametric minimal surface. (Russian summary) *Math. Slovaca* 29 (1979), no. 4, 347-380. (F. J. Almgren, Jr.) **81i:49042** 49F99 (35A15)
- Soussi, A. (with Debbaj, O.) Équation à dérivée oblique associé à des opérateurs elliptiques singuliers. *Journées: Equations aux Dérivées Partielles* (Saint-Cast, 1979), Exp. No. 7, 7 pp., *École Polytech., Palaiseau*, 1979. (Kazuki Taira) **81i:35033** 35H05 (35J70)
- Soula, C. (with Pujolle, Guy) A study of flows in queueing networks and an approximate method for solution. *Performance of computer systems* (Proc. Fourth Internat. Symp. Modelling Performance Evaluation Comput. Systems, Vienna, 1979), pp. 375-389, North-Holland, Amsterdam, 1979. (Authors' summary) **81d:60106** 60K25 (68C15, 90B22)
- Soulé, Christophe K-théorie de \mathbb{Z} et cohomologie étale. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 286 (1978), no. 24, A1179-A1181. (Author's summary) **81c:18016** 18F25 (12A70, 57R20)
- Chevalley groups over polynomial rings. *Homological group theory* (Proc. Sympos., Durham, 1977), pp. 359-367, *London Math. Soc. Lecture Note Ser.*, 36, Cambridge Univ. Press, Cambridge, 1979. (Howard Lyn Hiller) **81g:20000** 20G10 (22E40)
- K-théorie des anneaux d'entiers de corps de nombres et cohomologie étale. *Invent. Math.* 55 (1979), no. 3, 251-295. (Daniel R. Grayson) **81i:12016** 12A70 (18F25)
- Soun, Y. (with Truemper, K.) Minimal forbidden subgraphs of unimodular multicommodity networks. *Math. Oper. Res.* 4 (1979), no. 4, 379-389. (L. E. Trotter, Jr.) **81g:90050** 90B10 (05B35, 68C25)
- Souppouris, D. J. (with Singmaster, David) A constrained isoperimetric problem. *Math. Proc. Cambridge Philos. Soc.* 83 (1978), no. 1, 73-82. (Authors' review (Zbl 371:52003)) **81i:52011** 52A40
- Sourin, P. (with Gumowski, Igor) Analysis of the blood platelet control mechanism. *Simulation of systems '79* (Proc. Ninth IMACS Congress, Sorrento, 1979), pp. 1071-1076, North-Holland, Amsterdam, 1980. (See **81j:68009**) 92A09
- Sourour, A. R. Unbounded operators generated by a given spectral measure. *J. Funct. Anal.* 29 (1978), no. 1, 16-22. (Author's summary) **81h:47020** 47B15
- A note on integral operators. *Acta Sci. Math. (Szeged)* 41 (1979), no. 3-4, 375-378. (S. Newberger) **81g:47060** 47G05 (47B38)
- (with Fillmore, P. A.; Fong, Che Kao) Real parts of quasinilpotent operators. *Proc. Edinburgh Math. Soc.* (2) 22 (1979), no. 3, 263-269. (J. P. Williams) **81h:47021** 47A65 (47B47)
- de Sousa, Almir Joaquim Orlicz-Sobolev imbeddings of type p' . (Italian summary) *Bol. Un. Mat. Ital. B* (5) 16 (1979), no. 2, 543-554. (H. Triebel) **81b:46049** 46E35 (46E30)
- Southcott, J. B. Trace polynomials of words in special linear groups. *J. Austral. Math. Soc. Ser. A* 28 (1979), no. 4, 401-412. (B. A. F. Wehrhritz) **81c:20033** 20G99

- de Souza Doering, Ada Maria (with Lequain, Yves) The gluing of maximal ideals—spectrum of a Noetherian ring—going up and going down in polynomial rings. *Trans. Amer. Math. Soc.* **260** (1980), no. 2, 583–593. (Stephen McAdam) **81g:13014** 13E05
- Sora, Miroslav The Laplace transform of exponentially bounded vector-valued functions (real conditions). *Časopis Pěst. Mat.* **105** (1980), no. 1, 1–13. (D. Levitan) **81a:44001** 44A10 (28B05, 46G99)
- Relation between real and complex properties of the Laplace transform. (Czech summary) With a loose Russian summary. *Časopis Pěst. Mat.* **105** (1980), no. 2, 111–119, 208. (E. Gesztelyi) **81k:44002** 44A10
- Sorokojan, V. M. Periodic solutions of second-order nonlinear differential equations with impulse action. (Ukrainian. English and Russian summaries) *Visnik Kij. Univ. Ser. Mat. Meh. No. 20* (1978), 131–140, 167–168. (B. P. Tkáč) **81g:34053** 34C25
- Sowa, John F. Definitional mechanisms for conceptual graphs. *Graph-grammars and their application to computer science and biology (Internat. Workshop, Bad Honnef, 1978)*, pp. 426–439, *Lecture Notes in Comput. Sci.*, 73, Springer, Berlin, 1979. (Author's summary) **81d:68115** 68F20 (68G99)
- Soward, A. M. Finite-amplitude thermal convection and geostrophic flow in a rotating magnetic system. *J. Fluid Mech.* **98** (1980), no. 3, 449–471. (From the introduction) **81g:76055** 76E25 (86A25)
- Soyter, A. L. (with Murphy, F. H.) Sensitivity analysis of the costs in the dynamic lot size model. *AIIE Trans.* **11** (1979), no. 3, 245–249. (Kailash C. Kapur) **81d:90057** 90B30
- Sorazinski, Tadeusz Enumeration of weak isomorphism classes of signed graphs. *J. Graph Theory* **4** (1980), no. 2, 127–144. (E. M. Palmer) **81g:05070** 05C30
- Sosulov, A. I. (with Šunkov, V. P.) Infinite groups saturated by Frobenius subgroups. II. (Russian) *Algebra i Logika* **18** (1979), no. 2, 206–223, 254. (B. Hartley) **81h:20046** 20F50 (20E25)
- Marchetti-Spaccamela, A. See Marchetti-Spaccamela, A.
- Spade, Paul Vincent John Buridan on the liar: a study and reconstruction. *Notre Dame J. Formal Logic* **19** (1978), no. 4, 579–590. (Stephen Read) **81b:03002** 03-03 (01A35)
- Spagnolo, Sergio (with Colombini, Ferruccio; De Giorgi, Ennio) Sur les équations hyperboliques avec des coefficients qui ne dépendent que du temps. *Ann. Scuola Norm. Sup. Pisa Cl. Sci.* (4) **6** (1979), no. 3, 511–559. (P. Ungar) **81c:35077** 35L15
- Spak, V. F. (with Perceve, A. V.) Parallelization of the process of syntactical analysis for multiprocessor computing systems on the basis of adjusting logical structures. (Russian) *Gidribye Vyčisl. Mašiny i Kompleksy No. 2* (1979), 35–39, 106. (Authors' summary) **81b:68104** 68F25
- Spalding, D. Brian Numerical computation of multiphase fluid flow and heat transfer. *Recent advances in numerical methods in fluids*, Vol. 1, pp. 139–168, *Pineridge, Swansea*, 1980. (See **81j:76002**) 76T05 (80A20)
- (with Kossinlin, M. L.; Markatos, N. C.; Moul, A.) Mathematical models for the prediction of thermal pollution in rivers. *Simulation of systems '79 (Proc. Ninth IMACS Congress, Sorrento, 1979)*, pp. 633–643, *North-Holland, Amsterdam*, 1980. (Authors' summary) **81m:90038** 90A30 (92A17)
- Spalding, George R. (with Wells, William R.) Parameter estimation and identification of large scale control systems. (Russian summary) *Systems Sci.* **5** (1979), no. 2, 143–151 (1980). (Authors' summary) **81c:93016** 93A15 (93B30)
- Spallucci, E. (with Denardo, G.) Vacuum energy-momentum tensors in Schwarzschild-de Sitter space-time. (Italian and Russian summaries) *Nuovo Cimento B* (11) **55** (1980), no. 1, 97–109. (Authors' summary) **81e:83039** 83C99
- Spalvin, A. P. (with Bleier, Ja. F.; Grinhof, M. F.; Rodé, É. É.; Janbickij, R. A.) Parallel computing methods and means for solving boundary value problems of field theory. (Russian) *Latoijas PSR Zinātn. Akad. Vēstis* **1980**, no. 6(395), 105–117, 159–160. (Authors' summary) **81g:78042** 78A99 (65N05)
- Spang, H. A., III (with Baheti, R. S.; Mohler, R. A.) Second-order correlation method for bilinear system identification. *IEEE Trans. Automat. Control* **25** (1980), no. 6, 1141–1146. (Authors' summary) **81m:93079** 93E12
- Spaso, P. (with Pala, M. M.) A cubic spline technique for a fourth-order hyperbolic-parabolic mixed problem. (Italian) *Rend. Sem. Fac. Sci. Univ. Cagliari* **48** (1978), no. 1–2, 49–58. (Georges A. Lebadu) **81a:65088** 65M05
- Spanos, T. J. T. A stability analysis of immiscible viscous displacement in a homogeneous porous medium. (French summary) *Canad. J. Phys.* **58** (1980), no. 1, 138–142. (Author's summary) **81h:76054** 76S05 (76E99)
- Sparinskij, I. E. Completely uniform distribution. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* **19** (1979), no. 5, 1330–1333, 1359. (H. J. Godwin) **81b:10033** 10K05 (65C10)
- Prime divisors of recurrence sequences. (Russian) *Izv. Vys. Učebn. Zaved. Matematika* **1980**, no. 4, 100–103. (John H. Loxton) **81j:10015** 10A35
- Sparrow, C. Bifurcation and chaotic behaviour in simple feedback systems. *J. Theoret. Biol.* **83** (1980), no. 1, 93–105. (Frederick R. Marotto) **81e:58038** 58F13 (34C05, 82A15)
- Spaschik, B. L. (with Kukanova, E. E.) Did Newton and his followers have any conception of wave-particle duality of light? (Russian. English summary) *History and methodology of the natural sciences, No. XXI (Russian)*, pp. 76–83, *Mosk. Gos. Gos. Univ., Moscow*, 1979. (I. Grattan-Guinness) **81m:78001** 78-03 (01A99)
- Späth, Helmut Klassenweise diskrete Approximation. (English summary) *Numerische Methoden bei graphentheoretischen und kombinatorischen Problemen, Band 2 (Tagung, Math. Forschungsinst., Oberwolfach, 1978)*, pp. 224–233, *Internat. Ser. Numer. Math.*, 46, Birkhäuser, Basel, 1979. (P. Ruitauskas) **81c:90052** 90C05 (90C30)
- Spatt, Chester S. (with Ross, Stephen A.) Present values and internal rates of return. *J. Econom. Theory* **23** (1980), no. 1, 66–81. (Edwin Burmeister) **81m:90022** 90A09
- Spazzini, G. Instanton classical solution of a conformally invariant field theory. (Italian and Russian summaries) *Nuovo Cimento A* (11) **52** (1979), no. 3, 286–294. (V. Z. Enol'skij) **81f:81045** 81E10 (58E20, 58G35)
- Speelman, Wayne (with Sweet, Daniel) The alternative method for solutions in the kernel of a bounded linear functional. *J. Differential Equations* **37** (1980), no. 3, 297–302. (M. K. Grammatikopoulos) **81c:34053** 34C25 (34C28)
- Speers, W. T. (with Jackson, D. M.; Jeffcott, B.) The enumeration of sequences with respect to structures on a bipartition. *Discrete Math.* **30** (1980), no. 2, 133–149. (Morton Abramson) **81m:05010** 05A15
- Specht, Bernhard (with Wissmann, Johannes W.) Inclusion of hybrid deformation elements in the class of simple deformation models. *Internat. J. Numer. Methods Engrg.* **15** (1980), no. 6, 855–866. (Authors' summary) **81f:73041** 73K25
- Specht, J. (with Parchmann, R.; Duske, J.) On deterministic indexed languages. *Inform. and Control* **45** (1980), no. 1, 48–67. (Authors' summary) **81f:68086** 68F05
- Speciale, Angela Measurability of the family of ellipsoids of the projective space P_3 . (Italian. French summary) *Atti Accad. Sci. Lett. Arti Palermo Parte I* (4) **36** (1976/77), 411–417 (1978). (L. A. Santaló) **81f:53057e** 53C65 (60D05)
- Measurability of the family of hyperboloids of the projective space P_3 . (Italian. French summary) *Atti Accad. Sci. Lett. Arti Palermo Parte I* (4) **36** (1976/77), 419–424 (1978). (L. A. Santaló) **81f:53057f** 53C65 (60D05)
- (with Di Benedetto, Mario) The measurability of the families of ellipsoids and hyperboloids. (Italian. French summary) *Atti Accad. Sci. Lett. Arti Palermo Parte I* (4) **36** (1976/77), 535–540 (1978). (L. A. Santaló) **81f:53057m** 53C65 (60D05)
- (with Di Benedetto, Mario) Problems of integral geometry for the family of hyperellipsoids of the projective space P_n . (Italian. French summary) *Rev. Roumaine Math. Pures Appl.* **25** (1980), no. 2, 157–162. (M. Stoka) **81h:53071** 53C65
- Speck, F.-O. (with Meister, E.) Some multidimensional Wiener-Hopf equations with applications. *Trends in applications of pure mathematics to mechanics, Vol. II (Second Sympos., Kozubnik, 1977)*, pp. 217–262, *Monographs and Studies in Math.*, 5, Pitman, London, 1979. (N. K. Karapetjan) **81c:45004** 45E10 (78A45)
- (with Meister, E.) Wiener-Hopf operators on three-dimensional wedge-shaped regions. *Applicable Anal.* **10** (1980), no. 1, 31–45. (Gustaf Gripenberg) **81c:45011** 45E10 (47B35)
- Specker, Ernst Die Entwicklung der axiomatischen Mengenlehre. *Jahresber. Deutsch. Math.-Veren.* **81** (1978/79), no. 1, 13–21. (Editors) **81f:04001** 04-03 (01A60)
- Paul Bernays. *Logic Colloquium '78 (Mou, 1978)*, pp. 381–389, *Studies in Logic and Foundations of Math.*, 97, North-Holland, Amsterdam, 1979. (Editors) **81m:01075** 01A70 (03-03)
- Spector, Mitchell A measurable cardinal with a nonwellfounded ultrapower. *J. Symbolic Logic* **45** (1980), no. 3, 623–628. (L. Bukovsky) **81k:03053** 03E55 (03E60)
- Spector, Scott J. On uniqueness in finite elasticity with general loading. (French summary) *J. Elasticity* **10** (1980), no. 2, 145–161. (Cornelius O. Horgan) **81g:73059** 73G05 (58C30, 73C15)
- On continuous dependence in finite elasticity. *Quart. Appl. Math.* **38** (1980/81), no. 1, 135–138. (D. Graffi) **81f:73020** 73G05
- Spedaliere, R. (with Schucking, E. L.) A scale parameter for Friedmann models. *Astronom. J.* **85** (1980), no. 5, 586–588. (R. C. Roeder) **81g:83072** 83F05 (85A40)
- Spedicato, E. (with Bertocchi, M.) Computational experience with conjugate gradient algorithms. *Calcolo* **16** (1979), no. 3, 255–269 (1980). (Albert Buckley) **81f:90086** 90C30 (49D07, 65K10)
- Parameter estimation and least squares. *Numerical techniques for stochastic systems (Conf., Gargano, 1979)*, pp. 233–242, *North-Holland, Amsterdam*, 1980. (Author's summary) **81c:62053** 62F10 (65D10)
- See also Nonlinear optimization. **81c:65006**
- Speed, F. M. (with Hocking, Ronald R.; Hackney, O. P.) The analysis of linear models with unbalanced data. *Contributions to survey sampling and applied statistics*, pp. 133–151, *Academic Press, New York*, 1978. (Authors' summary) **81g:62118** 62J05
- (with Searle, S. R.; Milliken, George A.) Population marginal means in the linear model: an alternative to least squares means. *Amer. Statist.* **34** (1980), no. 4, 216–221. (Authors' summary) **81m:62129** 62J05
- Speed, T. P. Decompositions of graphs and hypergraphs. *Combinatorial mathematics (Proc. Internat. Conf. Combinatorial Theory, Australas. Nat. Univ., Canberra, 1977)*, pp. 300–307, *Lecture Notes in Math.*, 686, Springer, Berlin, 1978. (G. R. Grimmett) **81a:05106** 05C65 (60G05, 62H17)
- A factorisation theorem for adequate statistics. *Austral. J. Statist.* **20** (1978), no. 3, 240–249. (Pramod K. Pathak) **81j:62015** 62B05
- (with Darroch, J. N.; Lauritzen, Steffen L.) Markov fields and log-linear interaction models for contingency tables. *Ann. Statist.* **8** (1980), no. 3, 522–539. (Alan Agresti) **81f:62098** 62H17 (60C60, 60K35)
- See also Hida, Takeyuki, **81c:60009**
- Speer, E. (with Rivasseau, V.) The Borel transform in Euclidean ϕ_4^4 local existence for $\text{Re } \epsilon < 4$. *Comm. Math. Phys.* **72** (1980), no. 3, 293–302. (J.-P. Antoine) **81e:81003** 81E15 (81C30)
- Spehler, D. (with Leite Lopes, J.) On the Bargmann-Wigner and Weyl spin- $\frac{1}{2}$ fields. *Lett. Nuovo Cimento* (2) **26** (1979), no. 17, 567–572. (K. J. Le Couteur) **81e:81027** 81D25
- Speiser, David See Hadron structure and lepton-hadron interactions, **81a:81002**
- Spelman, Gerald Grand function of a one-component classical charged particle gas using collective coordinates. *Ann. Physics* **126** (1980), no. 1, 47–80. (Author's summary) **81d:82029** 82A40
- Spektor, A. A. (with Gol'dštejn, R. V.) Variational estimates of the solutions of some mixed three-dimensional problems of elasticity theory with unknown boundary. *Izv. Akad. Nauk SSSR Meh. Teor. Telo* **13** (1978), no. 2, 82–94. (Russian); translated as *Mech. Solids* **13** (1978), no. 2, 75–86. (Edward J. Haug, Jr.) **81d:73095** 73T05 (49A29, 73M05)
- Spelde, H. G. Bounds for the distribution function of network variables. *First Symposium on Operations Research (Univ. Heidelberg, Heidelberg, 1976)*, Teil 3, pp. 113–123, *Operations Research Verfahren, XXVII*, Hain, Meisenheim, 1977. (Kenji Onaga) **81h:90076** 90B15
- Spellucci, Peter See Björck, Åke; et al., **81f:65001**
- Spence, Alastair Product integration for singular integrals and singular integral equations. *Numerische Integration (Tagung, Math. Forschungsinst., Oberwolfach, 1978)*, pp. 288–300, *Internat. Ser. Numer. Math.*, 45, Birkhäuser, Basel, 1979. (Author's summary) **81f:65034** 65D30 (65R20)
- (with Moore, Gerald) The calculation of turning points of nonlinear equations. *SIAM J. Numer. Anal.* **17** (1980), no. 4, 567–576. (W. C. Rheinboldt) **81h:65047** 65J15 (35P30, 58C15, 58E07)
- Spencer, A. J. M. ★Continuum mechanics. Longman Mathematical Texts. Longman, London-New York, 1980. vii + 183 pp. ISBN 0-582-44282-6 (From the publisher's summary) **81h:73001** 73-01 (73Bxx, 76-01)
- (with Moss, R. L.; Rogers, T. G.) Axially symmetric deformations of

- fibre-reinforced cylinders. *J. Inst. Math. Appl.* **26** (1980), no. 1, 21–38. (G. A. Nariboli) **81m:73014** 73C40 (73L10)
- Spencer, Bruce D.** ★Benefit-cost analysis of data used to allocate funds. Lecture Notes in Statistics, 3. Springer-Verlag, New York-Heidelberg, 1980. viii + 296 pp. ISBN 0-387-90511-1 (G. Tintner) **81m:62199** 62P20 (90A19)
- Spencer, Donald** (with Goldschmidt, Hubert) On the nonlinear cohomology of Lie equations. III. *J. Differential Geom.* **13** (1978), no. 3, 409–453. (Ngô Van Quê) **81m:58088a** 58H10 (53C10, 58H15)
- (with Goldschmidt, Hubert) On the nonlinear cohomology of Lie equations. IV. *J. Differential Geom.* **13** (1978), no. 4, 455–526 (1979). (Ngô Van Quê) **81m:58088b** 58H10 (53C10, 58H15)
- Spencer, Joel H.** (with Erdős, Paul; Lovász, László) Strong independence of graphcopy functions. *Graph theory and related topics (Proc. Conf., Univ. Waterloo, Waterloo, Ont., 1977)*, pp. 165–172, Academic Press, New York, 1979. (E. Keith Lloyd) **81b:05060** 05C30
- All finite configurations are almost Ramsey. *J. Combin. Theory Ser. A* **27** (1979), no. 3, 401–403. (Karsten Steffens) **81d:05010** 05A17 (05C55)
- Counting magic squares. *Amer. Math. Monthly* **87** (1980), no. 5, 397–399. (H. Gupta) **81j:05042** 05B30 (05A15)
- Optimally ranking unrankable tournaments. *Period. Math. Hungar.* **11** (1980), no. 2, 131–144. (P. Erdős) **81h:05072** 05C20 (60C05, 90D10)
- Spencer, Richard V.** (with Crocker, Earle B.) Observability considerations for an inertial gyrocompass. *J. Guidance Control* **3** (1980), no. 4, 332–336. (Authors' summary) **81e:93019** 93B07 (70E05)
- Spencer, Thomas** (with Fröhlich, Jürg) Phase transitions in statistical mechanics and quantum field theory. *New developments in quantum field theory and statistical mechanics (Proc. Cargèse Summer Inst., Cargèse, 1976)*, pp. 79–130, NATO Adv. Study Inst. Ser., Ser. B: Physics, 26, Plenum, New York, 1977. (From the introduction) **81j:82013** 82A25 (81E10)
- (with Glimm, James G.; Jaffe, Arthur M.) Phase transitions for ϕ_2^4 quantum fields. (Russian) Translated from the English by Ju. M. Suhov. *Euclidean quantum field theory (Russian)*, pp. 46–64, Mat.: Novoe Zorub. Nauke, 12, "Mir", Moscow, 1978. (See **81f:81002**) **81E10**
- (with Glimm, James G.; Jaffe, Arthur M.) A convergent expansion about mean field theory. I. The expansion. (Russian) Translated from the English by Ju. M. Suhov. *Euclidean quantum field theory (Russian)*, pp. 65–87, Mat.: Novoe Zorub. Nauke, 12, "Mir", Moscow, 1978. (See **81f:81002**) **81E10**
- (with Glimm, James G.; Jaffe, Arthur M.) A convergent expansion about mean field theory. II. Convergence of the expansion. (Russian) Translated from the English by Ju. M. Suhov. *Euclidean quantum field theory (Russian)*, pp. 88–131, Mat.: Novoe Zorub. Nauke, 12, "Mir", Moscow, 1978. (See **81f:81002**) **81E10**
- The Lipatov argument. *Comm. Math. Phys.* **74** (1980), no. 3, 273–280. (Author's summary) **81j:81045** **81E10**
- Spera, Antonino Giorgio** Hestenes ternary rings. (Italian. English summary) *Rend. Circ. Mat. Palermo* (2) **27** (1978), no. 2, 289–304. (V. A. Artamonov) **81m:16024** 16A45 (17A40)
- Speranskii, D. V.** (with Skovcov, Ju. A.) Analytical construction of distinguishing sequences for discrete devices with memory. *Avtomat. i Telemekh.* **1980**, no. 1, 122–130 (Russian. English summary); translated as *Automat. Remote Control* **41** (1980), no. 1, part 2, 97–104. (Authors' summary) **81g:94063** 94C10 (68D05)
- Sperb, René P.** Maximum principles and nonlinear elliptic problems. *J. Analyse Math.* **35** (1979), 236–263. (Catherine Bandle) **81f:35044** 35J65 (49G05, 53B20, 73C05)
- Corrigendum and addendum: "Maximum principles and bounds in some inhomogeneous elliptic boundary problems" [*SIAM J. Math. Anal.* **8** (1977), no. 5, 871–878; MR **58** #11889] by P. W. Schaefer and Sperb. *SIAM J. Math. Anal.* **10** (1979), no. 6, 1326. (Catherine Bandle) **81c:35039** 35J25
- Nonlinear diffusion-reaction problems with time-dependent diffusion coefficient. *Z. Angew. Math. Phys.* **30** (1979), no. 4, 663–675. (J. Smoller) **81e:35066** 35K55 (80A20)
- Sperber, Steven I.** Congruence properties of the hyper-Kloosterman sum. *Compositio Math.* **40** (1980), no. 1, 3–33. (Daniel Barsky) **81j:10059** 10G20 (12B40)
- On the L-functions associated with certain exponential sums. *J. Number Theory* **12** (1980), no. 2, 141–153. (Daniel Barsky) **81m:12022** 12C25 (10G05, 14G10)
- Sperner, Emanuel** Ein kombinatorischer Umschließungssatz nebst Anwendungen. *Game theory and related topics (Proc. Sem., Bonn and Hagen, 1978)*, pp. 207–218, North-Holland, Amsterdam, 1979. (Udo Pachner) **81c:52013** 52A37
- Fifty years of further development of a combinatorial lemma. A. B. *Numerical solution of highly nonlinear problems (Sympos. Fixed Point Algorithms and Complementarity Problems, Univ. Southampton, Southampton, 1979)*, pp. 183–197, 199–217, North-Holland, Amsterdam, 1980. (E. C. Milner) **81i:05004** 05-02 (01A65, 05B25)
- Sperner, Emanuel, Jr.** (with Bokowski, Jürgen) Zerlegung konvexer Körper durch minimale Trennflächen. *J. Reine Angew. Math.* **311**/312 (1979), 80–100. (H. E. Debrunner) **81b:52010** 52A40
- Spesivceva, L. F.** (with Nuller, B. M.) On a class of problems for elastic regions weakened by an inhomogeneous inclusion. *Izv. Akad. Nauk SSSR Meh. Tverd. Tela* **14** (1979), no. 2, 46–52 (Russian); translated as *Mech. Solids* **14** (1979), no. 2, 47–53. (Authors' summary) **81d:73010** 73C40
- Spesivskiy, V.** Generalization of the concept of a connexion in a vector bundle. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* **1979**, no. 6, 74–77. (D. I. Papuc) **81a:45005** 53C05
- Spesivtseva, L. F.** See **Spesivceva, L. F.**
- Spesivskiy, V. L.** See **Spesivskiy, V.**
- Spevak, L. V.** An integral equation with partial integrals of Volterra type. (Russian) *Differentsial'nye Uravneniya (Ryazan)* **13** (1979), 119–129. (M. Tvrđý) **81m:45005** 45D05
- Speyer, Jason L.** (with Marcus, Steven; Krainak, Joseph) A decentralized team decision problem with an exponential cost criterion. *IEEE Trans. Automat. Control* **25** (1980), no. 5, 919–924. (Authors' summary) **81j:90128** 90C40
- (with Samn, Sherwood; Albanese, Richard) A stochastic differential game theory approach to human operators in adversary tracking encounters. *IEEE Trans. Systems Man Cybernet.* **10** (1980), no. 11, 755–762. (Authors' summary) **81m:90119** 90D26
- Speziamiglio, Adalberto** (with Onuchic, Nelson) Qualitative properties of certain ordinary differential systems. *Functional differential equations and bifurcation (Proc. Conf., Inst. Ciênc. Mat. São Carlos, Univ. São Paulo, São Carlos, 1979)*, pp. 334–347, *Lecture Notes in Math.*, 799, Springer, Berlin, 1980. (K. R. Schneider) **81m:34044** 34C10
- Spicher, K.** See *Proceedings: Operations Research*, **81e:90003a**
- Spickenheuer, W.** Optimale vorbeugende Instandhaltung. *Proceedings in Operations Research*, 7 (Sixth Annual Meeting, Deutsch. Gesellsch. Operations Res., Christian-Albrechts-Univ., Kiel, 1977), pp. 337–346, Physica, Würzburg, 1978. (Paul van Beek) **81g:90048** 90B05 (90B25)
- Spiegel, E. A.** Fluid dynamical form of the linear and nonlinear Schrödinger equations. *Phys. D* **1** (1980), no. 2, 236–240. (A. K. Rajagopal) **81k:76011** 76B15 (35Q20, 81C05)
- (with Marzec, C. J.) Ordinary differential equations with strange attractors. *SIAM J. Appl. Math.* **38** (1980), no. 3, 403–421. (P. J. Holmes) **81j:34045** 34Cxx (58F13)
- Spiegel, Eugene** (with Trojan, Allan) On the Schur index and the structure of finite groups. *J. Algebra* **65** (1980), no. 2, 416–420. (B. Fein) **81m:20013** 20C15
- Spiegel, Hartmut** (with Powarzynski, Roland) Über zwei besondere Eigenschaften von Dreiecksflächenetzen. *Elem. Math.* **34** (1979), no. 6, 140–146. (B. Artmann) **81b:52008** 52A25
- Spiegel, Stanley L.** On the evaluation of finite difference derivatives using interpolated data. *Internat. J. Math. Ed. Sci. Tech.* **11** (1980), no. 3, 391–399. (O. Widlund) **81i:65008** 65D05
- Spiegelhalter, D. J.** (with Smith, A. F. M.) Bayes factors and choice criteria for linear models. *J. Roy. Statist. Soc. Ser. B* **42** (1980), no. 2, 213–220. (D. V. Lindley) **81j:62009** 62F05 (62J99)
- Spiegelhalter, Clifford H.** (with Sacks, J.) Consistent window estimation in nonparametric regression. *Ann. Statist.* **8** (1980), no. 2, 240–246. (M. Hušková) **81f:62070** 62G05
- (with Studden, W. J.) Design aspects of Scheffé's calibration theory using linear splines. *J. Res. Nat. Bur. Standards* **85** (1980), no. 4, 295–304. (Authors' summary) **81j:62148** 62K05 (65D07)
- A univariate extension of Jensen's inequality. *J. Res. Nat. Bur. Standards* **85** (1980), no. 5, 363–365. (Yung L. Tong) **81m:60031** 60E15 (26D15)
- Spies, J. A.** On the escape of a particle from a potential well. *J. Phys. A* **13** (1980), no. 6, 2049–2056. (Author's summary) **81d:81020** 81C05
- Spies, P. P.** See *Jahrestagung: Gesellschaft für Informatik*, **81m:68004**
- Spigler, R.** The roots of the equation: $A\mathcal{C}_\epsilon(x) + Bx\mathcal{C}_\epsilon'(x) = 0$. (Italian. English summary) *Atti Sem. Mat. Fis. Univ. Modena* **27** (1978), no. 1, 153–166 (1979). (N. Hayek Calà) **81a:33013** 33A40
- Špilavský, E. K.** (with Petrov, G. I.) Identification of dynamic systems and parameter estimation by recognition methods. *Identification and system parameter estimation (Proc. Fourth IFAC Sympos., Tbilisi, 1976)*, Part 3, pp. 1901–1907, North-Holland, Amsterdam, 1978. (See **80d:93010c**) **93B30**
- Dynamical classification of stochastic processes and systems. *Proceedings of the Fourth International Joint Conference on Pattern Recognition (Kyoto, 1978)*, pp. 233–235, IEEE, New York, 1979. (Michael G. Strintzis) **81f:62131** 62M02 (68G10)
- (with Atamukas, Markas) Adaptive approach in the recognition of nonstationary processes. (Russian. Lithuanian and English summaries) *Statist. Problemy Upravljenja — Trudy Sem. Protsessy Optimal. Upravleniya V Sekcija No. 37* (1979), 83–93, 95. (Authors' summary) **81a:93087** 93E10 (68G10)
- Spilker, Jürgen** (with Schwarz, Wolfgang) Wiener-Lévy-Sätze für absolut konvergente Reihen. *Arch. Math. (Basel)* **32** (1979), no. 3, 267–275. (E. Grosswald) **81d:32002** 32A05 (10H99, 30B50, 32A10)
- Spilker, Robert L.** A traction-free edge hybrid-stress element for the analysis of edge effects in cross-ply laminates. *Comput. & Structures* **12** (1980), no. 2, 167–179. (Author's summary) **81f:73038** 73K25
- (with Munir, Nasir I.) The hybrid-stress model for thin plates. *Internat. J. Numer. Methods Engrg.* **15** (1980), no. 8, 1239–1260. (Authors' summary) **81f:73039** 73K25 (73K10)
- Spillers, W. R.** (with Lefcochilos, E.) Elastic realizability of force and displacement systems in structures. *Quart. Appl. Math.* **37** (1979/80), no. 4, 411–420. (Authors' summary) **81h:73045** 73K99
- Spillman, Bonnie** (with Spillman, Richard; Bezdek, James) A fuzzy analysis of consensus in small groups. *Fuzzy sets (Proc. Sympos. Policy Anal. Inform. Systems, Duke Univ., Durham, N.C., 1980)*, pp. 291–308, Plenum, New York, 1980. (Authors' summary) **81i:90019** 90A07 (03E72, 90A08)
- Spillman, Richard** (with Spillman, Bonnie; Bezdek, James) A fuzzy analysis of consensus in small groups. *Fuzzy sets (Proc. Sympos. Policy Anal. Inform. Systems, Duke Univ., Durham, N.C., 1980)*, pp. 291–308, Plenum, New York, 1980. (Authors' summary) **81i:90019** 90A07 (03E72, 90A08)
- Spindel, Ph.** Some Kasner-type solutions. *Gen. Relativity Gravitation* **10** (1979), no. 8, 699–708. (Alan Barnes) **81c:83010** 83C15 (35A30, 83C20)
- (with Brout, R.; Englert, F.; Frère, J.-M.; Gunzig, E.; Nardone, P.; Truffin, C.) Cosmogenesis and the origin of the fundamental length scale. *Nuclear Phys. B* **170** (1980), no. 2, FS 1, 228–264. (Authors' summary) **81j:83054** 83F05 (85A40)
- Spindler, Heinz** Der Satz von Grauert-Mülich für beliebige semistabile holomorphe Vektorbündel über dem n -dimensionalen komplex-projektiven Raum. *Math. Ann.* **240** (1979), no. 2, 131–141. (Knut Lønsted) **81b:14008** 14F05
- (with Okonek, Christian; Schneider, Michael) ★Vector bundles on complex projective spaces. *Progress in Mathematics*, 3. Birkhäuser, Boston, Mass., 1980. vii + 389 pp. ISBN 3-7643-3000-7 (Werner Kleinert) **81b:14001** 14-02 (14D20, 14F05, 32G13, 81C30)
- Spinel, F.** (with Hännilä, Florea) A generalization of the Vaschy theorem. (French and German summaries) *Rev. Roumaine Sci. Tech. Sér. Electrotech. Énergét.* **24** (1979), no. 3, 501–503, xi, xii. (Authors' summary) **81b:94061** 94C05
- (with Hännilä, Florea) On the solutions existence in nonlinear electrical resistive networks. (French and German summaries) *Rev. Roumaine Sci. Tech. Sér. Electrotech. Énergét.* **25** (1980), no. 2, 225–234, v, vii. (François Aribaud) **81j:94038** 94C05 (58F40)

- Spinelli, Giancarlo** Gravitational field theory for the continuum: second order field equations. (Italian summary) *Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur.* (8) 64 (1978), no. 6, 603-609. (Carl Brans) **81c:83006** 83C05 (83C25)
- Gravitational field theory for the continuum: convergence to general relativity. (Italian summary) *Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur.* (8) 65 (1978), no. 1-2, 78-85 (1979). (Elhanan Leibowitz) **81g:83051** 83D05 (49H05)
- Spingarn, J. E.** Fixed and variable constraints in sensitivity analysis. *SIAM J. Control Optim.* 18 (1980), no. 3, 297-310. (J. C. Allwright) **81c:90084** 90C31 (93B35)
- Spingarn, K.** (with Kalaba, Robert) Sensitivity of parameter estimates to observations, system identification, and optimal inputs. *Appl. Math. Comput.* 7 (1980), no. 3, 225-235. (Authors' summary) **81k:93020** 93B35
- Spinko, L. I.** (with Jurcenko, S. I.; Mel'nik, I. M.) A nonlinear Riemann problem with discontinuous coefficients on a Riemann surface. (Russian) *Differentsial'nye Uravneniya (Ryazan)* No. 14 (1979), 160-170. (Ju. L. Rodin) **81c:30051** 30E25 (30F99)
- de Spinoza, Benedictus** See Parkinson, G. H. R., (See **81m:01022b**)
- Spirakis, Paul G.** (with Reif, John H.) Random matroids. *Conference Proceedings of the Twelfth Annual ACM Symposium on Theory of Computing* (Los Angeles, Calif., 1980), pp. 385-397. *ACM, New York*, 1980. (See **81f:68006**) 68E99 (05B35, 68C05, 90C35)
- Spirin, Tiberiu** (with Tóviss, L.; Tasnadi, Al.) Economic system structure hierarchization. (French and Russian summaries) *Econom. Comput. Econom. Cybernet. Stud. Res.* 1978, no. 1, 45-61. (Authors' summary) **81c:90030** 90A17 (05C99, 15A21, 90A15)
- Sur le problème de la triangulation. *Rev. Roumaine Math. Pures Appl.* 25 (1980), no. 2, 271-276. (Authors' summary) **81h:90045** 90A17 (05C50)
- Spirig, Franz** A generalization of Hopf's bifurcation problem. *Proceedings of the Sixth Conference on Mathematical Methods in Celestial Mechanics* (Math. Forschungsinst., Oberwolfach, 1978), Part II. *Celestial Mech.* 21 (1980), no. 2, 199-201. (V. G. Kolomeic) **81d:34033** 34C25 (58F14, 70K20)
- Spirito, A.** (with Bonivento, C.; Tonielli, A.; Fronza, G.) The use of stochastic models in air pollution prediction and control: problems and numerical results. *Numerical techniques for stochastic systems (Conf., Gargnano, 1979)*, pp. 161-186. *North-Holland, Amsterdam*, 1980. (See **81f:93067**) 93E10 (86A35)
- Splivkovskii, I. M.** (with Krein, M. G.) Factorization of α -sectorial matrix-valued functions on the unit circle. (Russian) *Operators in Banach spaces. Mat. Issled.* No. 47 (1978), 41-63, 137. (E. R. Cekanovskii) **81d:47017** 47B15
- On the theory of the generalized Riemann boundary value problem in the classes L_p . (Russian) *Ukrain. Mat. Ž.* 31 (1979), no. 1, 63-73, 111. (V. B. Dybin) **81c:30053** 30E25
- Block operators and related questions of the theory of factorization of matrix-valued functions. (Russian) *Dokl. Akad. Nauk SSSR* 254 (1980), no. 4, 816-820. (B. Reichstein) **81k:47024** 47A68 (47B05)
- Some estimates for partial indices of measurable matrix-valued functions. (Russian) *Mat. Sb. (N.S.)* 111(153) (1980), no. 2, 227-248, 319. (J. Kisynsky) **81k:45004** 45E05 (30E20, 30E25, 47A68, 47G05)
- Spitzer, Frank** See Fichtner, Karl-Heinz; et al. **81c:60058c**
- Sprak, M. A.** (with Cerný, D. E.) Some simplifications of the construction of a diagnostic automaton for the solution of generalized diagnosis and setting problems. (Russian) *Automata*, No. 2 (Russian), pp. 53-57, 60. *Saratov. Gos. Univ., Saratov*, 1977. (Krzysztof Sapiecha) **81c:68050** 68D99 (94C99)
- Spitz, G. B.** Transformation groups with algebraic invariants. (Russian) *Problems of group theory and homological algebra*, No. 1 (Russian), pp. 203-210. *Jaroslav. Gos. Univ., Jaroslavl*, 1977. (V. L. Popov) **81c:14025** 14L30 (20F99)
- Splittstoesser, W.** (with Wagner, Heinz-Josef) Eine dyadische Infinitesimalrechnung für Haar-Funktionen. (English and Russian summaries) *Z. Angew. Math. Mech.* 57 (1977), no. 9, 527-541. (Authors' summary) **81h:42024** 42C10 (94A11)
- Error estimates for sampling approximation of nonbandlimited functions. *Math. Methods Appl. Sci.* 1 (1979), no. 2, 127-137. (Authors' summary) **81a:94007** 94A05
- (with Butzer, P. L.) On quantization, truncation and jitter errors in the sampling theorem and its generalizations. (German and French summaries) *Signal Process.* 2 (1980), no. 2, 101-112. (Authors' summary) **81c:94004** 94A12
- Spline Function Group, Mathematical Research Institute, Academia Sinica** B -splines. I. (Chinese) *Knowledge Practice Math.* 1979, no. 1, 62-70. (Charles K. Chui) **81i:41010a** 41A15 (41A10, 65D07)
- B -splines. II. (Chinese) *Knowledge Practice Math.* No. 2 (1979), 65-73. (Charles K. Chui) **81i:41010b** 41A15 (41A10, 65D07)
- B -splines. III. (Chinese) *Knowledge Practice Math.* No. 3 (1979), 70-80. (Charles K. Chui) **81i:41010c** 41A15 (41A10, 65D07)
- B -splines. IV. (Chinese) *Knowledge Practice Math.* No. 4 (1979), 61-68. (Charles K. Chui) **81i:41010d** 41A15 (41A10, 65D07)
- Spohn, Herbert** (with Fannes, M.; Verbeure, A.) Equilibrium states for mean field models. *J. Math. Phys.* 21 (1980), no. 2, 355-358. (Authors' summary) **81a:82015** 82A15 (81K05)
- (with van Beijeren, H.; Lanford, O. E., III; Lebowitz, Joel L.) Equilibrium time correlation functions in the low-density limit. *J. Statist. Phys.* 22 (1980), no. 2, 237-257. (Carlo Cercignani) **81a:82028** 82A40
- Kinetic equations from Hamiltonian dynamics: Markovian limits. *Rev. Modern Phys.* 52 (1980), no. 3, 569-615. (Authors' summary) **81c:82010** 82A05 (60K35, 82A15, 82A40)
- Spolinski Cherubini, Alessandra** (with Varisco, Ada) Semigroups whose proper subsemigroups are τ -Archimedean. (Italian. English summary) *Istit. Lombardo Accad. Sci. Lett. Rend. A* 112 (1978), no. 1, 91-98 (1979). (Franco Migliorini) **81h:20088** 20M10
- (with Varisco, Ada) Semigroups with simplifiable exponents. (Italian. English summary) *Atti Accad. Sci. Torino Cl. Sci. Fis. Mat. Natur.* 113 (1979), no. 1-2, 175-183. (Franco Migliorini) **81h:20089** 20M10
- (with Varisco, Ada) On Putcha's Q -semigroups. *Semigroup Forum* 18 (1979), no. 4, 313-317. (Bernard L. Madison) **81f:20081** 20M10 (20M14)
- (with Varisco, Ada) Power cancellative semigroups. *Semigroup Forum* 18 (1979), no. 4, 381-384. (Editors) **81d:20055** 20M10
- (with Varisco, Ada) Quasicommutative semigroups and σ -reflexive semigroups. *Semigroup Forum* 19 (1980), no. 4, 313-321. (Jerzy W. Grzymala-Busse) **81h:20088** 20M10
- Sponagel, S.** (with Akbay, U.; Becker, Ernst; Krozer, S.) Instability of slow viscometric flow. *Mech. Res. Comm.* 7 (1980), no. 4, 199-204. (From the introduction) **81d:76099** 76A10 (76E99)
- Spooner, David** (with Miller, Webb) Software for roundoff analysis. II. *ACM Trans. Math. Software* 4 (1978), no. 4, 369-387. (Authors' summary) **81h:65035** 65G05 (65F99)
- Spoutis, V. A.** (with Kennedy, William J., Jr.; Gentle, James E.) Useful generalized properties of L_1 estimators. *Comm. Statist. A—Theory Methods* 9 (1980), no. 12, 1309-1315. (Frederick N. Fritsch) **81h:65063** 65K05 (62J05, 90C05)
- Sprague, Alan P.** (with Beth, Thomas) Trees of British number systems are graceful. *Arch. Math. (Basel)* 33 (1979/80), no. 4, 383-391. (A. Rosa) **81f:05063** 05C05
- A characterization of 3-nets. *J. Combin. Theory Ser. A* 27 (1979), no. 3, 223-253. (Renu Laskar) **81h:05049** 05B99
- Sprekels, Jürgen** Iterationsverfahren zur Einschließung positiver Lösungen superlinearer Differentialgleichungen. (English summary) *Numerische Behandlung von Differentialgleichungen mit besonderer Berücksichtigung freier Randwertaufgaben (Tagung Math. Forschungsinst., Oberwolfach, 1977)*, pp. 261-279. *Internat. Ser. Numer. Math.*, 39, Birkhäuser, Basel, 1978. (Erich Bohl) **81c:65025** 65J15 (65R20)
- (with Voss, Heinrich) Bounds for the critical value of a nonlinear circular membrane under normal pressure. *Constructive methods for nonlinear boundary value problems and nonlinear oscillations (Proc. Conf., Math. Res. Inst., Oberwolfach, 1978)*, pp. 170-175. *Internat. Ser. Numer. Math.*, 48, Birkhäuser, Basel, 1979. (A. Radu) **81h:73038** 73K15 (34B15, 35P15, 49C05)
- Exact bounds for the solution branches of nonlinear eigenvalue problems. *Numer. Math.* 34 (1980), no. 1, 29-40. (Peter Lancaster) **81h:65049** 65J15 (47H17)
- Sprevak, D.** (with Newmann, M. M.) An assessment of the minimum divergence criterion. *IEEE Trans. Automat. Control* 25 (1980), no. 2, 289-290. (A. K. Mahalanabis) **81f:93049** 93E10
- gonzález Spriberg, Gerardo** See González Spriberg, Gerardo
- Sprindžuk, V. G.** Hilbert's irreducibility theorem and rational points on algebraic curves. (Russian) *Dokl. Akad. Nauk SSSR* 247 (1979), no. 2, 285-289. (John H. Loxton) **81b:12025** 12E05 (10F45, 14C05)
- Reducibility of polynomials and rational points on algebraic curves. (Russian) *Dokl. Akad. Nauk SSSR* 250 (1980), no. 6, 1327-1330. (Daniel Coray) **81m:14020** 14G25 (10B15, 12E05)
- Achievements and problems of the theory of Diophantine approximations. (Russian) *Uspehi Mat. Nauk* 35 (1980), no. 4(214), 3-68, 248. (S. V. Kotov) **81f:10039** 10Fxx (10Bxx, 12-02)
- Springer, T. A.** The theory of quadratic forms in the *Disquisitiones arithmeticae*. *Carl Friedrich Gauss 1777-1855*, pp. 42-54. *Commun. Math. Inst. Rijksuniv. Utrecht*, 7, Rijksuniv. Utrecht, Utrecht, 1978. (See **80g:01034**) 01A10 (10-03)
- The Steinberg function of a finite Lie algebra. *Invent. Math.* 58 (1980), no. 3, 211-215. (Bhama Srinivasan) **81g:20090** 20G40 (17B10)
- A formula for the characteristic function of the unipotent set of a finite Chevalley group. *J. Algebra* 62 (1980), no. 2, 393-399. (Ryoshi Hotta) **81d:20035** 20G05 (14L30)
- Springsteel, F. N.** (with Pudlák, Pavel) Complexity in mechanized hypothesis formation. *Theoret. Comput. Sci.* 8 (1979), no. 2, 203-225. (From the summary) **81h:68054** 68C25 (68G15)
- Sprinkhuizen-Kuyper, Ida G.** A fractional integral operator corresponding to negative powers of a certain second-order differential operator. *J. Math. Anal. Appl.* 72 (1979), no. 2, 674-702. (B. S. Rubin) **81h:47044** 47G05 (26A33, 46F05)
- Sprock, Jaap** (with Nijkamp, Peter) Interactive multiple goal programming: an evaluation and some results. *Multiple criteria decision making theory and application (Proc. Third Conf., Hagen/Königswinter, 1979)*, pp. 278-293. *Lecture Notes in Econom. and Math. Systems*, 177, Springer, Berlin, 1980. (Authors' summary) **81d:90098** 90C31 (90A05)
- (with Hartog, J. A.; Nijkamp, Peter) Operational multiple goal models for large economic environmental models. *Optimization techniques (Proc. Ninth IFIP Conf., Warsaw, 1979)*, Part 2, pp. 502-512. *Lecture Notes in Control and Information Sci.*, 23, Springer, Berlin, 1980. (See **81j:49011b**) 90A30
- Sprössig, Wolfgang** Stetigkeitseigenschaften des Nablaoperators. *Wiss. Z. Tech. Hochsch. Karl-Marx-Stadt* 20 (1978), no. 4, 517-521. (Authors' summary) **81h:30089** 30G99
- Taylor- und Laurententwicklungen räumlich verallgemeinerter analytischer Funktionen. *Wiss. Z. Tech. Hochsch. Karl-Marx-Stadt* 21 (1979), no. 7, 889-894. (Wolfgang Tutschke) **81h:30052** 30G35
- Anwendung der analytischen Theorie der Quaternionen zur Lösung räumlicher Probleme der linearen Elastizität in beschränkten Gebieten. *Z. Angew. Math. Mech.* 59 (1979), no. 12, 741-743. (L. Jentsch) **81h:73007** 73C25 (35C99, 73C02)
- Quadratur mehrdimensionaler singulärer Parameterintegrale und ihre Anwendung zur Lösung partieller Differentialgleichungen. *Beiträge Numer. Math.* 8 (1980), 155-166. (H. E. Fetsis) **81h:65019** 65D30 (45P05, 65P05)
- Sprows, David J.** Subhomeotopy groups of the 2-sphere with n holes. *Fund. Math.* 108 (1980), no. 1, 1-5. (M.-E. Hamstrom) **81m:57026** 57R05 (57N05)
- Sprull, Carl** (with Studden, W. J.) A Kiefer-Wolfowitz theorem in a stochastic process setting. *Ann. Statist.* 7 (1979), no. 6, 1329-1332. (Andrej Pázmán) **81a:62078** 62K05 (62J05, 62M99)
- Spulber, Daniel F.** Noncooperative equilibrium with price discriminating firms. *Econom. Lett.* 4 (1979/80), no. 3, 221-227. (Authors' summary) **81c:90025** 90A14 (90A16)
- Spurrer, John D.** Two stage sign tests that allow first stage acceptance and rejection. Time-sequential statistical procedures. *Comm. Statist. A—Theory Methods* 7 (1978), no. 4, 399-408. (See **81i:62141**) 62G10 (62L10)
- (with Wei, L. J.) A test of the parameter of the exponential distribution in the type I censoring case. *J. Amer. Statist. Assoc.* 75 (1980), no. 370, 405-409. (B. Raja Rao) **81h:62176** 62N05 (62L05)
- (with Lee, S. C. S.; Locke, Charles) On a class of tests of exponentiality. *Technometrics* 22 (1980), no. 4, 547-554. (Ramesh C. Gupta) **81m:62077** 62G10 (62N05)
- Šrader, R.** See Schrauer, Robert
- Sragović, V. G.** (with Gessel, M.; Popov, Ju. V.) Adaptive control of generalized processes with independent values. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* 1979, no. 6, 186-192

- (Russian); translated as *Engrg. Cybernetics* 16 (1978), no. 6, 157-163. (Lennart Ljung) **81b:93681** 93E20
(with Gössel, Michael) Adaptive control of Markov chains with rewards. (Russian) *Dokl. Akad. Nauk SSSR* 254 (1980), no. 3, 523-527. (Constantin Vărsan) **81b:93679** 93E20 (90C40)
- Sraiber, A. A. Euler and Lagrange methods in the theory of two-phase flows with variable particle size of the discrete phase. A translation of Teploobmen i Gidrodinamika 1977, 124-132. *Fluid Mech.—Soviet Res.* 8 (1979), no. 5, 79-87. (Author's summary) **81c:76046** 76T05
- Sraiber, E. G. Cartan forms of spaces with simple and quasisimple fundamental groups. (Russian) *Geometry of imbedded manifolds* (Russian), pp. 112-120, *Moscow. Gos. Ped. Inst., Moscow*, 1978. (K. Radziszewski) **81h:53055** 53C40
- Šramčenko, B. L. (with Tetelbaum, A. Ja.) Application of hypergraphs in the study of planarity of electronic circuits. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* 1978, no. 5, 127-136, 222 (Russian); translated as *Engrg. Cybernetics* 16 (1978), no. 5, 95-102. (A. N. Melikhov (Melihov)) **81c:94049** 94C15
- Sradin, I. F. A system of equations of composite type in multidimensional spaces. (Russian. Tajiki summary) *Dokl. Akad. Nauk Tadzhik. SSR* 23 (1980), no. 2, 66-69. (A. Džuraev) **81i:35128** 35M05
- Srebnjuk, S. M. (with Cerný, I. M.) Phase slip in a flow of a gas-liquid mixture. A translation of *Gidromekh.* 34 (1976), 30-35. *Fluid Mech.—Soviet Res.* 8 (1979), no. 3, 86-92. (Authors' summary) **81c:76047** 76T05
- Srebnjuk, U. (with Martio, Olli) On the local behavior of quasiregular maps and branched covering maps. *J. Analyse Math.* 36 (1979), 198-212 (1980). (P. T. Church) **81h:57001** 57M12 (30C60)
- Šreder, E. G. (with Paskal', Ju. I.) Variational principle in the thermodynamics of irreversible processes. (Russian) *Izv. Vysš. Učebn. Zaved. Fizika* 1980, no. 5, 47-51. (Authors' summary) **81g:82031** 82A35 (49H05)
- Srednicki, Mark. Hidden fermions in $Z(2)$ theories. *Phys. Rev. D* (3) 21 (1980), no. 10, 2878-2884. (Author's summary) **81c:81106** 81E99 (82A67)
(with Fradkin, Eduardo; Suskind, Leonard) Fermion representation for the Z_2 lattice gauge theory in 2+1 dimensions. *Phys. Rev. D* (3) 21 (1980), no. 10, 2885-2891. (Authors' summary) **81c:81095** 81E99 (82A67)
- Sree Hari Rao, V. Gronwall-Bellman type inequalities to distributions. *Proceedings of the Conference on Mathematical Methods in Physics (Mysore, 1978), Part B*, pp. 60-64, *Matscience Rep.*, 96, *Inst. Math. Sci., Madras*, 1979. (B. Crstici) **81g:26013** 26D15 (46F99)
Integral inequalities of Gronwall type for distributions. *J. Math. Anal. Appl.* 72 (1979), no. 2, 545-550. (Paul R. Beesack) **81a:26013** 26D10 (46F10)
(with Rama Mohana Rao, M.) Uniform asymptotic stability of impulsively perturbed nonlinear differential equations. *Nonlinear Anal.* 4 (1980), no. 3, 599-606. (T. Yoshizawa) **81i:34046** 34D05
- Sreider, Ju. A. Majorant models for modal (deontic) logics. (Russian) *Semiotics and information science*, No. 11 (Russian), pp. 81-87 (errata insert), *Akad. Nauk SSSR, Vsesojuz. Inst. Nauch. i Tehn. Informacii, Moscow*, 1979. (L. L. Maksimova) **81a:03020** 03B45
- Sridhar, R. See *Proceedings: Conference on Probability, Stochastic Processes and Statistical Mechanics*, **81j:60003**
- Sridhar, S. A matrix transformation between sequence spaces. *Acta Sci. Indica* 5 (1979), no. 4, 194-197. (Kenneth A. Jukes) **81c:40009** 40C05
- Sridhar, T. (with Hayes, John P.) Testing bit-sliced microprocessors. *FTCS-9 (Ninth Annual Internat. Sympos. Fault-Tolerant Comput., Madison, Wis., 1979)*, pp. 211-218, *IEEE, New York*, 1979. (See **81m:94001**) 94C99
- Sridharan, M. R. (with Mohanty, S. P.; Shukla, S. K.) On cyclic permutation groups and graphs. *J. Math. Phys. Sci.* 12 (1978), no. 5, 409-416. (D. R. Lick) **81h:05080** 05C25
Asymptotic formula for the number of self-converse digraphs. *Proceedings of the Symposium on Graph Theory (Indian Statist. Inst., Calcutta, 1976)*, pp. 299-304, *ISI Lecture Notes*, 4, *Macmillan of India, New Delhi*, 1979. (E. M. Palmer) **81c:05044** 05C20
- On cad graphs and polycad graphs. *Math. Ed. (Siwan)* 14 (1980), no. 1, A10-A13. (Authors' summary) **81j:05102** 05C99
- Sridharan, R. (with Knus, M. A.; Ojaguren, M.) Quadratic forms and Azumaya algebras. *J. Reine Angew. Math.* 303/304 (1978), 231-248. (From the introduction) **81h:15016** 15A63 (16A16)
- Srithar, Sargur N. (with Snabb, Thomas; White, Lee J.) An algorithm for determining identity of nearest-neighbor and potential function decision rules. *Pattern Recognition* 12 (1980), no. 5, 293-299. (Authors' summary) **81m:68075** 68G10
- Srikant, P. N. (with Joshi, Mohan) Existence theorems for generalized Hammerstein equations. *Proc. Amer. Math. Soc.* 78 (1980), no. 3, 369-374. (J. Kolomý) **81h:45009** 45G10 (47H15)
- Srimani, Pradip K. (with Duttgupta, Jayaree) Single fault equivalence classes and minimal test sets in combinational networks. *Internat. J. Electron.* 47 (1979), no. 3, 297-310. (A. J. Tosser) **81c:94048** 94C15
(with Sengupta, Abhijit) Algebraic determination of circuits in a directed graph. *Internat. J. Systems Sci.* 10 (1979), no. 12, 1409-1413. (Authors' summary) **81i:94000** 94C15 (94C05)
(with De, Nanda Kisor; Bandyopadhyay, Subir; Sengupta, Abhijit) Checking p -t diagnosability of a system. *Comput. Electr. Engrg.* 7 (1980), no. 3, 157-162. (Authors' summary) **81m:68005** 68A05
(with Sinha, Bateeshwar P.; Pal, A.) Fail-safe realisation of sequential machines with a new two-level MOS module. *Comput. Electr. Engrg.* 7 (1980), no. 3, 163-173. (Authors' summary) **81m:68042** 68D15 (68A05, 94C30)
(with De, Nanda Kisor; Sengupta, Abhijit; Bandyopadhyay, Subir) A new method to test system diagnosability. *Inform. Sci.* 22 (1980), no. 2, 131-138. (Authors' summary) **81m:68066** 68A05
Enumeration of all minimum feedback edge sets in a directed graph. *Internat. J. Systems Sci.* 11 (1980), no. 2, 239-246. (Authors' summary) **81h:68084** 68E10 (94C15)
(with De, Nanda Kisor; Sengupta, Abhijit; Bandyopadhyay, Subir) On certain investigations on self-diagnosable systems. *Internat. J. Systems Sci.* 11 (1980), no. 3, 363-375. (Authors' summary) **81h:68002** 68A05 (68J05)
Algebraic analysis of multiple faults in combinational networks. *Internat. J. Systems Sci.* 11 (1980), no. 8, 921-936. (Authors' summary) **81i:94039** 94C10
- Srinath, K. P. (with Hidiroglou, Michael) Estimation of variance in multistage sampling. *Metrika* 27 (1980), no. 2, 121-125. (C. H. Kapadia) **81i:62025** 62D05
- Srinivasan, Bhama. Weil representations of finite classical groups. *Invent. Math.* 51 (1979), no. 2, 143-153. (S. I. Gel'fand) **81d:20036** 20G05
(with Fong, Paul) Blocks with cyclic defect groups in $GL(n, q)$. *Bull. Amer. Math. Soc. (N.S.)* 3 (1980), no. 3, 1041-1044. (Karin Erdmann) **81h:20019** 20C20 (20G40)
- Srinivasan, R. (with Wharton, R. M.) Sequential estimation of quantal response curves. *Proceedings of the Twenty-Fourth Conference on the Design of Experiments (Math. Res. Center, Univ. Wisconsin, Madison, Wis., 1978)*, pp. 229-240, *ARO Rep.* 79, 2, *U. S. Army Res. Office, Research Triangle Park, N.C.*, 1979. (Authors' summary) **81h:62145** 62P10 (62L12)
- Srinivasan, S. K. (with Sukavanam, S.) Approximate two-fold generating function of photocounts of Gaussian light. *Phys. Lett. A* 66 (1978), no. 3, 164-166. (Authors' summary) **81m:81092** 81K05
(with Subramanian, Ramachandran) ★ Probabilistic analysis of redundant systems. *Lecture Notes in Economics and Mathematical Systems*, 175, *Springer-Verlag, Berlin-New York*, 1980. vii + 356 pp. ISBN 3-540-09736-8 (E. Arjas) **81d:60098** 60K10 (90B25)
(with Pillai, C. Chudalaimuthu) Correlation functions in the $G/M/1$ system. *Adv. in Appl. Probab.* 12 (1980), no. 2, 530-540. (Bruce D. Craven) **81f:60137** 60K25 (90B22)
(with Udayaskaran, S.) On a stochastic integral associated with a birth and death process. *J. Math. Phys. Sci.* 14 (1980), no. 2, 95-106. (Pierre-Louis Lions) **81m:60152** 60R10 (60H05)
- Srinivasan, Seshadri. A remark on Goldbach's problem. *J. Number Theory* 12 (1980), no. 1, 116-121. (M. I. Israilov) **81j:10075** 10J15
- Srinivasan, Subramanian. Two sufficient conditions for supersolvability of finite groups. *Israel J. Math.* 35 (1980), no. 3, 210-214. (Gary L. Walls) **81i:20044** 20F16 (20D10)
- Srinivasan, Sundarajan. (with Sastry, Sundaram M. A.) Chebyshev lines and Chebyshev hyperspaces of classical Banach spaces. *J. Madurai Kamaraj Univ.* 7 (1978), no. 2, 115-120. (Russell G. Bilyeu) **81b:41070** 41A50 (46B99)
- Srinivasan, T. (with Rao, Ganti Prasada) Multidimensional block-pulse functions and their use in the study of distributed parameter systems. *Internat. J. Systems Sci.* 11 (1980), no. 6, 689-709. (Authors' summary) **81f:93045** 93C20
(with Rao, Ganti Prasada) An optimal method of solving differential equations characterizing the dynamics of a current collection system for an electric locomotive. *J. Inst. Math. Appl.* 25 (1980), no. 4, 329-342. (E. R. Hansen) **81j:65082** 65L05
- Srinivasan, V. (with Bass, J.; Ravichandran, N.) Stationary solutions of differential equations. *J. Math. Phys. Sci.* 13 (1979), no. 6, 621-633. (J. M. Cushing) **81g:34054** 34C27 (34C28)
(with Ramamurti, V.) Stability and vibration of an annular plate with concentrated edge load. *Comput. & Structures* 12 (1980), no. 1, 119-129. (Authors' summary) **81f:73022** 73D99 (73K25)
- Srinivasan, V. K. On some Gelfand-Mazur like theorems in Banach algebras. *Bull. Austral. Math. Soc.* 20 (1979), no. 2, 211-215. (A. M. Sinclair) **81c:46029a** 46H05
(with Shaing, Hu) A theorem in Banach algebras and its applications. *Bull. Austral. Math. Soc.* 20 (1979), no. 2, 247-252. (A. M. Sinclair) **81c:46029b** 46H05
(with Shaing, Hu) On some Gelfand-Mazur-like theorems in p -normed algebras. *Bull. Austral. Math. Soc.* 21 (1980), no. 2, 211-221. (W. Zelazko) **81f:46058** 46H20 (46J35)
An equivalent condition for the continuity of a function. *Texas J. Sci.* 32 (1980), no. 2, 176-177. (Rotraut Goubau Cahill) **81f:26001** 26A15
- Sri Ram, M. S. (with Dass, Tulsu) Suppression of ultraviolet infinities in gravity-modified field theories. *Phys. Rev. D* (3) 22 (1980), no. 4, 814-829. (Authors' summary) **81i:81064** 81E15
- Sri Rama Chandra Murty, G. See Murty, G. Sri Rama Chandra
- Sri Ranganathan, S. (with Sharma, C. S.) A new proof of the Brillouin theorem. *Molecular Phys.* 40 (1980), no. 4, 1021-1023. (G. Fonte) **81g:81036** 81C99 (49H05, 81Hxx)
- Srivastava, A. N. (with Singh, S. N.) Some generating relations connected with a function defined by a generalized Rodrigues formula. *Indian J. Pure Appl. Math.* 10 (1979), no. 10, 1312-1317. (From the summary) **81a:33018** 33A65
(with Singh, S. D.) On a generalised polynomial set. *Acta Sci. Indica* 6 (1980), no. 1, 21-26. (L. Debnath) **81h:33017** 33A65
(with Hussain, M. A.; Singh, S. D.; Singh, S. N.) Operational derivation of generating relations of orthogonal polynomials related to ultraspherical and Hermite polynomials. *Indian J. Pure Appl. Math.* 11 (1980), no. 10, 1325-1328. (S. Saran) **81m:33008** 33A65 (33A45)
(with Singh, S. D.; Singh, S. N.) Bilateral generating functions for a new class of generalized Legendre polynomials. *Internat. J. Math. Math. Sci.* 3 (1980), no. 2, 305-310. (B. D. Agrawal) **81i:33013** 33A45 (33A65)
(with Singh, S. N.) Generating functions for a new class of polynomials. (Hindi. English summary) *Vijnana Parishad Anusandhan Patrika* 23 (1980), no. 1, 43-48. (C. L. Parihar) **81j:05018** 05A15 (33A70)
- Srivastava, Aruna. A formula for a generalized polynomial set. *Pure Appl. Math. Sci.* 11 (1980), no. 1-2, 49-53. (B. D. Agrawal) **81i:33011** 33A35 (33A45, 33A50)
- Srivastava, Girja S. (with Vaish, Satendra Kumar) A note on the logarithmic proximate orders. (French summary) *Rend. Mat.* (6) 11 (1978), no. 1, 57-63. (A. Peyerimhoff) **81h:30009** 30B50
The mean values of a subharmonic function. *Rev. Roumaine Math. Pures Appl.* 24 (1979), no. 10, 1505-1512. (E. F. Beckenbach) **81c:31002** 31A05
The growth estimates of an entire function and its derivative. *Comment. Math. Univ. St. Paul.* 28 (1980), no. 2, 147-155. (S. M. Shah) **81g:30035** 30D15
(with Vaish, Satendra Kumar) On the maximum term and its rank of an entire function of slow growth. I. *Rev. Roumaine Math. Pures Appl.* 25 (1980), no. 2, 277-282. (S. M. Shah) **81j:30043a** 30D15 (30D20)
(with Vaish, Satendra Kumar) On the maximum term and its rank of an entire function of slow growth. II. *Rev. Roumaine Math. Pures Appl.* 25 (1980), no. 3, 473-479.

- (S. M. Shah) **81j:30043b** 30D15 (30D20)
- Srivastava, H. M. See *Srivastava, Hari M.*
- Srivastava, H. S. P. Some relations involving the generalized associated Legendre functions and the H -function of two variables. *Jñānabha* 7 (1977), 83–95. (C. L. Parihar) **81c:33011** 33A35 (44A20)
- A generalized function of two variables and generalized associated Legendre functions. *J. Maulana Azad College Tech.* 11 (1978), 47–52. (B. R. Bhonele) **81h:35042** 35K05 (33A65, 80A20)
- Some results involving generalized function of two variables and Gegenbauer polynomials. *J. Maulana Azad College Tech.* 11 (1978), 69–74. (K. M. Saksena) **81a:33007** 33A35
- Srivastava, Hari M. A note on certain generating functions for the classical polynomials. (Italian summary) *Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur.* (8) 63 (1977), no. 5, 328–333 (1978). (Mourad E. H. Ismail) **81a:33019** 33A65
- (with Lavoie, J.-L.; Tremblay, Richard) The Rodrigues type representations for a certain class of special functions. *Ann. Mat. Pura Appl.* (4) 119 (1979), 9–24. (V. L. Deshpande) **81h:33006** 33A30 (33A65)
- Some generalizations of Carlitz's theorem. *Pacific J. Math.* 85 (1979), no. 2, 471–477. (J. P. Singhal) **81f:33015** 33A65 (05A15)
- The Laplace transform of the modified Bessel function of the second kind. *Publ. Inst. Math. (Beograd) (N.S.)* 26(40) (1979), 273–282. (P. M. Gupta) **81c:44002** 44A10 (33A40)
- Quelques fonctions génératrices pour une classe de polynômes définis par une formule générale du type de Rodrigues. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 21, A993–A996. (Author's summary) **81g:33005** 33A65
- (with Pathan, M. A.) Some bilateral generating functions for the extended Jacobi polynomials. *Comment. Math. Univ. St. Paul.* 28 (1980), no. 1, 23–30. (Ram Kishore Saxena) **81k:33014** 33A65
- Remarks on some expansions in series of G and H functions. *Nederl. Akad. Wetensch. Indag. Math.* 42 (1980), no. 1, 83–91. (P. Anandani) **81c:33005** 33A35
- See also *Thakare, Nimbakrishna*, **81k:33015**
- Srivastava, J. K. (with Srivastava, R. K.) Space of integral functions of several complex variables. *An. Univ. Timişoara Ser. Ştiinţ. Mat.* 16 (1978), no. 2, 179–184 (1979). (Arne Stray) **81a:46027** 46E10 (32A15)
- Srivastava, Jagdish N. On the linear independence of sets of 2^n columns of certain $(1, -1)$ matrices with a group structure, and its connection with finite geometries. *Combinatorial mathematics (Proc. Internat. Conf. Combinatorial Theory, Australian Nat. Univ., Canberra, 1977)*, pp. 79–88, *Lecture Notes in Math.*, 686, Springer, Berlin, 1978. (A. Hedayat) **81h:05024** 05B20 (62K15)
- (with Ariyaratna, W. M.) Theory of optimal balanced 3^n factorial designs. *Optimizing methods in statistics (Proc. Internat. Conf., Indian Inst. Tech., Bombay, 1977)*, pp. 443–460, *Academic Press*, New York, 1979. (K. G. Russell) **81c:62084** 62K05 (62K15)
- (with Ghosh, Subir) Enumeration and representation of nonisomorphic bipartite graphs. *Combinatorial mathematics, optimal designs and their applications (Proc. Sympos. Combin. Math. and Optimal Design, Colorado State Univ., Fort Collins, Colo., 1978)*, *Ann. Discrete Math.* 6 (1980), 315–332. (Edward A. Bender) **81i:05081** 05C30
- See also *Combinatorial mathematics, optimal designs and their applications*, **81i:05005**
- Srivastava, K. B. (with Chauhan, B. P. S.) Uniform convergence and rapidity of convergence of Grunwald-type operators on extended Tchebychev nodes of second kind. *Indian J. Pure Appl. Math.* 9 (1978), no. 12, 1337–1343. (C. W. Clenshaw) **81c:41005** 41A05
- (with Saxena, R. B.) On interpolation operators. II. A proof of Timan's theorem for differentiable functions. *Anal. Numér. Théor. Approx.* 8 (1979), no. 2, 215–227. (R. K. Beaton) **81g:41013** 41A10 (41A25)
- A proof of Telyakovski-Gopengauz theorem through interpolation. *Serdica* 5 (1979), no. 3, 272–279. (Helmut Brass) **81c:41009** 41A10 (41A25)
- Srivastava, K. N. (with Palaiya, R. M.; Choudhary, Arati) Some integrals occurring in fracture mechanics. *Defence Sci. J.* 29 (1979), no. 1, 27–34. (Maria Cominou) **81h:73019** 73M05
- (with Palaiya, R. M.; Choudhary, Arati) On a Griffith crack at the interface of two bonded dissimilar elastic wedges. *Z. Angew. Math. Mech.* 59 (1979), no. 11, 643–646. (K. S. Parihar) **81m:73072** 73M05 (73C35)
- (with Palaiya, R. M.; Karaulia, D. S.) Interaction of torsional wave by penny-shaped crack at the interface of two bonded dissimilar elastic solids. (German and Russian summaries) *Z. Angew. Math. Mech.* 59 (1979), no. 12, 731–735. (J. Miklowitz) **81h:73049** 73M05 (73D99)
- Srivastava, Muni Shankar (with Khatri, C. G.; Carter, E. M.) On monotonicity of the modified likelihood ratio test for the equality of two covariances. *J. Multivariate Anal.* 8 (1978), no. 2, 262–267. (Authors' summary) **81g:62098** 62H15
- (with Khatri, C. G.) ★ An introduction to multivariate statistics. *North-Holland, New York-Oxford*, 1979. xvi + 350 pp. ISBN 0-444-00302-9 (Somesh Das Gupta) **81j:62001** 62-01 (62Hxx)
- Correction to: "Asymptotically most powerful rank tests for regression parameters in MANOVA" [Ann. Inst. Statist. Math. 24 (1972), 285–297; MR 48 #7473]. *Ann. Inst. Statist. Math.* 31 (1979), no. 3, 515–516. (Editors) **81c:62063** 62H15 (62G10)
- (with Carter, E. M.) Asymptotic expansions for hypergeometric functions. *Multivariate analysis, V (Proc. Fifth Internat. Sympos., Univ. Pittsburgh, Pittsburgh, Pa., 1978)*, pp. 337–347, *North-Holland, Amsterdam*, 1980. (Yasuko Chikuse) **81i:62095** 62H10 (33A35)
- Srivastava, P. K. (with Wilson, N. W.) Buoyancy effects on heat and momentum transfer during the melting of a horizontal ice sheet above fresh water flowing at laminar Reynolds numbers. *Boundary and interior layers—computational and asymptotic methods (Proc. Conf., Trinity College, Dublin, 1980)*, pp. 421–425, *Boole, Din Laoghaire*, 1980. (See **81j:76001**) 76R99
- Srivastava, Pramila (with Srivastava, S. C.) Fixed point theorems for nonexpansive mappings in a locally convex space. *Bull. Austral. Math. Soc.* 20 (1979), no. 2, 179–186. (From the summary) **81f:47057** 47H10 (47H09, 54H25)
- Srivastava, R. C. (with Foutz, Robert V.) The asymptotic distribution of the likelihood ratio when the model is incorrect. (French summary) *Canad. J. Statist.* 6 (1978), no. 2, 273–279. (Reinhard Michel) **81c:62017** 62E20 (62F05)
- (with Potter, Randall W.) Statistical inference for the Galton-Watson branching process. *Optimizing methods in statistics (Proc. Internat. Conf., Indian Inst. Tech., Bombay, 1977)*, pp. 461–473, *Academic Press*, New York, 1979. (Niels Keiding) **81g:62148** 62M05 (60J80, 62M02)
- (with Wang, Y. H.) A characterization of the exponential and related distributions by linear regression. *Ann. Statist.* 8 (1980), no. 1, 217–220. (J. S. Huang) **81c:62010** 62E10
- Srivastava, R. K. (with Srivastava, J. K.) Space of integral functions of several complex variables. *An. Univ. Timişoara Ser. Ştiinţ. Mat.* 16 (1978), no. 2, 179–184 (1979). (Arne Stray) **81a:46027** 46E10 (32A15)
- (with Prasad, C. M.) On special congruences of a Finsler space. *Ann. Mat. Pura Appl.* (4) 119 (1979), 195–203. (B. B. Sinha) **81a:53030** 53B40
- Srivastava, R. S. L. (with Nandan, Krishna; Doherey, Ram Prakash) On the generalized type and generalized lower type of an entire function with index pair (p, q) . *Indian J. Pure Appl. Math.* 11 (1980), no. 11, 1424–1433. (S. K. Bajpai) **81m:30027** 30D20
- Srivastava, Ramesh (with Passarelli, R. E.) Analytical solutions to simple models of condensation and coalescence. *J. Atmospheric Sci.* 37 (1980), no. 3, 612–621. (Authors' summary) **81h:86009** 86A35
- Srivastava, Rekha New generating functions for a class of polynomials. (Italian summary) *Boll. Un. Mat. Ital. A* (5) 17 (1980), no. 1, 183–186. (I. M. Sheffer) **81c:33009** 33A70
- An expansion formula for the generalized Lauricella functions. *Bull. Inst. Math. Acad. Sinica* 8 (1980), no. 1, 95–99. (R. G. Buschman) **81a:33008** 33A35
- Srivastava, S. C. (with Srivastava, Pramila) Fixed point theorems for nonexpansive mappings in a locally convex space. *Bull. Austral. Math. Soc.* 20 (1979), no. 2, 179–186. (From the summary) **81f:47057** 47H10 (47H09, 54H25)
- Srivastava, S. M. A representation theorem for G_q -valued multifunctions. *Amer. J. Math.* 102 (1980), no. 1, 165–178. (R. E. Smithson) **81c:54026** 54C60 (28B20)
- (with Sarbadhikari, H.) Parametrizations of G_q -valued multifunctions. *Trans. Amer. Math. Soc.* 258 (1980), no. 2, 457–466. (Richard D. Mauldin) **81c:54025** 54C60 (54C65)
- Srivastava, U. N. (with Ramanujam, N.) Differential inequalities and singular perturbation problems. *Proceedings of the Conference on Mathematical Methods in Physics (Mysore, 1978)*, Part B, pp. 65–95, *Matscience Rep.*, 96, Inst. Math. Sci., Madras, 1979. (Authors' summary) **81m:34031** 34B99 (34A40)
- (with Ramanujam, N.) Nonlinear two point boundary value problems. *J. Math. Phys. Sci.* 13 (1979), no. 2, 139–153. (Authors' summary) **81c:34015** 34B15
- (with Ramanujam, N.) Singularly perturbed initial value problems for nonlinear differential systems. *Indian J. Pure Appl. Math.* 11 (1980), no. 1, 98–113. (R. E. O'Malley, Jr.) **81c:34048** 34E15 (34A34)
- Srivastava, Virender Kumar (with Bhattacharya, B. N.; Kumar, K.) Improved estimation of potency in slope ratio assays. (German summary) *J. 22* (1980), no. 1, 61–66. (Martin A. Hamilton) **81h:62187** 62P10 (62J05)
- (with Agnihotri, B. S.) Estimation of regression models under linear restrictions. (German summary) *Biometrical J.* 22 (1980), no. 3, 279–280. (Authors' summary) **81h:62125** 62J05
- (with Raj, Baldev; Ullah, Aman) Generalized two-stage least squares estimators for a structural equation with both fixed and random coefficients. *Internat. Econom. Rev.* 21 (1980), no. 1, 171–183. (R. W. Farebrother) **81h:62197** 62P20
- Estimation of linear single-equation and simultaneous-equation models under stochastic linear constraints: an annotated bibliography. (French summary) *Internat. Statist. Rev.* 48 (1980), no. 1, 79–82. (From the text) **81k:62095** 62J05 (62P20)
- (with Raj, Baldev; Upadhyaya, Sushama) The efficiency of estimating a random coefficient model. *J. Econometrics* 12 (1980), no. 3, 285–299. (H. T. Amundsen) **81h:62123** 62J05
- A note on the estimation of mean in normal population. *Metrika* 27 (1980), no. 2, 99–102. (Author's summary) **81h:62054** 62F10
- Srivenkataramana, T. (with Tracy, Derrick S.) An alternative to ratio method in sample surveys. *Ann. Inst. Statist. Math.* 32 (1980), no. 1, 111–120. (Mankal N. Murthy) **81h:62022** 62D05
- A dual to ratio estimator in sample surveys. *Biometrika* 67 (1980), no. 1, 199–204. (Victor K. T. Tang) **81c:62008** 62D05
- Srogoń, E. B. (with Gerlovin, É. L.) Methods for solving nonlinear network transport problems. (Russian) *Ékonom. i Mat. Metody* 14 (1978), no. 6, 1189–1196. (S. Zlobec) **81c:90104** 90C35
- Srokosz, M. A. The submerged sphere as an absorber of wave power. *J. Fluid Mech.* 95 (1979), no. 4, 717–741. (F. Ursell) **81a:76011** 76B15
- Some relations for bodies in a canal, with an application to wave-power absorption. *J. Fluid Mech.* 99 (1980), no. 1, 145–162. (Author's summary) **81g:76021** 76B20
- Szornai, Josef On the geometry of a partial product structure. *Czechoslovak Math. J.* 30(105) (1980), no. 1, 41–64. (Katsuei Kenmotsu) **81h:53016** 53B25 (53C40)
- Szumova, F. V. Asymptotics of the energy emitted into space by an almost periodic source of electromagnetic waves. (Russian) *Differentsial'nye Uravneniya* 16 (1980), no. 3, 560–563, 576. (Andrzej Zardecki) **81h:78016** 78A40
- Stacey, K. C. (with Holton, D. A.) Vertex-deleted subgraphs of lexicographic products. *Acta Combin.* 8 (1979), 163–183. (Gert Sabidussi) **81c:05078** 05C75
- Stacey, T. W. (with Common, A. K.) Convergent sequences of Legendre Padé approximants to the real and imaginary part of the scattering amplitudes. *J. Phys. A* 12 (1979), no. 9, 1399–1417. (Charles A. Nelson) **81c:81030** 81C12 (81F99)
- Stachel, Hellmuth Fundamentalsätze der quasielliptischen Differentialgeometrie. (English summary) *J. Geom.* 13 (1979), no. 2, 144–153. (K. Strubecker) **81h:53017** 53A35
- Stachel, John The anholonomic Cauchy problem in general relativity. *J. Math. Phys.* 21 (1980), no. 7, 1776–1782. (B. K. Nayak) **81h:83033** 83C99 (58D25)
- Stachó, L. L. (with Csörgő, Sándor) A step toward an asymptotic expansion for the Cramér-von Mises statistic. *Analytic function methods in probability theory (Proc. Colloq. Methods of Complex Anal. in the Theory of Probab. and Statist., Kossuth L. Univ. Debrecen, Debrecen, 1977)*, pp. 53–65, *Colloq. Math. Soc. János Bolyai*, 21, North-Holland, Amsterdam, 1979. (M. Knott) **81d:62015** 62E20 (53C65, 62G10)

- A short proof of the fact that biholomorphic automorphisms of the unit ball in certain L^p spaces are linear. *Acta Sci. Math. (Szeged)* 41 (1979), no. 3-4, 381-383. (Jean-Pierre Vigué) 81g:32036 32M05 (32A07)
- Stachow, E. W. An operational approach to quantum probability. *Physical theory as logico-operational structure*, pp. 285-321, *Univ. Western Ontario Series in Philos. Sci.*, 7, Reidel, Dordrecht, 1979. (From the introduction) 81a:81012 81B10 (03G12)
- Logical foundation of quantum mechanics. *Internat. J. Theoret. Phys.* 19 (1980), no. 4, 251-304. (Henner Kröger) 81g:83076 03G12 (81B10)
- Stachowicz-Galka, Danuta. Remarks on topological properties of the class $\mathfrak{q}(L)$. II. *Funct. Approx. Comment. Math.* 6 (1978), 51-55. (A. B. Németh) 81b:28003 28A20 (28A25)
- Stadje, Wolfgang. Erneuerungssätze für Prozesse mit stationären unabhängigen Zuwächsen. *Math. Z.* 171 (1980), no. 1, 37-50. (Paul Embrechts) 81b:60074 60J30 (60K05)
- Stadler, W. Preference optimality in multicriteria control and programming problems. *Nonlinear Anal.* 4 (1980), no. 1, 51-65. (H. Mukai) 81e:49018 49B10 (90C30)
- Stadtmüller, Ulrich (with Trautner, Rolf) Tauberian theorems for Laplace transforms. *J. Reine Angew. Math.* 311/312 (1979), 283-290. (Sonja Lytkens) 81f:44006 44A10 (40E10)
- (with Gawronski, Wolfgang) On density estimation by means of Poisson's distribution. *Scand. J. Statist.* 7 (1980), no. 2, 90-94. (C. Stone) 81j:62090 62G20 (62G05)
- Staffans, Olof J. A nonlinear Volterra integral equation with square integrable solutions. *Volterra equations (Proc. Helsinki Symp. Integral Equations, Otaniemi, 1978)*, pp. 281-286, *Lecture Notes in Math.*, 737, Springer, Berlin, 1979. (J. A. Nohel) 81d:45005 45D05 (45J05, 45M05, 73F99)
- On a nonlinear integral equation with a nonintegrable perturbation. *J. Integral Equations* 1 (1979), no. 4, 291-307. (G. S. Jordan) 81d:45006 45D05 (45J05, 45M05)
- A Volterra equation with square integrable solution. *Proc. Amer. Math. Soc.* 78 (1980), no. 2, 213-217. (G. S. Jordan) 81d:45007 45D05 (45G10, 45J05)
- On a nonlinear hyperbolic Volterra equation. *SIAM J. Math. Anal.* 11 (1980), no. 5, 793-812. (Gustaf Gripenberg) 81j:45018 45K05 (45D05, 45G10)
- A nonlinear Volterra equation with rapidly decaying solutions. *Trans. Amer. Math. Soc.* 258 (1980), no. 2, 523-530. (V. Lakshmikantham) 81b:45023 45J05 (45D05)
- Stafford, J. T. On the regular elements of Noetherian rings. *Ring theory (Proc. Antwerp Conf. (NATO Adv. Study Inst.), Univ. Antwerp, Antwerp, 1978)*, pp. 257-277, *Lecture Notes in Pure and Appl. Math.*, 51, Dekker, New York, 1979. (J. C. Robson) 81k:16016 16A33
- Bounded number of generations of right ideals in polynomial rings. *Comm. Algebra* 8 (1980), no. 16, 1513-1518. (J. C. Robson) 81k:16032 16A66 (16A33, 16A55)
- Projective modules over polynomial extensions of division rings. *Invent. Math.* 59 (1980), no. 2, 105-117. (Manuel Ojanguren) 81k:16024 16A50 (16A56)
- (with Brown, Kenneth A.; Lenagan, T. H.) Weak ideal invariance and localisation. *J. London Math. Soc.* (2) 21 (1980), no. 1, 53-61. (Beth Barnwell) 81i:16016 16A34 (16A33, 16A66)
- Staff, Milos (with Paderna, Bedrich) Losses in an electrically conducting magnetic half-space with an adjacent AC current carrying filament. *Acta Tech. ČSAV* 25 (1980), no. 3, 335-346. (Authors' introduction) 81m:78030 78A55
- Stagnaro, E. On Vahlen quintics and other rational curves that are set-theoretic complete intersections in P^2 in positive characteristic. (Italian. English summary) *Boll. Un. Mat. Ital.* B (5) 17 (1980), no. 1, 278-285. (D. Gallarati) 81j:14031 14M10
- Stahl, H. Orthogonal polynomials of complex-valued measures and the convergence of Padé approximants. *Fourier analysis and approximation theory (Proc. Colloq., Budapest, 1976)*, Vol. II, pp. 771-788, *Colloq. Math. Soc. János Bolyai*, 19, North-Holland, Amsterdam, 1978. (Author's summary) 81i:41016 41A21 (42C05)
- Stahl, Susi Self-dual embeddings of Cayley graphs. *J. Combin. Theory Ser. B* 27 (1979), no. 1, 92-107. (S. C. Althoen) 81f:05072 05C10 (05C25)
- Stahl, Stanley H. Interval sets. *Illinois J. Math.* 24 (1980), no. 3, 379-381. (Alan D. Taylor) 81g:03061 03E45
- Staicu, C. I. Systems of Diophantine, triangular equations for establishing the monome formulae. *Proceedings of the International Symposium on Applications of Mathematics in System Theory (Univ. Braşov, Braşov, 1978)*, II, pp. 281-285, *Univ. Braşov, Braşov*, 1979. (See 81j:93066b) 10B05 (93B15)
- Staicu, Stefan Mouvement supersonique autour de l'aile delta en rotation, avec séparation du courant aux bords. (Romanian summary) *Bul. Inst. Politehn. Bucureşti Ser. Mec.* 41 (1979), no. 4, 33-40. (Author's summary) 81g:76071 76J99
- Staiger, Ludwig (with Esperstedt, V.) Lineare Filter und ihre Anwendung bei der Decodierung von Convolutioncodes. *Vorträge aus dem Problemseminar Codierungstheorie und Theorie der Suchalgorithmen (Weissig, 1977)*, pp. 3-12, *Weiterbildungszentrum Math. Kybernet. Rechenrech. Informationsverarbeitung*, 30, Tech. Univ. Dresden, Dresden, 1978. (E. M. Gabidulin) 81b:94034 94B10
- Completeness of regular codes. *Problemy Peredači Informacii* 14 (1978), no. 4, 108-110 (Russian); translated as *Problems Inform. Transmission* 14 (1978), no. 4, 316-317 (1979). (Giuseppe Longo) 81e:94024 94B45
- A note on connected ω -languages. (German and Russian summaries) *Elektron. Informationsverarb. Kybernet.* 16 (1980), no. 5-6, 245-251. (Author's summary) 81m:68062 68F05
- Staikos, Vasilios Amst. (with Philo, Ch. G.) Quick oscillations with damping. *Math. Nachr.* 92 (1979), 153-160. (Bhagat Singh) 81c:34058 34K15
- Asymptotic behavior and oscillatory nature of bounded solutions of differential equations with deviating arguments. (Russian) *Ukrain. Mat. Ž.* 31 (1979), no. 6, 705-716, 767. (V. Šeda) 81f:34074 34K15
- (with Palamides, P. K.; Sficas, Y. G.) Asymptotic behavior of Carathéodory systems. Anti-Lyapunov method. *J. Differential Equations* 36 (1980), no. 3, 442-457. (N. Onuchic) 81g:34062 34G05 (34A10, 34C11)
- (with Philo, Ch. G.) Nonoscillations with damping. *Rev. Roumaine Math. Pures Appl.* 25 (1980), no. 7, 1099-1110. (Hiroshi Onose) 81m:34045 34C10 (34K15)
- Stein, Allen On Arthur Fine's interpretation of quantum mechanics. *Synthese* 42 (1979), no. 1, 91-100. (Gary M. Hardegree) 81f:81007 81B05
- Stekgold, I. Gradient bounds for plasma confinement. *Math. Methods Appl. Sci.* 2 (1980), no. 1, 68-72. (Henri Berestycki) 81k:35022 35B45 (35J60, 76X05)
- Stellard, Eric (with Manton, Kenneth G.) A stochastic compartment model representation of chronic disease dependence: techniques for evaluating parameters of partially unobserved age inhomogeneous stochastic processes. *Theoret. Population Biol.* 18 (1980), no. 1, 57-75. (Authors' summary) 81j:92012 92A09 (92A15, 93E10)
- Stallybrass, M. P. (with Morris, A. W.) A class of fluid motions obtained by superposition. *Atti Accad. Sci. Torino Cl. Sci. Fis. Mat. Natur.* 113 (1979), no. 1-2, 53-60. (William H. H. Banks) 81c:76015 76D05
- Stam, A. J. (with de Vries, S. A.; Reddingius, J.) Note on a death process. *J. Appl. Probab.* 17 (1980), no. 3, 853-855. (W. A. O'N. Waugh) 81i:60079 60J80 (92A15)
- Stam, P. Interference in genetic crossing over and chromosome mapping. *Genetics* 92 (1979), no. 2, 573-594. (Author's summary) 81k:92039 92A10
- Stamenković, Borivoje B. Realizability conditions on short-circuit conductance matrix by means of grounded active resistive networks embedding grounded VCVs. *Internat. J. Circuit Theory Appl.* 8 (1980), no. 3, 301-316. (Author's summary) 81f:94034 94C05
- Stamenković, S. (with Žakula, R. B.) Solitons in pseudo-one-dimensional hydrogen bounded ferroelectrics. *Phys. A* 102 (1980), no. 3, 554-560. (Authors' summary) 81i:82046 82A42 (82A67)
- Stamm, E. Recent developments in the analytic perturbation theory of ordinary differential equations. *Ber. Math.-Statist. Sect. Forsch. Graz No. 119* (1979), i+21 pp. (G. R. Sell) 81a:58009 58C20 (34G20, 58F30)
- Stammach, Urs Cohomological characterisations of finite solvable and nilpotent groups. *Topology and algebra (Proc. Colloq., Eidgenöss. Tech. Hochsch., Zurich, 1977)*, pp. 237-242, *Monograph. Enseign. Math.*, 26, Univ. Genève, Genève, 1978. (From the text) 81k:20072 20J06
- ★Lineare Algebra. (German) [Linear algebra] Teubner Studienskripten [Teubner Study Scripts], 82. B. G. Teubner, Stuttgart, 1980. 258 pp. ISBN 3-519-00082-2 (Edition) 81i:15004 15-01
- (with Baur, H.) A note on parafree Lie algebras. *Comm. Algebra* 8 (1980), no. 10, 953-960. (B. Hartley) 81k:17017 17B65 (20E99)
- Stammiller, Ludwig (with Weissbach, Bernulf) Halbierungssätze zur Gestaltabweichung ebener Figuren. Beiträge zur Algebra und Geometrie, 8. *Wiss. Beitr. Martin-Luther-Univ. Halle-Wittenberg M* 12 (1979), 55-65. (H. W. Guggenheimer) 81g:52001 52A10 (52A40)
- (with Tutschke, Wolfgang; Kühnau, Reiner; Vogel, Wolfgang; Zielke, Gerhard; Krötenheerd, Otto; Schleiff, Martin; Strehmel, Karl; Köhler, Jürgen) Mathematische Fortsetzung für Theorie und Anwendung. *Wiss. Z. Martin-Luther-Univ. Halle-Wittenberg Math.-Natur. Reihe* 28 (1979), no. 3, 5-21. (Editors) 81m:01103 01A72 (00A05)
- (with Matthe, Udo) Stetigkeitsaussagen zur Diskussion des Schnittverhaltens einer Ovalschar mit einem Oval. *Beiträge Algebra Geom. No. 9* (1980), 149-159. (Z. Nádeník) 81m:52007 52A10
- See also Beiträge: Algebra und Geometrie, 81b:00005
- Stamou, Georg Spezielle Geradenkongruenzen im einfach isotropen Raum. (English summary) *J. Geom.* 14 (1980), no. 1, 38-49. (K. Strubecker) 81g:53009 53A40
- Über eine spezielle Geradenkongruenz im einfach isotropen Raum. (English summary) *Manuscripta Math.* 32 (1980), no. 1-2, 81-90. (K. Strubecker) 81m:53018 53A40
- Stampacchia, Guido (with Kinderlehrer, David) ★An introduction to variational inequalities and their applications. Pure and Applied Mathematics, 88. Academic Press [Harcourt Brace Jovanovich, Publishers], New York-London-Toronto, Ont., 1980. xiv+313 pp. ISBN 0-12-407350-6 (Erich Miersemann) 81g:49013 49A29 (35R35, 47H15)
- See also Lions, Jacques-Louis, 81k:49006
- Stampfli, Joseph G. Recent developments on the invariant subspace problem. *Operator theory and functional analysis (Papers, Summer Meeting, Amer. Math. Soc., Providence, R.I., 1978)*, pp. 1-7, *Res. Notes in Math.*, 38, Pitman, San Francisco, Calif., 1979. (Mehdi Radjabalipour) 81m:47014 47A15 (47B20)
- On selfadjoint derivation ranges. *Pacific J. Math.* 82 (1979), no. 1, 257-277. (Lawrence Fialkow) 81a:47036 47B47 (47A05, 47A65)
- An extension of Scott Brown's invariant subspace theorem: K -spectral sets. *J. Operator Theory* 3 (1980), no. 1, 3-21. (Mehdi Radjabalipour) 81e:47009 47A15 (47B20)
- Stan, Mihail D. On the equations of motion in a porous, deformable micropolar medium. (Romanian) *Stud. Cerc. Mec. Apl.* 38 (1979), no. 6, 765-771. (D. Ieşan) 81g:76100 76S05 (73S99)
- Stănişilă, Tatiana Stable random polynomials. (Romanian. English summary) *Bul. Inst. Politehn. Bucureşti Ser. Mec.* 41 (1979), no. 4, 3-7. (Author's summary) 81f:93064 93D99
- Stănişilescu, Florin An uncertainty principle in the large-scale system theory and applications in their optimization. *Systems theory (Proc. Nat. Conf., Univ. Braşov, Braşov, 1977)* (Romanian), pp. 107-112, *Univ. Braşov, Braşov*, 1978. (Author's summary) 81b:93004 93A15
- Stancu-Minasian, I. M. On the multiple minimum risk problem. *Bull. Math. Soc. Sci. Math. R. S. Roumanie (N.S.)* 23(71) (1979), no. 4, 427-437. (R. Jagannathan) 81m:90085 90C15
- Stanczak, Wiesław (with Nowicki, Tadeusz) On some class of algorithms used for determination of minimal groups in cliques. *Proceedings of the International Symposium on Applications of Mathematics in System Theory (Univ. Braşov, Braşov, 1978)*, II, pp. 275-280, *Univ. Braşov, Braşov*, 1979. (Authors' summary) 81m:05079 05C25 (68E10, 92A20)
- (with Kacprzyk, Janusz) Optimal location of a central supply point in urban regions. (Polish. Russian and English summaries) *Arch. Automat. Telemekh.* 25 (1980), no. 1, 109-120. (Authors' summary) 81g:90042 90B05
- (with Nowicki, Tadeusz) A methodology for preliminary estimation of the number of telephone exchanges in an urban multiechange network. (Polish. English, French, German and Russian summaries) *Rozprawy Elektrotech.* 26 (1980), no. 2, 525-540. (Authors' summary) 81j:90053 90B22
- See also Deo, Narsingh, 81e:05001
- Standart, D. Direct perturbations of the planets on the Moon's motion. *Celestial Mech.* 22 (1980), no. 4, 357-369. (D. Schmidt) 81m:70024 70F15
- Staněk, Svatoplav On the structure of second-order linear differential equations with given

characteristic multipliers in the generalized Floquet theory. *Arch. Math. (Brno)* 14 (1978), no. 4, 235-242. (From the text) **81k:34031** 34C20

The characteristic multipliers of a block and of an inverse block of second-order linear differential equations with π -periodic coefficients. (Czech and Russian summaries) *Sb. Práci Pírodověd. Fak. Univ. Palackého v Olomouci Mat.* 57 (1978), 39-51. (N. Čalčec) **81k:34035** 34C25

On the structure of the second-order periodic linear differential equations with the same characteristic multipliers. (Czech and Russian summaries) *Sb. Práci Pírodověd. Fak. Univ. Palackého v Olomouci Mat.* 57 (1978), 53-60. (Richard Brown) **81k:34030** 34C11

On the properties of the fundamental dispersions of the equation $y'' = \lambda q(y)$. (Czech and Russian summaries) *Sb. Práci Pírodověd. Fak. Univ. Palackého v Olomouci Mat.* 18 (1979), 51-58. (C. A. Swanson) **81k:34027** 34C10

A note on disconjugate linear differential equations of the second order with periodic coefficients. (Czech and Russian summaries) *Sb. Práci Pírodověd. Fak. Univ. Palackého v Olomouci Mat.* 18 (1979), 93-101. (H. Hochstadt) **81k:34064** 34C10

Stanev, H. I. On an approximate method for the solution of nonstationary problems of mathematical physics. (Bulgarian, Russian and English summaries) *Godišnik Visš. Učebn. Zaved. Prirodna Mat.* 13 (1977), no. 2, 109-114 (1978). (Raičo Lazarov) **81k:65087** 65N05

Stanevičius, A.-I. A. (with Malaženko, Ju. E.) Solution of an integer programming problem. (Russian) *Ž. Vyšš. Mat. i Mat. Fiz.* 20 (1980), no. 3, 623-629, 812. (Authors' summary) **81k:90069** 90C10 (90B10)

Stangorhaus, Gabriela (with David, H. T.) Unbiased estimation in the mean. (Portuguese) *Proceedings of the 3rd National Symposium on Probability and Statistics (Inst. Mat. Estatist., Univ. São Paulo, São Paulo, 1978) (Portuguese)*, pp. 99-102. *Univ. São Paulo, São Paulo, 1979.* (From the introduction) **81k:62038** 62F10

Stanhous, Bryan (with Sherman, Larry) A note on information in the loan evaluation process. *J. Finance* 34 (1979), no. 5, 1263-1269. (Authors' summary) **81k:90019** 90A10

Stankiewicz, S. Optimization in nonlinear systems with right invertible operators. *Functional differential systems and related topics (Proc. First Internat. Conf., Błażejewko, 1979)*, pp. 327-333. *Higher College Engrg., Zielona Góra, 1980.* (D. K. Hughes) **81k:49026** 49B27

Stank, Rotraut (with Karzel, Helmut) Metrische affine Ebenen. *Abh. Math. Sem. Univ. Hamburg* 49 (1979), 237-243. (Cyril W. L. Garner) **81f:51013** 51F99
(with Karzel, Helmut) Rechtecksebenen und ihre Darstellung durch Integritätssysteme. *Mitt. Math. Ges. Hamburg* 10, no. 7, 531-551 (1979). (A. Cronheim) **81k:51008b** 51F15

Stanilov, Goro A. A Kähler manifold with a linear relation between the holomorphic curvatures of pairs of orthogonal directions. (Bulgarian, English summary) *Annuaire Univ. Sofia Fac. Math. Méc.* 69 (1974/75), 13-19 (1979). (V. Mihova-Nehmer) **81d:53043** 53C55

Stanjuković, K. P. Transformation of coordinates, interval and the principle of correspondence. (Russian) *Problemy Teor. Gravitacii i Element. Častic No. 10* (1979), 5-9. (R. F. Biljalov) **81k:83004** 83B05

On the question of remnant radiation. (Russian) *Problemy Teor. Gravitacii i Element. Častic No. 10* (1979), 116-127. (From the text) **81k:83030** 83C45

Stank, Gerd (with Schoenborn, Werner) Convergence properties of adaptive threshold elements in respect to application and implementation. *Kybernetika (Prague)* 16 (1980), no. 2, 159-171. (Authors' summary) **81d:68120** 68G05

Stankiewicz, Jan (with Krzyż, Jan) Quasibordation and quasimajorization. (Polish and Russian summaries) *Ann. Univ. Mariae Curie-Skłodowska Sect. A* 31 (1977), 71-74 (1979). (M. S. Robertson) **81d:30042** 30C80

(with Stankiewicz, Zofia) Some remarks on subordination and majorization of functions. (Polish and Russian summaries) *Ann. Univ. Mariae Curie-Skłodowska Sect. A* 31 (1977), 119-126 (1979). (M. S. Robertson) **81k:30044** 30C80 (30C45)

Quasibordation and quasimajorization of analytic functions. (Polish and Russian summaries) *Ann. Univ. Mariae Curie-Skłodowska Sect. A* 31 (1977), 127-135 (1979). (M. S. Robertson) **81k:30036** 30C80 (30C45)

Stankiewicz, Zofia (with Stankiewicz, Jan) Some remarks on subordination and majorization of functions. (Polish and Russian summaries) *Ann. Univ. Mariae Curie-Skłodowska Sect. A* 31 (1977), 119-126 (1979). (M. S. Robertson) **81d:30044** 30C80 (30C45)

Stankiewicz-Wiechno, E. (with Gennrich, Hartmann J.) A dictionary of some basic notions of net theory. *Net theory and applications (Proc. Adv. Course General Net Theory Processes Systems, Hamburg, 1979)*, pp. 519-535. *Lecture Notes in Comput. Sci.*, 84. Springer, Berlin, 1980. (Editors) **81g:68084** 68D90 (68D90, 68E99)

Stan'ko, M. A. See Milnor, John W.; et al. **81j:57014**

Stanković, Ljubomir R. (with Vasić, Petar M.) Some inequalities for convex functions. *Math. Balkanica* 6 (1976), 281-288 (1978). (Paul R. Beesack) **81k:26015** 26D15 (26A51)

Stanković, Miodir S. (with Stanković, Radomir S.) Generalised Poisson transform. *Univ. Beograd. Publ. Elektrotehn. Fak. Ser. Elektron. Telekomun. Automat. No. 118-128* (1978), 63-72. (H. Vincent Poor) **81k:94003** 94A11 (93A99, 94C05)

A note on a transformation which maps derivatives into differences. *Univ. Beograd. Publ. Elektrotehn. Fak. Ser. Mat. Fiz. No. 602-633* (1978), 171-175 (1979). (André Hautot) **81k:39003** 39A10

(with Danković, Bratislav) A transformation which maps derivatives into differences. *Univ. Beograd. Publ. Elektrotehn. Fak. Ser. Mat. Fiz. No. 634-677* (1979), 214-220. (André Hautot) **81k:39001** 39A10

Stanković, Radomir S. (with Stanković, Miodir S.) Generalised Poisson transform. *Univ. Beograd. Publ. Elektrotehn. Fak. Ser. Elektron. Telekomun. Automat. No. 118-128* (1978), 63-72. (H. Vincent Poor) **81k:94003** 94A11 (93A99, 94C05)

Stanković, S. A new adaptive real-time identification algorithm. *Identification and system parameter estimation (Proc. Fourth IFAC Sympos., Tbilisi, 1976)*, Part 3, pp. 1825-1834. *North-Holland, Amsterdam, 1978.* (See **80d:93010c**) **93B30**

(with Matausek, M. R.) Robust real-time algorithm for identification of nonlinear time-varying systems. *Internat. J. Control* 31 (1980), no. 1, 79-94. (Arunabha Bagchi) **81g:93119** 93E12 (93C10)

Stanley, H. Eugene (with Teixeira, J.) Interpretation of the unusual behavior of H_2O and D_2O at low temperatures: tests of a percolation model. *J. Chem. Phys.* 73 (1980), no. 7, 3404-3422. (From the summary) **81m:26034** 82A50 (82A42)

(with Nakanishi, Hideo) Scaling studies of percolation phenomena in systems of dimensionality two to seven: cluster numbers. *Phys. Rev. B* (3) 22 (1980), no. 5, 2466-2488. (Authors' summary) **81g:82045** 82A42 (82-04)

Stanley, J. C. (with de France, J. F.; Marchand, J.) A neural population model for the hippocampal theta rhythm. *Proceedings of the First International Conference on Mathematical Modeling (St. Louis, Mo., 1977)*, Vol. II, pp. 847-856. *Univ. Missouri-Rolla, Rolla, Mo., 1977.* (Authors' summary) **81j:92009** 92A07

Stanley, Richard P. Generating functions. *Studies in combinatorics*, pp. 100-141. *MAA Studies in Math.*, 17. Math. Assoc. America, Washington, D.C., 1978. (From the introduction) **81i:05015** 05A15

Invariants of finite groups and their applications to combinatorics. *Bull. Amer. Math. Soc. (N.S.)* 1 (1979), no. 3, 475-511. (Ralph Strebler) **81a:20015** 20C15 (05A15, 13H10, 14H10, 15A72, 51F15)

Balanced Cohen-Macaulay complexes. *Trans. Amer. Math. Soc.* 249 (1979), no. 1, 139-157. (G. O. H. Katona) **81c:05012** 05A99 (06A10, 13H10, 52A40, 57Q05)

Unimodal sequences arising from Lie algebras. *Combinatorics, representation theory and statistical methods in groups*, pp. 127-136. *Lecture Notes in Pure and Appl. Math.*, 57. Dekker, New York, 1980. (Ronald C. King) **81k:05011** 05A17 (06A10, 17B20)

An application of algebraic geometry to extremal set theory. *Ring theory and algebra, III (Proc. Third Conf., Univ. Oklahoma, Norman, Okla., 1979)*, pp. 415-422. *Lecture Notes in Pure and Appl. Math.*, 55. Dekker, New York, 1980. (J. R. Griggs) **81i:05016** 05A15

The number of faces of a simplicial convex polytope. *Adv. in Math.* 35 (1980), no. 3, 236-238. (I. Dolgachev) **81f:52014** 52A25 (05B99, 14M99)

Differentially finite power series. *European J. Combin.* 1 (1980), no. 2, 175-188. (P. N. Rathie) **81m:05012** 05A15

Stanley, T. E. Groups and 2×2 unimodular matrices. *Bull. Malaysian Math. Soc.* (2) 1 (1978), 49-52. (From the text) **81g:20091** 20H05

Powers of the period function for the sequence of Fibonacci numbers. *Fibonacci Quart.* 18 (1980), no. 1, 44-45. (W. A. Webb) **81g:10025** 10A35

Some remarks on the periodicity of the sequence of Fibonacci numbers. II. *Fibonacci Quart.* 18 (1980), no. 1, 45-47. (J. Chidambaramswamy) **81i:10015** 10A35

Stanojević, Č. V. (with Penico, A. J.) An integral analogue to parallelogram law. *Proc. Amer. Math. Soc.* 79 (1980), no. 3, 427-430. (Yehoram Gordon) **81j:46027** 46C99
(with Garrett, J. W.; Roes, C. S.) L^1 -convergence of Fourier series with coefficients of bounded variation. *Proc. Amer. Math. Soc.* 80 (1980), no. 3, 423-430. (S. Izumi) **81i:42010** 42A28

Stanoimir, D. Hybrid systems. Fundamental concepts. (Romanian, English summary) *Bul. Inst. Politehn. București Ser. Electrotehn.* 41 (1979), no. 4, 45-53. (Author's summary) **81i:93010** 93A15

(with Topalić, A.) Conservation laws for hyperbolic systems. An operator approach. (French and German summaries) *Rev. Roumaine Sci. Tech. Sér. Electrotech. Energ.* 25 (1980), no. 2, 267-276, viii, x. (Alan Jeffrey) **81i:35110** 35L65

Stanton, Dennis A short proof of a generating function for Jacobi polynomials. *Proc. Amer. Math. Soc.* 80 (1980), no. 3, 398-400. (R. A. Askey) **81i:33016** 33A65 (42C10)

Some Erdős-Ko-Rado theorems for Chevalley groups. *SIAM J. Algebraic Discrete Methods* 1 (1980), no. 2, 160-163. (Hugo S. Sun) **81i:05027** 05B10 (05A20, 20C99)

Product formulas for q -Hahn polynomials. *SIAM J. Math. Anal.* 11 (1980), no. 1, 100-107. (G. Gasper) **81d:33012** 33A75 (05A19)

Stanton, Ralph G. (with Goulden, I. P.) Partial sums of some even negative binomials. *Ars Combin.* 5 (1978), 227-236. (Editors) **81e:05015** 05A10

(with McKay, Brendan D.) The current status of the generalised Moore graph problem. *Combinatorial mathematics, VI (Proc. Sixth Austral. Conf., Univ. New England, Armidale, 1978)*, pp. 21-31. *Lecture Notes in Math.*, 748. Springer, Berlin, 1979. (Bernard M. E. Moret) **81i:05085** 05C30 (05C38)

Four covering problems. *Proceedings of the Tenth Southeastern Conference on Combinatorics, Graph Theory and Computing (Florida Atlantic Univ., Boca Raton, Fla., 1979)*, pp. 117-120. *Congress. Numer.*, XXIII-XXIV. *Utilitas Math.*, Winnipeg, Man., 1979. (F. Harary) **81i:05002** 05-02 (05B40)

(with Vanstone, S. A.) Some theorems on DK-designs. *Ars Combin.* 8 (1979), 117-129. (Stephen H. Y. Hung) **81j:05028** 05B05

A result of MacMahon on electoral predictions. *Combinatorics 79 (Proc. Colloq., Univ. Montréal, Montréal, Que., 1979)*, Part I. *Ann. Discrete Math.* 8 (1980), 163-167. (Graham J. G. Upton) **81m:62199** 62P99

(with McKay, Brendan D.) Some graph-isomorphism computations. *Ars Combin.* 9 (1980), 307-313. (M. L. Chandak) **81i:05029** 05B05

(with Seah, S. T. E.; Cowan, D. D.) Nonexistence of an extremal graph of a certain type. *J. Austral. Math. Soc. Ser. A* 30 (1980/81), no. 1, 55-64. (Authors' summary) **81j:05076** 05C35

(with Meek, D. S.) A combinatorial power identity. *Utilitas Math.* 18 (1980), 289-290. (Editors) **81m:05018** 05A19

(with Aranson, A. N.; Goulden, I. P.) The Macmahon cube law. *Math. Sci.* 6 (1981), no. 1, 63-72. (Authors' summary) **81k:00013** 90A08

See also *Proceedings: Southeastern Conference on Combinatorics, Graph Theory and Computing*, **81i:05004**; Tutte, William Thomas, **81k:01058a** and Tutte, William Thomas, **81k:01058b**

Stanton, Robert O. Semistable kernels of valued groups. *Rocky Mountain J. Math.* 10 (1980), no. 3, 629-635. (E. A. Walker) **81j:20079** 20K40

Staples, Jo Ann W. On some subclasses of well-covered graphs. *J. Graph Theory* 3 (1979), no. 2, 197-204. (William T. Trotter, Jr.) **81d:05066** 05C70 (05C35)

Staples, John A graph-like lambda calculus for which leftmost-outermost reduction is optimal. *Graph grammars and their application to computer science and biology (Internat. Workshop, Bad Honnef, 1978)*, pp. 440-455. *Lecture Notes in Comput. Sci.*, 73. Springer, Berlin, 1979. (From the introduction) **81i:03017** 03B40 (68B20)

A lambda calculus with naive substitution. *J. Austral. Math. Soc. Ser. A* 28 (1979), no. 3, 269-282. (B. Lercher) **81i:03015** 03B40

Stapleton, H. J. (with Allen, J. P.; Flynn, C. P.; Stinson, D. G.; Kurtz, S. R.) Fractal

- form of proteins. *Phys. Rev. Lett.* **45** (1980), no. 17, 1456-1459. (Authors' summary) **81h:92066** 92A09 (82A42)
- Stapp, Henry P. (with Kashiwara, Masaki; Kawai, Takahiro) Micro-analyticity of the S -matrix and related functions. *Comm. Math. Phys.* **66** (1979), no. 2, 95-130. (D. I. Olive) **81i:81052** 81F15 (32A45, 58G07)
- Stará, J. (with Nečas, Jindřich; Švarc, R.) Classical solution to a second order nonlinear elliptic system in \mathbb{R}^2 . *Ann. Scuola Norm. Sup. Pisa Cl. Sci. (4)* **5** (1978), no. 4, 605-631. (Moshe Marcus) **81i:35838** 35J65
- Starbird, T. W. (with Enflo, P.) Subspaces of L^1 containing L^1 . *Studia Math.* **65** (1979), no. 2, 203-225. (Zvi Altshuler) **81j:46034** 46E30 (46B15, 46B20, 47B38)
- Starčenko, A. A. On the content analysis of two normative notions. *Essays on mathematical and philosophical logic (Proc. Fourth Scandinavian Logic Sympos. and First Soviet-Finnish Logic Conf., Jyväskylä, 1976)*, pp. 401-404, *Synthese Library*, 122, Reidel, Dordrecht, 1979. (F. Speranza) **81c:03007** 03A05
- Starover, A. N. Some results connected with the invariance principle. (Russian) *Random processes and mathematical statistics (Russian)*, pp. 146-151, 189-190, "Fan", Tashkent, 1978. (Ju. S. Mišura) **81g:60032** 60F17
- Starčenko, A. A. See Starčenko, A. A.
- Stark, Alan E. Inbreeding systems: classification by a canonical form. *J. Math. Biol.* **10** (1980), no. 3, 305. (From the text) **81i:92040** 92A10
- Stark, Andreas (with Poppe, Harry) A two-dimensional induction lemma with applications to the proof of combinatorial formulas. *Math. Sem. Notes Kobe Univ.* **8** (1980), no. 1, 219-223. (W. R. Heise) **81h:05010** 05A15 (05A10)
- Stark, Eberhard L. (with Bleimann, G.) The fine structure of periodic approximate identities. *Fourier analysis and approximation theory (Proc. Colloq., Budapest, 1976)*, Vol. I, pp. 129-160, *Colloq. Math. Soc. János Bolyai*, 19, North-Holland, Amsterdam, 1978. (From the introduction) **81j:42003** 42A10
- (with Bleimann, G.) Distance conditions for the zeros of peaking cosine polynomials. *Serdica* **4** (1978), no. 1, 91-97. (N. K. Govil) **81j:42004** 42A10 (41A17)
- (with Becker, Michael) On a hierarchy of quolynomial inequalities for $\tan x$. *Univ. Beograd. Publ. Elektrotehn. Fak. Ser. Mat. Fiz.* No. 602-633 (1978), 133-138 (1979). (Chung Lie Wang) **81j:26018** 26D05
- (with Bleimann, G.; Wilmes, Gerhard) A construction of processes of best approximation. Special issue dedicated to George Alexits on the occasion of his 80th birthday. *Acta Math. Acad. Sci. Hungar.* **33** (1979), no. 1-2, 7-17. (Jean Tzimbalario) **81g:42003** 42A10
- (with Bleimann, G.) An elementary construction of periodic singular integrals achieving the order of best approximation. *Rendiate Math.* **2** (1979), no. 1, 17-29. (William T. Sled) **81a:42003** 42A10 (41A50)
- (with Butzer, P. L.; Gieseler, S.; Kaufmann, F.; Nessel, Rolf Joachim) Eduard Helly (1884-1943). Eine nachträgliche Würdigung. *Jahresber. Deutsch. Math.-Verein.* **82** (1980), no. 3, 128-151. (H. Hochstadt) **81h:01028** 01A70 (01A60)
- Elwin Bruno Christoffel zum 150. Geburtstag. *Praxis Math.* **22** (1980), no. 2, 54-55. (Editors) **81j:01044** 01A70
- Stark, Harold M. L -functions at $s=1$. IV. First derivatives at $s=0$. *Adv. in Math.* **35** (1980), no. 3, 197-235. (O. H. Körner) **81f:10054** 10H10 (12A70)
- (with Zagier, D.) A property of L -functions on the real line. *J. Number Theory* **12** (1980), no. 1, 49-52. (Paula A. Kemp) **81i:10051** 10H08
- Stark, Henry Sampling theorems in polar coordinates. *J. Opt. Soc. Amer.* **69** (1979), no. 11, 1519-1525. (Author's summary) **81i:68104** 68G10 (65D15)
- Stark, K. P. (with Harper, B. A.; Sobey, R. J.) Sensitivity analysis of a tropical cyclone surge model. *Numerical simulation of fluid motion (Proc. Internat. Conf. Numerical Simulation of Fluid Dynamic Systems, Monash Univ., Melbourne, 1976)*, pp. 371-381, North-Holland, Amsterdam, 1978. (See **81a:76005**) 76B15 (65P05, 76U05, 86A35)
- Stark, William Richard A forcing approach to strict- Π_1^1 reflection and strict- Π_1^1 - Σ_1^1 . *Z. Math. Logik Grundl. Math.* **24** (1978), no. 5, 467-479. (Douglas Cenzer) **81c:03025** 03C70 (03D60, 03E40)
- Type hierarchies and type-level reduction. I. *Cybernetica* **22** (1979), no. 1, 17-31. (I. Peák) **81g:03009** 03B15 (03D15, 68C25)
- A measure of subgroup diversity. *J. Algebra* **61** (1979), no. 2, 308-310. (C. Y. Tang) **81i:20030** 20E07
- Automatic model construction. *Inform. Sci.* **22** (1980), no. 2, 99-106. (Author's summary) **81a:68078** 68G20 (03B25)
- Martin's axiom in the model theory of L_A . *J. Symbolic Logic* **45** (1980), no. 1, 172-176. (Andreas Blass) **81a:03036** 03C70 (03E50)
- Starke, Peter H. Free Petri net languages. *Mathematical foundations of computer science, 1978 (Proc. Seventh Sympos., Zakopane, 1978)*, pp. 506-515, *Lecture Notes in Comput. Sci.*, 64, Springer, Berlin, 1978. (Author's introduction) **81i:68117** 68F05
- Semilinearity and Petri nets. *Fundamentals of computation theory (Proc. Conf. Algebraic, Arith. and Categorical Methods in Comput. Theory, Berlin/Wendisch-Rietz, 1979)*, pp. 423-429, *Math. Research*, 2, Akademie-Verlag, Berlin, 1979. (Dorothy Bollman) **81i:68050** 68D90 (68B20, 68F10)
- On the languages of bounded Petri nets. (German and Russian summaries) *Elektron. Informatsionverarb. Kibernet.* **15** (1979), no. 7, 355-365. (Author's summary) **81d:68109** 68F05 (68D90)
- Starkermann, R. The functional equivalence and the ethical ambivalence of a lawyer and a spy. *Simulation of systems '79 (Proc. Ninth IMACS Congress, Sorrento, 1979)*, pp. 127-132, North-Holland, Amsterdam, 1980. (Author's summary) **81m:92060** 92A20 (90D40)
- Starkman, A. A. (with Tanana, V. P.; Koršunov, V. A.) The principle of minimal residuals in the solution of ill-posed problems. (Russian) *Studies in functional analysis (Russian)*, pp. 99-104, *Ural. Gos. Univ., Ser. Drosk.*, 1978. (L. B. Rall) **81g:65074** 65J10 (47A05)
- Starkov, A. S. Asymptotic solution of two-scale problems of wave propagation in the presence of points of local degeneracy. (Russian. English summary) Mathematical questions in the theory of wave propagation, 10. *Zap. Nauch. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* **89** (1979), 275-285, 296. (A. S. Alekseev) **81a:35014** 35C20 (35L35)
- (with Molotkov, I. A.) Letter to the editors: "Local degeneracy of waves in a thin waveguide" [*Zap. Nauch. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* **78** (1978), 138-148; MR 80g:78018]. (Russian) Mathematical questions in the theory of wave propagation, 10. *Zap. Nauch. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* **89** (1979), 286. (Editors) **81f:78019** 78A50
- Starkov, V. V. (with Lebedev, N. A.) Some extremal problems in Basilevič's class. (Russian. English summary) *Vestnik Leningrad. Univ. Mat. Meh. Astronom.* **1979**, vyp. 4, 47-49, 122. (L. A. Akseñev) **81c:30034** 30C70
- Starling, A. Gregory (with Klerlein, Joseph B.) Hamiltonian cycles in Cayley color graphs of some special groups. *Proceedings of the Tenth Southeastern Conference on Combinatorics, Graph Theory and Computing (Florida Atlantic Univ., Boca Raton, Fla., 1979)*, pp. 595-599, *Congress. Numer.*, XXIII-XXIV, Utilitas Math., Winnipeg, Man., 1979. (A. T. White) **81c:05049** 05C25 (05C45)
- Starobinskiĭ, A. A. (with Gurovič, V. C.) Quantum effects and regular cosmological models. *Ž. Èksp. Teoret. Fiz.* **77** (1979), no. 5, 1683-1700 (Russian); translated as *Soviet Phys. JETP* **50** (1979), no. 5, 844-852. (S. G. Mamaev) **81g:83066** 83F05 (34C15)
- (with Novikov, I. D.) Quantum-electrodynamics effects inside a charged black hole and the problem of Cauchy horizons. *Ž. Èksp. Teoret. Fiz.* **78** (1980), no. 1, 3-19. (Russian); translated as *Soviet Phys. JETP* **51** (1980), no. 1, 1-9. (Authors' summary) **81c:83043** 83C99
- Starostenko, V. I. (with Sastri, R. G. S.) The regularizing solution of geophysical three-dimensional problems expressed by integral equations of the first kind of convolution type. (Russian) *Dokl. Akad. Nauk SSSR* **246** (1979), no. 5, 1074-1079. (From the introduction) **81i:86010** 86A20 (45E10, 65R20)
- (with Nikolenko, V. M.) Mathematical methods in geophysics. (Ukrainian. Russian summary) *Narisi Ist. Prirodoslov. i Tehn.* No. 25 (1979), 11-19, 114. (J. S. Joel) **81h:86003** 86A15 (01A65)
- Starostin, B. A. ★Параметры развития науки. (Russian) [Parameters of the development of science] "Nauka", Moscow, 1980. 280 pp. (I. Grattan-Guinness) **81m:00020** 00A99 (01A05)
- Starostina, L. A. (with Klimov, V. E.) Mapping a planar graph into the topography of a rectangle. (Russian) *Trudy Moskov. Orden. Lenin. Ènerget. Inst.* No. 415 (1979), 97-100, 134. (Authors' summary) **81i:94044** 94C15
- Starowlewiak, M. (with Bubnicki, Z.; Lebrun, A.) Stochastic approach to the two-level optimization of the complex of operations. *Optimization techniques (Proc. Ninth IFIP Conf., Warsaw, 1979)*, Part 2, pp. 281-290, *Lecture Notes in Control and Information Sci.*, 23, Springer, Berlin, 1980. (W. A. Gruver) **81m:90062** 90C15
- Starr, Daniel See Bazelow, Alexander R.; et al., **81k:05023a**
- Starr, Norman (with Chen, Wen Chen) Optimal stopping in an urn. *Ann. Probab.* **8** (1980), no. 3, 451-464. (M. A. Salsiašvili) **81j:62168** 62L15 (60G40)
- Starrett, David A. Marginal cost pricing of recursive lumpy investments. *Rev. Econom. Stud.* **45** (1978), no. 2, 215-227. (Author's conclusion) **81a:90017** 90A05
- Measuring externalities and second-best distortions in the theory of local public goods. *Econometrica* **48** (1980), no. 3, 627-642. (Author's introduction) **81c:90026** 90A14 (90A17)
- Staruhina, E. N. Weak minimality condition in topological groups. (Russian) *Ural. Gos. Univ. Mat. Zap.* **11** (1978), no. 1, 157-181, iv-v. (K. A. Ross) **81i:22004** 22D05
- Starun, I. I. A method of studying linear systems. (Russian) *Mat. Bilten* **28** (1978), no. 2, 63-67. (Š. Schwabik) **81i:34006** 34A30 (34D05)
- Starzyk, Janusz (with Sliwa, Edward) Topological analysis by hierarchic decomposition method. *Proceedings of the Fourth International Symposium on Network Theory (Ljubljana, 1979)*, pp. 155-160, *Georgi, St.-Saphorin*, 1979. (Authors' summary) **81c:94060** 94C15
- (with Sliwa, Edward) Hierarchic decomposition method for the topological analysis of electronic networks. *Internat. J. Circuit Theory Appl.* **8** (1980), no. 4, 407-417. (Authors' summary) **81i:94045** 94C15 (90B35)
- Stas, W. On the order of Dedekind zeta-functions near the line $\sigma=1$. *Acta Arith.* **35** (1979), no. 2, 195-202. (Larry J. Goldstein) **81b:10028** 10H10 (12A70)
- Stasiuk, M. G. (with Bartiś, M. Ja.) A method of solution of external problems. (Ukrainian. Russian summary) *Visnik L'viv. Der. Univ. Ser. Meh.-Mat.* No. 13 (1978), 59-64, 126. (Authors' summary) **81m:49032** 49D10
- Stasenko, A. L. (with Blagosklonov, V. I.) Two-dimensional nozzle and jet flows of a multiphase mixture. A translation of *Učen. Zap. CAGI* **8** (1977), 32-42. *Fluid Mech.—Soviet Res.* **8** (1979), no. 2, 157-168. (Authors' summary) **81b:76064** 76T05 (76J99)
- Stasheff, James (with Milnor, John W.) ★ХАРАКТЕРИСТИЧЕСКИЕ КЛАССЫ. (Russian) [Characteristic classes] Translated from the English by M. A. Štan'ko. "Mir", Moscow, 1979. 371 pp. (Editors) **81j:57014** 57R20
- Stasica, Jacek (with Denkowski, Zofia; Łojasiewicz, Stanisław) Certaines propriétés élémentaires des ensembles sous-analytiques. (English and Russian summaries) *Bull. Acad. Polon. Sci. Sér. Sci. Math.* **27** (1979), no. 7-8, 529-536 (1980). (Margherita Galbati) **81i:32003** 32B20
- (with Denkowski, Zofia; Łojasiewicz, Stanisław) Sur le théorème du complémentaire pour les ensembles sous-analytiques. (English and Russian summaries) *Bull. Acad. Polon. Sci. Sér. Sci. Math.* **27** (1979), no. 7-8, 537-539 (1980). (Margherita Galbati) **81i:32004** 32B20
- (with Denkowski, Zofia) On the dimension of a subanalytic set. *Zeszyty Nauk. Univ. Jagielloń. Prace Mat.* No. 21 (1979), 85-89. (Robert M. Hardt) **81c:32011** 32B20 (32B15, 32C05, 32C25)
- Stasjuk, M. F. Equivalence of two generalized spectral problems of the theory of elastic stability. (Russian) *Mat. Metody i Fiz.-Meh. Polja* No. 10 (1979), 25-26, 133. (V. T. Golovchan) **81a:73027** 73H05
- Stassinopoulos, G. I. Continuous dependence of constrained solutions of linear differential inclusions. *J. Inst. Math. Appl.* **25** (1980), no. 2, 161-175. (T. Zolezzi) **81g:49026** 49B50 (34A60, 49E20, 93C05)
- Stattman, Richard Bounds for proof-search and speed-up in the predicate calculus. *Ann. Math. Logic* **15** (1978), no. 3, 225-287 (1979). (M. Yasuhara) **81c:03049** 03F20 (68G15)
- (with Gourlay, John S.; Rounds, William C.) On properties preserved by contractions of concurrent systems. *Semantics of concurrent computation (Proc. Internat. Sympos., Eötvös, 1979)*, pp. 51-65, *Lecture Notes in Comput. Sci.*, 70, Springer, Berlin,

1979. (Authors' summary) **81f:60015** 68B05
 Worst case exponential lower bounds for input resolution with paramodulation. *SIAM J. Comput.* 9 (1980), no. 1, 104–110. (G. E. Peterson) **81e:68115** 68G15 (68C25)
- Stanton, William Some Ramsey-type numbers and the independence ratio. *Trans. Amer. Math. Soc.* 256 (1979), 353–370. (Michael O. Albertson) **81g:05083** 05C55
- Stanković, V. Large deviation theorems for sums of dependent random variables. I. (Russian. Lithuanian and English summaries) *Litovsk. Mat. Sb.* 19 (1979), no. 2, 199–208, 214–215. (Werner Wolf) **81i:60028** 60F10
- Stauder, D. (with Eschbach, P. D.; Herrmann, H. J.) Correlation-length exponent in two-dimensional percolation and Potts model. *Phys. Rev. B* (3) 23 (1981), no. 1, 422–425. (Authors' summary) **81k:82016** 82A25 (82-04)
- Steffens, H. B. On an embedding of a category into its completion. *J. Indian Math. Soc. (N.S.)* 42 (1978), no. 1–4, 263–266 (1979). (J. Lambek) **81d:18005** 18A35
 A derivation for the Weibull distribution. *J. Theoret. Biol.* 81 (1979), no. 1, 55–63. (Ramesh C. Gupta) **81b:62117** 62P10 (92A17)
- Stenson, L. P. (with van Dam, H.) Graphical introduction to the special theory of relativity. *Amer. J. Phys.* 48 (1980), no. 10, 807–817. (Lawrence Sklar) **81j:83002** 83-01 (83A05)
- Stavi, Jonathan Compactness properties of infinitary and abstract languages. I. General results. *Logic Colloquium '77* (Proc. Conf., Wrocław, 1977), pp. 263–275. *Studies in Logic and Foundations of Math.* 96, North-Holland, Amsterdam, 1978. (John Schlipf) **81d:03038** 03C75 (03C95)
 (with Manevitz, Larry) Δ_2^1 operators and alternating sentences in arithmetic. *J. Symbolic Logic* 45 (1980), no. 1, 144–154. (C. Smoryński) **81a:03064** 03H15 (03D80, 03F30)
- Stavroulakis, Nick M. (with Nadler, Sam B., Jr.; Quinn, Joseph E.) Hyperspaces of compact convex sets. *Pacific J. Math.* 83 (1979), no. 2, 441–462. (R. R. Sumnerhill) **81e:57019** 57N20 (46A55)
- Stavroulakis, L. P. Some oscillatory and asymptotic properties of differential equations with deviating arguments. *Bull. Math. Soc. Sci. Math. R. S. Roumanie (N.S.)* 22(70) (1978), no. 2, 191–204. (Author's summary) **81h:34085** 34K15
- Stavroulakis, P. (with Tzafestas, S. G.) Matrix minimum principle for distributed parameter control systems. *Internat. J. Systems Sci.* 11 (1980), no. 7, 793–801. (Authors' summary) **81g:93131** 93E20
 (with Tzafestas, S. G.) Distributed-parameter observer-based control implementation using finite spatial measurements. *Math. Comput. Simulation* 22 (1980), no. 4, 373–379. (Authors' summary) **81m:49011** 49A34 (93C20, 93E10)
- Stavrova, D. N. Cardinal-valued invariants for neighborhood spaces—definitions and main relations. (Russian) *C. R. Acad. Bulgare Sci.* 33 (1980), no. 4, 453–456. (Z. Balogh) **81m:54014** 54A25 (54A05)
- Stavroulakis, B. I. (with Fedorenko, R. P.; Gorlov, V. M.) Optimal control problems with complex constraints. (Russian) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 124* (1978), 54 pp. (V. V. Udilov) **81h:49003** 49A10
- Stein, Luigi On the intrinsic formulation of hyperelastic continua. (Italian. English summary) *Rend. Circ. Mat. Palermo* (2) 28 (1979), no. 2, 319–324. (M. Fabrizio) **81j:73014** 73B99
 On the relativistic kinematics of the deformations of a three-dimensional continuum. (Italian. English summary) *Rend. Mat.* (6) 12 (1979), no. 2, 209–220. (P. Havas) **81d:83009** —83A05 (73B99)
- St. Clair, D. C. (with Rigler, A. K.) An algorithm for least squares analysis of spectroscopic data. *BIT* 19 (1979), no. 4, 448–456. (G. C. Barozzi) **81j:65035** 65D10 (65F25)
- Stew, Edwin B. (with Johnson, Carl) Reproducing probability density classes on Lie groups with application to discrete-time filtering. *IEEE Trans. Inform. Theory* 26 (1980), no. 1, 124–129. (Authors' summary) **81d:93064** 93E11 (60G35)
- Stebunov, V. A. (with Babenko, K. L.; Orlova, M. G.) Periodic flows, close to the Poiseuille flow in a flat channel. (Russian. English summary) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 55* (1978), 37 pp. (Authors' summary) **81j:76020** 76D05 (35Q20)
- Stecenko, V. Ja. (with Nijazov, R. G.) Positive invertibility and theorems localizing the spectrum of a linear operator. (Russian) *Differential and integral equations*, No. 1 (Russian), pp. 3–8, *Tadzik. Gos. Univ., Dushanbe*, 1977. (From the introduction) **81j:47027** 47B55
 (with Hlamova, T. A.) A balance model with account taken of rescheduling of detrimental departures. (Russian. Tajiki summary) *Dokl. Akad. Nauk Tadzik. SSR* 22 (1979), no. 9, 525–529. (M. Vlach) **81m:90037** 90A17 (90A30)
 Estimation of the solution of a generalized Leontief-Ford model. (Russian. Tajiki summary) *Dokl. Akad. Nauk Tadzik. SSR* 22 (1979), no. 10, 588–591. (From the text) **81e:90027** 90A15
- Stech, Harlan W. On the adjoint theory for autonomous linear functional differential equations with unbounded delays. *J. Differential Equations* 27 (1978), no. 3, 421–443. (From the introduction) **81f:34067** 34K05
 Periodic solutions to a nonlinear Volterra integro-differential equation. *SIAM J. Math. Anal.* 11 (1980), no. 3, 533–544. (Gustaf Gripenberg) **81f:45018** 45J05 (34K15, 45M99, 92A15)
- Stecher, M. (with Kiffe, T.) An abstract Volterra integral equation in a reflexive Banach space. *J. Differential Equations* 34 (1979), no. 2, 303–325. (J. A. Nohel) **81d:45020** 45N05 (45D05, 47H15)
 (with Kiffe, T.) Properties and applications of the resolvent operator to a Volterra integral equation in Hilbert space. *SIAM J. Math. Anal.* 11 (1980), no. 1, 82–91. (G. F. Webb) **81k:45029** 45N05 (45D05, 47H99)
- Stech, George P. Lattice paths and accelerated life testing. *Combinatorics, representation theory and statistical methods in groups*, pp. 107–118, *Lecture Notes in Pure and Appl. Math.*, 57, Dekker, New York, 1980. (Reinhard Vierli) **81k:62063** 62G10 (60C05, 62N05)
- Stechkin, H. See *Proceedings: Operations Research*, **81e:90003c**
- Stechkin, S. B. (with Gavriluk, V. T.) Approximation of continuous functions by Fourier sums. (Russian) *Akad. Nauk Ukrain. SSR Inst. Mat. Preprint No. 1* (1979), 44 pp. (O. D. Gabisonija) **81h:42011** 42A10
- Estimation of the remainder for the Fourier series for differentiable functions. (Russian) Approximation of functions by polynomials and splines. *Trudy Mat. Inst. Steklov.* 145 (1980), 126–151, 250. (Paul Nevai) **81e:42012** 42A20
 See also *Approximation of functions by polynomials and splines*, **81h:41001**
- Stechkin, E. I. See Kuntzmann, Jean, **81e:65004**
- Stedry, Milan (with Vejvoda, O.) Periodic solutions of a weakly nonlinear autonomous wave equation. (Russian summary) *Partial differential equations (Russian)*, pp. 17–36, 142, *Trudy Sem. S. L. Soboleva*, No. 2, 1978, *Akad. Nauk SSSR Sibsk. Otdel. Inst. Mat., Novosibirsk*, 1978. (Mitsuihiro Nakao) **81g:35083** 35L70 (58E05)
 (with Herrmann, Leopold) Periodic solutions of weakly nonlinear wave equations in unbounded intervals. *Czechoslovak Math. J.* 28(183) (1978), no. 3, 343–355. (Mitsuihiro Nakao) **81i:35107** 35L65 (35B10)
 (with Hall, William S.) The Rayleigh and van der Pol wave equations. Extensions and generalizations. *J. Math. Anal. Appl.* 76 (1980), no. 2, 378–405. (Alwyn C. Scott) **81j:35020** 35B40 (35B10, 35L70, 78A25)
- Steece, Bert M. A Bayesian approach to model adequacy. *Comm. Statist. A—Theory Methods* 8 (1979), no. 14, 1393–1402. (Khurshid Alam) **81h:62042** 62F15 (62J05)
- Steel, John R. On Vaught's conjecture. *Cabal Seminar 76–77* (Proc. Caltech-UCLA Logic Sem., 1976–77), pp. 193–208, *Lecture Notes in Math.*, 689, Springer, Berlin, 1978. (John Rosenthal) **81h:03036** 03C15 (03C70, 03E15)
 Forcing with tagged trees. *Ann. Math. Logic* 15 (1978), no. 1, 55–74. (Douglas Cenzer) **81e:03044** 03E40 (03D55, 03D60)
- Steele, Charles R. Studies of the ear. *Nonlinear oscillations in biology* (Proc. Tenth Summer Sem. Appl. Math., Univ. Utah, Salt Lake City, Utah, 1978), pp. 69–91, *Lecture Notes in Appl. Math.*, 17, Amer. Math. Soc., Providence, R.I., 1979. (T. W. Barrett) **81h:92004** 92A09 (76Z05)
- Steele, J. Michael (with Ghossein, Nassif A.) Vector-valued subadditive processes and applications in probability. *Ann. Probab.* 8 (1980), no. 1, 83–95. (L. Sucheston) **81b:60027** 60F15 (60B12)
 Efron's conjecture on vulnerability to bias in a method for balancing sequential trials. *Biometrika* 67 (1980), no. 2, 503–504. (Author's summary) **81h:62136** 62L05
 A counterexample related to a criterion for a function to be continuous. *Proc. Amer. Math. Soc.* 79 (1980), no. 1, 107–109. (Robert J. Adler) **81j:60050** 60G17 (26A15)
- Steele, William A. Symmetry constraints on the configurational properties of nonlinear molecules. Tetrahedra. *Molecular Phys.* 39 (1980), no. 6, 1411–1422. (Author's summary) **81i:81117** 81G50 (51F15)
 Force-torque correlations. *Molecular Phys.* 40 (1980), no. 3, 723–739. (Author's summary) **81d:82050** 82A50
- Steen, Lynn Arthur Mathematics today. *Mathematics today*, pp. 1–12, Springer, New York, 1978. (See **80b:00007**) 00A05
 See also *Mathematics today*, **81k:00002**
- Stefan, P. Integrability of systems of vector fields. *J. London Math. Soc.* (2) 21 (1980), no. 3, 544–556. (D. R. J. Chillingworth) **81h:49026** 49E15 (58A30)
- Stefanelli, M. (with Colli Franzone, P.; Paganuzzi, A.) Iron metabolism: mathematical modelling and digital simulation. *Simulation of systems '79* (Proc. Ninth IMACS Congress, Sorrento, 1979), pp. 717–725, North-Holland, Amsterdam, 1980. (Authors' summary) **81m:92014** 92A09
- Stefanescu, I. Sabba Constraints on phase-shift analysis from two-variable analyticity. *Phys. Rev. D* (3) 21 (1980), no. 11, 3225–3246. (Author's summary) **81g:81007** 81F15
- Stefanescu, Mirela A generalization of the concept of near ring: infra-near-rings. *An. Ştiinţ. Univ. "Al. I. Cuza" Iaşi Sect. I a Mat. (N.S.)* 25 (1979), no. 1, 45–56. (Marjory J. Johnson) **81e:16032** 16A76
 Semisimple infranear rings. *An. Ştiinţ. Univ. "Al. I. Cuza" Iaşi Sect. I a Mat. (N.S.)* 26 (1980), no. 1, 5–14. (Steve Light) **81h:16051** 16A78 (16A76)
- Stefanini, Luciano (with Corradi, Corrado) Efficient computation of maximum likelihood estimates in ARMA regression models. *Numerical techniques for stochastic systems* (Conf., Gargnano, 1979), pp. 243–252, North-Holland, Amsterdam, 1980. (Authors' summary) **81i:62166** 62M10
- Stefanjuk, A. R. (with Vapnik, V. N.) Nonparametric methods for reconstructing probability densities. *Automat. i Telemekh.* 1978, no. 8, 38–52. (Russian); translated as *Automat. Remote Control* 39 (1978), no. 8, part 1, 1127–1140 (1979). (Authors' summary) **81i:62071** 62G05
- de Stefano, Stefania See De Stefano, Stefania
- Stefanov, S. S. Some properties of compacta with involution without fixed points. (Russian) *Serdica* 5 (1979), no. 4, 344–350. (K. Sieklucki) **81j:54056** 54F60 (54F62)
- Stefanyuk, A. R. See Stefanjuk, A. R.
- Steffé, Sergio A theorem on homogenization for ordinary differential equations with quasiperiodic coefficients. (Italian. English summary) *Boll. Un. Mat. Ital. B* (5) 17 (1980), no. 2, 757–764. (G. R. Sell) **81g:34056** 34C27
- Steffen, Günther Eigenschaften von Matrixgruppen über dem Restklassenring modulo p^k . *Rostock. Math. Kolloq.* No. 12 (1979), 17–30. (Ulrich Dempwolff) **81e:20019** 20C99 (20H25)
- Steffens, Karsten (with Holz, Michael; Podewski, Klaus-Peter) Hall families and the marriage problem. *J. Combin. Theory Ser. A* 27 (1979), no. 2, 161–180. (Paul E. Howard) **81e:04005** 04A20 (05A05, 90A06)
 (with Holz, Michael; Podewski, Klaus-Peter) A Hall criterion for countable families of sets. *J. London Math. Soc.* (2) 21 (1980), no. 1, 1–12. (N. H. Williams) **81g:04002** 04A25 (05A05)
- Stegall, Charles A proof of the principle of local reflexivity. *Proc. Amer. Math. Soc.* 78 (1980), no. 1, 154–156. (Yehoram Gordon) **81i:46012** 46B10
- Stegbauer, Werner A generalized model companion for a theory of partially ordered fields. *J. Symbolic Logic* 44 (1979), no. 4, 643–652. (M. Boffa) **81a:03034** 03C60 (12J15)
- Stegbächer, Hans Carleson sets and fixed-points of schlicht functions. *Romanian-Finnish Seminar on Complex Analysis* (Proc., Bucharest, 1976), pp. 373–388, *Lecture Notes in Math.*, 743, Springer, Berlin, 1979. (P. Zinterhof) **81e:30028** 30C55
 Dichteschätzungen mit Gleichverteilungsmethoden. (English summary) *Period. Math. Hungar.* 11 (1980), no. 2, 161–175. (Margaret P. Gessmann) **81f:62071** 62G05 (10K05)
- Stegenga, David A. Multipliers of the Dirichlet space. *Illinois J. Math.* 24 (1980), no. 1,

- 113-139. (Charles Horowitz) **81a:30027** 30H05 (46E15)
A geometric condition which implies BMOA. *Michigan Math. J.* 27 (1980), no. 2, 247-252. (Ch. Pommerenke) **81b:30039** 30D55 (30C85)
- Steger, Joseph L.** (with Sorenson, R. L.) Automatic mesh-point clustering near a boundary in grid generation with elliptic partial differential equations. *J. Comput. Phys.* 33 (1979), no. 3, 405-410. (Stephen W. Brady) **81b:65109** 65N05
- (with Schiff, Lewis B.) Numerical simulation of steady supersonic viscous flow. *AIAA J.* 18 (1980), no. 12, 1421-1430. (Authors' summary) **81j:76062** 76J99 (65P05)
- Stegmair, Ulrich** Centers of group algebras. *Math. Ann.* 243 (1979), no. 1, 11-16. (Justin Peters) **81b:43002** 43A20 (22D15)
- Stegmüller, Wolfgang** ★The structuralist view of theories. A possible analogue of the Bourbaki programme in physical science. *Springer-Verlag, Berlin-New York*, 1979. vii+101 pp. ISBN 3-540-09460-1 (Lawrence Sklar) **81i:00008** 00A25 (03A05)
- Stegun, Irene A.** See *Handbook: Mathematical functions with formulas, graphs and mathematical tables*, **81j:00014**
- Stehle, Werner** (with Brandenbusch, Wolfgang) A practical closed form solution for systems with variable eigenvalues via bilinear system theory. *Internat. J. Circuit Theory Appl.* 9 (1981), no. 1, 103-114. (Authors' summary) **81m:93029** 93B50 (57R27, 58F40, 94C10)
- Stehlik, Mark** (with Quintas, Louis V.; Yarnish, Joshua) Degree partition classes for 4-trees having specified properties. *Proceedings of the Tenth Southeastern Conference on Combinatorics, Graph Theory and Computing (Florida Atlantic Univ., Boca Raton, Fla., 1979)*, pp. 795-821, *Congress. Numer., XXIII-XXIV, Utilitas Math., Winnipeg, Man., 1979*. (E. M. Palmer) **81c:05030** 05C05
- Stehling, Wilfried** Approximationszahlen für Diagonaloperatoren zwischen Orlicz-Räumen. *Math. Nachr.* 93 (1979), 165-176. (M. S. Ramanujan) **81i:47037** 47B38 (46E30)
- Stein, Ann K.** (with Millman, Richard S.) Riemannian manifolds with many Killing vector fields. *Fund. Math.* 105 (1979/80), no. 3, 241-247. (K. Nomizu) **81g:53039** 53C30
- Steinberger, J.** (with Maissner, P.) Lagrange-Formalismus für diskrete elektromechanische Systeme. (English and Russian summaries) *Z. Angew. Math. Mech.* 59 (1979), no. 12, 717-730. (N. D. Sengupta) **81g:78040** 78A55 (49H05, 94C05)
- Steiger, Arno D.** On electromagnetic multipole fields in a finite, spherically symmetric region. *J. Math. Phys.* 21 (1980), no. 1, 60-70. (John Asvestas) **81c:78003** 78A25 (34B25)
- Steiger, James H.** The relationship between external variables and common factors. *Psychometrika* 44 (1979), no. 1, 93-97. (Alain Pousse) **81f:62096** 62H25
- Steiglitz, K.** (with Papadimitriou, Christos H.) Some examples of difficult traveling salesman problems. *Oper. Res.* 26 (1978), no. 3, 434-443. (James G. Morris) **81b:90092** 90B35
- Stein, Alan H.** (with An, Chung Ming) Representations of integers by positive definite forms over arithmetic progressions. *Illinois J. Math.* 24 (1980), no. 4, 612-618. (D. H. Lehmer) **81k:10029** 10B35 (10H10)
- Exponential sums related to binomial coefficient parity. *Proc. Amer. Math. Soc.* 80 (1980), no. 3, 526-530. (Heiko Harborth) **81k:10008** 10A21 (05A10)
- Stein, D. L.** Dissipative structures, broken symmetry, and the theory of equilibrium phase transitions. *J. Chem. Phys.* 72 (1980), no. 4, 2869-2874. (L. A. Turski) **81f:82014** 82A35 (82A25)
- (with Einhorn, Martin B.; Toussaint, Doug) Are grand unified theories compatible with standard cosmology? *Phys. Rev. D* (3) 21 (1980), no. 12, 3295-3298. (Authors' summary) **81i:81132** 81G20 (83E99, 83F05)
- Stein, Elias M.** (with Nagel, Alexander; Wainger, Stephen) Hilbert transforms and maximal functions related to variable curves. *Harmonic analysis in Euclidean spaces (Proc. Sympos. Pure Math., Williams Coll., Williamstown, Mass., 1978)*, Part 1, pp. 95-98, *Proc. Sympos. Pure Math., XXV, Part 1, Amer. Math. Soc., Providence, R.I., 1979*. (Hans P. Heinig) **81a:42027** 42B25
- A variant of the area integral. (French summary) *Bull. Sci. Math.* (2) 103 (1979), no. 4, 449-461. (Matti Essén) **81a:31006** 31B30 (31B05)
- Stein, Erwin** Variational functionals in the geometrical nonlinear theory of thin shells and finite-element discretizations with applications to stability problems. *Theory of shells (Proc. Third IUTAM Sympos., Tbilisi, 1978)*, pp. 509-535, North-Holland, Amsterdam, 1980. (Szczeban Borkowski) **81g:73101** 73J99 (65N30)
- Stein, G.** Robust stability of linear systems: engineering motivation. *Information linkage between applied mathematics and industry, II (Proc. Second Annual Workshop, Monterey, Calif., 1979)*, pp. 39-56, Academic Press, New York, 1980. (Author's summary) **81m:93058** 93D15
- Stein, Martin** Interpretationen der Heyting-Arithmetik endlicher Typen. *Arch. Math. Logik Grundlag.* 19 (1978/79), no. 3-4, 175-189. (Herman R. Jervell) **81j:03092** 03F30 (03F10)
- Stein, Michael R.** Stability theorems for K_1 , K_2 and related functors modeled on Chevalley groups. *Japan. J. Math. (N.S.)* 4 (1978), no. 1, 77-108. (M. E. Keating) **81c:20031** 20G35 (13D15)
- Excision and K_2 of group rings. *J. Pure Appl. Algebra* 18 (1980), no. 2, 213-224. (Jean-Louis Loday) **81k:18009** 18F25 (20J05)
- Stein, Paul R.** On the number of graphical partitions. *Proceedings of the Ninth Southeastern Conference on Combinatorics, Graph Theory, and Computing (Florida Atlantic Univ., Boca Raton, Fla., 1978)*, pp. 671-684, *Congress. Numer., XXI, Utilitas Math., Winnipeg, Man., 1978*. (S. L. Hakimi) **81a:05010** 05A17 (05C30, 10A45)
- (with Everett, C. J.) On a class of linked diagrams. II. Asymptotics. *Discrete Math.* 21 (1978), no. 3, 309-318. (K. A. Berman) **81j:05019** 05A15 (05C99)
- Stein, R. B.** (with Andreassen, S.; Ögüzörel, Mehmet Namik) Mathematical analysis of optimal multichannel filtering for nerve signals. *Biol. Cybernet.* 32 (1979), no. 1, 19-24. (Authors' summary) **81h:92009** 92A09 (94A34)
- (with Parmiggiani, F.; Ögüzörel, Mehmet Namik) Linear and nonlinear analysis of mammalian motor control. *Mathematical modelling in biology and ecology (Proc. Sympos., Pretoria, 1979)*, pp. 4-22, *Lecture Notes in Biomath.*, 33, Springer, Berlin, 1980. (See **81i:92001**) 92A09
- Stein, William E.** Optimal stopping in a fuzzy environment. *Fuzzy Sets and Systems* 3 (1980), no. 3, 253-259. (Author's summary) **81d:90108** 90C40
- Steinberg, L.** (with Altshuler, A.; Bokowski, Jürgen) The classification of simplicial 3-spheres with nine vertices into polytopes and nonpolytopes. *Discrete Math.* 31 (1980), no. 2, 115-124. (D. Barnette) **81m:52016** 52A25 (52A37, 57Q05)
- Steinberg, Stanley** Lie theory and differential equations. *Information linkage between applied mathematics and industry (Proc. First Annual Workshop, Naval Postgraduate School, Monterey, Calif., 1978)*, pp. 365-371, Academic Press, New York, 1979. (Carl Wulffman) **81b:58038** 58F35 (35A30, 58H15)
- (with Hersh, Reuben) Hyperbolic equations with coefficients in an enveloping algebra. *J. Differential Equations* 34 (1979), no. 3, 405-426. (Angelo Favini) **81c:34051** 34G10 (22E65, 35L30, 58F35)
- (with Wolf, K. B.) Groups of integral transforms generated by Lie algebras of second- and higher-order differential operators. (Italian and Russian summaries) *Nuovo Cimento A* (11) 53 (1979), no. 2, 149-177. (Carl Wulffman) **81c:22032** 22E70 (81C99)
- Steinberg, V.** (with Gitterman, M.) Memory effects in the motion of a suspended particle in a turbulent fluid. *Phys. Fluids* 23 (1980), no. 11, 2154-2160. (Authors' summary) **81j:76049** 76F99
- Steinberger, Mark** On the equivalence of the two definitions of the algebraic K-theory of a topological space. *Algebraic topology, Aarhus 1978 (Proc. Sympos., Univ. Aarhus, Aarhus, 1978)*, pp. 317-331, *Lecture Notes in Math.*, 763, Springer, Berlin, 1979. (Donald W. Kahn) **81d:55008** 55N15 (18F25)
- Steinberger, Meir** On loops with a general weak inverse property. *Math. Mag.* 10, no. 7, 573-586 (1979). (Afzal Beg) **81g:20132** 20N05
- Steinborn, E. Otto** (with Filter, Eckhard) A matrix representation of the translation operator with respect to a basis set of exponentially declining functions. *J. Math. Phys.* 21 (1980), no. 12, 2725-2736. (From the summary) **81m:33006** 33A45 (22E70, 81G50)
- Steinbuk, V. B.** Semigroups of partial endomorphisms of filters. (Russian) *Semigroup varieties and semigroups of endomorphisms (Russian)*, pp. 154-159, Leningrad. Gos. Ped. Inst., Leningrad, 1979. (G. Pollák) **81i:20098** 20M20
- Semigroups of endomorphisms of systems of saturated chains. (Russian) *Modern algebra (Russian)*, pp. 150-159, Leningrad. Gos. Ped. Inst., Leningrad, 1980. (Jan Chvalina) **81m:20009** 20M20 (06A10)
- Steinby, Magnus** Syntactic algebras and varieties of recognizable sets. *Les arbres en algèbre et en programmation (4ème Colloq., Lille, 1979)*, pp. 226-240, Univ. Lille I, Lille, 1979. (M. Novotný) **81i:08009** 08B99 (68F05)
- Steinchen, A.** (with Sanfeld, A.; Hennenberg, Marcel; Bisch, P. M.; van Lamsweerde-Gallez, D.; Dalle-Vedove, W.) Mechanical, chemical, and electrical constraints and hydrodynamic interfacial instability. *Dynamics and instability of fluid interfaces (Proc. Meeting, Tech. Univ. Denmark, Lyngby, 1978)*, pp. 168-204, *Lecture Notes in Phys.*, 105, Springer, Berlin, 1979. (See **81j:76045**) 76E99
- Steiner, Antonio** A uniqueness theorem for square integrable high-pass functions. *Rend. Circ. Mat. Palermo* (2) 27 (1978), no. 3, 347-352. (José García-Cuerva) **81m:42007** 42A38 (30D55, 94A11)
- Plancherel's theorem and the Shannon series derived simultaneously. *Amer. Math. Monthly* 87 (1980), no. 3, 193-197. (Walter R. Bloom) **81e:42010** 42A16
- Steiner, Ray** On the units in algebraic number fields. *Proceedings of the Sixth Manitoba Conference on Numerical Mathematics (Univ. Manitoba, Winnipeg, Man., 1976)*, pp. 413-435, *Congress. Numer., XVIII, Utilitas Math., Winnipeg, Man., 1977*. (Charles J. Parry) **81b:12008** 12A45
- Steiner, Richard** A canonical operad pair. *Math. Proc. Cambridge Philos. Soc.* 86 (1979), no. 3, 443-449. (M. Mahowald) **81a:55017** 55P47
- Decompositions of groups of units in ordinary cohomology. *Quart. J. Math. Oxford Ser. (2)* 30 (1979), no. 120, 483-494. (Harvey Margolis) **81c:55007** 55N20 (55P47)
- Steinhart, Paul Joseph** Problems of quantization in the infinite momentum frame. *Am. Phys. J.* 128 (1980), no. 2, 425-447. (Author's summary) **81m:81033** 81D05 (81E99)
- Steinhausen, D.** (with Bestehorn, Maik; Ebert, U.; Werner, Helmut) Some applications of computational methods to medical problems. *Computing methods in applied sciences and engineering (Proc. Third Internat. Sympos., Versailles, 1977)*, I, pp. 377-391, *Lecture Notes in Math.*, 704, Springer, Berlin, 1979. (See **80d:65016a**) 92A07
- Steinlage, R. C.** (with Gantner, T. E.; Warren, Richard H.) Compactness in fuzzy topological spaces. *J. Math. Anal. Appl.* 62 (1978), no. 3, 547-562. (Authors' summary) **81c:54006** 54A40 (54D30, 54D35)
- (with Gantner, T. E.; Warren, Richard H.) Errata: "Compactness in fuzzy topological spaces" *J. Math. Anal. Appl.* 62 (1978), no. 3, 547-562; MR 81e:54006. *J. Math. Anal. Appl.* 65 (1978), no. 2, 503. (From the text) **81i:54015** 54D30 (54A40)
- Steinlein, H.** Some abstract generalizations of the Ljusternik-Schnirelmann-Borsuk covering theorem. *Pacific J. Math.* 83 (1979), no. 1, 285-296. (G. V. Krishnamo) **81b:55007** 55M30
- Steinmetz, Norbert** Bemerkung zu einem Satz von Yosida. *Complex analysis Joensuu 1978 (Proc. Colloq., Univ. Joensuu, Joensuu, 1978)*, pp. 369-377, *Lecture Notes in Math.*, 747, Springer, Berlin, 1979. (J. Rausen) **81a:34007** 34A20 (30D35)
- Zur Theorie der binomischen Differentialgleichungen. *Math. Ann.* 244 (1979), no. 3, 263-274. (Shlomo Strelitz) **81a:34008** 34A20 (30D30)
- Ein Malmquist'scher Satz für algebraische Differentialgleichungen erster Ordnung. *J. Reine Angew. Math.* 316 (1980), 44-53. (Shlomo Strelitz) **81m:34007** 34A20 (34A30)
- Stekauer, Jan** Classical Runge-Kutta formulas of the fifth order with rational coefficients for an ordinary differential equation of the fourth order. (Slovak and Russian summaries) *Acta Fac. Rerum Natur. Univ. Comenian. Math.* 35 (1979), 43-53 (1980). (J. Sprekels) **81m:65125** 65L05
- Stelen, V. M.** (with Borroni, P. A.) The maximally extensive local group of invariance of Dirac-Lorentz's equation. *Lett. Nuovo Cimento* (2) 28 (1980), no. 5, 169-170. (From the text) **81f:81032** 81D25
- Stelik, V. G.** (with Maslova, N. V.) On the problem of optimizing the dates of functioning of capital funds in macroeconomic systems. (Russian. English summary) *Issled. Operacii i ASU No. 12* (1978), 3-13, 130. (Authors' summary) **81b:90007** 90A09
- Stella, A. L.** (with Fiorenzato, A.; Toigo, F.) On a new criterion for the determination of parameters in position space renormalization transformations. *Phys. Lett. A* 69 (1978/79), no. 2, 127-129. (Authors' summary) **81h:82020** 82A25 (82-04, 82A67)
- Stelle, K. S.** (with West, P. C.) Algebraic understanding of constraints. *Supergravity*

- (Proc. Workshop, Stony Brook, N.Y., 1979), pp. 133-142, North-Holland, Amsterdam, 1979. (See **81j:83001**) **81G20** (49C10, 53B50, 83E99)
- (with Sohnius, Martin F.; West, P. C.) Off-mass-shell formulation of extended supersymmetric gauge theories. *Phys. Lett. B* **92** (1980), no. 1-2, 123-127. (Authors' summary) **81g:8107** **81G25**
- (with Cremmer, E.; Ferrara, S.; West, P. C.) Off-shell $N=8$ supersymmetry with central charges. *Phys. Lett. B* **94** (1980), no. 3, 349-354. (Authors' summary) **81g:83058** **83E99** (81G25)
- (with West, P. C.) Spontaneously broken de Sitter symmetry and the gravitational holonomy group. *Phys. Rev. D* (3) **21** (1980), no. 6, 1466-1488. (Marcos D. Maia) **81c:83038** **83E99** (53C05)
- Stellmacher, Bernd Über den schwachen Abschluß von TI-Untergruppen in ihrem Normalisator. *Arch. Math. (Basel)* **32** (1979), no. 6, 516-525. (Arthur Reifart) **81a:20025** **20D25** (20F26)
- Stelzer, W. Funktorenvariable, Funktionenvariable und nichtklassische Logik. *Wis. Z. Karl-Marx-Univ. Leipzig Ges. Sprachwiss. Reihe* **28** (1979), no. 3, 313-318. (Siegfried Gottwald) **81i:03012** **03B05** (03B45)
- Stemple, Joel G. Geodesic graphs homeomorphic to a complete graph. *Second International Conference on Combinatorial Mathematics (New York, 1978)*, pp. 512-517, Ann. New York Acad. Sci., 319, New York Acad. Sci., New York, 1979. (M. E. Watkins) **81c:05079** **05C75**
- Stenflo, L. (with Gradov, O. M.) Magnetic field instability of a plasma in a beam of electromagnetic radiation. *Z. Naturforsch. A* **35** (1980), no. 4, 461-463. (Authors' summary) **81f:82024** **82A45** (76X05, 78A40)
- Stenger, Frank (with Johnson, Steven A.) Ultrasonic transmission tomography based on the inversion of the Helmholtz wave equation for plane and spherical wave insinification. *Appl. Math. Notes* **4** (1979), no. 3-4, 102-127. (V. M. Babić) **81d:76083** **76Q05** (45B05, 92A07)
- (with Lundin, L. R.) Cardinal-type approximations of a function and its derivatives. *SIAM J. Math. Anal.* **10** (1979), no. 1, 139-160. (Hans-Peter Helfrich) **81c:41043** **41A30** (30E10)
- Stenger, H. Loss functions and admissible estimators in survey sampling. (German summary) *Metrika* **26** (1979), no. 4, 205-214. (V. P. Godambe) **81a:62010** **62D05**
- Stengle, Gilbert Integral solution of Hilbert's seventeenth problem. *Math. Ann.* **246** (1979/80), no. 1, 33-39. (G. A. Efroymsen) **81c:12035** **12D99**
- Stenholm, S. (with Bambini, A.) Unification of free electron laser theories. *Optica Acta* **27** (1980), no. 2, 201-213. (Authors' summary) **81g:81115** **81K05** (78A15)
- Stens, R. L. (with Butzer, P. L.) Chebyshev transform methods in the solution of the fundamental theorem of best algebraic approximation in the fractional case. *Fourier analysis and approximation theory (Proc. Colloq., Budapest, 1976)*, Vol. I, pp. 191-212, Colloq. Math. Soc. János Bolyai, 19, North-Holland, Amsterdam, 1978. (Darrell Schmidt) **81c:41047** **41A25** (41A10)
- Gewichtete beste Approximation stetiger Funktionen durch algebraische Polynome. (English summary) *Linear spaces and approximation (Proc. Conf., Math. Res. Inst., Oberwolfach, 1977)*, pp. 407-421, Internat. Ser. Numer. Math., 40, Birkhäuser, Basel, 1978. (Hans-Peter Blatt) **81d:41036** **41A50** (41A10, 41A25, 65D15)
- (with Butzer, P. L.; Wehrens, M.) Approximation by algebraic convolution integrals. *Approximation theory and functional analysis (Proc. Internat. Sympos. Approximation Theory, Univ. Estadual de Campinas, Campinas, 1977)*, pp. 71-120, North-Holland Math. Studies, 35, North-Holland, Amsterdam, 1979. (Karl Scherer) **81c:41021** **41A30**
- (with Butzer, P. L.; Wehrens, M.) Higher order moduli of continuity based on the Jacobi translation operator and best approximation. *C. R. Math. Rep. Acad. Sci. Canada* **2** (1980), no. 2, 83-88. (Authors' summary) **81a:41040** **41A50**
- (with Wehrens, M.) Legendre transform methods and best algebraic approximation. *Comment. Math. Prace Mat.* **21** (1980), no. 2, 351-380. (Myron S. Henry) **81j:41013** **41A10** (44A15)
- Error estimates for sampling sums based on convolution integrals. *Inform. and Control* **45** (1980), no. 1, 37-47. (Pierre Bois) **81j:42009** **42A15** (94A24)
- (with Butzer, P. L.; Wehrens, M.) The continuous Legendre transform, its inverse transform, and applications. *Internat. J. Math. Math. Sci.* **3** (1980), no. 1, 47-67. (R. C. Varma) **81k:44002** **44A15** (94A05)
- Approximation to duration-limited functions by sampling sums. (German and French summaries) *Signal Process.* **2** (1980), no. 2, 173-176. (Author's summary) **81d:94002** **94A05**
- Stépán, Jaromír Complex system atomization. *Third Formator Symposium on Mathematical Methods for the Analysis of Large-Scale Systems*, pp. 323-334, Academia, Prague, 1979. (See **81j:93007**) **93B30** (93C45)
- Stépán, Josef Simplicial measures. *Contributions to statistics*, pp. 239-251, Reidel, Dordrecht, 1979. (Z. Semadeni) **81d:46015** **46A55** (52A05)
- Probability measures with given expectations. *Proceedings of the Second Prague Symposium on Asymptotic Statistics (Hradec Králové, 1978)*, pp. 315-320, North-Holland, Amsterdam, 1979. (Thomas E. Armstrong) **81h:46008** **46A55** (28C05, 60B05)
- Stepanukkas, G. Distribution of additive arithmetic functions on an arithmetic progression. (Russian, Lithuanian and German summaries) *Litovsk. Mat. Sb.* **19** (1979), no. 4, 175-190, 212-213. (Karl-Heinz Indlekofer) **81g:10069** **10K20** (10H20)
- Stepanec, O. I. A sharp estimate of the deviations of Favard sums over the classes $H_{\lambda, \mu}^1$. (Russian) *Studies in the theory of approximation of functions and their applications (Russian)*, pp. 174-181, 195, Akad. Nauk Ukrain. SSR, Inst. Mat., Kiev, 1978. (S. Aljančić) **81h:42016** **42A10**
- Elements of the behavior of the Favard kernel. (Russian) *The theory of functions and its applications (Russian)*, pp. 154-193, 212, "Naukova Dumka", Kiev, 1979. (S. Aljančić) **81h:42017** **42A10**
- (with Zaderé, P. V.) On the approximation of conjugate functions from Hölder classes by Fejér means. (Russian summary) *Anal. Math.* **5** (1979), no. 2, 167-178. (J. A. Siddiqui) **81j:42024** **42A50** (42A10)
- The solution in rearrangements of an extremal problem for classes of continuous functions of two variables in permutations. (Russian) *Ukrain. Mat. Ž.* **31** (1979), no. 1, 95-101, 112. (B. Bojanov) **81c:41039** **41A29**
- Simultaneous approximation of periodic functions and their derivatives by Fourier sums. (Russian) *Dokl. Akad. Nauk SSSR* **254** (1980), no. 3, 543-544. (Włodzimierz Lenski) **81m:42001** **42A10**
- Estimates of deviations of partial Fourier sums on classes of continuous periodic functions of several variables. (Russian) *Izv. Akad. Nauk SSSR Ser. Mat.* **44** (1980), no. 5, 1150-1190, 1214. (R. L. Cooke) **81h:42014** **42B05**
- (with Zaderé, N. N.) Approximation by Fourier sums on classes of periodic functions defined by polyharmonic operators. (Russian) *Mat. Zametki* **27** (1980), no. 4, 569-581, 669. (S. Baron) **81h:42066** **42A10** (42B05)
- Exact estimates of deviations of Favard sums on classes of continuous periodic functions of two variables. (Russian) *Ukrain. Mat. Ž.* **32** (1980), no. 4, 528-537. (S. Aljančić) **81h:42005** **42A10**
- Stepanenko, V. M. Approximation of the solution of a problem of elasticity theory for an incompressible material. (Russian) *Čisl. Metody Meh. Splajn. Sredy* **9** (1978), no. 6. *Modelirovanie*, 136-145. (V. T. Golovchan) **81c:73024** **73C99**
- Stepanec, A. I. See **Stepanec, O. I.**
- Stepanjan, S. S. Integral representation of functions of M. M. Džrbaljan's class $H_{\lambda}(\alpha)$. (Russian, Armenian summary) *Akad. Nauk Armjan. SSR Dokl.* **69** (1979), no. 2, 74-81. (C. Tanaka) **81c:30063** **30D55** (30E20)
- Stepanov, A. I. (with Val'šev, K. G.) Some particular solutions of a dynamical three-dimensional problem of elasticity theory. (Russian) *Meh. Teor. Tela* **11** (1979), 109-115, 120. (Kazimierz Sobczyk) **81g:73036** **73D99**
- Stepanov, A. K. (with Molčanov, S. A.) Markov models for energy dissipation in a homogeneous medium. (Russian) *Studies in the theory of functions of several real variables*, No. 2. (Russian), pp. 148-175, Yaroslavl. Gos. Univ., Yaroslavl, 1978. (Authors' introduction) **81c:82038** **82A42** (60K35)
- Stepanov, A. V. (with Nagaev, R. F.) Optimization of the damping factor of free oscillations for a two-mass system. *Izv. Akad. Nauk SSSR Meh. Teor. Tela* **14** (1979), no. 4, 24-28. (Russian); translated as *Mech. Solids* **14** (1979), no. 4, 20-24. (Authors' summary) **81g:70021** **70J05**
- Stepanov, G. Ju. The basic models of mechanics of liquids and gases in the theory of the wing. A translation of Nekotorye Voprosy Meh. Splajn. Sredy. **1978**, 5-28. *Fluid Mech. — Societ. Res.* **8** (1979), no. 6, 1-27 (1980). (E. Meister) **81m:76003** **76B05** (76D15)
- See also *Vortex motions in a fluid. Stability and separation of a boundary layer; free and quantum vortices*, **81c:76018**
- Stepanov, Ju. S. (with Kozin, N. S.; Holin, N. N.) Equations of dynamical plasticity for polycrystalline metallic materials. (Russian) *Ž. Prikl. Meh. i Tehn. Fiz.* **1979**, no. 6, 147-153, 175. (François Sidoroff) **81d:73036** **73E99**
- Stepanov, K. N. (with Grekov, D. L.) On the theory of wave conversion in an inhomogeneous plasma. (Russian, English summary) *Ukrain. Fiz. Ž.* **25** (1980), no. 8, 1281-1291, 1401. (Authors' summary) **81h:76067** **76K05**
- Stepanov, S. A. On the proof of the Davenport-Hasse relations. (Russian) *Mat. Zametki* **27** (1980), no. 1, 3-6, 157. (S. E. Schuur) **81j:10055** **10G05** (14G13)
- Stepanov, S. Ja. (with Wang, Tan Chih; Sergeev, V. S.) Computer solution of a problem of stability. (Russian) *Theory of stability and its applications (Russian)*, pp. 255-260, 303, "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. (A. A. Martinjuk) **81j:65067** **65L07**
- Stepanov, S. N. Calculation of the correlation function of a Markov process with continuous time and a finite number of states. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* **1979**, no. 2, 160-167, 222. (Russian); translated as *Engng. Cybernetics* **17** (1979), no. 2, 91-98 (1980). (Author's summary) **81h:60072** **60J27** (60K25, 65U05)
- Stepanov, V. D. Absolute summability of the Fourier transform of functions of several variables. (Russian) *Theory of cubature formulas and the application of functional analysis to problems of mathematical physics (Russian)*, pp. 116-121, 167, *Trudy Sem. S. L. Soboleva*, No. 1, 1978, Akad. Nauk SSSR Sibirsk. Otdel., Inst. Mat., Novosibirsk, 1978. (R. L. Cooke) **81c:42028** **42B10** (42B05)
- (with Korotkov, V. B.) Some properties of integral operators of convolution. (Russian) *Application of the methods of functional analysis to problems of mathematical physics and numerical analysis (Russian)*, pp. 64-68, Akad. Nauk SSSR Sibirsk. Otdel., Inst. Mat., Novosibirsk, 1979. (P. P. Zabreiko) **81m:47073** **47G05** (47B35)
- Stepanov, V. V. (with Gončarskii, A. V.) The uniform approximation of a solution with bounded variation of ill-posed problems. (Russian) *Dokl. Akad. Nauk SSSR* **248** (1979), no. 1, 20-22. (Editors) **81h:65047** **65J05**
- Stepanova, M. B. Application of a heuristic principle in binary problems with primes and powers of two. (Russian) *Kutbyrevo. Gos. Ped. Inst. Nauch. Trudy* **215** (1978), *Izdel. po Additivnoi Teor. Čisel*, 42-45. (Matti Jutila) **81j:10076** **10J15**
- Stepanova, N. V. (with Černavskii, D. S.) A mathematical model of the interaction of a tumor with an organism. (Russian) *Mathematical models of mechanisms of pathological processes. Voprosy Kibernet. (Moscow)* No. 49 (1979), 32-44. (See **81f:92007**) **92A07**
- Stepanova, S. Ja. See **Rouche, Nicolas; et al.**, **81f:34055**
- Stepaiko, T. A. (with Mirzo-zade, D. I.) Bismiquaternion projective geometry. (Russian, Tajiki summary) *Izv. Akad. Nauk Tadšk. SSR Otdel. Fiz.-Mat. i Geol.-Him. Nauk* **1979**, no. 2(72), 3-13. (D. B. Persic) **81c:51036** **51N25**
- Stephan, E. Conform and mixed finite element schemes for the Dirichlet problem for the bi-Laplacian in plane domains with corners. *Math. Methods Appl. Sci.* **1** (1979), no. 3, 354-382. (Charles I. Goldstein) **81c:65060** **65N30** (65J05, 73K25)
- Stephani, Hans ★ Allgemeine Relativitätstheorie. (German) [General theory of relativity] Eine Einführung in die Theorie des Gravitationsfeldes. [An introduction to the theory of the gravitational field]. Hochschulbücher für Physik [University Books for Physics], 43. VEB Deutscher Verlag der Wissenschaften, Berlin, 1977. 282 pp. (loose insert). (N. V. Micevski) **81d:83001** **83-01** (53B30, 53C50, 58D30, 83-02, 83Cxx)
- Stephani, Imtraud Operator ideals generalizing the ideal of strictly singular operators. *Math. Nachr.* **94** (1980), 29-41. (Bernd Rosenberger) **81m:47062** **47D30** (47B05)
- Stephanopoulos, George (with Stephanopoulos, Gregory; Schuelke, L. M.) A decomposition method for the stability analysis of large microbial systems. *Theoret. Population Biol.* **16** (1979), no. 2, 126-143. (P. Bertrand) **81f:92027** **92A15** (93D99)
- (with Morari, Manfred; Arkun, Yaman) Studies in the synthesis of control structures for chemical processes. I. Formulation of the problem. Process decomposition and the classification of the control tasks. Analysis of the optimizing control structures. *AIChE J.* **26** (1980), no. 2, 220-232. (Authors' summary) **81h:93002a** **93A13**
- (with Morari, Manfred) Studies in the synthesis of control structures for chemical

- processes. II. Structural aspects and the synthesis of alternative feasible control schemes. *AICAE J.* 26 (1980), no. 2, 232-246. (Authors' summary) **81h:93002b** 93A13 (93B05, 93B07)
- (with Morari, Manfred) Studies in the synthesis of control structures for chemical processes. III. Optimal selection of secondary measurements within the framework of state estimation in the presence of persistent unknown disturbances. *AICAE J.* 26 (1980), no. 2, 247-260. (Authors' summary) **81h:93002c** 93E10
- (with Svoronos, Spyros; Aris, Rutherford) Bilinear approximation of general nonlinear dynamic systems with linear inputs. *Internat. J. Control* 31 (1980), no. 1, 109-126. (K. W. Han) **81h:93020** 93C10
- (with Morari, Manfred) Minimizing unobservability in inferential control schemes. *Internat. J. Control* 31 (1980), no. 2, 367-377. (Authors' summary) **81h:93023** 93B07
- (with Michalopoulos, Panos G.; Stephanopoulos, Gregory) An application of shock wave theory to traffic signal control. *Transportation Res. Part B* 15 (1981), no. 1, 35-51. (Authors' summary) **81m:90051** 90B20
- Stephanopoulos, Gregory** (with Schuelke, L. M.; Stephanopoulos, George) A decomposition method for the stability analysis of large microbial systems. *Theoret. Population Biol.* 16 (1979), no. 2, 126-143. (P. Bertrand) **81f:92027** 92A15 (93D99)
- (with Michalopoulos, Panos G.; Stephanopoulos, George) An application of shock wave theory to traffic signal control. *Transportation Res. Part B* 15 (1981), no. 1, 35-51. (Authors' summary) **81m:90051** 90B20
- Stephens, C. F.** Nonlinear difference equations analytic in a parameter. *Black mathematical analysis and its works*, pp. 195-209, Dorrance, Ardmore, Pa., 1980. (See **81e:90004**) 39A10
- Stephens, Michael A.** (with Brown, Mark; Solomon, Herbert) Variance reduction in Monte Carlo simulation. *Proceedings of the Twenty-Fifth Conference on the Design of Experiments* (Natick, Mass., 1979), pp. 89-101, ARO Rep. 80, 2, U. S. Army Res. Office, Research Triangle Park, N.C., 1980. (From the introduction) **81h:65009b** 65C05
- Stephenson, F. W.** (with Dunning-Davies, J.) Analytical optimization of equal-valued-capacitor active RC networks. *Internat. J. Electron.* 46 (1979), no. 3, 255-260. (Authors' summary) **81h:94044** 94C05
- (with Dunning-Davies, J.) Sensitivity optimization of active filters containing current conveyors and controlled sources. *Internat. J. Electron.* 48 (1980), no. 3, 283-289. (Authors' summary) **81h:94029** 94C05 (93B35)
- Stephenson, Kenneth** Weak subordination and stable classes of meromorphic functions. *Trans. Amer. Math. Soc.* 262 (1980), no. 2, 565-577. (Lowell Hansen) **81m:30029** 30D55 (30C80)
- Stephenson, R. M., Jr.** (with Davis, S. W.) Separability and minimal weak base topologies. *Proc. Amer. Math. Soc.* 74 (1979), no. 2, 371-378. (Authors' summary) **81j:54037** 54D25 (54E25, 54E30)
- Symmetrizable spaces and separability. The Proceedings of the 1979 Topology Conference (Ohio Univ., Athens, Ohio, 1979). *Topology Proc.* 4 (1979), no. 2, 589-599 (1980). (Robert A. McCoy) **81m:54056** 54E25
- Stepić, Cezary** (with Prusinkiewicz, Przemysław) A digital method of computing the inverse function. (Polish. Russian and English summaries) *Arch. Automat. Telemekh.* 24 (1979), no. 4, 443-452. (Authors' summary) **81h:65129** 65V05 (68C05)
- Stepin, A. M.** (with Pidkuiko, S. I.) Polynomial integrals of Hamiltonian systems. (Russian) *Dokl. Akad. Nauk SSSR* 239 (1978), no. 1, 50-53. (From the text) **81f:58022** 58F05
- Stepilink, Janecz** Theory of coherent two-photon NMR: standard-basis operators and coherent averaging. *Phys. B + C* 100 (1980), no. 2, 245-259. (Author's summary) **81d:81123** 81G99 (81K05)
- Stepp, James W.** (with Byrd, R. D.; Lloyd, J. T.) The automorphism group of the semigroup of finite complexes of a periodic abelian group. *J. Austral. Math. Soc. Ser. A* 28 (1979), no. 1, 15-22. (D. R. La Torre) **81h:20065** 20M10
- Topological semilattices with enough closed subsemilattices to separate points. *Semigroup Forum* 20 (1980), no. 1, 49-54. (Jimmie D. Lawson) **81m:06009** 06A12 (22A26)
- Steinbohl, François** A problem in constructive combinatorics and related questions. *Combinatorics* (Proc. Fifth Hungarian Colloq., Keszthely, 1976), Vol. II, pp. 1049-1064, *Colloq. Math. Soc. János Bolyai*, 18, North-Holland, Amsterdam, 1978. (C. Berge) **81h:05037** 05B30 (05C65)
- Hypergraphes transversaux des couplages. (English summary) *Problèmes combinatoires et théorie des graphes* (Colloq. Internat. CNRS, Univ. Orsay, Orsay, 1976), pp. 393-394, *Colloques Internat. CNRS*, 260, CNRS, Paris, 1978. (See **80e:05065**) 05C65
- Le problème du Loto. *Colloque Mathématiques Discrètes: Codes et Hypergraphes* (Brussels, 1978). *Cahiers Centre Études Rech. Opér.* 20 (1978), no. 3-4, 443-449. (R. G. Stanton) **81g:05005** 05A05 (05C70)
- A characterization of the graphs in which the transversal number equals the matching number. *J. Combin. Theory Ser. B* 27 (1979), no. 2, 228-229. (O. D'Antona) **81c:05080** 05C75 (05C05)
- Un problème de coloration aux aspects variés. (English summary) *Combinatorics 79* (Proc. Colloq., Univ. Montréal, Montréal, Que., 1979), Part II. *Ann. Discrete Math.* 9 (1980), 29-33. (D. de Werra) **81m:05069** 05C15 (05C65)
- (with Wertheimer, D.) Comment construire un graphe PERT minimal. (English summary) *Combinatorics 79* (Proc. Colloq., Univ. Montréal, Montréal, Que., 1979), Part II. *Ann. Discrete Math.* 9 (1980), 147-154. (Authors' summary) **81h:90053** 90B35
- (with Bermond, J.-C.; Frankl, Péter) On the maximum number of edges in a hypergraph whose linegraph contains no cycle. (French summary) *Discrete Math.* 30 (1980), no. 3, 295-298. (C. St. J. A. Nash-Williams) **81i:05103** 05C65
- Štěpánová, Dina** On the spectral properties of elements of the type $\exp(ih)$ in Hermitian Banach algebras. (Czech and Russian summaries) *Sb. Práci Přírodověd. Fak. Univ. Palackého v Olomouci Mat.* 57 (1978), 109-114. (A. M. Sinclair) **81a:46009** 46K05
- On Banach \ast -algebras without the unit. (Czech and Russian summaries) *Sb. Práci Přírodověd. Fak. Univ. Palackého v Olomouci Mat.* 18 (1979), 21-28. (F. F. Bonsall) **81j:46008** 46K05
- Sterling, G.** (with Chowla, S.; Hartung, Paul G.) On the linear independence of certain numbers over the field of rationals. *Proceedings of the Tenth Southeastern Conference on Combinatorics, Graph Theory and Computing* (Florida Atlantic Univ., Boca Raton, Fla., 1979), pp. 261-262, *Congress. Numer.*, XXIII-XXIV, Utilitas Math., Winnipeg, Man., 1979. (Melvin M. Sweet) **81d:10027** 10F37
- Stern, A.** (with Naimark, M. A.) \star Théorie des représentations des groupes. (French) [Theory of group representations] Translated from the Russian by A. Sossinski. *Édition Mir, Moscow*, 1979. 608 pp. (Jonathan M. Rosenberg) **81b:22001** 22-01 (20Cxx, 20G05)
- (with Skagerstam, B. S.) Magnetic superconductors and the MIT bag model. *Z. Phys. C* 5 (1980), no. 4, 347-350. (Authors' summary) **81h:81187** 81J05 (81G05)
- Stern, Frederick** Absorption sequences. *Fibonacci Quart.* 17 (1979), no. 3, 275-280. (S. G. Mohanty) **81c:60081** 60J15 (10A35)
- Stern, Gerhard** Tripelsysteme mit Untersystemen. *Arch. Math. (Basel)* 33 (1979/80), no. 2, 204-208. (Ian Blake) **81h:05048** 05B30 (51E30)
- (with Lenz, Manfred) Steiner triple systems with given subspaces; another proof of the Doyen-Wilson-theorem. (Italian summary) *Boll. Un. Mat. Ital. A* (5) 17 (1980), no. 1, 109-114. (Ian Blake) **81h:05049** 05B30 (51E10)
- Stern, I.** On summability theory and multiparticle production in hadron reactions at very high energies. *Proceedings of the International Symposium on Applications of Mathematics in System Theory* (Univ. Brasov, Brasov, 1978), I, pp. 173-178, Univ. Brasov, Brasov, 1979. (See **81j:93006a**) 81G25
- Stern, Jacques** Évaluation du rang de Borel de certains ensembles. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 286 (1978), no. 20, A855-A857. (Author's summary) **81e:03049** 03E15 (03D55)
- Ultrapowers and local properties of Banach spaces. *Trans. Amer. Math. Soc.* 240 (1978), 231-252. (Author's summary) **81f:46031** 46B99 (03C20, 46E30)
- Effective partitions of the real line into Borel sets of bounded rank. *Ann. Math. Logic* 18 (1980), no. 1, 29-60. (Keith Devlin) **81d:03052** 03E15
- Stern, Manfred** Standard ideals in matroid lattices. *Publ. Math. Debrecen* 25 (1978), no. 3-4, 241-250. (From the introduction) **81g:06004** 06C99
- On perspectives in incidence geometries of grade n . *Beiträge zur Algebra und Geometrie, 7. Wiss. Beir. Martin-Luther-Univ. Halle-Wittenberg M* 11 (1978), 13-19. (I. Yaqub) **81j:06012** 06C10 (05B35, 51B99)
- Stern, Melvin E.** A variational principle for turbulent flow. *Phys. Fluids* 23 (1980), no. 11, 2161-2170. (Author's summary) **81k:76034** 76F99 (49H05)
- Stern, Ronald J.** On bilinear systems with coinciding attainable sets. *J. Math. Anal. Appl.* 72 (1979), no. 1, 329-337. (Eitelbert N. Chukwu) **81e:93048** 93C15 (49E15)
- (with Galewski, David E.) Orientation-reversing involutions on homology 3-spheres. *Math. Proc. Cambridge Philos. Soc.* 85 (1979), no. 3, 449-451. (R. C. Kirby) **81c:57009** 57N10 (57R05, 57R20)
- (with Galewski, David E.) Classification of simplicial triangulations of topological manifolds. *Ann. of Math. (2)* 111 (1980), no. 1, 1-34. (R. C. Kirby) **81f:57012** 57Q15 (57Q25)
- (with Schmidt, E. J. P. Georg) Invariance theory for infinite-dimensional linear control systems. *Appl. Math. Optim.* 6 (1980), no. 2, 113-122. (B. G. Pachpatte) **81e:93043** 93C05
- Sternberg, A.** (with Elishakoff, I.) Vibration of rectangular plates with edge-beams. (German summary) *Acta Mech.* 36 (1980), no. 3-4, 195-212. (Authors' summary) **81d:73058** 73K12
- Sternberg, Eli** (with Knowles, J. K.) Discontinuous deformation gradients near the tip of a crack in finite anti-plane shear: an example. *J. Elasticity* 10 (1980), no. 1, 81-110. (From the summary) **81h:73044** 73M05
- Sternberg, Robert L.** See *Nonlinear partial differential equations in engineering and applied science*, **81d:35002**
- Sternberg, Shlomo** (with Ungar, Thomas) Classical and prequantized mechanics without Lagrangians or Hamiltonians. *Hadronic J.* 1 (1978), no. 1, 33-76. (Tudor S. Răjui) **81e:70014** 70G99 (58F06, 81E99)
- (with Iacob, Andrei) Coadjoint structures, solitons, and integrability. *Nonlinear evolution equations and dynamical systems* (Proc. Meeting, Univ. Lecce, Lecce, 1979), pp. 52-84, *Lecture Notes in Phys.*, 120, Springer, Berlin, 1980. (Tudor S. Răjui) **81h:58035** 58F07 (70H99, 76B25)
- (with Guillemin, Victor) The moment map and collective motion. *Ann. Phys.* 127 (1980), no. 1, 220-253. (Frans Cantrijn) **81g:58011** 58F05 (57S25, 70H99, 81C99)
- (with Ne'eman, Yuval) Internal supersymmetry and unification. *Proc. Nat. Acad. Sci. U.S.A.* 77 (1980), no. 6, part 1, 3127-3131. (Hans Türling) **81h:81098** 81G20 (17A70)
- Sternfeld, Wolfgang** Remarks on presupposition, truth, and modality in supervaluation logic. *Logique et Anal. (N.S.)* 22 (1979), no. 85-86, 31-47. (Charles F. Kielkopf) **81g:03025** 03B50 (03B45)
- Sternheimer, Daniel** Nonlinear group representations and the linearizability of nonlinear equations. *Mathematical problems in theoretical physics* (Proc. Internat. Conf. Math. Phys., Lausanne, 1979), pp. 300-302, *Lecture Notes in Phys.*, 116, Springer, Berlin, 1980. (Author's summary) **81h:81062** 81D25 (22E45, 81E99)
- Sternin, B. Ju.** The topological meaning of the quantization conditions in complex Maslov theory. (Russian) *Theory of cubature formulas and the application of functional analysis to problems of mathematical physics* (Russian), pp. 141-156, 167, *Trudy Sem. S. L. Soboleva*, No. 1, 1976, Akad. Nauk SSSR Sibirsk. Otdel., Inst. Mat., Novosibirsk, 1976. (Th. Friedrich) **81h:58041** 58G15 (35S05)
- Štělina, K.** (with Kafka, V.) Theory of rheological deformation of quasi-isotropic eutectic composites. *Acta Tech. ČSAV* 25 (1980), no. 2, 205-224. (Authors' summary) **81j:73085** 73F99
- Stettner, L.** (with Zabczyk, Jerzy) Stochastic version of a penalty method. *Optimization techniques* (Proc. Ninth IFIP Conf., Warsaw, 1979), Part 1, pp. 179-183, *Lecture Notes in Control and Information Sci.*, 22, Springer, Berlin, 1980. (Benson Kurtaran) **81m:49039** 49D30
- Stedde, Reinhard** Mathematische Behandlung eines Desorptionsmodells für biporöse Systeme. *Comment. Math. Univ. Carolin.* 21 (1980), no. 3, 605-618. (D. E. Edmunds) **81m:35133** 35Q20
- Steuerswilt, Michael** (with Kedem, Gershon; Parter, Seymour V.) The solutions of a model nonlinear singular perturbation problem having a continuous locus of singular points. *Stud. Appl. Math.* 63 (1980), no. 2, 119-146. (Johannes Elschner) **81m:34074** 34E20 (34B15)

- Steinrich, Manfred (with Herzog, Jürgen) Berechnung einiger Poincaré-Reihen. *Fund. Math.* 105 (1979/80), no. 2, 127-145. (Chr. U. Jensen) **81c:13022** 13H10
- (with Herzog, Jürgen) Two applications of change of rings theorems for Poincaré series. *Proc. Amer. Math. Soc.* 73 (1979), no. 2, 163-168. (P. Schenzel) **81c:13013** 13H99 (16A60)
- Steinle, F. W. Infinite divisibility of mixtures of gamma distributions. *Analytic function methods in probability theory (Proc. Colloq. Methods of Complex Anal. in the Theory of Probab. and Statist., Kossuth L. Univ. Debrecen, Debrecen, 1977)*, pp. 345-357. *Colloq. Math. Soc. János Bolyai*, 21, North-Holland, Amsterdam, 1979. (Charles M. Goldie) **81c:60017** 60E07
- (with Schurer, F.) On the exact degree of approximation of Bernstein operators on $C([0, 1]^2)$. *Multivariate approximation theory (Proc. Conf., Math. Res. Inst., Oberwolfach, 1979)*, pp. 413-435. *Internat. Ser. Numer. Math.*, 51, Birkhäuser, Basel, 1979. (P. C. Sikkema) **81d:41022** 41A25
- (with Schurer, F.) On the degree of approximation of functions in C_{α}^1 with operators of the Jackson type. *J. Approx. Theory* 27 (1979), no. 2, 153-178. (R. K. Beaton) **81c:42009** 42A10 (41A36)
- Steven, G. P. On the application of the finite element method to problems in fluid flow. *Numerical simulation of fluid motion (Proc. Internat. Conf. Numerical Simulation of Fluid Dynamic Systems, Monash Univ., Melbourne, 1976)*, pp. 171-197. North-Holland, Amsterdam, 1978. (See **81a:76005**) 76-04 (65P05)
- Finite element solution for a fluid subject to thermal and buoyancy effects. *Numerical simulation of fluid motion (Proc. Internat. Conf. Numerical Simulation of Fluid Dynamic Systems, Monash Univ., Melbourne, 1976)*, pp. 551-566. North-Holland, Amsterdam, 1978. (See **81a:76005**) 76R99 (65P05)
- (with Tran Cong, T.) Derivation of a two function expression for displacements in torsion-free axis-symmetric deformations, and its relations with other solutions. *Internat. J. Solids and Structures* 16 (1980), no. 5, 465-472. (R. D. Bhargava) **81g:73021** 73C99
- Stevens, James L. (with Harrison, B. Kent) Using group theory to solve certain equations arising in general relativity. *Encyclopaedia* 55 (1978), no. 1-2, 73-76. (Marcos D. Maia) **81k:83016** 83C20 (35A30, 58G35)
- Stevens, Robert R. Periodic solutions of $x'' + g(t, x) = 0$. *SIAM J. Math. Anal.* 11 (1980), no. 2, 400-403. (N. Chafee) **81d:34034** 34C25 (58E05)
- Stevenson, Rodney E. Likelihood functions for generalized stochastic frontier estimation. Specification and estimation of frontier production, profit and cost functions. *J. Econometrics* 13 (1980), no. 1, 57-66. (See **81k:62157**) 62P20
- Stewart, C. L. On the representation of an integer in two different bases. *J. Reine Angew. Math.* 319 (1980), 63-72. (A. J. van der Poorten) **81j:10012** 10A30
- Stewart, G. W. A note on the perturbation of singular values. *Linear Algebra Appl.* 28 (1979), 213-216. (J. de Pillis) **81a:15019** 15A42
- See also **Proceedings: Symposium on Sparse Matrix Computations**, **81f:65003**
- Stewart, Ian Consumer guide to catastrophe theory. *Southeast Asian Bull. Math.* 2 (1978), no. 1, 13-16. (Editors) **81a:58017** 58C28
- (with Tall, David) \star Algebraic number theory. Chapman and Hall Mathematics Series. Chapman and Hall, London; A Halsted Press Book, John Wiley & Sons, New York, 1979. xviii + 257 pp. ISBN 0-470-26660-0 (Charles J. Parry) **81g:12001** 12-01 (10B15)
- The minimal condition for subideals of Lie algebras implies that every ascendant subalgebra is a subideal. *Hiroshima Math. J.* 9 (1979), no. 1, 35-36. (Ralph K. Amayo) **81j:17013** 17B65 (17B05)
- Stewart, J. M. (with Schmidt, B. G.) The scalar wave equation in a Schwarzschild space-time. *Proc. Roy. Soc. London Ser. A* 367 (1979), no. 1731, 503-525. (George Debnay) **81d:83025** 83C30 (53C80)
- Stewart, James Fourier transforms of unbounded measures. *Canad. J. Math.* 31 (1979), no. 6, 1281-1292. (J. Gil de Lamadrid) **81d:43001** 43A05 (43A30)
- Stewart, T. J. A descriptive approach to multiple-criteria decision making. *J. Oper. Res. Soc.* 32 (1981), no. 1, 45-53. (Authors' summary) **81k:90005** 90A05
- Stewart, W. Jr. (with Golds, Bruce L.; Bodin, Lawrence D.; Doyle, T.) Approximate traveling salesman algorithms. *Oper. Res.* 28 (1980), no. 3, part 2, 694-711. (Authors' summary) **81d:90060** 90B35 (90C35)
- Stewart, Warren E. See **Reactive systems**, **81i:80001**
- Stewart, William J. (with Marie, Raymond) A numerical solution for the $\lambda(n)/C_k/r/n$ queue. *European J. Oper. Res.* 5 (1980), no. 1, 56-68. (R. Bergmann) **81m:60171** 60K25 (65U05)
- Stewartson, Keith High Reynolds-number flows. *Approximation methods for Navier-Stokes problems (Proc. Sympos., Univ. Paderborn, Paderborn, 1979)*, pp. 505-518. *Lecture Notes in Math.*, 771, Springer, Berlin, 1980. (J. F. Clarke) **81e:76036** 76D15 (76N05)
- (with Cebeci, Tuncer; Khattab, A. K.) On nose separation. *J. Fluid Mech.* 97 (1980), no. 3, 435-454. (Authors' summary) **81e:76019** 76D15
- (with Cebeci, Tuncer; Chang, Kuo Cheng) A boundary-layer collision in a curved duct. *Quart. J. Mech. Appl. Math.* 33 (1980), no. 1, 59-75. (Authors' summary) **81e:76024** 76D10
- Step, G. C. A new approach to classical mechanics. *Phys. Lett. A* 69 (1978/79), no. 3, 151-152. (Authors' summary) **81k:70012** 70H99
- Steph, H. S., Jr. A class of multiparameter power series distributions. *South African Statist. J.* 14 (1980), no. 1, 1-15. (G. S. Lingappaiah) **81d:62034** 62E15 (62F10)
- Stessens, M. (with Peregrine, D. H.) Shoaling of finite-amplitude surface waves on water of slowly varying depth. *J. Fluid Mech.* 97 (1980), no. 4, 783-805. (Authors' summary) **81d:76016** 76B15
- Stilz, George R. Early computers. *A history of computing in the twentieth century*, pp. 479-483. Academic Press, New York, 1980. (See **81i:68002**) 68-03 (01A65)
- Schlenker, Henning Zur Konservativität algebraischer Funktionenkörper. *J. Reine Angew. Math.* 301 (1978), 30-45. (Authors' introduction) **81g:12015** 12A90
- Die Hasse-Witt-Invariante eines Kongruenzfunktionenkörpers. *Arch. Math. (Basel)* 33 (1979/80), no. 4, 357-360. (K. Kiyek) **81d:14015** 14H05 (12A90)
- Stichel, Mark E. Fuzzy four-valued logic for inconsistency and uncertainty. *Proceedings of the Eighth International Symposium on Multiple-Valued Logic (Rome, 1978)*, pp. 91-94. IEEE, Long Beach, Calif., 1978. (Authors' summary) **81d:03028** 03B52 (03B50, 94D05)
- Sticker, Bernhard See **Schmitt, Hans-Werner**; et al., **81k:01047**
- Stickler, David C. (with Ammicht, E.) Uniform asymptotic evaluation of the continuous spectrum contribution for the Pekeris model. *J. Acoust. Soc. Amer.* 67 (1980), no. 6, 2018-2024. (Authors' summary) **81d:86007** 86A05
- (with Ahluwalia, Daljit S.; Reiss, Edward L.) Sound propagation in a temporally varying waveguide. *J. Acoust. Soc. Amer.* 68 (1980), no. 6, 1801-1808. (Authors' summary) **81k:76056** 76Q05
- Stidham, Shaker, Jr. (with Johansen, Søren Glud) Control of arrivals to a stochastic input-output system. *Adv. in Appl. Probab.* 12 (1980), no. 4, 972-999. (Richard F. Serfozo) **81m:60167** 60K25 (90B22)
- Stiefel, Edward L. (with Füssler, Albert) \star Gruppentheoretische Methoden und ihre Anwendung. (German) [Group-theoretic methods and their application] Eine Einführung mit typischen Beispielen aus Natur- und Ingenieurwissenschaften. [An introduction with typical examples from natural and engineering sciences]. Teubner Studienbücher Mathematik. [Teubner Textbooks for Mathematics] Leitfäden der Angewandten Mathematik und Mechanik [Guides to Applied Mathematics and Mechanics], 46. B. G. Teubner, Stuttgart, 1979. 256 pp. ISBN 3-519-02348-2 (Vojtěch Kopský) **81a:20025** 20C35 (22E70, 81C40)
- See also **Szebehely, Victor**; et al., **81a:01042**
- Stigan, I. See **Stegun, Irene A.**
- Stigler, Stephen M. Laplace's early work: chronology and citations. *Isis* 69 (1978), no. 247, 234-254. (M. Kline) **81m:01026** 01A50
- An Edgeworth curiosity. *Ann. Statist.* 8 (1980), no. 4, 931-934. (V. P. Godambe) **81k:62056** 62F10 (01A55, 62-03, 90A99)
- van Stigt, W. P. L. E. J. Brouwer: intuitionism and topology. *Proceedings, Bicentennial Congress Wiskundig Genootschap (Vrije Univ., Amsterdam, 1978), Part II*, pp. 359-374. *Math. Centre Tracts*, 101, Math. Centrum, Amsterdam, 1979. (Albert C. Lewis) **81d:01023** 01A70 (01A60, 03-03, 54-03)
- Stillinger, F. H. Simple cell model with collapse instability. *J. Statist. Phys.* 23 (1980), no. 2, 219-230. (Authors' summary) **81g:82011** 82A05
- Stillman, Arthur E. (with Freed, Jack H.) Stochastic modeling of generalized Fokker-Planck equations. I. *J. Chem. Phys.* 72 (1980), no. 1, 550-566. (From the summary) **81e:82030** 82A35
- Stillwell, John Letter to the editors. *Math. Intelligencer* 1 (1978/79), no. 4, 192. (L. Newirth) **81a:01027** 01A60 (57P99)
- Stillman, M. S. Repeating games with changing value of the payment unit. II. Equilibrium situations. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* 1978, no. 5, 26-34, 219 (Russian); translated as *Engrg. Cybernetics* 16 (1978), no. 5, 20-28. (R. E. Stearns) **81k:90116** 90D12
- Sufficiency of the use of nonrandomized strategies in hypergames with infinite horizon. (Russian) *Moskov. Inst. Inzh. Železnodorozh. Transporta Trudy No. 640 Prikl. Mat. i Zadachi Železnodorozh. Transporta* (1979), 60-65, 153. (Authors' summary) **81m:90112** 90D13
- Stinson, Michael J. (with Savitch, Walter J.) Hierarchies of recursive computations. *Internat. J. Comput. Math.* 7 (1979), no. 4, 271-286. (Giorgio Ausiello) **81c:68038** 68C40 (03D15, 68C25)
- (with Savitch, Walter J.) Time bounded random access machines with parallel processing. *J. Assoc. Comput. Mach.* 26 (1979), no. 1, 103-118. (Authors' summary) **81g:68073** 68C25 (68B20)
- Stine, G. C. Denotation and existence. *Internat. Logic Rev.* No. 17-18 (1978), 134-141. (Stanley H. Stahl) **81g:03004** 03A05
- Stingl, M. (with Patzel, B.; Weiguny, A.) Scattering solutions to nonlocal Hamiltonians in terms of generalized Bessel-Neumann series. *Nuclear Phys. A* 339 (1980), no. 1, 175-188. (R. G. Newton) **81c:81048** 81F05 (41A58)
- Stinson, D. G. (with Stapleton, H. J.; Allen, J. P.; Flynn, C. P.; Kurtz, S. R.) Fractal form of proteins. *Phys. Rev. Lett.* 45 (1980), no. 17, 1456-1459. (Authors' summary) **81h:92008** 92A09 (82A42)
- Stinson, Douglas On the existence of 30 mutually orthogonal Latin squares. *Ars Combin.* 7 (1979), 153-170. (Katherine Heinrich) **81a:05020** 05B15
- A generalization of Wilson's construction for mutually orthogonal Latin squares. *Ars Combin.* 8 (1979), 95-105. (G. H. J. Van Rees) **81f:05032** 05B15
- The distance between units in rings—an algorithmic approach. *Utilitas Math.* 16 (1979), 281-292. (Philip A. Leonard) **81d:16009** 10A20 (05B15)
- (with Mullin, Ronald C.; Schellenberg, P. J.; Vanstone, S. A.) Some results on the existence of squares. *Combinatorial mathematics, optimal designs and their applications (Proc. Sympos. Combin. Math. and Optimal Design, Colorado State Univ., Fort Collins, Colo., 1978)*. *Ann. Discrete Math.* 6 (1980), 257-274. (Helen Skala) **81m:05036** 05B15
- (with Wallis, W. D.) Some designs used in constructing skew Room squares. *Combinatorics 79 (Proc. Colloq., Univ. Montréal, Montréal, Que., 1979), Part I*. *Ann. Discrete Math.* 8 (1980), 171-175. (Arnold Neumaier) **81m:05038** 05B15
- (with Diniz, Jeffrey H.) Boss block designs. *Ars Combin.* 9 (1980), 59-68. (S. K. Tharthare) **81m:05023** 05B05
- A general construction for group-divisible designs. *Discrete Math.* 33 (1981), no. 1, 89-94. (G. H. J. Van Rees) **81m:05039** 05B15
- Stjepanovskas, G. See **Stepanovskas, G.**
- Stojanik, N. L. (with Popov, P. S.; Simonov, R. O.) Logic in Russia at the end of the fifteenth century. (Russian) *Ideas of natural science in Old Russia (Russian)*, pp. 98-112. "Nauka", Moscow, 1978. (Roman Murawski) **81k:01015** 01A35 (03-03)
- Stöckel, Klaus-Günter See **Vapnik, V. N.**; et al., **81j:62114**
- Stöckel, Bernd Ungleichungen vom Plancherel-Pólya-Nikol'skij-Typ in gewichteten L^p -Räumen mit gemischten Normen. *Math. Nachr.* 86 (1978), 19-32. (Hans G. Feichtinger) **81e:46022a** 46E35 (42B15)
- Multiplikatoren in gewichteten anisotropen L^p -Räumen ganzer analytischer Funktionen exponentiellen Typs. *Math. Nachr.* 86 (1978), 33-40. (Hans G. Feichtinger) **81e:46022b** 46E35 (42B15)
- (with Triebel, Hans) Decomposition methods for function spaces of $B_{p,q}^s$ type and $F_{p,q}^s$ type. *Math. Nachr.* 89 (1979), 247-267. (Alberto Torchinsky) **81e:46023** 46E35
- Stöckli, E. D. Superstructures of generalized, matrix and conditional grammars. (Russian) *Studies in nonclassical logics and set theory (Russian)*, pp. 173-182. "Nauka", Moscow,

1979. (A. A. Iskander) **81j:68096** 68F05
- Stockman, G. C. A minimax algorithm better than alpha-beta? *Artificial Intelligence* **12** (1979), no. 2, 179–196. (Amitava Bagchi) **81d:68130** 68G20 (68E10)
- Stockman, S. G. (with Moiseiwitsch, B. L.) Electron capture by charged particles at relativistic energies. *J. Phys. B* **13** (1980), no. 15, 2975–2981. (Authors' summary) **81h:81126** 81F20
- Stockmeyer, Larry J. (with Lipton, Richard J.) Evaluation of polynomials with super-preconditioning. *J. Comput. System Sci.* **16** (1978), no. 2, 124–139. (Authors' summary) **81h:68029** 68C25
- (with Rosenberg, Arnold L.; Snyder, Lawrence) Uniform data encodings. *Theoret. Comput. Sci.* **11** (1980), no. 2, 145–165. (Authors' summary) **81h:68059** 68E10
- Stockmeyer, Paul K. (with Yao, F. Frances) On the optimality of linear merge. *SIAM J. Comput.* **9** (1980), no. 1, 85–90. (Authors' summary) **81h:68057** 68C25
- Stodolsky, Leo Matter and light wave interferometry in gravitational fields. *Gen. Relativity Gravitation* **11** (1979), no. 6, 391–405 (1980). (Author's summary) **81d:83045** 83C99 (81C99)
- Stoeger, William R. (with Yasskin, Philip B.) Can a macroscopic gyroscope feel torsion? *Gen. Relativity Gravitation* **11** (1979), no. 6, 427–431 (1980). (Authors' summary) **81d:83011** 83B05 (53B50, 83D05)
- (with Yasskin, Philip B.) Propagation equations for test bodies with spin and rotation in theories of gravity with torsion. *Phys. Rev. D* (3) **21** (1980), no. 8, 2081–2094. (Andrzej Trautman) **81d:83049** 83D05 (53B50)
- Stoer, G. S. The geometric structure of a class of even-dimensional webs of curves. (Bulgarian. Russian and German summaries) *Godišnik Visš. Učebn. Zaved. Prirožna Mat.* **13** (1977), no. 4, 175–180 (1978). (Author's summary) **81j:53020** 53A60
- On a class of 8-webs of curves. (Bulgarian. Russian and German summaries) *Godišnik Visš. Učebn. Zaved. Prirožna Mat.* **14** (1978), no. 4, 9–14 (1979). (Author's summary) **81j:53021** 53A60
- Stoer, Nikolai (with Cobanov, Ivan) An axiomatic approach to the real three-dimensional linear analytic geometry. (Bulgarian summary) *Annuaire Univ. Sofia Fac. Math. Méc.* **69** (1974/75), 165–227 (1979). (L. W. Szczerba) **81k:51020** 51M05 (51N20)
- Stogail, A. O. (with Kondrat'ev, A. I.) Concepts of normative game theory. *Kibernetika (Kiev)* **1979**, no. 4, 80–82 (Russian); translated as *Cybernetics* **15** (1979), no. 4, 522–525 (1980). (From the text) **81d:90113** 90D12
- (with Kondrat'ev, A. I.) Strategic representation of knowledge in automated information systems. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* **1980**, no. 5, 77–79, 95. (Authors' summary) **81e:90127** 90D45 (68H05, 90D12, 94A15)
- See also Computations in algebra and combinatorial analysis, **81m:20003**
- Stogin, M. I. (with Delone, B. N.; Dolbilin, N. P.) Combinatorial and metric theory of planigons. (Russian) *Algebra, number theory and their applications. Trudy Mat. Inst. Steklov.* **148** (1978), 109–140, 275. (E. Jucović) **81e:52015** 52A45 (05B40)
- See also Fedorov, E. S., **81g:01022**
- Stoia, Manuela (with Bănică, Constantin) Singular sets of a module and local cohomology. (French summary) *Boll. Un. Mat. Ital. B* (5) **16** (1979), no. 3, 923–934. (Zoghman Mehkhout) **81d:14007** 14B15 (13D03)
- Stoian, G. See Stoyan, Gilbert
- Stoica, Liliana Partial point derivations on Lipschitz algebras. *An. Univ. București Mat.* **29** (1980), 97–101. (H. G. Dales) **81m:46074** 46J10
- Stoica, Petre Factorization of auto-inversive polynomials and system identification. (Romanian. English summary) *Bul. Inst. Politehn. București Ser. Electrotehn.* **40** (1978), no. 4, 61–74. (Author's summary) **81h:93011** 93B30
- Identification of the univariate time series by spectral factorization. (Russian summary) *Problems Control Inform. Theory / Problemy Upravlen. Teor. Inform.* **8** (1979), no. 2, 115–122. (Naohiro Ishii) **81d:62104** 62M15 (93E12)
- (with Söderström, Torsten) Consistency properties of an identification method using the instrumental variable principle. (French and German summaries) *Rev. Roumaine Sci. Tech. Sér. Electrotech. Énerg.* **24** (1979), no. 2, 289–293, vii, viii. (Arunabha Bagchi) **81h:93087** 93E12
- Stokova, G. A. (with Kostin, O. V.) Asymptotic representation of the solutions of an n th-order linear differential equation. (Russian) *Dokl. Akad. Nauk SSSR* **250** (1980), no. 5, 1050–1053. (J. Švejda) **81h:34071** 34E05
- Stolkova, L. S. (with Golodnikov, A. N.) The determination of the optimal period of preventive replacement on the basis of information on mathematical expectation and time dispersion of the trouble-free operation of a system. (Russian. English summary) *Kibernetika (Kiev)* **1978**, no. 3, 110–118. (I. G. Ciobanu) **81h:90086** 90B25
- Stoich, Emil I. Interaction balance method with feedback using augmented Lagrangians. (Polish. Russian and English summaries) *Arch. Automat. Telemekh.* **25** (1980), no. 1, 3–20. (Authors' summary) **81g:93004** 93A13 (90C30)
- Stoinski, Stanisław (φ, ψ -convex functions. *Funct. Approx. Comment. Math.* **8** (1980), 85–88. (L. D. Fountain) **81m:26006** 26A51 (26D05)
- Stojaković, Mirko ★ Stazama matematike. (Serbo-Croatian) [Along mathematical paths] Problemi, otkrića, i zanimljivosti. [Problems, discoveries and interesting things] Biblioteka Saznanja. [Library of Learning] *Radnički Univerzitet "Radiof. Čirpanov". Novi Sad*, 1977. 253 pp. (R. P. Boas, Jr.) **81j:00021** 00A25 (01A05)
- Elementary transformations and determinants. (Serbo-Croatian. English summary) *Acad. Serbe Sci. Arts Glas* **311** (1979), no. 44, 23–27. (B. Crstici) **81k:15009** 15A15 (05C99, 39B60)
- Stojaković, Zoran (with Ušan, Janez) Orthogonal systems of partial operations. (Serbo-Croatian summary) *Univ. u Novom Sadu Zb. Rad. Prirod.-Mat. Fak. B* (1978), 47–51. (Petr Němec) **81f:20107** 20N99 (94B25)
- (with Ušan, Janez) On π -groups. *Publ. Inst. Math. (Beograd) (N.S.)* **26**(40) (1979), 283–288. (M. Stefănescu) **81f:20104** 20N15
- Stojan, Ju. G. (with Konovko, A. V.) Method of minimization of the target function in a problem of heat source distribution. (Russian) *Theoretical and applied questions of differential equations and algebra (Russian)*, pp. 233–238, 271. "Naukova Dumka", Kiev, 1978. (Authors' summary) **81d:80016** 80A20 (93C20)
- (with Sokolovskii, V. Z.) ★ Решение некоторых многоэкстремальных задач методом сужающихся окрестностей. (Russian) [Solution of some multiextremal problems by the method of restricting neighborhoods] "Naukova Dumka", Kiev, 1980. 207 pp. (Ulrich Eckhardt) **81g:65005** 65C05 (65–01, 90C10)
- A generalization of a function of dense packing. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* **1980**, no. 8, 71–74. (From the introduction) **81k:68076** 68G99 (52A45)
- Stojanov, D. C. (with Hadžiivanov, L.) On the free scalar massless field in two-dimensional space-times. *Rep. Math. Phys.* **15** (1979), no. 3, 361–373. (P. R. Chernoff) **81d:81077** 81E99 (35L65)
- (with Sotkov, G. M.) On the conformal invariance in quantum electrodynamics. *J. Phys. A* **13** (1980), no. 8, 2807–2816. (Authors' summary) **81h:81205** 81L05 (81D25)
- Stojanov, Jordan M. ★ Стохастични процеси—теория и приложение. (Bulgarian) [Stochastic processes—theory and application] *Поредика Съвременна Математика [Series in Modern Mathematics]*, 13. *Nauka i Izkustvo, Sofia*, 1978. 218 pp. (B. Kronfeld) **81a:60001** 60–01
- (with Enchev, O. B.) Stochastic integrals for Gaussian random processes. *C. R. Acad. Bulgare Sci.* **32** (1979), no. 11, 1467–1470. (D. Kannan) **81g:60059** 60H05
- See Summer School: Probability Theory and Mathematical Statistics, **81j:60004**
- Stojanov, N. V. (with Zukošvili, V. I.) A coalition three-person differential game. (Russian. Bulgarian and English summaries) *Godišnik Visš. Učebn. Zaved. Prirožna Mat.* **13** (1977), no. 4, 29–52 (1978). (É. G. Albrecht) **81f:90136** 90D25
- (with Dinovski, V. I.) On conditional stabilization of a class of nonlinear control systems. (Bulgarian. Russian and English summaries) *Godišnik Visš. Učebn. Zaved. Prirožna Mat.* **14** (1978), no. 4, 153–170 (1979). (Authors' summary) **81f:93040** 93C10 (93D99)
- (with Žukovskii, V. I.; Molostov, V. S.) A coalition differential game of three persons. (Russian) *Problems of stability of motion, analytical mechanics and control of motion (Third All-Union Cetaev Conf., Irkutsk, 1977) (Russian)*, pp. 218–226, 325. "Nauka" Sibirsk. Otdel. Novosibirsk, 1979. (W. H. Ruckle) **81g:90110** 90D25
- Stojanov, S. K. (with Nonova, A. N.) A vector-valued criterion optimization method. *Optimization techniques (Proc. Ninth IFIP Conf., Warsaw, 1979)*, Part 1, pp. 499–507. *Lecture Notes in Control and Information Sci.*, 22. Springer, Berlin, 1980. (Authors' summary) **81m:90101** 90C31
- Stojanova-Venkova, Atanasa H. Bases of identities of Grassmann algebras. (Russian) *Serdica* **6** (1980), no. 1, 63–72. (Ju. N. Mal'cev) **81h:16024** 16A38
- Stojmenović, Kiril On $[m, n]$ -quasigroups. (Macedonian. English summary) *Prirod.-Mat. Fak. Univ. Kiril Metodij Skopje Godišen Zb.* **28** (1977), 33–37. (G. Čupona) **81d:20068** 20N15
- Stoka, Marius I. Sur la mesurabilité de la famille de paraboloides de l'espace projectif F_2 . *Atti Accad. Sci. Lett. Arti Palermo Parte I* (4) **36** (1976/77), 425–431 (1978). (L. A. Santaló) **81f:53057g** 53C65 (60D05)
- Measurability families of hyperboloids of the plane P_2 . (Italian) *Atti Accad. Sci. Lett. Arti Palermo Parte I* (4) **36** (1976/77), 449–451 (1978). (L. A. Santaló) **81f:53057f** 53C65 (60D05)
- The measurability of the family of hyperspheres in the projective space P_2 . (Italian) *Atti Accad. Sci. Lett. Arti Palermo Parte I* (4) **36** (1976/77), 511–516 (1978). (L. A. Santaló) **81f:53057h** 53C65 (60D05)
- Measurable families of hyperboloids of the plane A_2 . (Italian. French summary) *Rend. Circ. Mat. Palermo* (2) **27** (1978), no. 3, 359–381. (L. A. Santaló) **81h:53045** 53C65 (60D05)
- Géométrie intégrale dans l'espace projectif \mathbb{P}_n . *Confer. Sem. Mat. Univ. Bari No. 172* (1979), 19 pp. (Dumitru Filipescu) **81e:53057** 53C65 (60D05)
- La distribution normale généralisée et quelques problèmes d'inférence statistique. (English summary) *Rend. Sem. Mat. Univ. Politec. Torino* **37** (1979), no. 2, 157–171 (1980). (C. A. Robertson) **81h:62032** 62E15 (62F10)
- Stoker, J. J. Periodic vibrations of systems of relaxation oscillators. *Comm. Pure Appl. Math.* **33** (1980), no. 3, 215–240. (G. V. Hmelevskaja-Plotnikova) **81f:70025** 70K39 (34C15)
- Stokes, A. N. A stable quotient-difference algorithm. *Math. Comp.* **34** (1980), no. 150, 515–519. (Authors' summary) **81h:65019** 65D15 (41A21)
- Stokes, Arnold P. Comparison theorems and instability with applications to numerical integration, satellite orbits and averaging. *SIAM J. Appl. Math.* **35** (1978), no. 3, 564–574. (Authors' summary) **81h:65020** 65D30 (65L20)
- Stokes, Vijay K. (with Upadhyay, P. C.) A comparison of rate sensitive constitutive equations under plane stress conditions. (German summary) *Acta Mech.* **36** (1980), no. 3–4, 231–246. (Authors' summary) **81d:73038** 73E99
- On the proper vectors of real third order matrices. *J. Math. Phys.* **21** (1980), no. 12, 2842–2843. (A. R. Amir-Moéz) **81m:15010** 15A18
- Stokić, Dragan (with Vukobratović, Miomir) Contribution to the decoupled control of large-scale mechanical systems. *Automatica—J. IFAC* **16** (1980), no. 1, 9–21. (Authors' summary) **81g:93067** 93C35 (93A15)
- Stolarczyk, Maria La convergence de suites d'itération et l'existence de la dérivée de la fonction itérée dans un point stationnaire. (Polish summary) *Univ. Śląski w Katowicach Prace Nauk.-Prace Mat. No. 9* (1979), 7–19. (William Eames) **81m:26003** 26A24 (26A18)
- Stolarski, Henryk An extremum principle for dynamics of rigid-plastic shells with large displacements. *Theory of shells (Proc. Third IUTAM Sympos., Tbilisi, 1978)*, pp. 537–551. North-Holland, Amsterdam, 1980. (N. Gass) **81e:73072** 73L99 (49H05, 73E99)
- Stolarsky, Kenneth B. (with Rubel, Lee A.) Subseries of the power series for e^x . *Amer. Math. Monthly* **87** (1980), no. 5, 371–376. (S. K. Bajpai) **81g:30006** 30B50
- A stronger logarithmic inequality suggested by the entropy inequality. *SIAM J. Math. Anal.* **11** (1980), no. 2, 242–247. (Bruce Ebanks) **81c:94014** 94A17 (26D15)
- Stoljarov, A. D. (with Sotskii, B. A.; Dmitriev, V. A.) Electromagnetic fields with identical coherence properties. (Russian. English summary) *Dokl. Akad. Nauk BSSR* **24** (1980), no. 11, 989–991, 1052–1053. (K. Wódkiewicz) **81m:81091** 81K05
- Stoljarov, A. V. Geometry of the centroaffine normalization of a hypersurface. (Russian) *Current problems of geometry and its applications (Russian)*, pp. 3–10, 106. Čerak. Gos. Univ., Cheboksary, 1975. (Vladislav Goldberg) **81a:53009** 53A15 (53A20)
- The dual theory of regular distributions of hyperplane elements in a space with projective connection. I. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* **1980**, no. 1, 79–82. (L. Tamásy) **81j:53023a** 53B10

- The dual theory of regular distributions of hyperplane elements in a space with projective connection. II. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1980, no. 3, 84-87. (L. Tamásy) **81i:53023b** 53B10
- Stojanović, B. A. (with Janbihs, G.) Topological optimization of a hierarchical network of minicomputers. *Automat. i Vychisl. Tehn. (Riga)* 1980, no. 3, 3-12, 95 (Russian); translated as *Automat. Control Comput. Sci.* 14 (1980), no. 3, 1-9. (Authors' summary) **81m:68010** 68A05
- Stoll, E. (with Schneider, Toni) Long-time behavior and dynamic scaling properties of displacement fluctuations in the sine-Gordon chain. *Phys. Rev. B* (3) 22 (1980), no. 1, 395-399. (Authors' summary) **81e:82064** 82A67
- (with Schneider, Toni) Classical statistical mechanics of the sine-Gordon and ϕ^4 chains. Static properties. *Phys. Rev. B* (3) 22 (1980), no. 11, 5317-5338. (B. Derrida) **81k:82066** 82A67 (81E99)
- Stoll, Wilhelm The characterization of strictly parabolic manifolds. *Ann. Scuola Norm. Sup. Pisa Cl. Sci.* (4) 7 (1980), no. 1, 87-154. (Alexander A. Pankov) **81h:32028** 32F99 (32H99)
- Stolov, E. L. Asymptotic behavior of integrals with Jacobi polynomials and Clebsch-Gordan coefficients. (Russian) *Constructive theory of functions and functional analysis*, No. 2 (Russian), pp. 83-87, Kazan. Gos. Univ., Kazan, 1979. (E. Rieksnifš) **81m:41034** 41A60 (33A65, 33A75)
- The Hausdorff set of a matrix. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1979, no. 10, 98-100. (I. K. Marek) **81g:15029** 15A60 (15A42, 47A12)
- Stoltenberg-Hansen, Viggo Finite injury arguments in infinite computation theories. *Ann. Math. Logic* 16 (1979), no. 1, 57-80. (From the introduction) **81h:03094** 03D75
- Stöltgen, Rolf Das Sternaxiom in endlichen Hiemelsgruppen. *Resulante Math.* 2 (1979), no. 2, 196-205. (R. J. Bumcrot) **81i:20060** 20E34
- Stoltzfus, Neal W. Algebraic computations of the integral concordance and double null concordance group of knots. *Knot theory (Proc. Sem., Plans-sur-Bex, 1977)*, pp. 274-290, *Lecture Notes in Math.*, 685, Springer, Berlin, 1978. (From the text) **81k:57018** 57O45 (10C05)
- Stolyarov, B. A. See Stojanović, B. A.
- Stolz, Hubertus ★Supraleitung. (German) [Superconductivity] Wissenschaftliche Taschenbücher, Reihe Mathematik/Physik [Scientific Paperbacks, Mathematics/Physics Series], 255. Akademie-Verlag, Berlin, 1979. 175 pp. (P. Rudra) **81i:81001** 81-01 (81J05)
- Stolze, Joachim (with Leschke, Hajo; Morawek, Michael) Unity-resolving states and generalised Golden-Thompson bounds on partition functions. *J. Phys. A* 13 (1980), no. 4, 1311-1324. (Authors' summary) **81a:82019** 82A15
- Stone, A. H. (with Maharam, Dorothy) Category algebras of complete metric spaces. *Mathematika* 26 (1979), no. 1, 13-17. (V. V. Miškin) **81a:54040** 54H05 (54E50)
- (with Maharam, Dorothy) One-to-one functions and a problem on subfields. *Measure theory, Oberwolfach 1979 (Proc. Conf., Oberwolfach, 1979)*, pp. 49-52, *Lecture Notes in Math.*, 794, Springer, Berlin, 1980. (B. Rodriguez-Salinas) **81j:28004** 28A10
- Stone, Alexander P. (with Eiseeman, P. R.) Conservation laws of fluid dynamics—a survey. *SIAM Rev.* 22 (1980), no. 1, 12-27. (P. Günther) **81f:35076** 35L65 (53A45, 58A15, 76A02)
- Stone, David A. The calculus of variations applied to combinatorics. *Second International Conference on Combinatorial Mathematics (New York, 1978)*, pp. 518-526, *Ann. New York Acad. Sci.*, 319, New York Acad. Sci., New York, 1979. (H. R. Glück) **81c:53046** 53C22 (05C10, 57Q05, 58E10)
- Stone, David R. (with Cheatham, Thomas J.) Flat and projective character modules. *Proc. Amer. Math. Soc.* 81 (1981), no. 2, 175-177. (K. A. Byrd) **81k:16023** 16A50 (16A35)
- Stone, J. M. (with Goldolphin, E. J.) On the structural representation for polynomial-projecting predictor models based on the Kalman filter. *J. Roy. Statist. Soc. Ser. B* 42 (1980), no. 1, 35-45. (William D. Ray) **81e:62100** 62M10 (93E11)
- Stone, M. H. The system of real numbers revisited. (Catalan) *Stochastica* 2, no. 3, 1-14 (1977). (Editors) **81a:00003** 00A05
- Stone, Mervyn A pictorial treatment of generalized inverses for statistics based on dual vector spaces. (German and Russian summaries) *Math. Operationsforsch. Statist. Ser. Statist.* 10 (1979), no. 1, 3-17. (C. R. Rao) **81d:62064** 62J05 (15A09)
- Stone, Richard E. (with Aspvall, Bengt) Khachiyan's linear programming algorithm. *J. Algorithms* 1 (1980), no. 1, 1-13. (K. G. Murty) **81i:90123** 90C05 (65K05, 68C25)
- Stoneham, R. J. Vacuum polarization effects on Compton scattering by unmagnetized electrons in an ambient magnetic field. *Optica Acta* 27 (1980), no. 4, 537-544. (Author's summary) **81e:81187** 81L05
- Vacuum polarization effects of Thomson scattering in a strong magnetic field. *Optica Acta* 27 (1980), no. 4, 545-548. (Author's summary) **81e:82042** 82A45 (78A45, 81L05)
- Stonehewer, Stewart E. (with McCaughan, D. J.) Finite soluble groups whose subnormal subgroups have defect at most two. *Arch. Math. (Basel)* 35 (1980), no. 1-2, 56-60. (H. Bechtell) **81h:20021** 20D10 (20D35)
- (with Lennox, John C.) The join of two subnormal subgroups. *J. London Math. Soc.* (2) 22 (1980), no. 3, 460-466. (J. E. Roseblade) **81m:20038** 20E15
- Stong, R. E. (with Kosniowski, Czes) $(\mathbb{Z}_2)^k$ -actions and characteristic numbers. *Indiana Univ. Math. J.* 28 (1979), no. 5, 725-743. (Michael C. Bix) **81d:57027** 57R85 (57R20)
- Algebraic classification of diffeomorphisms. *Tōhoku Math. J.* (2) 31 (1979), no. 2, 207-219. (P. J. Kahn) **81d:57023** 57R50 (55N22)
- Wall manifolds. *Trans. Amer. Math. Soc.* 251 (1979), 287-298. (J. W. Vick) **81e:57036** 57R85
- Stora, R. (with Madore, J.; Richard, J. L.) $F \rightarrow F$, a review. *Feynman path integrals (Proc. Internat. Colloq., Marseille, 1978)*, pp. 304-334, *Lecture Notes in Phys.*, 106, Springer, Berlin, 1979. (R. O. Wells, Jr.) **81d:81055** 81E10 (14F05, 32G13, 53C05)
- Yang-Mills fields: semiclassical aspects. *Bifurcation phenomena in mathematical physics and related topics (Proc. NATO Advanced Study Inst., Cargèse, 1979)*, pp. 219-229, *NATO Adv. Study Inst. Ser., Ser. C: Math. and Phys. Sci.*, 54, Reidel, Dordrecht, 1980. (See **81f:00012**) **81E10**
- Storakers, B. (with Hill, Rodney) Plasticity and creep of pressurized membranes: a new look at the small-deflection theory. *J. Mech. Phys. Solids* 28 (1980), no. 1, 27-48. (Authors' summary) **81g:73041** 73E25
- Storch, Uwe (with Scheja, Günter) Residuen bei vollständigen Durchschnitten. *Math. Nachr.* 91 (1979), 157-170. (K. Kiyek) **81e:14029** 14M10 (13H99)
- (with Scheja, Günter) ★Lehrbuch der Algebra. Teil 1. (German) [Textbook of algebra. Part 1] Unter Einschluss der linearen Algebra. [Including linear algebra] Mathematische Leitfäden. [Mathematical Textbooks] B. G. Teubner, Stuttgart, 1980. 408 pp. ISBN 3-519-02203-6 (B. M. Schein) **81i:80002** 00A05
- Storey, Colin (with Frost, M. G.) Transformations of strict system equivalence between polynomial system matrices over $\mathbb{R}[s, z]$. *Internat. J. Control* 30 (1979), no. 6, 917-926. (Authors' summary) **81c:93006** 93A10
- (with Frost, M. G.) Another form of system matrix associated with delay-differential systems. *Internat. J. Control* 31 (1980), no. 3, 507-518. (Authors' summary) **81f:93018** 93B05
- Stork, Hans-Georg Remarks on the satisfiability problem of propositional logic. *Graphs, data structures, algorithms (Proc. Workshop, Graphtheoretic Concepts in Comput. Sci., Erlangen, 1978)*, pp. 31-43, *Applied Comput. Sci.*, 13, Hanser, Munich, 1979. (Author's summary) **81h:68058** 68C25 (03D15, 68G15)
- Sternier, Erling Real structure in the hyperfinite factor. *Duke Math. J.* 47 (1980), no. 1, 145-153. (P. A. Fillmore) **81g:46008** 46L35 (46L40)
- (with Robinson, Derek W.) Lie and Jordan structure in operator algebras. *J. Austral. Math. Soc. Ser. A* 29 (1980), no. 2, 129-142. (Pierre de la Harpe) **81d:46067** 46L99 (17B60, 17C65)
- Regular abelian Banach algebras of linear maps of operator algebras. *J. Funct. Anal.* 37 (1980), no. 3, 331-373. (B. E. Johnson) **81k:46057** 46H99 (46L05)
- Decomposition of positive projections on C^* -algebras. *Math. Ann.* 247 (1980), no. 1, 21-41. (Horst Behncke) **81h:46077** 46L05
- Störmer, Horand Verteilung der Erstüberschreitungzeiten beim Yule-Prozess. *Third Symposium on Operations Research (Univ. Mannheim, Mannheim, 1978)*, Section 3, pp. 443-448, *Operations Research Verfahren*, 33, Hain, Meisenheim, 1979. (Søren Asmussen) **81a:60094** 60J80
- Storonkin, B. A. (with Panasuk, G. J.) Dynamics of systems with a tensorial ordering parameter near the critical point. (Russian. English summary) *Theoret. Mat. Fiz.* 45 (1980), no. 1, 107-113. (Authors' summary) **81k:82019** 82A25
- Storö, O. G. (with Ljance, V. E.) Mutual adjointness conditions for certain closed operators in terms of abstract boundary operators. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* 1980, no. 6, 29-32, 92. (Hari Bercevic) **81m:47005** 47A05 (47E05)
- Storoženko, E. A. Theorems of Jackson type in H^p , $0 < p < 1$. (Russian) *Izv. Akad. Nauk SSSR Ser. Mat.* 44 (1980), no. 4, 946-962, 974. (A. B. Aleksandrov) **81k:42003** 42A10 (42B30)
- Storoženko, V. O. (with Ilinskii, A. Ju.; Malašenko, S. V.; Temčenko, M. E.; Šilkin, P. G.) Method of balancing rotating bodies on a string drive. *Izv. Akad. Nauk SSSR Meh. Teord. Tela* 14 (1979), no. 5, 3-18. (Russian); translated as *Mech. Solids* 14 (1979), no. 5, 1-14. (Authors' summary) **81d:70006** 70E99
- (with Ilinskii, A. Ju.; Temčenko, M. E.) Motion of an axisymmetric solid suspended on a string. *Izv. Akad. Nauk SSSR Meh. Teord. Tela* 14 (1979), no. 6, 3-16. (Russian); translated as *Mech. Solids* 14 (1979), no. 6, 1-12. (Authors' summary) **81f:70007** 70E15
- Story, L. An analysis of the "semidissipative" terms in the plasma-dynamical equations. *Acad. Roy. Belg. Bull. Cl. Sci.* (5) 65 (1979), no. 3-4, 127-142. (Author's summary) **81m:82031** 82A45 (35Q99, 45M99)
- Stothers, W. W. (with Tomkinson, M. J.) On infinite families of sets. *Bull. London Math. Soc.* 11 (1979), no. 1, 23-26. (N. H. Williams) **81h:04005** 04A20
- Stoughton, J. R. (with Husch, L. S.) s -fibrations. *Fund. Math.* 106 (1980), no. 2, 105-126. (S. Mardešić) **81k:58031** 55R65 (55P55)
- Stougle, L. (with Boender, C. G. E.; Rinnooy Kan, A. H. G.; Timmer, G. T.) Global optimization: a stochastic approach. *Numerical techniques for stochastic systems (Conf., Gargnano, 1979)*, pp. 387-394, *North-Holland, Amsterdam*, 1980. (Authors' introduction) **81h:90107** 90C15
- Stout, Edgar Lee Cauchy-Stieltjes integrals on strongly pseudoconvex domains. *Ann. Scuola Norm. Sup. Pisa Cl. Sci.* (4) 6 (1979), no. 4, 685-702. (G. M. Henkin) **81g:32006** 32A25
- Stout, Lawrence Neff Laminations, or how to build a quantum-logic-valued model of set theory. *Manuscripta Math.* 28 (1979), no. 4, 379-403. (Author's summary) **81h:03099** 03G12 (03E70, 03G30, 81B10)
- Stout, William Almost sure invariance principles when $EX_i^2 = \infty$. *Z. Wahrsch. Verw. Gebiete* 49 (1979), no. 1, 23-32. (Wim Vervaat) **81h:60030** 60F15 (60F17)
- (with Lai, Tze Leung) Limit theorems for sums of dependent random variables. *Z. Wahrsch. Verw. Gebiete* 51 (1980), no. 1, 1-14. (Hiroshi Negishi) **81h:60029** 60F15
- Stowe, Dennis The stationary set of a group action. *Proc. Amer. Math. Soc.* 79 (1980), no. 1, 139-146. (Deane Montgomery) **81h:57035** 57S20
- Stoyan, Dietrich (with Stoyan, H.) Bounds for the probability of wait in $M/G/s$ queues. (German and Russian summaries) *Z. Angew. Math. Mech.* 57 (1977), no. 9, 549-552. (Authors' summary) **81h:60124** 60K25
- (with König, Dieter) ★Metody teorii obshchego masovoj. (Polish) [Methods of queueing theory] Translated from the German by Jerzy Kucharczyk. Wydawnictwa Naukowo-Techniczne (WNT), Warsaw, 1979. 169 pp. ISBN 83-204-0142-9 (Editors) **81k:60097** 60K25
- Interrupted point processes. (German and Russian summaries) *Biometrical J.* 21 (1979), no. 7, 607-610. (Brian D. Ripley) **81h:60048** 60G55
- Applied stochastic geometry: a survey (invited paper). (German and Russian summaries) *Biometrical J.* 21 (1979), no. 8, 693-715. (Adrian Baddeley) **81h:60020** 60D05 (52A22, 60G55, 62M99, 90A99, 92A15)
- (with Bergmann, Reinhard; Daley, D. J.; Rolski, Tomasz) Bounds for cumulants of waiting-times in $GI/G/1$ queues. (German and Russian summaries) *Math. Operationsforsch. Statist. Ser. Optim.* 10 (1979), no. 2, 257-263. (Peter Franken) **81e:60095** 60K25
- Proofs of some fundamental formulas of stereology for non-Poisson grain models. (German and Russian summaries) *Math. Operationsforsch. Statist. Ser. Optim.* 10 (1979), no. 4, 575-583. (Pamela J. Dichomides) **81d:60018** 60D05 (52A22, 60G55)
- On some qualitative properties of the Boolean model of stochastic geometry. (German and Russian summaries) *Z. Angew. Math. Mech.* 59 (1979), no. 9, 447-454.

- (Roger E. Miles) **81g:60012** 60D05 (52A22)
- Stoyan, Gilbert** Identification of a spatially varying coefficient in a parabolic equation. A report on numerical experiments. *Inverse and improperly posed problems in differential equations* (Proc. Conf., Math. Numer. Methods, Halle, 1979), pp. 249–258, Math. Research, 1, Akademie-Verlag, Berlin, 1979. (See **80d:35004**) 65P05
- (with Baumert, H.; Braun, P.; Glos, E.; Müller, W.-D.) Modelling and computation of water quality problems in river networks. *Optimization techniques* (Proc. Ninth IFIP Conf., Warsaw, 1979), Part 2, pp. 482–491, Lecture Notes in Control and Information Sci., 23, Springer, Berlin, 1980. (See **81j:49001b**) 90A30
- Über eine monotone Differenzenapproximation einer partiellen Differentialgleichung. *Seminar on Numerical Methods for Solving Balance Equations* (Berlin, 1980) (Russian), pp. 83–94, Rep. 1980, 5, Akad. Wiss. DDR, Berlin, 1980. (A. O. Garder) **81m:65155** 65N05
- On the asymptotic stability of some efficient difference schemes. (Russian) *Ž. Vychisl. Mat. i Mat. Fiz.* **20** (1980), no. 2, 350–358, 550. (F. M. Pascal) **81j:65114** 65N10
- Stoyan, H.** (with Stoyan, Dietrich) Bounds for the probability of wait in $M/G/s$ queues. (German and Russian summaries) *Z. Angew. Math. Mech.* **57** (1977), no. 9, 549–552. (Authors' summary) **81h:60124** 60K25
- Stojanov, D. Ts.** See **Stojanov, D. C.**
- Stojanov, J. M.** See **Stojanov, Jordan M.**
- Stojanov, S. K.** See **Stojanov, S. K.**
- Strada, M.** (with Comini, G.; Del Giudice, S.) Finite element analysis of laminar flow in the entrance region of ducts. *Internat. J. Numer. Methods Engrg.* **15** (1980), no. 4, 507–517. (Authors' summary) **81h:76018** 76D05
- Strahov, V. N.** On the theory of the plane inverse problem of gravimetry for a contact surface. (Russian) *Dokl. Akad. Nauk SSSR* **249** (1979), no. 5, 1091–1095. (S. K. Andersen) **81f:86005** 86A20
- Straight, David W.** (with Hughes, Charles E.) Word problems for bidirectional, single-premise Post systems. *Notre Dame J. Formal Logic* **21** (1980), no. 3, 501–508. (G. Asser) **81h:03009** 03D30 (03D03, 03D40)
- Straight, H. Joseph** (with Beineke, Lowell W.; Ringelsen, Richard D.) The cochromatic index of a graph. *Discrete Math.* **31** (1980), no. 2, 153–159. (Linda Lesniak-Foster) **81h:05063** 05C15
- Note on the cochromatic number of several surfaces. *J. Graph Theory* **4** (1980), no. 1, 115–117. (Saul Stahl) **81e:05063** 05C10 (05C15)
- Straka, Günther** State-space decomposition of general dynamical systems. (Russian summary) *Systems Sci.* **5** (1979), no. 2, 123–141 (1980). (Author's summary) **81c:93014** 93A10 (68D30, 93C05)
- Strala, Albert R.** (with Lystad, Garr S.) Semilattices having bialgebraic congruence lattices. *Pacific J. Math.* **85** (1979), no. 1, 131–143. (T. S. Fofanova) **81i:06004** 06A12 (06B30)
- Strambach, Karl** (with Barlotti, Adriano; Schreiber, E.) The group of projectivities in free-like geometries. *Rend. Sem. Mat. Univ. Padova* **60** (1978), 183–200 (1979). (Hermann Hahl) **81g:51005** 51A35 (51B05)
- Differenzierbare distributive Quasigruppen. *Arch. Math. (Basel)* **35** (1980), no. 1–2, 121–126. (M. Friedberg) **81m:22006** 22A30 (20N05)
- Strang, Gilbert** (with Matthies, Hermann) The solution of nonlinear finite element equations. *Internat. J. Numer. Methods Engrg.* **14** (1979), no. 11, 1613–1626. (Ulrich Eckhardt) **81c:65102** 65N30 (65–04)
- ★Linear algebra and its applications. Second edition. Academic Press [Harcourt Brace Jovanovich, Publishers], New York-London, 1980. xi+414 pp. ISBN 0-12-673660-X (Editors) **81f:15003** 15–01
- ★Линейная алгебра и ее приложения. (Russian) [Linear algebra and its applications] Translated from the English by Ju. A. Kuznetsov and D. M. Fage. "Mir", Moscow, 1980. 454 pp. (Editors) **81k:15001** 15–01
- (with Matthies, Hermann) Numerical computations in nonlinear mechanics. *Computing methods in applied sciences and engineering* (Proc. Fourth Internat. Sympos., Versailles, 1979), pp. 517–525, North-Holland, Amsterdam, 1980. (Authors' summary) **81k:73017** 73C50 (65H10, 73F99)
- Strano, Rosario** The Brauer group of a scheme. (Italian) *Ann. Mat. Pura Appl.* (4) **121** (1979), 157–169. (F. DeMeyer) **81f:14012** 14F99 (13A20)
- Strantzalos, P.** Kompaktheitseigenschaften der Gruppe der Isometrien metrischer Räume. *Arch. Math. (Basel)* **33** (1979/80), no. 1, 66–75. (B. T. Sims) **81h:54036** 54E40
- Eigentlich operierende Gruppen von Isometrien. (English summary) *Fund. Math.* **104** (1979), no. 3, 225–232. (Author's summary) **81f:54025** 54H20 (54E40)
- Stratburger, Alexander** See **Wawrzyńczyk, Antoni**, **81c:33011**
- Straiko, V. T.** (with Bakan, G. M.) Controllable processes with uncertainty and optimal control of them. *Automat. i Telemekh.* **1980**, no. 2, 89–98 (Russian. English summary); translated as *Automat. Remote Control* **41** (1980), no. 2, part 1, 206–215. (Authors' summary) **81h:93118** 93E20
- Strasberg, Helen** L-functions for GL_n . *Math. Ann.* **245** (1979), no. 1, 23–36. (Joe Repka) **81c:12021** 12A67 (10D40, 22E55)
- Strasser, R.** (with Hofbauer, Franz) β -Shifts haben ein eindeutiges Maß mit maximaler Entropie. *Österreich. Akad. Wiss. Math.-Natur. Kl. Sitzungsber. II* **187**, no. 4–7, 165–168 (1978). (B. Volkman) **81c:10065** 10K10 (28D20)
- Strasser, Karl** Kongruenzen und Erweiterungen von Semimodulen. (English and Russian summaries) *Elektron. Informationsverarb. Kybernet.* **15** (1979), no. 7, 367–376. (Author's summary) **81f:68069** 68D30 (06B99)
- Straszak, Andrzej** (with Kacprzyk, Janusz) Application of fuzzy decision-making models for determining optimal policies in "stable" integrated regional development. *Fuzzy sets* (Proc. Sympos. Policy Anal. Inform. Systems, Duke Univ., Durham, N.C., 1980), pp. 321–328, Plenum, New York, 1980. (Authors' summary) **81i:90047** 90A17 (03E72, 90A30)
- Strătilă, Șerban** (with Zăidő, László) ★Lectures on von Neumann algebras. Translated from the Romanian by Silviu Teleman. Revision of the 1975 original. Editura Academiei, Bucharest; Abacus Press, Tunbridge Wells, 1979. 478 pp. ISBN 0-8526-109-2 (E. Stormer) **81j:46009** 46Lxx
- Straton, A. E.** (with Webb, M. C.) Abelian groups, nil modulo a subgroup, need not have nil quotient group. *Publ. Math. Debrecen* **27** (1980), no. 1–2, 127–130. (Delmar L. Boyer)
- 81k:20077** 20K27
- Straubing, Howard** On finite \mathfrak{S} -trivial monoids. *Semigroup Forum* **19** (1980), no. 2, 107–110. (Heinrich Seidel) **81i:20101** 20M35 (68F10)
- Strauch, Otto** Injective choice functions. (Slovak. English and Russian summaries) *Acta Fac. Rerum Natur. Univ. Comenian. Math.* **33** (1977), 191–201 (1978). (L. Bukovský) **81f:04005** 04A20 (05A05)
- Strauch, Brian** Consequences of analyticity in linear elastostatics and related systems. *SIAM J. Math. Anal.* **11** (1980), no. 1, 181–189. (Giovanni P. Galdi) **81h:73005** 73C30
- Štraus, A. V.** Spectral representation of a symmetric operator. (Russian) *Functional analysis*, No. 12 (Russian), pp. 159–166, *Ul'janovsk. Gos. Ped. Inst., Ul'janovsk*, 1979. (G. Biriuk) **81c:47028** 47B25
- See also *Functional analysis*, **81c:47002** and *Functional analysis*, **81j:47002**
- Straus, Ernst G.** Memoir. Einstein, pp. 31–32, Harvard Univ. Press, Cambridge, Mass., 1979. (See **81k:01053**) 01A70
- Straus, Joe M.** (with Zebib, Abdelfattah; Schubert, Gerald) Infinite Prandtl number thermal convection in a spherical shell. *J. Fluid Mech.* **97** (1980), no. 2, 257–277. (L. R. Mack) **81d:76050** 76E15
- Strauss, Hans** Optimal quadrature formulas. *Approximation in Theorie und Praxis* (Proc. Sympos., Siegen, 1979), pp. 239–250, Bibliographisches Inst., Mannheim, 1979. (K. Jetter) **81h:41024** 41A15 (41A55, 65D07, 65D32)
- Über Fehlerabschätzungen bei besten Quadraturformeln. *Numerische Integration* (Tagung, Math. Forschungsinst., Oberwolfach, 1978), pp. 301–308, Internat. Ser. Numer. Math., 45, Birkhäuser, Basel, 1979. (Helmut Brass) **81g:65032** 65D30 (41A55, 65D07)
- Strauss, Michael** Über Russells Kritik an Freges Unterscheidung zwischen Sinn und Bedeutung. *Z. Allgemeine Wissenschaftstheorie* **9** (1978), no. 1, 106–111. (Ignacio Angeli) **81c:03008** 03A05
- Strauss, Walter Alexander** The nonlinear Schrödinger equation. *Contemporary developments in continuum mechanics and partial differential equations* (Proc. Internat. Sympos., Inst. Mat., Univ. Fed. Rio de Janeiro, Rio de Janeiro, 1977), pp. 452–465, North-Holland Math. Studies, 30, North-Holland, Amsterdam, 1978. (Woodford W. Zachary) **81h:35047** 35J10 (81C05)
- (with Marshall, Bernard; Wainger, Stephen) Estimates from L^p to its dual for the Klein-Gordon equation. *Harmonic analysis in Euclidean spaces* (Proc. Sympos. Pure Math., Williams Coll., Williamstown, Mass., 1978), Part 2, pp. 175–177, Proc. Amer. Math. Soc., XXXV, Part 2, Amer. Math. Soc., Providence, R.I., 1979. (Gustavo Peña Menzala) **81a:35053** 35L05 (35C20)
- (with Glassey, R. T.) Propagation of the energy of Yang-Mills fields. *Bifurcation phenomena in mathematical physics and related topics* (Proc. NATO Advanced Study Inst., Cargèse, 1979), pp. 231–241, NATO Adv. Study Inst. Ser., Ser. C: Math. and Phys. Sci., 54, Reidel, Dordrecht, 1980. (See **81f:00012**) **81E10** (35Q20)
- (with Marshall, Bernard; Wainger, Stephen) L^p - L^q estimates for solutions of the Klein-Gordon equation. *Fourier analysis* (Proc. Sem., El Escorial, 1979), pp. 193–200, Asoc. Mat. Española, 1, Asoc. Mat. Española, Madrid, 1980. (Editors) **81m:35000** 35L05
- Strauß, Werner** (with Babiker, A. G. A. G.) Almost strong liftings and r -additivity. *Measure theory, Oberwolfach 1979* (Proc. Conf., Oberwolfach, 1979), pp. 220–227, *Lecture Notes in Math.*, 794, Springer, Berlin, 1980. (M. P. Eršov) **81j:28011** 28A51 (46C15)
- (with Babiker, A. G. A. G.) Measure spaces in which every lifting is an almost \mathfrak{S} -lifting. *Measure theory, Oberwolfach 1979* (Proc. Conf., Oberwolfach, 1979), pp. 228–232, *Lecture Notes in Math.*, 794, Springer, Berlin, 1980. (V. Losert) **81j:28011** 28A51 (46G15)
- Strawderman, William E.** (with Brown, Lawrence D.; Cohen, Arthur) On the admissibility or inadmissibility of fixed sample size tests in a sequential setting. *Ann. Statist.* **7** (1979), no. 3, 569–578. (James Berger) **81i:62138** 62L10 (62C15)
- (with Cohen Brandwein, Ann R.) Minimax estimation of location parameters for spherically symmetric distributions with concave loss. *Ann. Statist.* **8** (1980), no. 2, 279–284. (Pi-Erh Lin) **81c:62006** 62C20 (62H12)
- (with Brown, Lawrence D.; Cohen, Arthur) Complete classes for sequential tests of hypotheses. *Ann. Statist.* **8** (1980), no. 2, 377–398. (Lionel Weiss) **81h:62095** 62L10 (62C07)
- Sträßer, V. L.** (with Kruglov, S. I.) Larmor symmetry of the quantum theory of a massless vector field. (Russian. English summary) *Acta Phys. Polon. B* **10** (1979), no. 11, 975–982. (Authors' summary) **81b:81039** 81L05 (81E99)
- (with Pletjuhov, V. A.) Wave equations with multiple representations and two-potential formalism of electrodynamics. (Russian) *Izv. Vysš. Učebn. Zaved. Fizik.* **1979**, no. 12, 14–18. (S. A. Vladimirov) **81g:81118** 81L05
- (with Kruglov, S. I.; Tolkačev, E. A.; Škol'nikov, P. L.) Internal symmetry of the theory of a neutral vector field of general type. (Russian. English summary) *Vest. Akad. Nauk BSSR Ser. Fiz.-Mat. Nauk* **1979**, no. 6, 53–56, 141. (J. Niederle) **81d:81000** 81E99 (81G20)
- (with Škol'nikov, P. L.) On two-potential formulation of electrodynamics with magnetic monopoles. (Russian. English summary) *Acta Phys. Polon. B* **11** (1980), no. 3, 209–220. (Authors' summary) **81e:81108** 81L05
- (with Kruglov, S. I.) New approach to the theory of magnetic monopoles. *J. Phys. A* **13** (1980), no. 4, L85–L87. (Authors' summary) **81a:81092** 81G10
- Strazicky, Beata** Some results concerning an algorithm for the discrete recourse problem. *Stochastic programming* (Proc. Internat. Conf., Univ. Oxford, Oxford, 1974), pp. 263–274, Academic Press, London, 1980. (Author's summary) **81i:90086** 90C15
- Streeter, R. F.** A bound for the difference Laplacian. *Bull. London Math. Soc.* **11** (1979), no. 3, 354–357. (V. L. Makarov) **81b:39004** 39A12 (31C05, 58A14)
- Streibel, Donald E.** Logistic growth in the presence of nonwhite environmental noise. *J. Theoret. Biol.* **85** (1980), no. 4, 713–738. (Howard B. Stauffer) **81j:92042** 92A15
- Streibel, Kurt** On the density of quadratic differentials with closed trajectories. *Proceedings of the Rolf Nevanlinna Symposium on Complex Analysis* (Math. Res. Inst., Univ. Istanbul, Silivri, 1976), pp. 89–101, Publ. Math. Res. Inst. Istanbul, 1979. (H. H. Martens) **81c:30063** 30F30
- On quasiconformal mappings of open Riemann surfaces. *Comment. Math. Helv.* **53** (1978), no. 3, 301–321. (From the introduction) **81i:30041** 30C60

- Inflatable families of holomorphic functions. *Complex analysis Joensuu 1978 (Proc. Colloq., Univ. Joensuu, Joensuu, 1978), pp. 378-386, Lecture Notes in Math., 747, Springer, Berlin, 1979. (A. Duma) 81j:30040 30D10*
- Strebel, Ralph (with Bieri, Robert) Metabelian quotients of finitely presented soluble groups are finitely presented. *Homological group theory (Proc. Sympos., Durham, 1977), pp. 231-234, London Math. Soc. Lecture Note Ser., 36, Cambridge Univ. Press, Cambridge, 1979. (J. R. J. Groves) 81j:20068 20F16 (20F05)*
- (with Bieri, Robert) Soluble groups with coherent group rings. *Homological group theory (Proc. Sympos., Durham, 1977), pp. 235-240, London Math. Soc. Lecture Note Ser., 36, Cambridge Univ. Press, Cambridge, 1979. (I. B. S. Passi) 81m:20054 20F16*
- (with Baumslag, Gilbert; Thomson, Michael W.) On the multiplier of $F/\gamma_n R$. *J. Pure Appl. Algebra 16 (1980), no. 2, 121-132. (John D. P. Meldrum) 81e:20039 20F05 (20F40)*
- (with Bieri, Robert) Valuations and finitely presented metabelian groups. *Proc. London Math. Soc. (3) 41 (1980), no. 3, 439-464. (R. Göbel) 81j:20080 20K99*
- Strecker, George E. (with Herrlich, Horst) \star Category theory. An introduction. Second edition. Sigma Series in Pure Mathematics, 1. Heldermann Verlag, Berlin, 1979. xii + 400 pp. ISBN 3-88538-001-3 (Editors) 81e:18001 18-01 (18-02)
- (with Adámek, Jiří; Herrlich, Horst) The structure of initial completions. *Cahiers Topologie Géom. Différentielle 20 (1979), no. 4, 333-352. (Authors' summary) 81d:18009 18B15 (54B30)*
- (with Herrlich, Horst) Semi-universal maps and universal initial completions. *Pacific J. Math. 82 (1979), no. 2, 407-428. (Walter Tholen) 81f:18005 18A35 (18A32)*
- (with Herrlich, Horst; Nakagawa, R.; Titcomb, T.) Equivalence of topologically-algebraic and semitopological functors. *Canad. J. Math. 32 (1980), no. 1, 34-39. (Hans-E. Porst) 81f:18008 18A99 (18D99, 54B30, 55U40)*
- Strecker, Gerhard Unitäre Gruppen über beliebigen lokalen Ringen. *J. Algebra 57 (1979), no. 1, 258-270. (Allan J. Silberberg) 81f:20058 20G35*
- Strecker, Reinhard Das Radikal $\text{rad } K$ für kleine Kategorien K . *Rostock. Math. Kolloq. No. 9 (1978), 75-91. (H.-B. Brinkmann) 81e:18004 18A99 (16A21)*
- M -Radikale von universellen Algebren. *Publ. Math. Debrecen 26 (1979), no. 3-4, 245-254. (Rainer Mitz) 81j:08003 08A05 (20M11)*
- (with Márki, L.; Mlitz, R.) Strict radicals of monoids. *Semigroup Forum 21 (1980), no. 1, 27-66. (J. K. Luedeman) 81k:20095 20M11 (16A21)*
- Street, Anne Penfold (with Oates-Williams, Sheila) Balanced binary arrays. I. The square grid. *Combinatorial mathematics, VI (Proc. Sixth Austral. Conf., Univ. New England, Armidale, 1978), pp. 165-198, Lecture Notes in Math., 748, Springer, Berlin, 1979. (Severino V. Gervacio) 81k:05034a 05B30*
- (with Oates-Williams, Sheila) Balanced binary arrays. II. The triangular grid. *Ars Combin. 8 (1979), 65-84. (Severino V. Gervacio) 81k:05034b 05B30*
- (with Oates-Williams, Sheila) Balanced binary arrays. III. The hexagonal grid. *J. Austral. Math. Soc. Ser. A 28 (1979), no. 4, 479-498. (Severino V. Gervacio) 81k:05034c 05B30*
- Street, Deborah J. Generalized Hadamard matrices, orthogonal arrays and F -squares. *Ars Combin. 8 (1979), 131-141. (Dieter Jungnickel) 81k:05037 05B20*
- Bhaskar Rao designs from cyclotomy. *J. Austral. Math. Soc. Ser. A 29 (1980), no. 4, 425-430. (Dieter Jungnickel) 81m:05048 05B20*
- Street, Ross Fibrations in bicategories. *Cahiers Topologie Géom. Différentielle 21 (1980), no. 2, 111-160. (Timothy Porter) 81f:18028 18D05 (18D30)*
- (with Tholen, Walter; Wischniewsky, Manfred Bernd; Wolff, Harvey) Semitopological functors. III. Lifting of monads and adjoint functors. *J. Pure Appl. Algebra 16 (1980), no. 3, 299-314. (M. Hušek) 81g:18003 18A40*
- Strehl, Volker Alternating permutations and modified Ghandi polynomials. *Discrete Math. 28 (1979), no. 1, 89-100. (F. T. Howard) 81d:05008 05A15*
- Strehmel, F. Bemerkungen zum Verfahren von Nickel und Rieder. *Z. Angew. Math. Mech. 60 (1980), no. 1, 50-53. (Eckehard Wagenführer) 81j:65084 65L05*
- Strehmel, Karl Integration von Differentialgleichungen n -ter Ordnung mit einer exponentiell angepaßten Mehrschrittverfahren. *Wiss. Z. Martin-Luther-Univ. Halle-Wittenberg Math.-Natur. Reihe 27 (1978), no. 4, 99-107. (From the introduction) 81k:65063 65L05*
- (with Tutschke, Wolfgang; Kühnau, Reiner; Vogel, Wolfgang; Zielke, Gerhard; Krötenheerdt, Otto; Stammler, Ludwig; Schleiff, Martin; Köhler, Jürgen) Mathematische Forschung für Theorie und Anwendung. *Wiss. Z. Martin-Luther-Univ. Halle-Wittenberg Math.-Natur. Reihe 28 (1979), no. 3, 5-21. (Editors) 81m:01103 01A72 (00A05)*
- Näherungsmethoden für ebene transsonische Profilströmungen mit der Hodographenmethode. *Wiss. Z. Martin-Luther-Univ. Halle-Wittenberg Math.-Natur. Reihe 29 (1980), no. 1, 17-39. (Silvio Nocilla) 81j:76059 76H05*
- Bemerkungen zur numerischen Integration gewöhnlicher Differentialgleichungen n -ter Ordnung mittels exponentiell angepaßter Diskretisierungsverfahren. *Wiss. Z. Martin-Luther-Univ. Halle-Wittenberg Math.-Natur. Reihe 29 (1980), no. 4, 109-115. (Siegfried Filippi) 81k:65085 65L05*
- Streit, Franz On the bivariate geometric median. *Rend. Sem. Mat. Univ. Politec. Torino 37 (1979), no. 2, 7-14 (1980). (P. N. Rathie) 81j:62096 62H10*
- Multivariate linear discrimination when the covariance matrix is unknown. *South African Statist. J. 13 (1979), no. 2, 93-101. (Anant M. Kshirsagar) 81d:62058 62H30*
- (with Fraser, Donald Alexander Stuart) A further note on the bivariate normal distribution. *Comm. Statist. A—Theory Methods 9 (1980), no. 10, 1097-1099. (Kumar Jogdeo) 81k:62024 62E10*
- Streit, L. (with Alberverio, Sergio; Hoegh-Krohn, Raphael) Regularization of Hamiltonians and processes. *J. Math. Phys. 21 (1980), no. 7, 1636-1642. (Francesco Guerra) 81g:81018 81C20 (60J25)*
- Strejc, Vladimír \star Stavová teorie lineárního diskretního řízení. (Czech) [State-space theory of linear discrete control] *Academia, Prague, 1978. 375 pp. (Antonín Tuzar) 81i:93001 93-02 (93B05)*
- Strelakovich, A. S. Optimality conditions in a smooth problem of optimal control in a Banach space. (Russian) *Numerical methods of optimization (applied mathematics) (Russian), pp. 76-88, Akad. Nauk SSSR Sibirsk. Otdel., Energet. Inst., Irkutsk, 1978. (W. W. Breckner) 81f:90117 90C48 (49B27)*
- Strel'čenko, A. I. General piecewise-polynomial approximations in numerical methods of solving boundary value problems. (Russian) *Variational-difference methods in mathematical physics (Proc. All-Union Conf., Novosibirsk, 1977) (Russian), pp. 61-70, Akad. Nauk SSSR Sibirsk. Otdel., Vychisl. Centr., Novosibirsk, 1978. (V. R. Ibragimov) 81m:65146 65L10*
- Strel'cova, G. Ja. \star Блез Паскаля. (Russian) [Blaise Pascal] "Mysl", Moscow, 1979. 239 pp. (I. Ruzsa) 81d:01024 01A70 (01A45)
- Strelcyn, J.-M. (with Benettin, G.; Casartelli, M.; Gargani, L.; Giorgilli, A.) On the reliability of numerical studies of stochasticity. II. Identification of time averages. (Italian and Russian summaries) *Nuovo Cimento B (11) 50 (1979), no. 2, 211-232. (John Guckenheimer) 81i:58031 58F15 (28D05)*
- Strellitz, Sh. (with Abramovich, S.) On the existence of eigenvalues of differential operators dependent on a parameter. *Trans. Amer. Math. Soc. 258 (1980), no. 2, 407-429. (Harold E. Benzinger) 81h:34010 34B10 (30E25, 34A20)*
- Strelkov, N. A. Iteration method of solving projection-difference analogues of boundary value problems for fourth-order equations. (Russian) *Variational-difference methods in mathematical physics (Proc. All-Union Conf., Novosibirsk, 1977) (Russian), pp. 165-177, Akad. Nauk SSSR Sibirsk. Otdel., Vychisl. Centr., Novosibirsk, 1978. (E. Schecter) 81k:65119 65N20 (65N10)*
- Streller, Arnfried (with Franken, Peter) Reliability analysis of complex repairable systems by means of marked point processes. *J. Appl. Probab. 17 (1980), no. 1, 154-167. (Masakiyo Miyazawa) 81a:60096 60K10 (90B25)*
- Streubel, Michael (with Ashtekar, Abhay) On angular momentum of stationary gravitating systems. *J. Math. Phys. 20 (1979), no. 7, 1362-1365. (Authors' summary) 81d:83024 83C30 (58D30)*
- Steinzer, V. A. (with Karpov, A. I.) Construction of dynamical models and identification in problems of investigating the dynamics of complex systems. (Russian) *Theory of stability and its applications (Russian), pp. 277-284, 304, "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. (Authors' summary) 81i:93027 93B30 (70E99)*
- Stricker, C. (with Emery, M.) Démonstration élémentaire d'un résultat d'Azéma et Jeulin. *Séminaire de Probabilités, XIII (Univ. Strasbourg, Strasbourg, 1977/78), pp. 116-117, Lecture Notes in Math., 721, Springer, Berlin, 1979. (Thomas E. Armstrong) 81m:60085 60G48*
- Strickland, Elisabetha On the orthogonal Brauer group. (Italian summary) *Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur. (8) 62 (1977), no. 3, 341-347. (Author's summary) 81h:55016 55R99*
- The real Brauer group of a finite CW-complex. *Proc. Amer. Math. Soc. 75 (1979), no. 1, 163-168. (Donald W. Kahn) 81i:55016 55R10 (14F20, 16A39)*
- van Strien, Sebastian J. Unicity of the Lie product. *Compositio Math. 40 (1980), no. 1, 79-85. (J. Peetre) 81a:53061 53C99 (22E99, 58G35)*
- Strietz, H. Über Erzeugendengruppen endlicher Partitionenverbände. *Studia Sci. Math. Hungar. 12 (1977), no. 1-2, 1-17 (1980). (Ivan Rival) 81k:06011 06C10 (05A17)*
- Strikwerda, John C. Initial-boundary value problems for the method of lines. *J. Comput. Phys. 34 (1980), no. 1, 94-107. (M. K. Kadalbajoo) 81d:65055 65M20*
- Iterative methods for the numerical solution of second order elliptic equations with large first order terms. *SIAM J. Sci. Statist. Comput. 1 (1980), no. 1, 119-130. (Author's summary) 81f:65070 65N05*
- Stringari, S. (with Lipparini, E.) Variational approach to the moment of inertia. *Phys. Rev. C (3) 22 (1980), no. 2, 884-887. (Authors' summary) 81e:81150 81G35*
- Strobeck, Curtis Haploid selection with m alleles in m niches. *Amer. Natur. 113 (1979), no. 3, 439-444. (Author's summary) 81j:92026 92A10*
- Partial selfing and linkage: the effect of a heterotic locus on a neutral locus. *Genetics 92 (1979), no. 1, 305-315. (Author's summary) 81k:92041 92A10*
- (with Charlesworth, D.; Charlesworth, B.) Selection for recombination in partially self-fertilizing populations. *Genetics 93 (1979), no. 1, 237-244. (Authors' summary) 81k:92029 92A10*
- (with Golding, G. B.) Linkage disequilibrium in a finite population that is partially selfing. *Genetics 94 (1980), no. 3, 777-789. (Authors' summary) 81k:92026 92A10*
- Strobel, H. Theorems on vector fields in the general relativistic p -space. *Acta Phys. Polon. B 10 (1979), no. 10, 863-874. (H. Rund) 81k:83009 83C10 (53C80)*
- Relativistic analogs of the phase space and the Liouville theorem of classical statistics. *Acta Phys. Polon. B 10 (1979), no. 12, 1009-1018. (Gheorghe Nenciu) 81h:82010 82A05 (53B50, 81C99)*
- Strocchi, F. (with Morchio, G.) Infrared singularities, vacuum structure and pure phases in local quantum field theory. *Ann. Inst. H. Poincaré Sect. A (N.S.) 33 (1980), no. 3, 251-282. (Authors' summary) 81m:81039 81E05*
- Strömer, Gerhard Instabile Minimalflächen in Riemannschen Mannigfaltigkeiten nichtpositiver Schnittkrümmung. *J. Reine Angew. Math. 315 (1980), 16-39. (M. do Carmo) 81e:53038 53C42 (49F10, 53A10)*
- Strok, V. V. (with Javorskij, E. B.) On the question of the combinatorial analysis of graph imbedding. (Russian) *Theoretical and applied questions of differential equations and algebra (Russian), pp. 238-241, 271, "Naukova Dumka", Kiev, 1978. (J. Bošák) 81h:05063 05C10 (05C30)*
- (with Kratoch, M. I.) Random mappings and partitionings of finite sets. (Russian) *Analytical methods of probability theory (Russian), pp. 80-84, 152, "Naukova Dumka", Kiev, 1979. (Ljuben R. Mutafchiev) 81m:60015 60C05*
- morin-Strom, Karl A. See Morin-Strom, Karl A.
- Strom, Roberto See Systems theory in immunology. 81c:92001
- Strömberg, Jan Olov Bounded mean oscillation with Orlicz norms and duality of Hardy spaces. *Indiana Univ. Math. J. 28 (1979), no. 3, 511-544. (Arne Stray) 81f:42021 42B20 (46E30)*
- (with Torchinsky, Alberto) Weights, sharp maximal functions and Hardy spaces. *Bull. Amer. Math. Soc. (N.S.) 3 (1980), no. 3, 1053-1056. (José García-Cuerva) 81k:42021 42B30 (42B25)*
- Strommer, Gyula Construction of regular polygons in absolute geometry. (Hungarian. English summary) *Mat. Lapok 27 (1976), no. 1-2, 161-163 (1978). (L. Gyarmathi) 81m:51019 51F15*
- (with Sachs, Hans) Geodätische und Pseudogeodätische auf Regelflächen im Flaggenraum. *Arch. Math. (Basel) 33 (1979/80), no. 5, 478-484. (K. Strubecker) 81e:53018 53A35*

- Stromquist, Walter** How to cut a cake fairly. *Amer. Math. Monthly* **87** (1980), no. 8, 640-644. (From the text) **81m:5916** 05A17
- Strong, H. R.** (with Blasgen, M. W.; Astrahan, M. M.; Chamberlin, D. D.; Gray, James N.; King, W. F.; Lindsay, B. G.; Lorie, R. A.; Mehl, J. W.; Price, T. G.; Putzolu, G. R.; Schkolnick, M.; Selinger, P. G.; Slutz, D. R.; Traiger, I. L.; Wade, B. W.; Yost, R. A.) System R: an architectural overview. *IBM Systems J.* **20** (1981), no. 1, 41-62. (Authors' summary) **81m:6079** 68H05
- Strongin, R. G.** An estimate of the convergence of a noise-stable algorithm of global search. (Russian) *Problemy Slozhen. Poiska No. 6 Zadachi Optimizatsii* (1978), 160-167, 333. (Olavi Hellman) **81c:93096** 93E25 (65K05)
- Stroina, M. I.** Mathematical analysis of a class of population dynamics models. (Russian) *Z. Vyčisl. Mat. i Mat. Fiz.* **20** (1980), no. 2, 316-333, 549. (Ju. I. Ljubic) **81i:92021** 92A15 (34K05)
- Stroock, Daniel W.** (with Varadhan, S. R. Srinivasa) ★Multidimensional diffusion processes. *Grundlehren der Mathematischen Wissenschaften [Fundamental Principles of Mathematical Sciences]*, 233. Springer-Verlag, Berlin-New York, 1979. xii+338 pp. ISBN 3-540-90353-4 (A. D. Wentzell (Ventcel')) **81i:60108** 60J60
- Some remarks about Becker's inequality. *Harmonic analysis in Euclidean spaces (Proc. Sympos. Pure Math., Williams Coll., Williamstown, Mass., 1978), Part 1*, pp. 149-157. *Proc. Sympos. Pure Math., XXXV, Part 1, Amer. Math. Soc., Providence, R.I.*, 1979. (Krishna M. Das) **81d:26009** 26D15 (42A99)
- Stross, N.** (with Kluwick, A.) Unsteady, turbulent flow in pipes. (German summary) *Acta Mech.* **37** (1980), no. 1-2, 1-12. (Authors' summary) **81c:76048** 76F99 (76N10)
- Stroth, Gernot** Einige Gruppen vom Charakteristik 2-Typ. *J. Algebra* **51** (1978), no. 1, 107-143. (Author's review) **81g:20032** 20D05
- Quadratic forms and special 2-groups. *Arch. Math. (Basel)* **33** (1979/80), no. 5, 415-422. (Carl Riehm) **81m:20063** 20G40
- Endliche Gruppen, die eine maximale 2-lokale Untergruppe besitzen, so daß $Z(F^*(M))$ eine TI-Menge in G ist. *J. Algebra* **64** (1980), no. 2, 460-528. (U. Schoenwaelder) **81j:20025** 20D05
- Stroud, I. A.** (with Braid, I. C.; Hillyard, R. C.) Stepwise construction of polyhedra in geometric modelling. *Mathematical methods in computer graphics and design (Proc. Conf., Univ. Leicester, Leicester, 1978)*, pp. 123-141. Academic Press, London, 1980. (See **81i:68010**) 52-04 (68K05)
- Stroup, Walter W.** (with Evans, James W.; Anderson, R. L.) Maximum likelihood estimation of variance components in a completely random BIB design. *Comm. Statist. A—Theory Methods* **9** (1980), no. 7, 725-756. (Robert Hultquist) **81h:62057** 62F10 (62J10)
- Strubecker, Karl** Duale Minimalflächen des isotropen Raumes. (Serbo-Croatian summary) *Rad Jugoslav. Akad. Znan. Umjet.* No. 382 (1978), 91-107. (Hellmuth Stachel) **81i:53011** 53A35
- Theorie der flächentreuen Abbildungen der Ebene. *Contributions to geometry (Proc. Geom. Sympos., Siegen, 1978)*, pp. 313-329. Birkhäuser, Basel, 1979. (Walter O. Vogel) **81j:53018** 53A40 (51N25)
- Strübing, Wolf** Symmetric submanifolds of Riemannian manifolds. *Math. Ann.* **245** (1979), no. 1, 37-44. (Robert Reilly) **81a:53027** 53B25
- Struble, Raymond A.** Functions meromorphic in right half-planes are Laplace transforms. *J. Math. Anal. Appl.* **70** (1979), no. 1, 304-307. (John S. Lew) **81c:44006** 44A10 (30D30, 46F12)
- Operational rules. *SIAM J. Math. Anal.* **10** (1979), no. 3, 629-642. (W. Kecs) **81f:44003** 44A05 (42B10)
- Strugov, Ju. F.** Differential properties of extremal quasiconformal mappings. (Russian) *Questions in the metric theory of mappings and its application (Proc. Fifth Colloq. Quasiconformal Mappings, Generalizations Appl., Donetsk, 1976) (Russian)*, pp. 135-142, 185. "Naukova Dumka", Kiev, 1978. (Olli Martio) **81d:30036** 30C60 (30C70)
- Strukov, L. I.** (with Timan, A. F.) Sharpening and generalization of some theorems of approximation by polynomials of S. N. Bernstein. (Russian) *The theory of the approximation of functions (Proc. Internat. Conf., Kaluga, 1975) (Russian)*, pp. 338-341. "Nauka", Moscow, 1977. (Wiesław Pleśniak) **81d:41003** 41A10 (41A17)
- Strulak, Michał** (with Malinowski, Krzysztof; Nowosad, Krzysztof) Simplification of models of linear systems using the continued fractions method and the application of simplified models. (Polish. Russian and English summaries) *Arch. Automat. Telemech.* **24** (1979), no. 3, 351-370. (Authors' summary) **81a:93063** 93C99
- Struminskii, V. V.** On the substantiation of kinetic theory. (Russian) *Dokl. Akad. Nauk SSSR* **249** (1979), no. 2, 302-307. (A. K. Vidybida) **81d:82030** 82A40
- Strumolo, Gary** (with Caffisch, Russel E.; Majda, George; Peskin, Charles S.) Distortion of the arterial pulse. *Math. Biosci.* **51** (1980), no. 3-4, 229-260. (Authors' summary) **81i:92005** 92A09 (76Z05)
- Struppa, Daniele** (with Lanteri, Antonio) Degenerations of compact surfaces: the nonorientable case. (Italian. English summary) *Atti Sem. Mat. Fis. Univ. Modena* **27** (1978), no. 1, 58-66 (1979). (Mario Pezzana) **81a:57013** 57N05 (14J17)
- Strygin, V. V.** (with Gorelova, E. Ja.) An algorithm for the asymptotic expansion of the solutions of the Cauchy problem for singularly perturbed systems. (Russian) *Approximate methods for investigating differential equations and their applications, No. 4 (Russian)*, pp. 19-31, 133. *Kuibyshev. Gos. Univ., Kuibyshev*, 1978. (Snezana Hristova) **81k:34045** 34E10
- (with Sobolev, V. A.) The method of integral manifolds in the problem of the acceptability of the solution of precessional equations of gyroscopic systems. (Russian) *Problems of stability of motion, analytical mechanics and control of motion (Third All-Union Cetero Conf., Irkutsk, 1977) (Russian)*, pp. 38-43, 320. "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. (Authors' summary) **81g:70003** 70E05 (34C29)
- See also Approximate methods for investigating differential equations and their applications, **81c:34004**
- Strygina, S. O.** On the justification of the convergence of projection type methods for nonlinear boundary value problems. (Russian) *Proceedings of a Seminar on Differential Equations, No. 3 (Russian)*, pp. 86-91, 148. *Kuibyshev. Gos. Univ., Kuibyshev*, 1977. (Author's summary) **81a:65081** 65L10
- Strzelecki, Tomasz** Loi de comportement dans la théorie de la consolidation électrohydrodynamique. (English and Russian summaries) *Studia Geotech. Mech.* **1** (1979), no. 3-4, 39-49 (1980). (Author's summary) **81j:76088** 76T05 (76W05)
- Stuart, Allan E. G.** (with Bowtell, Graham) Particle motions and the dynamics of Korteweg-de Vries solitons. *Progr. Theoret. Phys.* **64** (1980), no. 1, 68-80. (Luc Vinet) **81k:35138** 35Q20 (76B25, 81C05)
- Stuart, C. A.** An introduction to bifurcation theory based on differential calculus. *Nonlinear analysis and mechanics: Heriot-Watt Symposium, Vol. IV, pp. 76-135, Res. Notes in Math.*, 39. Pitman, San Francisco, Calif., 1979. (R. A. Piastock) **81j:58032** 58E07 (47H15)
- A variational method for bifurcation problems when the linearization has no eigenvalues. A survey on the theoretical and numerical trends in nonlinear analysis, I (Proc. Third Sem. Funct. Anal. Appl., Bari, 1978). *Confer. Sem. Mat. Univ. Bari* No. 158-162 (1979), 157-180. (A. Vanderbauwhede) **81c:58023** 58E07 (47H15, 49G99)
- Bifurcation for Neumann problems without eigenvalues. *J. Differential Equations* **36** (1980), no. 3, 391-407. (E. F. Infante) **81m:47089** 47H15 (35J60)
- (with Toland, John F.) A variational method for boundary value problems with discontinuous nonlinearities. *J. London Math. Soc. (2)* **21** (1980), no. 2, 319-328. (Gianfranco Bottaro) **81i:35055** 35J25 (35J20)
- (with Toland, John F.) A property of solutions of elliptic differential equations with discontinuous nonlinearities. *J. London Math. Soc. (2)* **21** (1980), no. 2, 329-335. (A. Džuraev) **81i:35051** 35J20
- (with Smith, H. L.) A uniqueness theorem for fixed points. *Proc. Amer. Math. Soc.* **79** (1980), no. 2, 237-240. (Louis A. Talman) **81c:47062** 47H10 (54H25)
- Stubbiefield, Beauregard** Lower bounds for odd perfect numbers (beyond the googol). *Black mathematicians and their works, pp. 211-222 (1 plate), Dorrance, Ardmore, Pa.*, 1980. (B. M. Stewart) **81m:10011** 10A25
- See also Black mathematicians and their works, **81c:00004**
- Stuchlik, Z.** Equatorial circular orbits and the motion of the shell of dust in the field of a rotating naked singularity. *Bull. Astronom. Inst. Czechoslovakia* **31** (1980), no. 3, 129-144. (From the summary) **81c:85015** 85A99
- Stucki, J. W.** (with Arnold, L.; Horsthemke, W.) The influence of external real and white noise on the Lotka-Volterra model. (German summary) *Biometrical J.* **21** (1979), no. 5, 451-471. (Authors' summary) **81a:92019** 92A15
- Stückrad, Jürgen** (with Roloff, Hartmut) Bemerkungen über Zusammenhangseigenschaften und mengentheoretische Darstellung projektiver algebraischer Mannigfaltigkeiten. Beiträge zur Algebra und Geometrie [Contributions to Algebra and Geometry], **8**. Wiss. Beitr. Martin-Luther-Univ. Halle-Wittenberg **M 12** (1979), 125-131. (W. Vogel) **81h:14031** 14M15 (13H10)
- Studden, W. J.** (with Spruill, Carl A.) Kiefer-Wolfowitz theorem in a stochastic process setting. *Ann. Statist.* **7** (1979), no. 6, 1329-1332. (Andrej Pázman) **81a:62078** 62K05 (62J05, 62M99)
- (with Agarwal, Girdhar G.) Asymptotic integrated mean square error using least squares and bias minimizing splines. *Ann. Statist.* **8** (1980), no. 6, 1307-1325. (Michael Titterton) **81m:62135** 62K05 (41A15)
- (with Spiegelman, Clifford H.) Design aspects of Scheffé's calibration theory using linear splines. *J. Res. Nat. Bur. Standards* **85** (1980), no. 4, 295-304. (Authors' summary) **81j:62148** 62K05 (65D07)
- Studenianski, Marek** Application of the Dubovitskii-Milyutin method to some locally convex extremal problems. (Polish summary) *Bull. Soc. Sci. Lett. Łódź* **29** (1979), no. 4, 8 pp. (V. F. Dem'janov) **81f:49022a** 49B27 (90C25, 90C48)
- Regularly locally convex functions on the Cartesian product of two spaces. (Polish summary) *Bull. Soc. Sci. Lett. Łódź* **29** (1979), no. 7, 10 pp. (V. F. Dem'janov) **81f:49022b** 49B27 (90C25, 90C48)
- Stuetzle, Werner** (with Mittal, Yashaswini) Some comments on the asymptotic behavior of robust smoothers. *Smoothing techniques for curve estimation (Proc. Workshop, Heidelberg, 1979)*, pp. 191-195. *Lecture Notes in Math.*, 757. Springer, Berlin, 1979. (F. P. Tarasenko) **81g:62069** 62F35 (62G05)
- Stuhler, Ulrich** Unterbündel maximalen Grades von Vektorbündeln auf algebraischen Kurven. (English summary) *Manuscripta Math.* **27** (1979), no. 3, 313-321. (S. Ramanan) **81f:14009** 14F05 (14H35)
- Homological properties of certain arithmetic groups in the function field case. *Invent. Math.* **57** (1980), no. 3, 263-281. (Avner Ash) **81g:22016** 22E40 (20G99)
- Štuliš, Vytautas** An algorithm for solving a parallel sequencing problem. (Russian. Lithuanian and English summaries) *Teor. Optimal. Reseniū—Trudy Sem. Procezy Optimal. Upravleniya VI Sekcija No. 5* (1979), 81-94, 119. (Author's summary) **81b:90094** 90B35
- Štuka, V. L.** Invariant connections and metrics on homogeneous spaces corresponding to global triples. (Russian) *Mat. Zametki* **26** (1979), no. 3, 449-463, 494. (O. Kowalski) **81h:53050** 53C30 (53C05)
- Štuka, L. V.** (with Bogdanov, B. A.; Fridman, V. M.) One method of solving the problem of vibrations of an elastic solid with complex boundary conditions. *Izv. Akad. Nauk SSSR Meh. Tverd. Tela* **15** (1980), no. 4, 111-119 (Russian); translated as *Mech. Solids* **15** (1980), no. 4, 86-92. (Authors' summary) **81m:73030** 73D30
- Šulajter, František** An optimal property of the best linear unbiased interpolation filter. *Kybernetika (Prague)* **16** (1980), no. 4, 341-344. (A. F. Gualtierotti) **81c:60073** 60G35 (62M09, 93E11)
- Stuier, J. A.** (with Netravali, A. N.) Transform domain motion estimation. *Bell System Tech. J.* **58** (1979), no. 7, 1673-1702. (Authors' summary) **81a:94008** 94A05 (68G10)
- Stummel, Friedrich** (with Hainer, K.) ★Introduction to numerical analysis. Translated from the German by E. R. Dawson. *Scottish Academic Press, Edinburgh*, 1980. xiv+282 pp. ISBN 0-7073-0130-0 (R. F. Denemeyer) **81j:65001** 65-01
- Rounding error analysis of elementary numerical algorithms. *Fundamentals of numerical computation (computer-oriented numerical analysis) (Proc. Conf., Tech. Univ. Berlin, Berlin, 1979)*, pp. 169-195. *Comput. Suppl.*, 2. Springer, Vienna, 1980. (F. J. Murray) **81m:65065** 65G05
- Basic compactness properties of nonconforming and hybrid finite element spaces. (French summary) *RAIRO Anal. Numér.* **14** (1980), no. 1, 81-115. (Igor Bock) **81h:65058** 65J10 (65N30)
- Stupelis, L.** (with Maz'ja, V. G.; Plamenetskii, B. A.) The three-dimensional problem of the steady-state motion of a fluid with a free surface. (Russian. English and Lithuanian summaries) *Differencial'nye Uravneniya i Primeneniyā—Trudy Sem. Procezy Optimal.*

- Upravlenija I Sekcija No. 23 (1979), 157 pp. (P. C. Fife) **81m:76019** 76D05 (35Q10, 35R35)
- Uspolniska-Stupnicka, W. See Szemplinska-Stupnicka, W.
- Ustulio, Jeffrey L. (with Kevles, Daniel J.; Carroll, Thomas P.) The sciences in America, circa 1880. *Science* **209** (1980), no. 4452 Centennial Issue, 27-32. (Authors' summary) **81m:01034** 01A55
- Ustulio, A. H. P. Two complete systems of algebraic orthogonal functions over $(-\infty, +\infty)$. *Karachi Math. Assoc. Riaz (Souvenir)* **1978**, 64-92. (A. E. Danese) **81b:42074** 42C05 (33A65, 42C10)
- Ustulio, J. (with Esser, E.) Berechnung wirtschaftlicher Stichprobenpläne für messende Prüfung bei exponentieller Schadensfunktion durch ein Näherungsverfahren. *Proceedings in Operations Research, 8 (Seventh Annual Meeting, Deutsch. Gesellschaft. Operations Res., Freie Univ. Berlin, Berlin, 1978)*, pp. 227-233, *Physica, Würzburg*, 1979. (W. Uhlmann) **81i:62182** 62N10
- Ustulio, Jacob Projections of C^m automorphic forms. *Bull. Amer. Math. Soc. (N.S.)* **2** (1980), no. 3, 435-439. (Henri Cohen) **81g:10039** 10D12
- Ustulio, Teo Lattices of convex equivalences. (Russian summary) *Czechoslovak Math. J.* **29(104)** (1979), no. 3, 396-405. (Joseph Chacron) **81b:06002** 06A99
- Ustulio, I. V. Internal waves generated in an exponentially stratified fluid by an arbitrarily moving source. *Izv. Akad. Nauk SSSR Meh. Zhidk. Gaza* **1980**, no. 3, 67-74 (Russian); translated as *Fluid Dynamics* **15** (1980), no. 3, 378-383. (Authors' summary) **81m:76056** 76V05
- Ustulio, Dean G. (with Proctor, Robert A.; Saks, Michael E.) Product partial orders with the Sperner property. *Discrete Math.* **30** (1980), no. 2, 173-180. (Derek C. J. Burgess) **81f:06005** 06A10 (05A05)
- Ustulio, W. (with Elker, J.; Pollard, David) Glivenko-Cantelli theorems for classes of convex sets. *Adv. in Appl. Probab.* **11** (1979), no. 4, 820-833. (J. M. Steele) **81a:60042** 60F15
- (with Schumann, G.) A general Glivenko-Cantelli theorem for stationary sequences of random observations. *Scand. J. Statist.* **7** (1980), no. 2, 102-104. (R. M. Dudley) **81j:60042** 60F15
- Ustulio, George P. H. (with Seshadri, Vanamamalai) Canonical correlations, rank additivity and characterizations of multivariate normality. *Analytic function methods in probability theory (Proc. Colloq. Methods of Complex Anal. in the Theory of Probab. and Statist., Kosztul. L. Univ. Debrecen, Debrecen, 1977)*, pp. 331-344, *Colloq. Math. Soc. János Bolyai*, 21, North-Holland, Amsterdam, 1979. (C. G. Khatri) **81b:62009** 62H05
- (with Wolkowicz, Henry) Bounds for eigenvalues using traces. *Linear Algebra Appl.* **29** (1980), 471-506. (M. Shafat Ali) **81k:15015** 15A18
- (with Wolkowicz, Henry) More bounds for eigenvalues using traces. *Linear Algebra Appl.* **31** (1980), 1-17. (J. Segethová) **81k:15016** 15A18 (65F15)
- Ustulio, Bogumila (with Biernacki, Radoslaw M.) Properties of transfer functions of multiloop feedback active filters with identical biquadratic sections. *IEEE Trans. Circuits and Systems* **27** (1980), no. 5, 350-357. (Authors' summary) **81g:93111** 93E11
- Ustulio, Martin On faster convergence of the bisection method for all triangles. *Math. Comp.* **35** (1980), no. 152, 1195-1201. (V. Pereyra) **81j:51023** 51N99 (65B99, 65N30)
- Ustulio, T. (with Majcher, G.) On a multistage optimization problem. *I. Comment. Math. Prace Mat.* **21** (1980), no. 1, 163-171. (Joachim Hirsch) **81g:90070** 90C20
- Ustulio, S. (with Mirie, Rida M.) On head-on collisions between solitary waves. *J. Fluid Mech.* **98** (1980), no. 3, 509-525. (Authors' summary) **81g:76023** 76B25
- Ustulio, Stephen Y. H. (with Pradhan, Dhiraj K.; Hsiao, M. Y.; Patel, A. M.) Shift registers designed for on-line fault detection. *FTCS-8 (Eighth Ann. Internat. Conf. Fault-Tolerant Comput., Toulouse, 1978)*, pp. 173-178, *IEEE, New York*, 1978. (Authors' summary) **81c:94052** 94C30
- (with Karpovsky, Mark) Detection and location of input and feedback bridging faults among input and output lines. *IEEE Trans. Comput.* **29** (1980), no. 6, 523-527. (Authors' summary) **81g:94076** 94C99
- Ustulio, Wei Yi On an extremum problem for n -variable Walsh transforms. (Chinese. English summary) *Nanjing Daxue Xuebao* **No. 2** (1980), 6-14. (Authors' summary) **81j:42050** 42C10 (44A15, 94A11)
- Ustulio, Ya Cheng Asymptotic solution of singular perturbation Cauchy problems for quasilinear second-order hyperbolic partial differential equations. (Chinese. English summary) *Numer. Math. J. Chinese Univ.* **1** (1979), no. 1, 80-91. (Kotik K. Lee) **81j:35011** 35B25 (35C20)
- Ustulio, Sun Kan See Le Sun Kan
- Ustulio, S. T. See Czuba, Stanislaw T.
- Ustulio, Perla (with Mudholkar, Govind S.) MANOVA multiple comparisons associated with finite intersection tests. *Multivariate analysis, V (Proc. Fifth Internat. Sympos., Univ. Pittsburgh, Pittsburgh, Pa., 1978)*, pp. 467-482, North-Holland, Amsterdam, 1980. (Jack C. Lee) **81f:62092** 62H15
- (with Mudholkar, Govind S.) Testing significance of a mean vector—a possible alternative to Hotelling's T^2 . *Ann. Inst. Statist. Math.* **32** (1980), no. 1, 43-52. (Franz Streit) **81b:62096** 62H15
- Ustulio, M. V. On the nonexistence of certain Euler products. *Canad. Math. Bull.* **23** (1980), no. 3, 371-372. (T. M. Apostol) **81k:10064** 10H10
- Ustulio, Rao, V. (with Zacharias, Cecily) A characterisation theorem for simultaneous approximation by sums of Chebyshev norms. *J. Math. Phys. Sci.* **14** (1980), no. 1, 1-8. (R. A. Lorentz) **81j:41044** 41A50 (41A28)
- Ustulio, K. R. (with Trullinger, S. E.) Instability of nontopological solitons of coupled scalar field theories in two dimensions. *Phys. Rev. D* **23** (1980), no. 6, 1495-1496. (Authors' summary) **81h:81106** 81E99 (35Q99)
- Ustulio, R. (with Sarma, V. V. S.; Vaithilingam, M. C.) An approach for sensitivity-reduced design of linear regulators. *Internat. J. Systems Sci.* **9** (1978), no. 1, 65-74. (Authors' summary) **81e:93031** 93B35
- Ustulio, S. (with Magill, Kenneth D., Jr.) Another semigroup characterization of the simple closed curve. *Semigroup Forum* **20** (1980), no. 1, 89-90. (Bridget B. Baird) **81f:20091** 20M20 (54F25)
- Ustulio, I. Ja. Finite nonsolvable groups with the invariator condition for normal subgroups. (Russian) *Theoretical and applied questions of differential equations and algebra (Russian)*, pp. 241-243, 272, "Naukova Dumka", Kiev, 1978. (S. S. Levčenko)
- 81i:20026** 20D99
- Ustulio, Ju. N. Extremal and approximate properties of splines. (Russian) *The theory of the approximation of functions (Proc. Internat. Conf., Kaluga, 1975)* (Russian), pp. 341-345, "Nauka", Moscow, 1977. (B. I. Kvasov) **81b:41025** 41A15 (65D07)
- Extremal problems of the theory of approximation of functions with incomplete information. (Russian) Approximation of functions by polynomials and splines. *Trudy Mat. Inst. Steklov.* **145** (1980), 152-168, 250. (J. Peetre) **81g:41031** 41A35 (41A44)
- Ustulio, N. N. (with Cencov, A. G.) Existence of the Bellman function in a linear differential game. (Russian) *Trudy Inst. Mat. i Meh. Ural. Nauch. Centr Akad. Nauk SSSR No. 26 Differential. Sistemy Upravlen.* (1979), 80-86, 96. (Authors' summary) **81h:90150** 90D25
- Ustulio, A. S. The connection between a dispersive dynamical system on the line and semidynamical systems. (Russian) Algebraic invariants of dynamic systems. *Mat. Issled.* **No. 55** (1980), 135-147, 151. (B. S. Pikel) **81j:54063** 54H20
- Ustulio, Eduardo J. The dependence of betting strategies on the probability of winning. *J. Appl. Probab.* **16** (1979), no. 4, 855-866. (Lester E. Dubins) **81c:60059** 60G40 (93E05)
- Ustulio, M. A. Almost periodic elliptic operators. (Russian) *Proceedings of an All-Union Conference on Partial Differential Equations (Moscow State Univ., Moscow, 1976)* (Russian), pp. 245-248, Moskov. Gos. Univ., Meh.-Mat. Fakul'tet, Moscow, 1978. (See **80f:35002**) 47F05 (35J99, 35P05, 58G15)
- Spectral theory and the index of elliptic operators with almost-periodic coefficients. (Russian) *Uspehi Mat. Nauk* **34** (1979), no. 2(206), 95-135. (P. A. Milnaevskii) **81f:35090** 35P05 (34B30, 58G12, 58G25)
- Local Favard theory. (Russian. English summary) *Vestnik Moskov. Univ. Ser. I Mat. Meh. No. 2* (1979), 31-36, 102. (Bois Basit) **81h:35015** 35B10
- Ustulio, A. M. (with Braslavskii, A. D.; Ulanov, A. G.) Certain continuous identification techniques for linear dynamic plants. Identification and system parameter estimation (Proc. Fourth IFAC Sympos., Tbilisi, 1976), Part 2, pp. 1021-1031, North-Holland, Amsterdam, 1978. (See **80d:93010b**) 93B30
- Techniques for designing maximally stable control systems. *Avtomat. i Telemekh.* **1980**, no. 1, 28-37 (Russian); translated as *Automat. Remote Control* **41** (1980), no. 1, part 1, 20-28. (Authors' summary) **81b:93087** 93D99
- (with Braslavskii, A. D.) Solution to problems of "fast" identification using multidimensional sliding modes. *Avtomat. i Telemekh.* **1980**, no. 2, 72-78 (Russian. English summary); translated as *Automat. Remote Control* **41** (1980), no. 2, part 1, 195-199. (Authors' summary) **81b:93016** 93B30 (93C15)
- Ustulio, T. A. Averaging kernels with small norms. (Russian) Numerical methods and questions in the organization of calculations. *3. Zap. Nauch. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* **90** (1979), 265-267, 302. (J. Kofroš) **81g:65184** 65R20
- Ustulio, M. A. Construction of resonance states for a three-dimensional Schrödinger operator. (Russian) *Scattering theory. Theory of oscillations (Russian)*, pp. 145-180, 187, *Probl. Mat. Fiz.*, 9, Leningrad. Univ., Leningrad, 1979. (V. E. Korepin) **81d:81021** 81C05 (35P10, 47A40)
- Ustulio, Subrahmanyan, Kocherlakota (with Gajjar, A. V.) Robustness to nonnormality of some transformations of the sample correlation coefficient. *J. Multivariate Anal.* **10** (1980), no. 1, 60-77. (Nariaki Sugiyra) **81j:62050** 62E20 (62J99)
- Ustulio, Subrahmanyan, M. R. On simultaneous best approximations in $C[a, b]$. *J. Approx. Theory* **26** (1979), no. 2, 101-107. (Wilhelm Sippel) **81k:41011** 41A27 (41A28, 41A50)
- Ustulio, Subrahmanyan, K. H. S. A fundamental growth relation between the supremum modulus and the maximum term of an entire Dirichlet series. *Indian J. Pure Appl. Math.* **11** (1980), no. 7, 874-877. (C. Tanaka) **81h:30008** 30B50 (30D15)
- Ustulio, Subrahmanyan, M. B. On a class of restricted phase problems in the plane. *J. Math. Anal. Appl.* **72** (1979), no. 2, 654-665. (L. D. Berkovitz) **81f:49024** 49B36
- Ustulio, Subrahmanyan, P. V. An operator equation in a Tychonoff space. *Aequationes Math.* **20** (1980), no. 2-3, 166-169. (Kok Keong Tan) **81j:54081** 54H25 (39B70, 47H15)
- On the convergence of iterates. *Nonlinear Anal.* **4** (1980), no. 6, 1203-1211. (Shri Nivas Bhatt) **81k:40003** 40A05 (26A18, 47H99)
- Ustulio, Subrahmanyan, N. R. (with Chakrabarty, S. K.) Low-frequency and small perturbation equation for transonic flow past wings. *AIAA J.* **18** (1980), no. 9, 1147-1149. (From the introduction) **81j:76053** 76H05
- Ustulio, Subrahmanyan, Ramachandran (with Srinivasan, S. K.) Probabilistic analysis of redundant systems. *Lecture Notes in Economics and Mathematical Systems*, 175. Springer-Verlag, Berlin-New York, 1980. vii + 356 pp. ISBN 3-540-09736-8 (E. Arjas) **81d:60098** 60K10 (90B25)
- (with Ravichandran, N. J.) A complex two-unit system. (German summary) *Z. Oper. Res. Ser. A-B* **24** (1980), no. 3, A83-A90. (Authors' summary) **81d:90051** 90B25 (60K10)
- Ustulio, Subrahmanyan, K. (with Ghosh, J. K.; Sinha, Bimal Kumar) Edgeworth expansions for Fisher-consistent estimators and second order efficiency. *Calcutta Statist. Assoc. Bull.* **28** (1979), no. 109-112, 1-18. (Dana Vorlicková) **81k:6201a** 62E20 (62F12)
- (with Ghosh, J. K.; Sinha, Bimal Kumar) Addendum to: "Edgeworth expansions for Fisher-consistent estimators and second order efficiency". *Calcutta Statist. Assoc. Bull.* **28** (1979), no. 109-112, 171. (Editors) **81k:6201b** 62E20 (62F12)
- Ustulio, Sub-Sizonekko, Ju. A. Inversion of an integral operator by the method of expansion with respect to orthogonal Watson operators. (Russian) *Sibirsk. Mat. Zh.* **20** (1979), no. 2, 445-448, 462. (Hans-Jürgen Glaeske) **81f:44011** 44A15 (44A20, 45P05)
- Ustulio, Suchanocki, Zdzislaw (with Rosiński, Jan) A Gaussian random integral of vector-valued functions. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math. Astronom. Phys.* **26** (1978), no. 5, 437-440. (Authors' summary) **81k:60078** 60H05 (60G57)
- Ustulio, Sucher, J. Foundations of the relativistic theory of many-electron atoms. *Phys. Rev. A* **3** (1972), no. 2, 348-362. (Authors' summary) **81i:81105** 81G15
- Ustulio, Sucheston, Louis (with Millet, Annie) Classes d'amarts filtrants et conditions de Vitali. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **286** (1978), no. 19, A835-A837. (Authors' summary) **81c:60056** 60G48
- (with Millet, Annie) On the existence of e -finite invariant measures for operators. A collection of invited papers on ergodic theory. *Israel J. Math.* **33** (1979), no. 3-4, 349-367 (1980). (Richard Isaac) **81j:60073** 60J05 (28D05, 47B38)
- (with Millet, Annie) A characterization of Vitali conditions in terms of maximal inequalities. *Ann. Probab.* **8** (1980), no. 2, 339-349. (U. Krengel) **81g:60052** 60G48 (60G40)

- (with Millet, Annie) Convergence of classes of amarts indexed by directed sets. *Canad. J. Math.* 32 (1980), no. 1, 86–125. (U. Krengel) **81g:60051** 60G48
- Suchy, Kurt** (with Hebenstreit, Helmut) Polarization relations and dispersion equations for anisotropic moving media. *Z. Naturforsch. A* 34 (1979), no. 10, 1147–1157. (B. K. Datta) **81f:78013** 78A40 (10C05)
- Suchs, Gh.** (with Olaru, Elefterie) Dauerstabile und kritisch imperfekte Graphen. *An. Univ. Timisoara Ser. Ştiinţ. Mat.* 17 (1979), no. 1, 59–64. (Carsten Thomassen) **81f:05082** 05C15
- Suchs, Ion** Inner-outer factorization on multiply connected domains. *Complex analysis Joensuu 1978 (Proc. Colloq., Univ. Joensuu, Joensuu, 1978)*, pp. 387–397, *Lecture Notes in Math.*, 747, Springer, Berlin, 1979. (From the text) **81h:47024** 47A68 (30D50)
(with Valuşescu, Ilie) A linear filtering problem in complete correlated actions. *J. Multivariate Anal.* 9 (1979), no. 4, 599–613. (Tata Subba Rao) **81h:60059** 60G35 (47A20)
- Suchs, Nicolae** Boundedly absolutely continuous representations of function algebras. *An. Univ. Timisoara Ser. Ştiinţ. Mat.* 17 (1979), no. 1, 81–94. (M. Abel) **81h:46061** 46J25 (47A67)
- Suĭkov, M. V.** Some properties of spectral expansions corresponding to a second-order selfadjoint elliptic operator with discontinuous coefficients. (Russian) *Dokl. Akad. Nauk SSSR* 251 (1980), no. 6, 1314–1317. (M. A. Atahodžev) **81c:35094** 35P10 (47F05)
- Suĭkov, M. V.** See **Garcia-Sucre, M.**
- Sudarshan, E. C. G.** (with Chiu, C. B.; Gorini, Vittorio) Decaying states as complex energy eigenvectors in generalized quantum mechanics. *Phys. Rev. D* (3) 18 (1978), no. 8, 2914–2929. (D. I. Olive) **81h:81012** 81D99
(with Parravicini, Guido; Gorini, Vittorio) Resonances, scattering theory, and rigged Hilbert spaces. *J. Math. Phys.* 21 (1980), no. 8, 2208–2226. (W. O. Amrein) **81m:81057** 81F05 (47A40)
- (with Mukunda, N.; Sharma, J. K.; Mehta, C. L.) Representations and properties of para-Bose oscillator operators. I. Energy position and momentum eigenstates. *J. Math. Phys.* 21 (1980), no. 9, 2386–2394. (F. R. Halpern) **81h:81033** 81C40 (17B10, 22E70, 81D05)
- Sudborough, Ivan Hal** (with Monien, Burkhard) On eliminating nondeterminism from Turing machines which use less than logarithm workspace. *Automata, languages and programming (Sixth Colloq., Graz, 1979)*, pp. 431–445, *Lecture Notes in Comput. Sci.*, 71, Springer, Berlin, 1979. (Joel I. Seiferas) **81g:68070** 68C25
Efficient algorithms for path system problems and applications to alternating and time-space complexity classes. *21st Annual Symposium on Foundations of Computer Science (Syacuse, N.Y., 1980)*, pp. 62–73, IEEE, New York, 1980. (See **81h:68008**) **68C25**
- Sudbury, Aidan W.** (with Clifford, Peter) On the use of bounds in the statistical analysis of spatial processes. *Biometrika* 66 (1979), no. 3, 495–503. (Richard Holley) **81h:62099** 62M05
- Sudit, Ephraim F.** (with Kinberg, Yoram; Rao, Ambar G.) Optimal resource allocation between spot and package demands. *Management Sci.* 26 (1980), no. 9, 890–900. (Authors' summary) **81j:90003** 90A05 (90B05)
- Sudolok, Marián** A generalization of the friendship theorem. (Russian summary) *Math. Slovaca* 28 (1978), no. 1, 57–59. (Torrence D. Parsons) **81a:05116** 05C99
(with Fiby, R.; Sokol, J.) Efficient resolution theorem proving in the propositional logic. *CL & CL—Comput. Linguist. Comput. Lang.* 13 (1979), 151–168. (J. A. Kalman) **81j:68112** 68G15 (03B35)
- Sudolok, D.** Equilibrium situations in mixed strategies for a two-seller one-buyer market with bounded strategies for the buyers. (Russian. Lithuanian and English summaries) *Litovsk. Mat. Sb.* 19 (1979), no. 4, 191–201, 212. (Hildegard Dierker) **81e:90028** 90A14 (90D30)
- Suekane, Ryota** Early history of computing in Japan. *A history of computing in the twentieth century*, pp. 575–578, Academic Press, New York, 1980. (See **81h:68002**) **68-03** (01A65)
- Suetis, S. P.** Inverse theorems on generalized Padé approximations. (Russian) *Mat. Sb. (N.S.)* 109(151) (1979), no. 4, 629–646, 648. (Anthony G. O'Farrell) **81a:30072** 30E10 (41A21, 41A27)
On the Montessus de Ballore theorem for nonlinear Padé approximations of orthogonal expansions and Faber series. (Russian) *Dokl. Akad. Nauk SSSR* 253 (1980), no. 6, 1322–1325. (Hans-Jürgen Albrand) **81m:41015** 41A21
- Suffel, C. L.** The spanning subgraphs of Eulerian graphs. *Topics in graph theory (New York, 1977)*, pp. 193–200, *Ann. New York Acad. Sci.*, 328, New York Acad. Sci., New York, 1979. (Editors) **81c:05061** 05C45
- Suffridge, T. J.** A new criterion for starlike functions. *Indiana Univ. Math. J.* 28 (1979), no. 3, 429–443. (James A. Hummel) **81h:30024** 30C45
- Sufliata, Zbigniew** Identification of spatially-varying parameters in distributed systems using cubic splines. *Systems analysis and simulation, 1980 (Proc. Internat. Sympos., Berlin, 1980)*, pp. 190–194, Math. Research, 5, Akademie-Verlag, Berlin, 1980. (See **81j:93009**) **93B30**
A method for identification of a class of distributed systems with spatially-varying parameters. *Found. Control Engrg.* 5 (1980), no. 1, 31–44. (Author's summary) **81c:93029** 93B30
- Sugaw, F. V.** (with Fiskareva, M. V.) A special case of the density distribution behind an unsteady shock wave. (Russian) *Izv. Akad. Nauk SSSR Meh. Židk. Gaza* 1979, no. 6, 163–167. **81h:76035** 76L05
- Sugar, R. L.** (with Bronzan, J. B.) Thinning degrees of freedom in lattice field theories. *Phys. Rev. D* (3) 21 (1980), no. 6, 1564–1573. (Authors' summary) **81a:81050** 81E10 (82A67)
- Sugawa, Kazuki** (with Sato, Yoshiharu; Kawaguchi, Michiaki) The geometrical structure of the parameter space of the two-dimensional normal distribution. *Rep. Math. Phys.* 16 (1979), no. 1, 111–119. (Adhir K. Basu) **81g:62071** 62F99
- Sugawara, Kenji** (with Noguchi, Shoichi; Tanaka, Akio) Properties of analogue neural networks. *J. Cybernet.* 10 (1980), no. 4, 265–281. (H. C. Tuckwell) **81h:92015** 92A09 (45K05)
- Sugawara, Tami** Wu formulas for the mod 3 reduced power operations. *Mem. Fac. Sci. Kyushu Univ. Ser. A* 33 (1979), no. 2, 297–309. (Stanley Kochman) **81a:55028** 55R45 (55S10)
- A construction of Morse functions on flag manifolds. *Mem. Fac. Sci. Kyushu Univ. Ser. A* 34 (1980), no. 1, 107–125. (G. R. Belicki) **81d:57026** 57R70
- Sugie, Tōru** (with Miyazishi, Masayoshi) Affine surfaces containing cylinderlike open sets. *J. Math. Kyoto Univ.* 20 (1980), no. 1, 11–42. (M. H. Gizatullin) **81h:14029** 14J10 (14M20)
- Sugihara, Kōkichi** (with Iri, Masao) A mathematical approach to the determination of the structure of concepts. *Matrix Tensor Quart.* 30 (1979/80), no. 3, 62–75. (Manfred Kochen) **81h:92028** 92A25 (68H05)
- Sugihara, Souichi** Statistical estimation of the nonlinear regression model with autoregressive errors. *Kwansei Gakuin Univ. Annual Stud.* 25 (1976), 101–104. (Author's introduction) **81h:62111** 62J02 (62M10, 62P20)
- Sugimoto, Nobumasa** (with Majima, Yoshiyuki) Nonlinear third harmonic resonance of flexural waves on a waveguide of thin elastic plate. *J. Acoust. Soc. Amer.* 69 (1981), no. 2, 410–415. (Authors' summary) **81m:73032** 73D35
- Sugitani, Sadao** On the limit distributions of decomposable Galton-Watson processes. *Proc. Japan Acad. Ser. A Math. Sci.* 55 (1979), no. 9, 334–336. (P. E. Ney) **81h:60108** 60J80
On the smoothness of infinitely divisible distributions corresponding to some ordinary differential equations. *Proc. Japan Acad. Ser. A Math. Sci.* 55 (1979), no. 10, 371–374. (Lennart Bondesson) **81c:60013** 60E07 (60J80)
- Sugiyama, Masaru** A new approach to hard sphere system in equilibrium. I. General consideration. *Progr. Theoret. Phys.* 63 (1980), no. 5, 1484–1494. (Author's summary) **81g:82026a** 82A25
A new approach to hard sphere system in equilibrium. II. Three-dimensional hard sphere system. *Progr. Theoret. Phys.* 63 (1980), no. 5, 1495–1508. (Author's summary) **81g:82026b** 82A25
- Sugiyama, Takakazu** (with Itoh, Masashi) Estimation of the threshold parameter of the three parameter lognormal distribution. *Recent developments in statistical inference and data analysis (Proc. Internat. Conf., Inst. Statist. Math., Tokyo, 1979)*, pp. 159–163, North-Holland, Amsterdam, 1980. (See **81j:62009**) **62F10**
- Sugiyama, Yasso** (with Kasahara, Masao; Hirasawa, Shigeichi; Namekawa, Toshihiko) Superimposed concatenated codes. *IEEE Trans. Inform. Theory* 26 (1980), no. 6, 735–736. (Authors' summary) **81k:94031** 94B15
- Sugiyama, Yūji** (with Taniguchi, Kenichi; Matsuura, Toshio; Kasami, T.) On equivalence of safe Petri nets. *Fundamentals of computation theory (Proc. Conf. Algebraic, Arith. and Categorical Methods in Comput. Theory, Berlin/Wendisch-Rietz, 1979)*, pp. 430–436, Math. Research, 2, Akademie-Verlag, Berlin, 1979. (Dorothy Bollman) **81e:68074** 68D90 (68C25)
- Suhanov, E. V.** The closedness of semigroup varieties with respect to certain constructions. (Russian) *Ural. Gos. Univ. Mat. Zap.* 11 (1978), no. 1, 182–189, v. (Anna Ja. Alizmitia) **81a:20064** 20M07
On the closedness of semigroup varieties with respect to commutative bands. (Russian) *Ural. Gos. Univ. Mat. Zap.* 11 (1979), no. 3, Issled. po Sovremen. Algebr., 180–188, 213–214. (P. Goralčik) **81g:20109** 20M07
- Suharevskii, O. I.** Singularly perturbed mixed problems for hyperbolic systems. (Russian) *Theoretical and applied questions of differential equations and algebra (Russian)*, pp. 243–247, 272. "Naukova Dumka", Kiev, 1978. (L. E. Bobisud) **81h:35006** 35B25
- Suhli, L. I.** (with Eliseev, V. I.; Fleer, L. A.) Asymptotic method for solving problems with radial laminar jets of immiscible liquids. *Izv. Akad. Nauk SSSR Meh. Židk. Gaza* 1980, no. 3, 19–26. (Russian); translated as *Fluid Dynamics* 15 (1980), no. 3, 338–344. (Authors' summary) **81h:76021** 76D25 (76T05)
- Suhl, Uwe H.** (with Johnson, Ellis L.) Experiments in integer programming. *Discrete Appl. Math.* 2 (1980), no. 1, 39–55. (J. K. Lenstra) **81f:90071** 90C10 (65K05)
- Suhman, I. G.** (with Poljachenko, V. L.) Nonlinear waves in collisionless gravitating systems. *Astronom. Zh.* 56 (1979), no. 5, 957–964. (Russian); translated as *Soviet Astronom.* 23 (1979), no. 5, 539–543. (Authors' summary) **81a:85003** 85A05 (76B25)
- Suhomila, N. B.** (with Bagrov, V. G.; Gitman, D. M.; Šapovalov, A. V.; Šapovalov, V. N.) New exact solutions of the Dirac equation. VII. (Russian) *Izv. Vysš. Učebn. Zaved. Fizika* 1977, no. 7, 46–51. (Authors' summary) **81a:81015a** 81C05
(with Bagrov, V. G.; Gitman, D. M.; Zadorožnyi, V. N.; Šapovalov, V. N.) New exact solutions of the Dirac equation. VIII. (Russian) *Izv. Vysš. Učebn. Zaved. Fizika* 1978, no. 2, 13–18. (Authors' summary) **81a:81015b** 81C05
- Suhorol'skii, M. A.** (with Peleh, B. L.) ★ Контактные задачи теории упругих анизотропных оболочек. (Russian) [Contact problems of the theory of elastic anisotropic shells] "Naukova Dumka", Kiev, 1980. 215 pp. (Vadim Komkov) **81d:73071** 73T05
(with Peleh, B. L.) A method for the approximation of a function and its first derivative by Legendre polynomials and its applications. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A No. 3* (1980), 26–29, 90. (T. Hermann) **81d:43033** 42C10 (41A10)
(with Bardin, B. I.; Boicun, S. A.) Reduction of a class of differential equations. (Russian) *Vestnik L'vov. Politehn. Inst. No. 141 Differentsial'nye Uravnenija i ih Prilozhen.* (1980), 85–86, 124. (Authors' summary) **81h:35009** 35A22
- Suhorukov, A. P.** (with Hohlov, R. V.) Asymptotic methods for partial differential equations. (Russian) *Proceedings of an All-Union Conference on Partial Differential Equations (Moscow State Univ., Moscow, 1976)* (Russian), pp. 223–226, Moskov. Gos. Univ., Meh.-Mat. Fakul'tet, Moscow, 1978. (See **80f:35002**) **35C20**
- Suhorukov, G. A.** Planning of production and development in hierarchical control systems. (Russian) *Models and methods for the analysis of economic goal-directed systems* (Russian), pp. 58–71, "Nauka" Sibirsk. Otdel., Novosibirsk, 1977. (From the introduction) **81h:90101** 90B30 (90A11, 93A13)
- Suhorutchenko, I. I.** Programmably categorical abelian p -groups. I, II. (Russian) *The theory of nonregular curves in various geometric spaces* (Russian), pp. 77–83, 84–90, Kazakh. Gos. Univ., Alma-Ata, 1979. (M. A. Tačlin) **81f:63048** 03C60 (20A15)
- Suhov, A. G.** Entropy of diagonalizable states of von Neumann algebras. (Russian) *Funkcional. Anal. i Prilozhen.* 14 (1980), no. 2, 95–96. (Robert S. Doran) **81h:46071** 46L50
- Suhov, Ju. M.** (with Kel'bert, M. Ja.) ★ Asymptotic analysis of star-like packet switching networks. With German and Russian summaries. *Wissenschaftliche Sitzungen zur Stochastik, 2. Akademie der Wissenschaften der DDR, Zentralinstitut für Mathematik und*

- Mechanik, Berlin*, 1979, 41 pp. (I. A. Melamed) **81a:60105** 60K25 (94C10)
(with Dobrušin, R. L.) Asymptotic behavior for some degenerate models of the time evolution of systems with an infinite number of particles. (Russian) *Current problems in mathematics*, Vol. 14 (Russian), pp. 148-254, 256 (loose errata), Akad. Nauk SSSR, Vsesojuz. Inst. Nauchn. i Tehn. Informacii, Moscow, 1979. (B. S. Nahapetjan) **81j:20003** 82A05
- (with Kel'bert, M. Ja.) One class of star-shaped communication networks with packet switching. *Problemy Peredaci Informacii* **15** (1979), no. 4, 53-72 (Russian); translated as *Problems Inform. Transmission* **15** (1979), no. 4, 286-300 (1980). (Authors' summary) **81g:68004** 68A05 (94C10)
- See also Glimm, James G.; et al., (See **81f:81002**); Glimm, James G.; et al., (See **81f:81002**) and Glimm, James G.; et al., (See **81f:81002**)
- Suhbuddin, S. (with Husain, D.) Nonlocal potentials and positive energy bound states. *J. Phys. A* **13** (1980), no. 5, L141-L142. (Authors' summary) **81d:81004** 81F05 (35P25)
- Suhubi, E. S. (with Oğuztöreli, Mehmet Namik; Leung, K. V.) Wave propagation in dissipative or dispersive nonlinear media: a numerical approach. *Appl. Math. Comput.* **6** (1980), no. 4, 309-334. (P. M. Gupta) **81j:76012** 76B15 (65P05)
- (with Oğuztöreli, Mehmet Namik; Teymur, M.) An initial value problem in the theory of nonlinear wave propagation. *Nonlinear Anal.* **4** (1980), no. 4, 781-789. (Alan Jeffrey) **81g:35000** 35L67 (73B15)
- Suita, Nobuyuki (with Jenkins, James A.) On the Pick-Nevanlinna problem. *Kodai Math. J.* **2** (1979), no. 1, 82-102. (A. I. Heifich) **81b:30009** 30E05
- (with Kobayashi, Shōji) On subordination of subharmonic functions. *Kodai Math. J.* **3** (1980), no. 2, 315-320. (Lung Ock Chung) **81m:31005** 31C05
- Szűcs, S. On the integral representation of the entropy rate. *Studia Sci. Math. Hungar.* **11** (1976), no. 1-2, 25-36 (1978). (Author's summary) **81m:28020** 28D20 (82A05, 94A17)
- Ergodic theory and information in classical lattice systems. *Transactions of the Eighth Prague Conference on Information Theory, Statistical Decision Functions, Random Processes* (Prague, 1978), Vol. B, pp. 247-257, Reidel, Dordrecht, 1978. (J. Fritz) **81e:60062** 60G60 (60K35, 82A05)
- Epsilon-rates, epsilon-quantiles, and group coding theorems for finitely additive information sources. *Kybernetika* (Prague) **16** (1980), no. 2, 105-119. (Author's summary) **81j:94014** 94A29
- Generators of an abelian group of invertible measure-preserving transformations. *Monatsh. Math.* **90** (1980), no. 1, 67-79. (Manfred Denker) **81m:28021** 28D20
- Szűcs, A. M. (with Atahodzaev, M. A.) The Cauchy problem for a fourth-order operator-differential equation. (Russian) *Differential equations and their applications* (Russian), pp. 97-109, 168, "Fizmatgiz", Tashkent, 1979. (K. Goebel) **81k:34050** 34G10
- Szűcs, N. H. The problem of torsion of a reinforced cylinder under finite deformation. (Russian) *Dokl. Akad. Nauk UzSSR* **1980**, no. 7, 20-24. (M. Mišicu) **81k:73029** 73G05 (73K05)
- Szűcs, S. (with Srivastava, S. K.) Approximate two-fold generating function of photocounts of Gaussian light. *Phys. Lett. A* **66** (1978), no. 3, 164-166. (Authors' summary) **81m:81092** 81K05
- Szűcs, B. (with S. V. See Fuller, Wayne A., **81a:01034**)
- Szűcs, L. I. See Szűcs, L. I.
- Szűcs, Yu. M. See Szűcs, Yu. M.
- Szűcs, Indulata Generalization of a theorem of McFadden. *Pacific J. Math.* **82** (1979), no. 2, 539-545. (Gokulananda Das) **81e:40004** 40D25
- Szűcs, J. M. (with Kružkov, S. N.) Boundary value problems for systems of equations of two-phase filtration type; formulation of problems, questions of solvability, justification of approximate methods. (Russian) *Mat. Sb. (N.S.)* **104(146)** (1977), no. 1, 69-88, 175-176. (Authors' summary) **81f:35105** 35Q20 (76S05)
- Szűcs, F. A. (with Ail'diev, A. I.) Numerical solution of boundary value problems for second-order degenerate ordinary differential equations. (Russian. Tajiki summary) *Dokl. Akad. Nauk Tadžik. SSR* **22** (1979), no. 12, 707-711. (I. P. Gavriljuk) **81g:65105** 65L10
- Szűcs, T. G. (with Piranavili, Z. A.; Alanidi, N. P.) Explicit formulas for the optimal linear predictor and its mean square error for a stationary sequence. (Russian. Georgian and English summaries) *Soobšč. Akad. Nauk Gruz. SSR* **93** (1979), no. 1, 37-40. (M. I. Jadrenko) **81j:60051** 60G25
- Szűcs, A. V. See Norden, A. P.; et al., **81m:01071**
- Szűcs, N. M. Behavior of the solutions of second-order nonlinear elliptic equations with a linear principal part. (Russian) *Dokl. Akad. Nauk SSSR* **247** (1979), no. 4, 805-809. (R. Guenther) **81a:35022** 35J15
- The Wiman-Valiron-type estimates for the solutions of parabolic equations. (Russian) *Dokl. Akad. Nauk SSSR* **250** (1980), no. 3, 577-580. (A. D. Ziebur) **81j:34056** 34G10
- Wiman-Valiron-type estimates for power series with a finite radius of convergence and their exactness. (Russian) *Dokl. Akad. Nauk SSSR* **253** (1980), no. 4, 822-824. (C. Tanaka) **81j:30007** 30B10 (30B30)
- Szűcs, Catherine (with Sulem, Pierre Louis) Un résultat d'existence en magnétohydrodynamique des gaz unidimensionnelle. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **290** (1980), no. 10, B207-B210. (E. G. Broadbent) **81d:76110** 76W05 (35L67)
- Szűcs, Pierre Louis (with Sulem, Catherine) Un résultat d'existence en magnétohydrodynamique des gaz unidimensionnelle. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **290** (1980), no. 10, B207-B210. (E. G. Broadbent) **81d:76110** 76W05 (35L67)
- Szűcs, K. Z. Condition for the external hydrodynamic effect for a rotating body of revolution partially submerged in a fluid. (Bulgarian. Russian and English summaries) *Godišnik Viz. Učebn. Zaved. Prirodna Mat.* **14** (1978), no. 1, 181-194. (Author's summary) **81j:76014** 76C05
- Existence of a near-potential boundary sublayer in the boundary layer in rotation of a body of revolution in a fluid. (Bulgarian. Russian and English summaries) *Godišnik Viz. Učebn. Zaved. Tehn. Meh.* **13** (1978), no. 2, 185-194 (1979). (From the summary) **81m:76022** 76D99
- Szűcs, D. D. Some properties of ordered α -spaces. (Russian) *Taškent. Gos. Univ. Sb. Nauch. Trudov* No. 573 *Funkcional. Anal.* (1978), 96-102, 112. (T. A. Sarymsakov) **81b:46012** 46A40
- Szűcs, Ju. N. (with Matina, N. I.) On the question of optimization of the functioning of a three-dimensional network with moving servicing devices. (Russian) *Akad. Nauk Ukrain. SSR Inst. Kibernet. Preprint* **1978**, no. 80 *Modelir. Optimiz. Protsed. Proc.*, 3-14, 49. (I. Văduva) **81b:68049** 68C15 (60K25, 90B15, 90B22)
- (with Skripnik, V. M.) Servicing customers on a closed contour with bounded waiting time. (Russian) *Akad. Nauk Ukrain. SSR Inst. Kibernet. Preprint* **1978**, no. 80 *Modelir. Optimiz. Protsed. Proc.*, 25-34, 50. (Authors' summary) **81g:60097** 60K25
- Szűcs, A. M. (with Andreev, A. S.; Šančenko, N. I.) Application of the averaging method and the method of Ljapunov functions in the investigation of the motion of some mechanical systems. (Russian) *Theory of stability and its applications* (Russian), pp. 157-163, 301, "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. (Authors' summary) **81k:93071** 93D20 (34C29, 70F07)
- Szűcs, Ion (with Gurtin, Morton E.; Williams, William O.) On rate-type constitutive equations and the energy of viscoelastic and viscoplastic materials. *Internat. J. Solids and Structures* **16** (1980), no. 7, 607-617. (Authors' summary) **81d:73035** 73E99 (73B05, 73F99)
- Szűcs, G. T. (with Grilic'kić, D. V.; Evtušenko, A. A.) A half-plane with a linear elastic inclusion of arbitrary orientation. (Russian. Armenian and English summaries) *Izv. Akad. Nauk Armjan. SSR Ser. Meh.* **33** (1980), no. 1, 12-20, 78. (M. O. Balelišvili) **81j:73020** 73C40
- Szűcs, Robert Remark on partially ordered sets, universal algebras and semigroups. (Russian summary) *Math. Slovaca* **29** (1979), no. 2, 131-139. (P. Goralčík) **81g:06004** 08A30 (06A10, 20M12)
- Szűcs, L. J. (with Dodson, C. T. J.) On bundle completion of parallelizable manifolds. *Math. Proc. Cambridge Philos. Soc.* **87** (1980), no. 3, 523-525. (Paul E. Ehrlich) **81f:53048** 53C50 (83F05)
- Szűcs, Dennis Hyperbolic geometry and homeomorphisms. *Geometric topology* (Proc. Georgia Topology Conf., Athens, Ga., 1977), pp. 543-555, Academic Press, New York, 1979. (C. Stark) **81m:57012** 57N99 (30C60, 57Q25, 57R15, 58A12, 58G10)
- Rufus Bowen (1947-1978). *Inst. Hautes Études Sci. Publ. Math.* No. 50 (1979), 7-9 (1 plate). (Editors) **81k:01049** 01A70
- The density at infinity of a discrete group of hyperbolic motions. *Inst. Hautes Études Sci. Publ. Math.* No. 50 (1979), 171-202. (Troels Jørgensen) **81b:58031** 58F17 (22E40, 28C10, 30C85)
- Szűcs, Francis E. (with Hagler, James) Smoothness and weak* sequential compactness. *Proc. Amer. Math. Soc.* **78** (1980), no. 4, 497-503. (T. Figiel) **81a:46010** 46B05
- Szűcs, J. (with Crone, L.; Jaliczek, J.) Approximation of the unit step function by a linear combination of exponential functions. *J. Approx. Theory* **28** (1980), no. 4, 299-308. (R. Franke) **81m:41021** 41A30 (65D10)
- Szűcs, John J. Generalized back coupling rules for the Racah algebra of GL_n . *J. Math. Phys.* **21** (1980), no. 2, 227-233. (T. Janssen) **81f:20018** 20C35 (22E70, 81C40)
- Szűcs, Paul J. (with Chatwin, P. C.) Some turbulent diffusion invariants. *J. Fluid Mech.* **97** (1980), no. 2, 405-416. (Authors' summary) **81a:76041** 76R99 (76F99)
- Szűcs, Robert S. (with Hayya, Jack C.) A comparison of the method of bounding distributions (MBD) and Monte Carlo simulation for analyzing stochastic acyclic networks. *Oper. Res.* **28** (1980), no. 3, part 1, 614-617. (Authors' summary) **81d:90064** 90B35 (68J05)
- Szűcs, Wayne G. (with Flood, R. G.) Consistency of random field specifications. *Z. Wahrsch. Verw. Gebiete* **53** (1980), no. 2, 147-156. (J. Theodore Cox) **81m:60178** 60K35 (82A67)
- Szűcs, V. S. (with Barauskas, Arunas; Žilinskas, Antanas; Piljavič, Valerij; Julkėns, Elena) Investigation of optimization problems in synthesis of pigment compositions. (Russian. Lithuanian and English summaries) *Teor. Optimal. Rešenij—Trudy Sem. Processy Optimal. Upravlenija VI Sekcija* No. 6 (1980), 57-74, 155. (Authors' summary) **81j:90136** 90C50 (92A27)
- Szűcs, Z. P. (with Volcenok, V. F.) Convective dissipative heat exchange in generalized Couette flow of a nonlinearly viscoplastic liquid. *Int.-Fiz. Ž.* **37** (1979), no. 1, 50-58 (Russian); translated as *J. Engng. Phys.* **37** (1979), no. 1, 790-796 (1980). (S. Bhargava) **81k:80003** 80A20 (76A05)
- Szűcs, L. L. (with Petrašen, P. V.; Čuhovskij, F. N.) The physical foundations of the computer simulation of X-ray traverse topographs. *Acta Cryst. Sect. A* **36** (1980), no. 2, 287-295. (Authors' summary) **81m:92011** 92A07 (44A15, 68G10, 78A45)
- Szűcs, A. (with Bachman, G.) Applications of functional analysis to topological measure theory. *Operator theory and functional analysis* (Papers, Summer Meeting, Amer. Math. Soc., Providence, R.I., 1978), pp. 122-164, *Res. Notes in Math.*, **38**, Pitman, San Francisco, Calif., 1979. (Robert F. Wheeler) **81b:28016** 28C05 (46N05)
- Szűcs, U. M. ★Методы сферических гармоник и дискретных ординат в задачах кинетической теории переноса. (Russian) [Methods of spherical harmonics and discrete ordinates in problems of kinetic transport theory] Edited and with a preface by G. I. Marčuk. "Nauka" Kazah. SSR, Alma-Ata, 1979, 268 pp. (Janusz Mika) **81k:20056** 82A70 (35C10, 45K05, 82A40)
- Szűcs, M. B. Wave functions and the spectrum of electrons in a bounded crystal. (Russian. English summary) *Teoret. Mat. Fiz.* **44** (1980), no. 1, 127-137. (Author's summary) **81k:20045** 82A60
- Szűcs, S. M. Coding of the logical operation of bit-by-bit inversion by generalized correcting codes. (Russian) *Voprosy Kibernet. (Tashkent)* No. 107 (1979), 131-133, 172-173. (Author's summary) **81d:94025** 94B35
- Szűcs, Stanisław (with Palej, Marian) Properties of a transformation of a sphere. (Polish. Russian and English summaries) *Zeszyty Nauk. Politech. Śląsk. Mat.-Fiz.* No. 35 (1979), 179-183. (E. Otto) **81b:51019** 51M15
- Šum, A. A. Propositional semantic systems. (Russian) *Semiotics and information science*, No. 11 (Russian), pp. 88-116 (errata insert), *Akad. Nauk SSSR, Vsesojuz. Inst. Nauchn. i Tehn. Informacii, Moscow*, 1979. (M. Rogava) **81k:03057** 03B60 (03G25)
- Szűcs, A. S. Integrals that are linear with respect to velocity. Generalization of Jacobi's theorem. (Russian) *General mechanics*, Vol. 4 (Russian), pp. 3-57, 143, *Akad. Nauk SSSR, Vsesojuz. Inst. Nauchn. i Tehn. Informacii, Moscow*, 1979. (B. Vujanović) **81j:70016** 70H20 (49C10)
- Cyclic coordinates of conservative dynamical systems with two degrees of freedom.

- (Russian) *Theory of stability and its applications* (Russian), pp. 214–221, 303, "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. (Z. Janković) **81c:70011** 70H35 (34C35)
- Sumeckii, M. Ju. Probability of tunneling through heterogeneous potential barriers. (Russian. English summary) *Teoret. Mat. Fiz.* 45 (1980), no. 1, 64–75. (Author's summary) **81c:81040** 81C99
- Sumioka, Takeshi On finite-dimensional QF-3' rings. *Proceedings of the 10th Symposium on Ring Theory (Shinsu Univ., Matsumoto, 1977)*, pp. 99–105, Okayama Univ., Okayama, 1978. (E. A. Rutter) **81c:16025** 16A36
- On nonsingular QF-3' rings with injective dimension ≤ 1 . *Osaka J. Math.* 15 (1978), no. 1, 1–11. (E. A. Rutter) **81c:16026** 16A36
- Summers, D. Summary of solutions to the spherically symmetric accretion and stellar wind problems. *Astrophys. and Space Sci.* 73 (1980), no. 1, 3–9. (Author's summary) **81c:85007** 85A20
- Spurious solutions of the Navier-Stokes equations. *Astrophys. J.* 241 (1980), no. 1, part 1, 468–473. (William H. H. Banks) **81c:76019** 76D05 (65P05, 85A99)
- Polytropic solutions to the problem of spherically symmetric flow of an ideal gas. (French summary) *Canad. J. Phys.* 58 (1980), no. 8, 1085–1092. (From the summary) **81g:76082** 76N15
- Šumovskii, A. S. (with Kudrjavev, K.) On a modification of the Dicke model. *Optica Acta* 26 (1979), no. 7, 827–830. (English summary) **81a:81131** 81K05 (82A25)
- Sun, Hong Zhou (with Song, Xing Chang; Han, Qi Zhi) Irreducible representations of the graded Lie algebra $SU(2/1)$. A translation of *Kexue Tongbao* (Chinese) 25 (1980), no. 3, 105–110. *Kexue Tongbao (English)* 25 (1980), no. 3, 201–207. (Hans Tilgner) **81j:17008** 17A70 (81C40)
- Sun, Ji Guang Singular integral equations on a closed smooth manifold. (Chinese. English summary) *Acta Math. Sinica* 22 (1979), no. 6, 675–692. (P. S. Chee) **81f:32031** 32H10 (45E99)
- Invariant subspaces and generalized invariant subspaces. I. Existence and uniqueness theorems. (Chinese. English summary) *Math. Numer. Sinica* 2 (1980), no. 1, 1–13. (Author's summary) **81j:15010** 15A18 (65F15)
- Sun, Shou Hua A class of Banach algebras with \ast -subalgebras and its applications. (Chinese) *Kexue Tongbao* 24 (1979), no. 9, 385–388. (From the text) **81c:46074** 46K05 (47G05)
- (with Bai, Dong Hua) A prediction problem in theory of fluid dynamics in naturally fractured reservoirs. *Sci. Sinica* 1979, Special Issue II on Math., 204–221. (Harald E. Kroghstad) **81h:76039** 76N10 (46E35, 47B25)
- Sun, Tse Chien A finite element method for random differential equations with random coefficients. *SIAM J. Numer. Anal.* 16 (1979), no. 6, 1019–1035. (Charlie H. Cooke) **81c:65054** 65L99 (34F05)
- Sun, Xia (with Li, Tie Cheng; Woo, Chia Wei) Theory of quantum solids: effect of lattice symmetry and anisotropy in the pair-correlation function. *Phys. Rev. B* 3 (1980), no. 7, 3230–3241. (Authors' summary) **81j:82061** 82A55
- Sunada, Toshikazu Trace formula for Hill's operators. *Duke Math. J.* 47 (1980), no. 3, 529–546. (B. A. Kupershmidt) **81k:58039** 58F07 (34B30, 35P20, 35Q20)
- Sunaga, Teruo (with Kondo, Eiji; Sakamoto, Ryuji) Design of single linear functional filters. *Internat. J. Control* 30 (1979), no. 4, 565–579. (Norman P. Coleman, Jr.) **81c:93096** 93E11 (93E20)
- Sunahara, Y. (with Aihara, S.; Ikeda, Y.) On a method for parameter identification of stochastic systems under scanty observations. *Identification and system parameter estimation (Proc. Fourth IFAC Symp., Tbilisi, 1976)*, Part 3, pp. 1681–1690, North-Holland, Amsterdam, 1978. (See **80d:93010c**) 93B35
- Sumece, V. N. Stabilizability of a multidimensional object in the absence of data on some of its coordinates. (Russian) *Dynamics of control systems (Third All-Union Ceteac Conf., Irkutsk, 1977)* (Russian), pp. 269–277, 343, "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. (Author's summary) **81c:93072** 93D99
- Sund, T. On the structure of solvable Lie algebras. *Math. Scand.* 44 (1979), no. 2, 235–242. (Jouko Mickelsson) **81a:17006** 17B30
- Sundaram, Kokila On a representation of W_{∞} -transformable distributions. *Ranchi Univ. Math. J.* 8 (1977), 91–98 (1978). (E. Gesztesy) **81g:46051** 46F12 (44A15)
- Sundararaj, N. A method for confidence regions for nonlinear models. *Austral. J. Statist.* 20 (1978), no. 3, 270–274. (Hans-Peter Höschel) **81f:62105** 62J02
- Sundararaman, D. Value distribution in several complex variables. *Hyperbolic complex analysis (Proc. All India Sem., Ramanujan Inst., Univ. Madras, Madras, 1977)*, pp. 80–111, Publ. Ramanujan Inst., 4, Univ. Madras, Madras, 1979. (James A. Carlson) **81c:32050** 32H30
- Sundaresan, K. (with Chivukula, R. Rao) Finite representation of Banach spaces—smoothness. *J. Math. Anal. Appl.* 72 (1979), no. 2, 435–445. (R. C. James) **81h:46016** 46B10 (46B20)
- Sundaresan, S. (with Amundson, Neal R.; Aris, Rutherford) Observations of fixed-bed dispersion models: the role of the interstitial fluid. *AIChE J.* 26 (1980), no. 4, 529–536. (P. M. Gupta) **81m:80006** 80A20
- Sundt, Björn An insurance model with collective seasonal random factors. (German, French and Italian summaries) *Mitt. Verein. Schweiz. Versicherungsmath.* 79 (1979), no. 1, 57–64. (Hans U. Gerber) **81b:62114** 62P05
- Credibility and relative exchangeability. *Scand. Actuar. J.* 1979, no. 1, 45–51. (H. L. Seal) **81a:62105** 62P05
- A multilevel hierarchical credibility regression model. *Scand. Actuar. J.* 1980, no. 1, 25–32. (Gregory Taylor) **81g:62173** 62P05
- Šunkov, V. P. (with Sozotov, A. I.) Infinite groups saturated by Frobenius subgroups. II. (Russian) *Algebra i Logika* 18 (1979), no. 2, 206–223, 254. (B. Hartley) **81h:20046** 20F50 (20E25)
- Sunley, Judith S. Prime discriminants in real quadratic fields of narrow class number one. *Number theory, Carbondale 1979 (Proc. Southern Illinois Conf., Southern Illinois Univ., Carbondale, Ill., 1979)*, pp. 294–301, *Lecture Notes in Math.*, 751, Springer, Berlin, 1979. (J. C. Lagarias) **81c:12011** 12A45
- Sunouchi, G. Saturation of certain trigonometric interpolation polynomials. *The theory of the approximation of functions (Proc. Internat. Conf., Kahua, 1975)* (Russian), pp. 346–351, "Nauka", Moscow, 1977. (Editors) **81g:42007** 42A10 (41A40)
- Suominen, Kalevi (with Walczak, Paweł) Chern characteristic classes of vector bundles. *Proceedings of the First Finnish-Polish Summer School in Complex Analysis (Podlesice,*
- 1977), Part II, pp. 45–59, Univ. Łódź, Łódź, 1978. (James B. Carrell) **81b:58003** 58A12 (57R20)
- Supino, Giulio See Graffi, Dario, **81k:01035**
- Supowit, Kenneth J. (with Plaisted, David A.; Reingold, Edward M.) Heuristics for weighted perfect matching. *Conference Proceedings of the Twelfth Annual ACM Symposium on Theory of Computing (Los Angeles, Calif., 1980)*, pp. 398–419, ACM, New York, 1980. (See **81f:68006**) 68E10 (68C25, 90B35, 90C35)
- Suppes, Patrick Current trends in computer-assisted instruction. *Advances in computer*, Vol. 18, pp. 173–229, Academic Press, New York, 1979. (See **81f:68004**) 68G99
- Self-profile. *Patrick Suppes*, pp. 3–56 (1 plate), *Profiles*, 1, Reidel, Dordrecht, 1979. (See **80m:01040**) 01A70
- Logical inference in English: a preliminary analysis. *Studia Logica* 38 (1979), no. 4, 375–391. (John Bacon) **81m:03038** 03B99 (68F20)
- See also Bibliography: Suppes, Patrick, (See **80m:01040**); Jamison, Dean T., (See **80m:01040**); Batchelder, William H.; et al., (See **80m:01040**); Grandy, Richard E., (See **80m:01040**); Rosenkrantz, Roger D., (See **80m:01040**); Luce, R. Duncan, (See **80m:01040**); and Moulins, Carlos-Ulises; et al., (See **80m:01040**)
- Suprun, V. P. (with Novikov, S. V.) A lower bound for the number of inputs of micromodules in minimal circuits. (Russian. English and German summaries) *Elektron. Informatsionverarb. Kibernet.* 15 (1979), no. 5–6, 265–270. (Authors' summary) **81a:94063** 94C10
- Suprunenko, D. A. Monomial minimal irreducible groups. (Russian) *Algebra, number theory and their applications. Trudy Mat. Inst. Steklov.* 148 (1978), 225–232, 271. (Yasuhiro Asoo) **81c:20049** 20G15 (20E07)
- Nilpotent matrices and unipotent matrix groups over a division ring. (Russian. English summary) *Vesci Akad. Nauk BSSR Ser. Fiz.-Mat. Nauki* 5 (1979), no. 5, 5–10, 138. (A. I. Škuratskii) **81k:20069** 20H25 (15A33)
- Šur, M. G. An analogue of the ratio limit theorem in the case of parts of a recurrent chain. (Russian) *Mat. Zametki* 27 (1980), no. 1, 129–136, 159. (Arthur O. Pittenger) **81k:60067** 60J05
- Šurabivili, L. A. (with Kipsidze, K. S.) Ein Beitrag zur Untersuchung eines räumlichen fünfgliedrigen Getriebes. *Wiss. Z. Tech. Univ. Dresden* 28 (1979), no. 6, 1483–1486. (O. Bottema) **81c:51029** 51N05 (70B15)
- Šura-Bura, A. Ė. Approximate solution of the problem of optimal standby by the method of dynamic programming. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* 1979, no. 4, 39–44, 218 (Russian); translated as *Engrg. Cybernetics* 17 (1979), no. 4, 31–36 (1980). (Author's summary) **81k:90045** 90B25
- Surányi, János Some proofs about the uniqueness of the prime number factorization of the integers. (Hungarian) *Mat. Lapok* 27 (1976/79), no. 3–4, 213–226. (Péter Kiss) **81c:10003** 10A05 (10–03)
- Surányi, László On a generalization of line-critical graphs. *Discrete Math.* 30 (1980), no. 3, 277–287. (J. Richard Lundgren) **81c:05121** 05C99
- Suranyi, P. (with Halliday, I. G.) Anharmonic oscillator: a new approach. *Phys. Rev. D* 3 (1980), no. 6, 1529–1537. (Authors' summary) **81a:81135** 81C99 (81C99)
- to Surdo, Camillo See Lo Surdo, Camillo
- Surendran, K. (with Sivanandam, S. N.) Stability of large scale systems—algebraic criteria. *Simulation of distributed-parameter and large-scale systems (Proc. IMACS European Simulation Meeting, Univ. Patras, Patras, 1979)*, pp. 149–153, North-Holland, Amsterdam, 1980. (Authors' summary) **81k:93058** 93D99 (93A15)
- Šurenkov, V. M. (with Ešov, I. I.) Branching processes in a random environment. (Russian) *Analytical methods of probability theory (Russian)*, pp. 114–117, 154, "Nauka Dumka", Kiev, 1979. (P. Jagers) **81c:60064** 60J80
- Additive functionals of branching processes. (Russian. English summary) *Teor. Veroyatnost. i Primenen.* 24 (1979), no. 2, 389–394. (A. Spätaru) **81f:60117** 60J80 (60K99)
- (with Eleiko, Ja. I.) Limit distributions of time averages of a semi-Markov process with a finite number of states. (Russian) *Ukrain. Mat. Ž.* 31 (1979), no. 5, 598–603, 622. (Serban Grigorescu) **81c:60097** 60K15
- Surgailis, D. On trajectories of Gaussian Markov random fields. *Probability theory (Papers, VIIIth Semester, Stefan Banach Institute. Math. Center, Warsaw, 1976)*, pp. 231–247, Banach Center Publ., 5, PWN, Warsaw, 1979. (Loren D. Pitt) **81k:60051** 60G17 (60G60)
- Šurgaja, A. V. The Dirac method and N. N. Bogoljubov transformations in the scalar theory. (Russian. Georgian and English summaries) *Sovetsk. Akad. Nauk Gruz. SSR* 95 (1979), no. 1, 65–68. (V. V. Sokolov) **81k:81081** 81E99 (35A30)
- Suri, Rajan (with Ho, Yu Chi) Resource management for large systems: concepts, algorithms, and an application. *IEEE Trans. Automat. Control* 25 (1980), no. 4, 651–662. (Authors' summary) **81i:90058** 90A30 (93A15)
- Šurjak, E. V. Quantum chromodynamics and the theory of superdense matter. *Phys. Rep.* 61 (1980), no. 2, 71–158. (Author's summary) **81c:81061** 81G05 (82A25)
- Surta, Katarina The numerical solution of the Fredholm integral equation by spline approximations. (Serbo-Croatian. English summary) *Univ. u Novom Sadu Zb. Rad. Prirod.-Mat. Fak.* 8 (1978), 113–119. (Author's summary) **81b:65124** 65R20
- On the exit criterion for interpolational quadrature formulas. (Serbo-Croatian. English summary) *Univ. u Novom Sadu Zb. Rad. Prirod.-Mat. Fak.* 8 (1978), 121–124. (Author's summary) **81a:65032** 65D30
- Surovskii, David B. Degrees of irreducible characters of (B, N) -pairs of types E_6 and E_7 . *Trans. Amer. Math. Soc.* 243 (1978), 235–249. (Author's summary) **81g:20019** 20C15 (16A25)
- The reflection character of the finite symplectic and odd-dimensional orthogonal groups. *Comm. Algebra* 7 (1979), no. 16, 1747–1757. (R. H. Dye) **81a:20048** 20G05
- Survillo, G. S. Cesàro summability of series with respect to periodic multiplicative orthonormal systems. (Russian) *Sibirsk. Mat. Ž.* 21 (1980), no. 1, 161–167, 238. (Włodzimierz Lenski) **81c:42012** 42A24 (40G05)
- Suryanarayana, D. On the average order of the function $E(x) = \sum_{n \leq x} \varphi(n) - 3x^2/\pi^2$. *Indian Math. Soc. (N.S.)* 42 (1978), no. 1–4, 179–195 (1979). (T. M. Apostol) **81a:10039** 10H25
- On the order of the error function of the square-full integers. *Period. Math. Hungar.* 10 (1979), no. 4, 261–271. (M. Ram Murty) **81i:10054** 10H15 (10H25)
- (with Pomerance, Carl) On a problem of Evelyn-Linfoot and Page in additive

- number theory. *Publ. Math. Debrecen* 26 (1979), no. 3-4, 237-244. (Karl-Heinz Indlekofer) **81g:10666** 10J20
- Suryanarayana, M. B. (with Cesari, Lamberto) An existence theorem for Pareto problems. *Nonlinear Anal.* 2 (1978), no. 2, 225-233. (Authors' introduction) **81g:49068** 49A27 (90A14)
- (with Cesari, Lamberto) Existence theorems for Pareto optimization; multivalued and Banach space valued functionals. *Trans. Amer. Math. Soc.* 244 (1978), 37-65. (Authors' summary) **81h:49007** 49A36 (90A14)
- Suryin, V. A. The structure of constructive sets with equality. (Russian) *Studies in the theory of algorithms and mathematical logic (Russian)*, pp. 115-130, 134, "Nauka", Moscow, 1979. (Max I. Kanovich) **81h:03116** 03F65
- Suryin, V. V. Totally geodesic subspaces in spaces over algebras. (Russian) *Trudy Geom. Sem. Kazan. Univ.* No. 10 (1978), 128-139. (P. G. Walczak) **81i:53032** 53C05 (58A99)
- Families of totally geodesic hypersurfaces in Weyl spaces. (Russian) *Trudy Geom. Sem. Kazan. Univ.* No. 10 (1978), 140-147. (P. G. Walczak) **81i:53045** 53C40 (57R30)
- Susarla, V. (with Van Ryzin, John) Empirical Bayes estimation of a distribution (survival) function from right-censored observations. *Ann. Statist.* 6 (1978), no. 4, 740-754. (Authors' summary) **81h:62016** 62C12 (62G05)
- (with Van Ryzin, John) Large sample theory for survival curve estimators under variable censoring. *Optimizing methods in statistics (Proc. Internat. Conf., Indian Inst. Tech., Bombay, 1977)*, pp. 475-507, Academic Press, New York, 1979. (Bruce W. Turnbull) **81a:62032** 62G05 (62E20)
- (with Johnson, Richard A.; Van Ryzin, John) Bayesian nonparametric estimation for age-dependent branching processes. *Stochastic Process. Appl.* 9 (1979), no. 3, 307-318. (Niels Keiding) **81g:62146** 62M05 (60J80, 62G05)
- (with Van Ryzin, John) Addendum to: "Large sample theory for a Bayesian nonparametric survival curve estimator based on censored data" [Ann. Statist. 6 (1978), no. 4, 755-768; MR 58 #3155]. *Ann. Statist.* 8 (1980), no. 3, 693. (Editors) **81i:62020** 62E20 (62F15, 62G05)
- Sul'zhan, V. I. (with Dmitruk, Ju. V.) Homogeneous subgroups of Sylow p -subgroups of symmetric groups and their generalizations. (Russian) *Theoretical and applied questions of differential equations and algebra (Russian)*, pp. 85-90, 262, "Naukova Dumka", Kiev, 1978. (Ja. G. Berkovich) **81k:20007** 20B35
- (with Kuluznin, L. A.) Verbal functions on groups. (Russian) *Theoretical and applied questions of differential equations and algebra (Russian)*, pp. 105-110, 264, "Naukova Dumka", Kiev, 1978. (N. S. Chernikov) **81m:20046** 20F05 (16A76)
- (with Kuluznin, L. A.) ★Преобразования и перестановки. (Russian) [Transformations and permutations] Translated from the Ukrainian by G. I. Falin. "Nauka", Moscow, 1979. 112 pp. (Ja. G. Berkovich) **81m:20001** 20-01 (20B05)
- Periodic p -groups of permutations and the unrestricted Burnside problem. (Russian) *Dokl. Akad. Nauk SSSR* 247 (1979), no. 3, 557-561. (L. A. Kurdachenko) **81k:20009** 20B35
- Sulov, B. G. (with Mitčenko, A. V.) The problem of optimal allocation of resources on a network model with linear constraints on task completion time. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 20 (1980), no. 5, 1324-1328, 1360. (Authors' summary) **81k:90033** 90B10
- Sunila, A. A. Structure of projective modules over rings of polynomials in the case of a noncommutative ring of coefficients. (Russian) *Algebra, number theory and their applications. Trudy Mat. Inst. Steklov.* 148 (1978), 233-252, 279. (G. Eisenreich) **81e:16036** 16A50
- The cancellation problem for projective modules and related topics. *Ring theory (Proc. Conf., Univ. Waterloo, Waterloo, 1978)*, pp. 323-338, *Lecture Notes in Math.*, 734, Springer, Berlin, 1979. (Z. Papp) **81i:13011** 13C10 (13F20)
- Reciprocity laws and the stable rank of rings of polynomials. (Russian) *Izv. Akad. Nauk SSSR Ser. Mat.* 43 (1979), no. 6, 1394-1429. (Chr. U. Jensen) **81m:13013** 13D15 (13F20)
- On the triviality of some cohomology groups. (Russian) *Rings and modules, 2. Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 94 (1979), 114-115, 151-152. (P. E. Newstead) **81g:14012** 14F05
- Sulov, S. I. Extreme points of trajectory integrals and optimal control. (Russian) *Upravljajemye Sistemy* No. 18 (1979), 65-67, 77. (Françoise Berquier) **81f:49038** 49E15
- Sulova, N. N. Methods for the solution of three-dimensional problems of the theory of elasticity for bodies with a parallelepiped form. (Russian) *Mechanics of a solid deformable body, Vol. 13 (Russian)*, pp. 187-296, *Akad. Nauk SSSR, Vsesojuz. Inst. Nauch. i Tehn. Informacii, Moscow*, 1980. (Z. Kączkowski) **81m:73006** 73-02 (65N99, 73C99)
- Susul, I. T. (with Dem'ik, I. I.) Generalized nonlinear Taylor-Cauchy-Aitken formula. (Russian) *Vestnik L'ov. Politehn. Inst. No. 141 Differencial'nye Uravnenija i ih Priłożen.* (1980), 28-30, 114. (Authors' summary) **81i:65014** 65D15
- Susangkarn, Chal (with Goldman, Steven M.) On equity and efficiency. *Econom. Lett.* 5 (1980), no. 1, 29-31. (Authors' summary) **81i:90042** 90A15
- Süsser, Herbert (with Oelschlägel, Dieter) Fehlerabschätzung bei einem speziellen quadratischen Optimierungsproblem. *Z. Angew. Math. Mech.* 59 (1979), no. 9, 482-483. (Authors' summary) **81g:65067** 65G10 (65K10)
- (with Oelschlägel, Dieter) Behandlung spezieller Optimierungsprobleme mit intervallanalytischen Methoden. *Beiträge Numer. Math.* 8 (1980), 121-129. (Authors' summary) **81k:65054** 65K10
- (with Oelschlägel, Dieter; Bendzulla, Claus) Intervallarithmetik—Rechentchnische Realisierung und Anwendung in der Optimierung. *Wiss. Z. Tech. Hochsch. Leuna-Merseburg* 22 (1980), no. 1, 65-69. (G. Alefeld) **81g:65056** 65G10
- Suskind, Leonard (with Raby, Stuart; Dimopoulos, Savas) Tumbling gauge theories. *Nuclear Phys. B* 169 (1980), no. 5-6, 373-383. (Authors' summary) **81f:81064** 81E99 (81G05)
- (with Fradkin, Eduardo; Srednicki, Mark) Fermion representation for the Z_2 lattice gauge theory in 2+1 dimensions. *Phys. Rev. D* (3) 21 (1980), no. 10, 2885-2891. (Authors' summary) **81e:81095** 81E99 (82A67)
- Sussman-Fort, S. E. New results on the ability of LC networks to realize natural frequencies. *IEEE Trans. Circuits and Systems* 27 (1980), no. 3, 229-231. (Author's summary) **81a:94054** 94C05
- (with Orchard, H. J.) Canonic structures for lossless one-ports. *IEEE Trans. Circuits and Systems* 27 (1980), no. 9, 772-778. (Authors' summary) **81h:94029** 94C05
- Sussmann, Hector J. Single-input observability of continuous-time systems. *Math. Systems Theory* 12 (1979), no. 4, 371-393. (P. Brunovsky) **81f:93025** 93B07 (58A35, 58C27, 58E25)
- Analytic stratifications and control theory. *Proceedings of the International Congress of Mathematicians (Helsinki, 1978)*, pp. 865-871, *Acad. Sci. Fennica, Helsinki*, 1980. (B. I. Anan'ev) **81j:93016** 93B05 (32B20, 49E20)
- Les semi-groupes sous-analytiques et la régularité des commandes en boucle fermée. *Systems analysis (Conf., Bordeaux, 1978)*, pp. 219-226, *Astérisque*, 75/76, Soc. Math. France, Paris, 1980. (P. Brunovsky) **81m:49018** 49B10 (32B20)
- Sustov, A. P. (with Smirnov, Ju. F.) Group theory of pseudo-oscillators. *J. Phys. A* 12 (1979), no. 12, 2399-2406. (L. S. Schulman) **81k:81035** 81C40 (22E43, 22E70)
- Süßmann, G. (with Szilas, P.) A one-dimensional microscopical model for the study of the coherence in the stopping power problem. I. *Z. Phys. B* 39 (1980), no. 2, 125-130. (Authors' summary) **81h:81100** 81Hxx
- Sutcliffe, D. C. Contouring over rectangular and skewed rectangular grids—an introduction. *Mathematical methods in computer graphics and design (Proc. Conf., Univ. Leicester, Leicester, 1978)*, pp. 39-62, Academic Press, London, 1980. (See **81h:68010**) 68K05
- Sutcliffe, Richard J. (with Alspach, Brian) Vertex-transitive graphs of order $2p$. *Second International Conference on Combinatorial Mathematics (New York, 1978)*, pp. 18-27, *Ann. New York Acad. Sci.*, 319, *New York Acad. Sci., New York*, 1979. (Torrence D. Parsons) **81d:05033** 05C25 (05C20)
- Suter, S. (with Zagier, D.) Dilatationen von abelschen Gruppen. *Enseign. Math.* (2) 24 (1978), no. 1-2, 125-142. (I. H. Bekker (Zbl 396:20035)) **81e:20061** 20K30
- Sutera, Alfonso Stochastic perturbation of a pure convective motion. *J. Atmospheric Sci.* 37 (1980), no. 1, 245-249. (L. A. Bunimovich) **81e:58039** 58F13 (58F30, 86A10)
- Sutherland, Bill (with Gutkin, Eugene) Completely integrable systems and groups generated by reflections. *Proc. Nat. Acad. Sci. U.S.A.* 76 (1979), no. 12, 6057-6059. (Alexander A. Pankov) **81a:81128** 81Hxx (58F07)
- Exact solution for the time evolution of a one-dimensional system. *Phys. Rev. A* (3) 21 (1980), no. 6, 2130-2135. (Author's summary) **81f:82003** 82A05 (60K35)
- Sutherland, Colin E. Cohomology and extensions of von Neumann algebras. I, II. *Publ. Res. Inst. Math. Sci.* 16 (1980), no. 1, 105-133, 135-174. (B. E. Johnson) **81k:46067** 46L10 (46L40, 46M20)
- Sutherland, W. R. S. Equivalent Markovian decision problems. *Analysis and optimisation of stochastic systems (Proc. Internat. Conf., Univ. Oxford, Oxford, 1978)*, pp. 127-137, Academic Press, London, 1980. (Karl Shell) **81m:90035** 90A16 (90C05)
- (with Gray, D. F.) Inverse programming and the linear vector maximization problem. *J. Optim. Theory Appl.* 30 (1980), no. 4, 523-534. (T. R. Jefferson) **81f:90101** 90C31 (90C05)
- Optimality in transient Markov chains and linear programming. *Math. Programming* 18 (1980), no. 1, 1-6. (E. I. Kistauri) **81j:90129** 90C40
- Sütő, A. Phase transition for Ising frustration potentials. *J. Statist. Phys.* 23 (1980), no. 2, 203-217. (P. Rudra) **81k:82006** 82A05 (82A25, 82A42)
- Sütő, J. P. Generalized entropies in coding theory. (Hungarian summary) *SZÁMKI Tanulmányok* No. 5 (1980), 31-48. (L. L. Campbell) **81j:94010** 94A17
- Sütő, E. G. Semigroups of endomorphisms of ordered sets, complete with respect to division. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1979, no. 8, 93-95. (L. Bokut') **81g:20126** 20M20
- Imbedding of semigroups into groups and potential invertibility. (Russian) *Sibirsk. Mat. Ž.* 21 (1980), no. 1, 168-180, 238. (Hubert Grassmann) **81f:20087** 20M10
- Sutti, C. Nongradient methods for unconstrained optimization. *Nonlinear optimization (Proc. Internat. Summer School, Univ. Bergamo, Bergamo, 1979)*, pp. 137-147, Birkhäuser, Boston, Mass., 1980. (Sven-Ake Gustafson) **81m:65108** 65K10
- Suttrop, L. G. Kinetic theory of self-diffusion in a moderately dense one-component plasma. *Phys. A* 104 (1980), no. 1-2, 25-47. (Author's summary) **81m:82032** 82A45 (82A70)
- Souza, H. (with Wilson, Weldon James; Young, Bing Lin) Relativistic wave equation and heavy quarkonium spectra. *Phys. Rev. D* (3) 21 (1980), no. 11, 3204-3211. (Authors' summary) **81g:81098** 81G05
- Suvelka, I. V. See **Linear operators**, **81i:47001**
- Suvorov, B. V. (with Kuprijanov, V. V.; Skatov, E. F.) A generalized approach to a problem of the realizability of an invariant check system. (Russian) *Theory of invariance and its application (Proc. Fifth All-Union Conf., Kiev, 1976)*, Part 2 (Russian), pp. 410-423, "Naukova Dumka", Kiev, 1979. (O. E. Citrickii) **81m:93039** 93B99 (94A17)
- Suvorov, G. D. Relative metric and prime ends of a simply connected domain. (Russian) *Metric questions of the theory of functions and mappings, No. VI (Russian)*, pp. 116-125, "Naukova Dumka", Kiev, 1975. (See **80j:30003**) 30D40
- (with Pomel'nikov, Ju. V.) A new family of conformally invariant metrizable bicompact extensions of a plane domain. (Russian) *Sibirsk. Mat. Ž.* 21 (1980), no. 3, 144-161, 237. (L. A. Aksent'ev) **81i:30057** 30D40
- See also *Theory of functions and mappings*, **81b:30002** and *Metric questions of the theory of functions*, **81j:30002**
- Suvorov, P. Ju. Representation of proofs by colored graphs and Hadwiger's conjecture. (Russian. English summary) *Studies in constructive mathematics and mathematical logic, VIII. Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 88 (1979), 209-217, 246. (S. Ju. Maslov) **81g:05060** 05C15 (03F99)
- Suvorov, S. G. Ljusternik-Snirel'man theory. (Russian) *Sibirsk. Mat. Ž.* 19 (1978), no. 3, 670-684, 719. (B. P. Tkač) **81j:58027** 58E05
- Critical sets in optimization problems with several constraints. (Russian) *Sibirsk. Mat. Ž.* 21 (1980), no. 4, 151-160, 238. (J. Jarušek and Jiří V. Outrata) **81k:58013** 58C27 (49F05, 58E05, 90C30)
- Suwa, Mitsuyoshi Remarks on minimal submanifolds of S^{*N} . *TRU Math.* 15 (1979),

- no. 1, 31-40. (João Lucas Marques Barbosa) **81c:53052** 53C40
- Suma, Tatsuo** The Lyndon-Hochschild-Serre spectral sequences for sheaves with operators. *Proc. Amer. Math. Soc.* 77 (1979), no. 1, 32-34. (K. Tezeman) **81g:55018** 55T10
- Suwanda, Hendra** (with Munro, J. Ian) Implicit data structures for fast search and update. *J. Comput. System Sci.* 21 (1980), no. 2, 236-250. (Authors' summary) **81k:68017** 68B15 (68C25)
- Swelack, D.** (with Rothwell, W. P.; Waugh, J. S.) Slow molecular motion detected in the NMR spectra of rotating solids. *J. Chem. Phys.* 73 (1980), no. 6, 2559-2569. (Authors' summary) **81h:81174** 81G55
- Suzuki, Gitiro** On a stochastic game with one-chance recovery. *Ann. Inst. Statist. Math.* 32 (1980), no. 1, 53-64. (Bert Fristedt) **81h:60067** 60G50 (60J15, 90D15)
Further modified forms of binomial and Poisson distributions. *Ann. Inst. Statist. Math.* 32 (1980), no. 2, 143-159. (Ramesh C. Gupta) **81k:62020** 62E15
- Suzuki, Hideo** (with Shimodaira, Kazuo; Noguchi, Taisuke; Michiaki, Yoshimasa; Matsuzaki, Toshio; Kuwabara, Hideo; Takagi, Shigeo; Matsuo, Motohisa; Ōya, Shinichi) Perspective of study of history of mathematics. (Japanese) Special issue on the 20th anniversary of Sūgakushi Kenkyū. *Sūgakushi Kenkyū* No. 80 (1979), 3-75. (K. Inoue) **81b:01008** 01A27
- Suzuki, Ikao** Group-theoretical analysis of ferroelastic phase transition in squaric acid $C_4H_2O_4$. *Bull. Nagoya Inst. Tech.* 31 (1979), 127-133. (Author's summary) **81i:82026** 82A25
- Suzuki, Kazuyoshi** (with Shibuya, Toshikazu; Koizumi, Takashi) The torsion of a hollow cylinder with two or infinite parallel external cracks. *Bull. JSME* 23 (1980), no. 179, 637-643. (Authors' summary) **81d:73005** 73M05
- Suzuki, Masaki** (with Azukawa, Kazuo) Some examples of algebraic degeneracy and hyperbolic manifolds. *Rocky Mountain J. Math.* 10 (1980), no. 3, 655-659. (M. Kalka) **81j:32029** 32H20
- Suzuki, Masahiko** (with Yoshinaga, Etsuo) Normal forms of nondegenerate quasihomogeneous functions with inner modality <4 . *Invent. Math.* 55 (1979), no. 2, 185-206. (E. Brieskorn) **81b:32001** 32B30 (14B07, 32C40, 58C27)
- Suzuki, Masakazu** Compactifications of $C \times C^*$ and $(C^*)^2$. *Tōhoku Math. J. (2)* 31 (1979), no. 4, 453-468. (J. A. Morrow) **81f:32036** 32J05
- Suzuki, Masao** The Migdal approximation and other new methods in the real-space renormalization group approach to critical dynamics. *Dynamical critical phenomena and related topics* (Proc. Internat. Conf., Univ. Geneva, Geneva, 1979), pp. 75-96, *Lecture Notes in Phys.*, 104, Springer, Berlin, 1979. (See **81i:82002**) 82A25
- Suzuki, N.** (with Matsuo, O.; Aoyama, T.; Malli, G.) Relativistic self-consistent-field methods for molecules. I. Dirac-Fock multiconfiguration self-consistent-field theory for molecules and a single-determinant Dirac-Fock self-consistent-field method for closed-shell linear molecules. *J. Chem. Phys.* 73 (1980), no. 3, 1320-1328. (Authors' summary) **81h:81173a** 81G55
- Suzuki, Noriaki** On the essential boundary and supports of harmonic measures for the heat equation. *Proc. Japan Acad. Ser. A Math. Sci.* 56 (1980), no. 8, 381-385. (R. M. Hervé) **81m:31015** 31D05 (35K05)
- Suzuki, Osamu** Theorems on holomorphic bisectional curvature and pseudoconvexity on Kähler manifolds. *Analytic functions, Kozubnik 1979* (Proc. Seventh Conf., Kozubnik, 1979), pp. 412-428, *Lecture Notes in Math.*, 798, Springer, Berlin, 1980. (Y.-T. Siu) **81k:32016** 32F10 (53C55)
- Suzuki, Ryōji** (with Mishima, Nobuhiko; Yamakoshi, Petrosky, Tomio) Theory of irreversible processes in nonequilibrium quantum systems. I. General formalism. *J. Statist. Phys.* 21 (1979), no. 4, 347-392. (J. Fernando Perez) **81i:81124a** 81Hxx (82A15)
(with Nakamura, Masayoshi) On the exact canonical conjugate momenta of collective motion in many-boson system. *Progr. Theoret. Phys.* 64 (1980), no. 3, 1086-1088. (Authors' summary) **81i:81115** 81Hxx
- Suzuki, Shin'ichi** (with Hosokawa, Fujitsugu; Maeda, Toru) Numerical invariants of surfaces in 4-space. *Math. Sem. Notes Kobe Univ.* 7 (1979), no. 2, 409-420. (R. C. Kirby) **81b:57019** 57Q45
- Suzuki, Takashi** (with Fujita, Hiroshi) On the finite element approximation for evolution equations of parabolic type. *Computing methods in applied sciences and engineering* (Proc. Third Internat. Symp., Versailles, 1977), I, pp. 207-221, *Lecture Notes in Math.*, 704, Springer, Berlin, 1979. (W. V. Petryshyn) **81c:65045** 65M15 (34G10)
- Suzuki, Takeru** Asymptotic sufficiency up to higher orders and its applications to statistical tests and estimates. *Osaka J. Math.* 15 (1978), no. 3, 575-588. (L. B. Klebanov) **81c:62034** 62F12 (62B05, 62E20)
- A remark on asymptotic sufficiency up to higher orders in multidimensional parameter case. *Osaka J. Math.* 17 (1980), no. 1, 245-252. (Eberhard Siebert) **81f:62005** 62B15
- Suzuki, Toru** (with Kuratsuji, Hiroshi) Path integral in the representation of SU(2) coherent state and classical dynamics in a generalized phase space. *J. Math. Phys.* 21 (1980), no. 3, 472-476. (L. L. Lee) **81c:81019** 81C35 (32A25)
- Suzuki, Tsunoo** (with Leschke, Hajo; Hirshfeld, A. C.) Dyson-Wick expansions for nonlinear Bose systems. *Phys. Lett. A* 67 (1978), no. 2, 87-89. (Authors' summary) **81m:81045** 81E15
- Švábik, V. I.** Effect of compressibility of the normal in contact problems for transversely isotropic slabs. *Prikl. Meh.* 16 (1980), no. 4, 71-77, 142 (Russian); translated as *Soviet Appl. Mech.* 16 (1980), no. 4, 322-328. (From the introduction) **81k:73064** 73T05
- Švačka, A. B.** (with Mahan'kov, V. G.; Kummer, G.) Interaction of two-space-dimensional classical Q solitons. *Phys. Lett. A* 70 (1979), no. 3, 171-176. (Authors' summary) **81i:81078** 81E99 (35Q20, 81G25)
- Švai, O. I.** (with Dzjadik, V. K.; Antonjuk, P. E.) Approximation of some kernels. (Russian) *Studies in the theory of approximation of functions and their applications* (Russian), pp. 61-68, 189, *Akad. Nauk Ukrain. SSR, Inst. Mat., Kiev*, 1978. (J. Siciak) **81c:30068** 30E10 (31A99)
- Svanadze, M. Ž.** (with Natrošvili, D. G.; Džagnadze, A. Ja.) ★Решение некоторых граничноконтактных задач теории упругости. (Russian) [Solution of some boundary-contact problems of the theory of elasticity] With Georgian and English summaries. *Tbilis. Gos. Univ., Tbilis.*, 1980. 88 pp. (L. Jentsch) **81j:73080** 73T05
- Švarc, A. S.** (with Fateev, V. A.; Frolov, I. V.) Quantum fluctuations of instantons in two-dimensional nonlinear theories. *Jadernaja Fiz.* 30 (1979), no. 4, 1134-1147 (Russian); translated as *Soviet J. Nuclear Phys.* 30 (1979), no. 4, 590-596. (Authors' summary) **81c:81068** 81E10
(with Romanov, V. N.) Anomalies and elliptic operators. (Russian. English summary) *Theoret. Mat. Fiz.* 41 (1979), no. 2, 190-204. (B. N. Frolov) **81g:81067** 81E10 (47F05)
- Are the field and space variables on an equal footing? *Nuclear Phys. B* 171 (1980), no. 1-2, 154-166. (Authors' summary) **81h:81105** 81E99 (83E99)
- Švarc, R.** (with Nečas, Jindřich; Stará, J.) Classical solution to a second order nonlinear elliptic system in R^3 . *Ann. Scuola Norm. Sup. Pisa Cl. Sci. (4)* 5 (1978), no. 4, 605-631. (Moshe Marcus) **81a:35038** 35J65
- Švarčburd, S. I.** (with Kolmogorov, A. N.; Boltjanskii, V. G.; Verčenko, I. Ja.; Maalov, G. G.; Belousov, V. D.; Brovikov, I. S.; Gnedenko, B. V.; Sikorskii, K. P.; Čerkasov, R. S.) Aleksei Ivanovič Markuševič. (Russian) *Mat. v Škole* 1979, no. 5, 77-78. (Editors) **81m:01059** 01A70
- Švarčburg, A. B.** The nonlinear resonant plasma-wave interaction in a collisional magnetoplasma. *Nonlinear electromagnetic optics*, pp. 189-238, *Academic Press, New York*, 1980. (See **81j:78001**) 78X05
The nonlinear geometric optics of the localized wave fields. *Fortschr. Phys.* 28 (1980), no. 1, 1-33. (G. S. Agarwal) **81j:78002** 78A05 (78A40)
- Svarcman, E. A.** Openness and surjectivity of nonlinear operators. (Russian) *Qualitative and approximate methods for the investigation of operator equations*, No. 2 (Russian), pp. 208-213, *Jaroslavl. Gos. Univ., Yaroslavl*, 1977. (See **80g:47002**) 47H12
- Švarcman, O. V.** A Chevalley theorem for complex crystallographic groups that are generated by mappings in the affine space C^2 . (Russian) *Uspehi Mat. Nauk* 34 (1979), no. 1(205), 249-250. (Peter Giblin) **81h:32016** 32C40 (53C35, 57S30)
- Švartina, S. M.** A study of the stability of transportation problems. (Russian) *Ž. Vychisl. Mat. i Mat. Fiz.* 18 (1978), no. 1, 235-240, 271. (R. Petrović) **81h:90074** 90B10 (90C08)
- Švec, Alois** Two applications of an integral formula. (Czech and Russian summaries) *Sb. Práci Přírodověd. Fak. Univ. Palackého v Olomouci Mat.* 57 (1978), 5-12. (Samuel I. Goldberg) **81d:58029** 58E20 (53C20)
On the equivalence of isometric surfaces in E^4 . *Beiträge Algebra Geom. No. 9* (1980), 7-12. (Vladislav Goldberg) **81m:53006** 53A07
- Švec, Marko** (with Meleško, V. P.; Šneorov, B. E.; Dmitrieva-Arrago, L. R.; Parčina, G. V.; Jušina, E. P.; Magazenzov, L. N.; Bogačenko, S. V.; Šešin, D. A.) A hydrodynamic model of the general circulation of the atmosphere. (Russian) *Trudy Glavn. Geofiz. Observator. No. 410 Dinamika Global. Atmosfer. Processov i Prognoz Pogody* (1980), 3-33, 142. (Authors' summary) **81h:86006** 86A10 (76R05)
See also Kurzwil, Jaroslav, **81m:01062**
- Švec, R. M.** (with Fijaček, V. M.) Variational form of equations of thermoelasticity of anisotropic shells with account taken of thermomechanical interaction. (Russian) *Metody i Fiz.-Meh. Polja* No. 11 (1980), 67-71, 122. (Authors' summary) **81c:73057** 73U05 (73L99)
Variational principles of the dynamic theory of thermoelasticity. (Russian) *Metody i Fiz.-Meh. Polja* No. 12 (1980), 101-102, 123. (Author's summary) **81f:73058** 73U05 (49H05)
- Švec, V. F.** (with Ivanov, M. F.) Numerical solution of stochastic differential equations for modeling collisions in a plasma. (Russian) *Čisl. Metody Meh. Splajn. Sredy* 10 (1979), no. 1 Gaz. *Dinamika*, 64-70. (Steven M. Moore) **81a:82018** 82A15 (60H10)
- Svečikareva, M. A.** Margin of stability for autonomous systems with a finite number of degrees of freedom. (Russian) *Numerical mathematics, programming and processing of an experiment* (Russian), pp. 3-10, 128, "Naukova Dumka", Kiev, 1979. (C. Corduneanu) **81c:34043** 34D20
- Švečik, B. I.** (with Višenčuk, I. M.; Trocenko, V. V.) Analysis of transient processes in computational parameters of integral signal parameters. (Russian) *Avtomat. i Vychisl. Tehn. (Riga)* 1978, no. 3, 37-44, 93. (Authors' summary) **81d:94003** 94A05
- Šveor, V. I.** Optimal ordering of indexing of fields in a file. (Russian) *Ekonom. i Mat. Metody* 14 (1978), no. 5, 969-974. (E. Ja. Gabovič) **81h:68120** 68H05 (90B40)
- Švedov, A. S.** Jackson's theorem in L^p , $0 < p < 1$, for algebraic polynomials and orders of comonotone approximations. (Russian) *Mat. Zametki* 25 (1979), no. 1, 107-117, 159. (V. A. Baskakov) **81c:41017** 41A10 (41A17, 42A10)
- Comonotone approximation of functions by polynomials. (Russian) *Dokl. Akad. Nauk SSSR* 250 (1980), no. 1, 39-42. (Z. Rubinstein) **81d:41026** 41A29 (41A17)
- Svenomus, Lars** Two kinds of extensions of primitive recursive arithmetic. *Essays on mathematical and philosophical logic* (Proc. Fourth Scandinavian Logic Symp. and First Soviet-Finnish Logic Conf., Jyväskylä, 1976), pp. 49-94, *Synthese Library*, 122, Reidel, Dordrecht, 1979. (John Hooley) **81c:03058** 03F35
- Svensson, Erik** On Fourier-Stieltjes transforms, integer-valued on a given subset. *Math. Scand.* 44 (1979), no. 1, 103-134. (Colin C. Graham) **81a:43009** 43A25
- Svensson, Lars-Gunnar** Equity among generations. *Econometrica* 48 (1980), no. 5, 1251-1256. (R. D. Luce) **81j:90006** 90A06 (06A99)
- Sverdan, M. L.** (with Jasinskaja, L. I.) Stability of stochastic functional-differential systems. (Russian) *Asymptotic methods of nonlinear mechanics* (Russian), pp. 117-127, 197, *Akad. Nauk Ukrain. SSR, Inst. Mat., Kiev*, 1979. (Z. Schuss) **81c:60073** 60H99 (34F05, 34K05)
- Sverdllov, Ronald** Vector fields defined by complex functions. *J. Differential Equations* 34 (1979), no. 3, 427-439. (Freddy Dumortier) **81c:34041** 34C35 (58F14)
- Sreshnikov, A. A.** See Svečnikov, A. A.
- Sreshnikov, V. I.** See Svečnikov, V. I.
- Svečnikov, A. A.** ★Problems in probability theory, mathematical statistics and theory of random functions. Translated from the Russian. Reprint of the 1968 English translation. Edited and with a foreword by Bernard R. Gelbaum. *Dover Publications, Inc., New York*, 1978. ix+481 pp. ISBN 0-486-63717-4 (Editors) **81f:60002** 60-01 (62-01)
- Svečnikov, A. G.** (with Il'inskii, A. S.) Methods for the numerical solution of problems of diffractions theory. (Russian) *Proceedings of an All-Union Conference on Partial Differential Equations* (Moscow State Univ., Moscow, 1976) (Russian), pp. 124-127, *Moskov. Gos. Univ., Meh.-Mat. Fakul'tet, Moscow*, 1978. (See **80c:35002**) 65P05
(with Eremin, Ju. A.; Čivilov, A. V.) Investigation of the uniqueness of the solution of an inverse problem of diffraction theory. (Russian) *Differentsial'nye Uravnenija* 15

- (1979), no. 12, 2205-2209, 2301. (M. A. Atahodzaev) **81c:35113** 35R30 (35J05, 78A45)
- (with Bogoljubov, A. N.) Justification of the finite-difference method of calculating optical waveguides. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* **19** (1979), no. 6, 1496-1505, 1629. (Authors' summary) **81a:78018** 78A50 (65N30)
- (with Tihonov, A. N.; Vasil'eva, A. B.) *★Дифференциальные уравнения.* (Russian) [Differential equations] Курс Высшей Математики и Математической Физики [Course in Higher Mathematics and Mathematical Physics], 7. "Наука", Moscow, 1980. 232 pp. (From the preface) **81f:34005** 34-01
- (with Tihonov, A. N.; Bicadze, A. V.; Il'in, V. A.; Arsen'ev, A. A.) Academician Aleksandr Andreevič Samarskii (on the occasion of his sixtieth birthday). (Russian) *Uspehi Mat. Nauk* **35** (1980), no. 1(211), 223-232 (1 plate). (Editors) **81m:01078** 01A70
- Svetlikov, V. I. (with Grigor'jan, K. A.) Precision of the requirements of mathematical models solved by geometric programming. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* **1979**, no. 3, 55-59, 220 (Russian); translated as *Engrg. Cybernetics* **17** (1979), no. 3, 32-36 (1980). (Authors' summary) **81h:90018** 90A11 (90C33)
- Svetlikova, G. L. (with Ermakova, N. V.) A class of congruences of second-order curves with nondegenerating focal surfaces. (Russian) *Kaliningrad. Gos. Univ. Differentsial'naia Geom. Mnogobraz. Figur* No. 9 (1978), 79-84, 139. (M. Decuyper) **81c:53016** 53A20
- Congruences I_2 with a focal surface that degenerates to a line. (Russian) *Kaliningrad. Gos. Univ. Differentsial'naia Geom. Mnogobraz. Figur* No. 10 (1979), 104-109, 163. (Leo Boček) **81c:53013** 53A20
- Svetitsky, Benjamin (with Drell, Sidney D.; Quinn, Helen R.; Weinstein, Marvin) Dynamical breaking of chiral symmetry in lattice gauge theories. *Phys. Rev. D* **3** (1980), no. 2, 490-504. (Authors' summary) **81e:81127** 81G05
- (with McLerran, Larry D.) A Monte Carlo study of $SU(2)$ Yang-Mills theory at finite temperature. *Phys. Lett. B* **98** (1981), no. 3, 195-198. (Authors' summary) **81h:81063** 81E10 (81-04)
- Svetitsky, A. A. (with Vasil'zenko, G. P.) A projective algorithm for solutions of linear algebraic equations of large dimension. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* **20** (1980), no. 1, 3-10, 259. (O. Pokorný) **81j:65060** 65F10
- Svetitsky, George (with Otterson, Paul) On derivative-dependent infinitesimal deformations of differentiable maps. *J. Differential Equations* **36** (1980), no. 2, 270-294. (A. M. Vinogradov) **81i:58054** 58G35 (35A30)
- Svetlov, G. G. (with Erusalimskii, Ja. M.) Bifurcation points, bifurcations, and bifurcations of directed graphs. *Kibernetika (Kiev)* **1980**, no. 1, ii, 37-39, 150 (Russian); translated as *Cybernetics* **16** (1980), no. 1, 41-44. (Authors' introduction) **81k:05053** 05C20
- Svidinskii, A. V. (with Makeev, A. I.) Theory of current states in an extremely polluted SNS-contact in the neighbourhood of the zero temperature. (Russian. English summary) *Teoret. Mat. Fiz.* **44** (1980), no. 1, 85-92. (Authors' summary) **81h:81184** 81J05
- Svrlin, A. V. On factor interpolation analysis of nonlinear automatic control system accuracy with random inputs. *Izv. Vysš. Učebn. Zaved. Aviacion. Tehn.* **22** (1979), no. 4, 77-84 (Russian); translated as *Soviet Aeronaut.* **22** (1979), no. 4, 63-69. (Authors' summary) **81g:93100** 93E03 (93C10)
- Streizer, Ju. M. (with Moiseev, N. N.) Systems analysis of dynamic processes in the biosphere. Conceptual model of biosphere. (Russian) *Vestnik Akad. Nauk SSSR* **1979**, no. 2, 47-58. (Editors) **81m:92053** 92A17 (90A16, 92A05)
- Sviridov, D. T. The fundamental element of symmetry of n -dimensional crystallography ($n=1, 2, \dots, \infty$). (Russian) *Dokl. Akad. Nauk SSSR* **252** (1980), no. 1, 106-107. (H. W. Guggenheimer) **81m:51020** 51F15 (82A60)
- Sviridova, E. A. (with Tartakovskii, I. I.) Questions on the effective generation of graphs. (Russian) *Radiotekhn. (Har'kov)* No. 52 (1980), 132-137, vi. (V. B. Alekseev) **81h:05095** 05C99
- Švitra, Donatas (with Kolesov, Ju. S.) *★Автоколебания в системах с запаздыванием.* (Russian) [Self-oscillation in systems with lags] "Mokslas", Vilnius, 1979. 147 pp. (J. K. Hale) **81i:34071** 34K15 (34-02, 70-02)
- (with Kolesov, Ju. S.) The role of time-delay in mathematical models of ecology. (Russian. Lithuanian and English summaries) *Lietuv. Mat. Sb.* **19** (1979), no. 1, 115-128, 231. (J. S. Joel) **81h:92001** 92-01 (92A17)
- Svjatla, V. G. (with Borisov, Ju. G.; Mänz, P.) Nichtlineare Fredholm-Operatoren, Abbildungsgrad und Anwendungen auf nichtlineare Eigenwertprobleme. *Math. Nachr.* **91** (1979), 281-295. (Christian Fenske) **81d:58019** 58C40 (47H99, 55M25, 58B15)
- Svoboda, Antonín From mechanical linkages to electronic computers: recollections from Czechoslovakia. *A history of computing in the twentieth century*, pp. 579-586, Academic Press, New York, 1980. (See **81i:68002**) 68-03 (01A65)
- Svoboda, Karel Contribution to the characterization of the sphere in E^3 . *Arch. Math. (Brno)* **15** (1979), no. 3, 171-177. (P. J. Ryan) **81c:53057** 53C45 (53A05)
- Several new characterizations of the 2-dimensional sphere in E^4 . *Czechoslovak Math. J.* **29**(104) (1979), no. 4, 573-583. (D. Mekero) **81c:53062** 53A05
- On characterization of the sphere in E^4 by means of the parallelism of certain vector fields. *Časopis Pěst. Mat.* **105** (1980), no. 1, 56-72. (H. W. Guggenheimer) **81h:53009** 53A07
- Svoronos, Spyros (with Stephanopoulos, George; Aris, Rutherford) Bilinear approximation of general nonlinear dynamic systems with linear inputs. *Internat. J. Control* **31** (1980), no. 1, 109-126. (K. W. Han) **81h:93020** 93C10
- Svrák, N. M. (with Shukla, P.) Universality classes of Ising models. *Phys. Lett. A* **69** (1977/79), no. 3, 167-168. (Authors' summary) **81h:82053** 82A67 (82B15)
- de Swaan Oliva, Abraham The symmetric Laplace transform of the function $(1/s)\exp(-as/(s+b))$. (Spanish) *Acta Mexicana Cienc. Tecn.* **9**(10) (1975/76), no. 25-30, 26-28 (1978). (L. Arteaga) **81h:44001** 44A10
- Swaia, S. Generalised multiphoton rate equations. *J. Phys. B* **13** (1980), no. 12, 2375-2396. (Authors' summary) **81h:81159** 81G45 (81K05)
- Swaminathan, S. (with Blum, I. E.) A note on intersections of ideals in rings of continuous functions. *Topology (Proc. Fourth Colloq., Budapest, 1978)*, Vol. 1, pp. 155-162. *Colloq. Math. Soc. János Bolyai*, 23, North-Holland, Amsterdam, 1980. (Thomas E. Gantner) **81m:54023** 54C40 (54D60)
- (with Blum, I. E.) Ideal equivalences for almost realcompact spaces. *Comment. Math. Univ. Carolin.* **21** (1980), no. 1, 81-95. (R. Grant Woods) **81d:54018** 54D60 (54C30)
- Swamy, K. N. (with Tarn, Tryh Jong) Deterministic and stochastic control of discrete-time bilinear systems. *Automatica—J. IFAC* **15** (1979), no. 6, 677-682. (From the summary) **81a:93056** 93C55
- Swamy, M. N. S. (with Reddy, Harnatha C.; Ramachandran, V.) New results in sum separability of multivariable reactance and positive real functions. *Proceedings of the Fourth International Symposium on Network Theory (Ljubljana, 1979)*, pp. 305-310, Georgi, St.-Sophorin, 1979. (See **81b:94003**) 94C99
- (with Rajan, P. K.) Symmetry constraints on two-dimensional half-plane digital transfer functions. *IEEE Trans. Acoust. Speech Signal Process.* **27** (1979), no. 5, 506-511. (Authors' summary) **81a:94018** 94A12
- Swamy, Meena N. Optimum spring balance weighing designs for estimating the total weight. *Comm. Statist. A—Theory Methods* **9** (1980), no. 11, 1185-1190. (Authors' summary) **81h:62133** 62K05
- Swamy, N. V. V. J. (with Wilson, W. B.) Note on Bäcklund transformations, Dirac factorization and the sine-Gordon equation. (Italian summary) *Nuovo Cimento A* **11** (1980), no. 1, 44-50. (H. Rund) **81c:35152** 35Q20 (78A40, 81C05)
- Swamy, Parvavati A. V. B. (with Mehta, Jatinder S.; Narasimham, Gorti V. L.) Estimation of a dynamic demand function for gasoline with different schemes of parameter variation. *J. Econometrics* **7** (1978), no. 3, 263-279. (Peter M. Robinson) **81a:62112** 62P20
- (with Mehta, Jatinder S.) Estimation of common coefficients in two regression equations. *J. Econometrics* **10** (1979), no. 1, 1-14. (K. R. Shah) **81h:62118** 62J05
- A comparison of estimators for undersized samples. *J. Econometrics* **14** (1980), no. 2, 161-181. (Peter Schmidt) **81m:62179a** 62P20 (90A17)
- Corrigenda: "A comparison of estimators for undersized samples". *J. Econometrics* **15** (1981), no. 3, 405. (Editors) **81m:62197b** 62P20 (90A17)
- Swamy, S. R. The radius of univalence and starlikeness of certain analytic functions. I. *J. Karnatak Univ. Sci.* **22** (1977), 11-15. (John G. Milotich) **81f:30013a** 30C45
- The radius of univalence and starlikeness of certain analytic functions. II. *J. Karnatak Univ. Sci.* **22** (1977), 16-23. (John G. Milotich) **81f:30013b** 30C45
- Swamy, Sowmitri (with Savage, John E.) Space-time tradeoffs for oblivious integer multiplication. *Automata, languages and programming (Sixth Colloq., Graz, 1979)*, pp. 498-504, *Lecture Notes in Comput. Sci.*, 71, Springer, Berlin, 1979. (Authors' summary) **81d:68059** 68C25
- (with Savage, John E.) Space-time tradeoffs for linear recursion. *Conference Record of the Sixth Annual ACM Symposium on Principles of Programming Languages (San Antonio, Tex., 1979)*, pp. 135-142, ACM, New York, 1979. (Authors' summary) **81g:68013** 68B05
- Swamy, U. Maddana (with Manikyamba, P.) Prime ideal characterization of Stone lattices. *Math. Sem. Notes Kobe Univ.* **7** (1979), no. 1, 25-31. (Terence P. Speed) **81a:06014** 06D05
- Distributive semilattices. *Math. Sem. Notes Kobe Univ.* **7** (1979), no. 2, 211-233. (Anna Romanowska) **81d:06005** 06A12 (06D99)
- (with Manikyamba, P.) Representation of certain classes of distributive lattices by systems of sheaves. *Internat. J. Math. Math. Sci.* **3** (1980), no. 3, 461-476. (H. A. Priestley) **81h:06009** 06D05 (03G20, 06D25, 18F20)
- Baer-Stone semigroups. *Semigroup Forum* **19** (1980), no. 4, 385-386. (K. D. Magill, Jr.) **81c:20073** 20M30
- Swan, P. L. (with Hillman, A. L.) Club participation under uncertainty. *Econom. Lett.* **4** (1979/80), no. 4, 307-312. (Authors' summary) **81i:90156** 90C15 (90A08)
- Swan, Richard G. Strong approximation and locally free modules. *Ring theory and algebra, III (Proc. Third Conf., Univ. Oklahoma, Norman, Okla., 1979)*, pp. 153-223, *Lecture Notes in Pure and Appl. Math.*, 55, Dekker, New York, 1980. (I. Reiner) **81m:12017** 12A57 (12A62, 16A18, 16A54)
- Swanepoel, J. W. H. Fixed width sequential confidence interval for the median of a distribution. *Comm. Statist. A—Theory Methods* **7** (1978), no. 9, 829-835. (Malay Ghosh) **81d:62083** 62L12
- (with Lombard, F.) On finite and infinite confidence sequences. *South African Statist. J.* **12** (1978), no. 1, 1-24. (Authors' summary) **81j:62080** 62G15
- (with Lombard, F.) An asymptotic sequential test based on confidence sequences. *Comm. Statist. A—Theory Methods* **8** (1979), no. 2, 107-116. (Malay Ghosh) **81d:62080** 62L10
- Repeated significance tests for a location parameter of an exponential distribution. *South African Statist. J.* **14** (1980), no. 1, 31-41. (Jan C. Geertsema) **81j:62163** 62L10 (62F03)
- Swanson, Charles A. (with Noussair, Ezzat S.) Positive solutions of semilinear Schrödinger equations in exterior domains. *Indiana Univ. Math. J.* **28** (1979), no. 6, 993-1003. (W. Allegretto) **81b:35031** 35J60 (85A05)
- (with Noussair, Ezzat S.) Oscillation of semilinear elliptic inequalities by Riccati transformations. *Canad. J. Math.* **32** (1980), no. 4, 908-923. (V. B. Headley) **81j:35045** 35J60 (35B05)
- (with Noussair, Ezzat S.) Positive solutions of quasilinear elliptic equations in exterior domains. *J. Math. Anal. Appl.* **75** (1980), no. 1, 121-133. (J. R. Kuttler) **81j:35007** 35B05 (35J10)
- (with Noussair, Ezzat S.) Semilinear Schrödinger equations in exterior domains. *Nonlinear Anal.* **4** (1980), no. 3, 635-637. (From the text) **81j:35045** 35J10 (81C05)
- (with Kreith, Kurt) Higher order Wirtinger inequalities. *Proc. Roy. Soc. Edinburgh Sect. A* **85** (1980), no. 1-2, 87-110. (Paul R. Beesack) **81c:26013** 26D10 (34B05, 47E05)
- Swanson, Laif Bernoulli shifts and induced automorphisms. *Adv. in Math.* **33** (1979), no. 2, 93-108. (E. M. Klimko) **81a:28022** 28D05
- (with del Junco, Andrés; Rahe, M.) Chacon's automorphism has minimal self-joinings. *J. Analyse Math.* **37** (1980), 276-284. (B. Kamiński) **81j:28027** 28D05
- Swanson, Leonard G. (with Crittenden, Richard) Complete orthonormal systems generated by matrices. *Proceedings of the Ninth Southeastern Conference on Combinatorics, Graph Theory, and Computing (Florida Atlantic Univ., Boca Raton, Fla., 1978)*, pp. 229-233, *Congress. Numer., XXI, Utilitas Math., Winnipeg, Man., 1978*. (Editors) **81a:42031** 42C30
- (with Hansen, Rodney T.) An extension of Rédei's generalization of the Euler-Fermat theorem. *Bull. Number Theory Related Topics* **3** (1978), no. 3, 5-9. (M.

- Livingston) **81h:10003** 10A10
(with Hansen, Rodney T.) Vinogradov's Möbius inversion theorem. *Nieuw Arch. Wisk.* (3) **28** (1980), no. 1, 1-11. (J. Spilker) **81i:10007** 10A20
- Swanson, R. C. (with Chicone, Carmen) The spectrum of the adjoint representation and the hyperbolicity of dynamical systems. *J. Differential Equations* **36** (1980), no. 1, 28-39. (Michael J. Field) **81h:58047** 58F15 (34C35)
- Linear symplectic structures on Banach spaces. *Rocky Mountain J. Math.* **10** (1980), no. 2, 305-317. (Mihai Anastasie) **81h:58014** 58B20 (58B05)
- Swart, E. R. The edge reconstructibility of planar bidegree graphs. *Combinatorics* **79** (Proc. Colloq., Univ. Montréal, Montréal, Que., 1979), Part II. *Ann. Discrete Math.* **9** (1980), 7-12. (Thomas Andreae) **81m:05099** 05C60
- Swart, Johan Applications of Schwartz bornologies. *Math. Colloq. Univ. Cape Town* **12** (1978/79), 33-42 (1980). (H. Hogbe-Nlend) **81h:46005** 46A09
- Pairwise C-compact spaces. *Kyungpook Math. J.* **19** (1979), no. 1, 33-38. (Ivan L. Reilly) **81c:54049** 54E55 (54D30)
- Swartz, Blair (with de Boer, Carl) Collocation approximation to eigenvalues of an ordinary differential equation: the principle of the thing. *Math. Comp.* **35** (1980), no. 151, 679-694. (Steven M. Serbin) **81h:65097** 65L15
- Compact, implicit difference schemes for a differential equation's side conditions. *Math. Comp.* **35** (1980), no. 151, 733-746. (P. M. Dew) **81f:65063** 65L10 (65L05)
- Swartz, Charles Orlicz-Pettis topologies in function spaces. *Publ. Inst. Math. (Beograd) (N.S.)* **26**(40) (1979), 289-292. (K. Sundaresan) **81h:46024** 46E15 (46B15)
- Swartz, G. Boyd Polling in a loop system. *J. Assoc. Comput. Mach.* **27** (1980), no. 1, 42-59. (Authors' summary) **81i:68010** 68A05 (68C15)
- Swartzman, Gordon Evaluation of ecological simulation models. *Mathematical modelling in biology and ecology (Proc. Sympos., Pretoria, 1979)*, pp. 230-267. *Lecture Notes in Biomath.*, **33**, Springer, Berlin, 1980. (W. J. Padgett) **81j:92049** 92A17
- Swarp, G. A. (with Cowsik, R. C.) A remark on infinite cyclic covers. *J. Pure Appl. Algebra* **11** (1977/78), no. 1-3, 131-138. (From the introduction) **81c:57001** 57M10
- Boundary preserving maps of 3-manifolds. *Proc. Amer. Math. Soc.* **78** (1980), no. 2, 291-294. (Benny Evans) **81h:57006** 57N10
- Cable knots in homotopy 3-spheres. *Quart. J. Math. Oxford Ser. (2)* **31** (1980), no. 121, 97-104. (G. Peter Scott) **81h:57005** 57M25
- F. A. Smith conjecture for cable knots. *Quart. J. Math. Oxford Ser. (2)* **31** (1980), no. 121, 105-108. (G. Peter Scott) **81h:57006** 57M25 (57S17)
- Swarp, Kanti (with Sharma, J. K.) Time minimization in transportation problems. *New Zealand Oper. Res.* **6** (1978), no. 1, 75-88. (Authors' summary) **81f:90109** 90C35 (65K10)
- (with Gupta, S. N.) Note on stochastic programming for minimization of variance. *New Zealand Oper. Res.* **8** (1980), no. 2, 185-187. (Authors' summary) **81h:90073** 90C15
- Swarp, Shanti Heat transfer from a porous sphere in low Reynolds number flow. (German summary) *Z. Angew. Math. Phys.* **29** (1978), no. 1, 147-156. (Authors' summary) **81g:76093** 76R05 (76S05)
- Mass transfer from a porous circular cylinder with second order surface reaction. *J. Math. Phys. Sci.* **14** (1980), no. 2, 161-169. (Authors' summary) **81h:80006** 80A20
- Swartztraber, Paul N. On the spectral approximation of discrete scalar and vector functions on the sphere. *SIAM J. Numer. Anal.* **16** (1979), no. 6, 934-949. (Dietrich Braess) **81c:65011** 65D10 (86A99)
- Wayne, D. A. Matrix operations with rational functions. *Proceedings of the Seventh Manitoba Conference on Numerical Mathematics and Computing (Univ. Manitoba, Winnipeg, Man., 1977)*, pp. 581-589. *Congress. Numer., XX, Utilitas Math., Winnipeg, Man.*, 1978. (Editors) **81h:65006** 65L05
- Sweedler, Moss E. Complete separability. *J. Algebra* **61** (1979), no. 1, 199-248. (Lindsay N. Childs) **81h:16012** 16A16
- Sweeney, Dennis J. (with Murphy, Richard A.) A method of decomposition for integer programs. *Oper. Res.* **27** (1979), no. 6, 1128-1141. (C. R. Bector) **81h:90072** 90C10
- Sweet, Arnold L. An ad hoc method for forecasting series with zero values. *AIIE Trans.* **12** (1980), no. 1, 97-103. (Authors' summary) **81d:90034** 90A20 (62M20)
- Sweet, Daniel (with Speelman, Wayne) The alternative method for solutions in the kernel of a bounded linear functional. *J. Differential Equations* **37** (1980), no. 3, 297-302. (M. K. Grammatikopoulos) **81m:34053** 34C25 (34C28)
- Sweet, Roland A. (with Machura, Marek) A survey of software for partial differential equations. *ACM Trans. Math. Software* **6** (1980), no. 4, 461-488. (Authors' summary) **81h:65106** 65M99 (65-04, 65N99)
- Sweeting, T. J. Speeds of convergence and asymptotic expansions in the central limit theorem: a treatment by operators. *Ann. Probab.* **8** (1980), no. 2, 281-297. (Christian Hipp) **81f:60039** 60F05 (60G50)
- Swendsen, R. H. (with Zia, R. K. P.) The surprising effectiveness of the Migdal-Kadanoff renormalization scheme. *Phys. Lett. A* **69** (1978/79), no. 6, 382-384. (Authors' summary) **81h:82011** 82A05 (82A25)
- (with Blöte, H. W. J.) Critical behavior of the four-dimensional Ising model. *Phys. Rev. B* (3) **22** (1980), no. 9, 4481-4483. (Authors' summary) **81h:82020** 82A25 (82-04, 82A67)
- Swenson, Robert J. Generalized heat conduction equation. *Amer. J. Phys.* **46** (1978), no. 1, 76-77. (Authors' summary) **81g:81012** 81C05 (80A20)
- Sweetin, J. Asymptotic estimation of actuarial functions arising in coal mine valuation. *Proc. West Virginia Acad. Sci.* **50** (1978), no. 2-4, 104-116 (1980). (Authors' summary) **81m:90067** 90B99
- On the relationship between a summability matrix and its transpose. *J. Austral. Math. Soc. Ser. A* **28** (1979), no. 3, 362-368. (Amnon Jakimovski) **81c:40010** 40D25 (40C05)
- Świątek, Halina On an equation of information theory. *Aequationes Math.* **20** (1980), no. 1, 18-22. (Ram Autar) **81d:39004** 39B20 (94A15)
- Świątek, Jerzy The Bayes' approach to the parameter estimation in complex systems. *Found. Control Engrg.* **5** (1980), no. 1, 45-52. (Authors' summary) **81g:93108** 93E10
- Świątkowski, T. Properties of a function of E. Marczewski. *Fund. Math.* **100** (1978), no. 1, 45-49. (Authors' summary) **81h:28002** 28A12 (26A30)
- Swick, K. E. Nonlinear age-dependent single species population dynamics. *Proceedings of the First International Conference on Mathematical Modeling (St. Louis, Mo., 1977)*, Vol. I, pp. 259-268. *Univ. Missouri-Rolla, Rolla, Mo.*, 1977. (Authors' summary) **81j:92040** 92A15 (34C25)
- Swieca, J. A. (with Rothe, K. D.) Fractional winding numbers and the U(1) problem. *Nuclear Phys. B* **168** (1980), no. 3-4, 454-464. (Authors' summary) **81e:81104** 81E99
- (with Marino, E. C.) Order, disorder and generalized statistics. *Nuclear Phys. B* **170** (1980), no. 1 FS 1, 175-186. (Authors' summary) **81f:81061** 81E99 (81E15, 82A25, 82A67)
- Świątek, Andrzej Performance deterioration of optimum systems. *Found. Control Engrg.* **5** (1980), no. 2, 105-109. (Authors' summary) **81h:90046** 90B25 (49E30)
- Swiger, L. A. (with Bennett, G. L.) Genetic variance and correlation after selection for two traits by index, independent culling levels and extreme selection. *Genetics* **94** (1980), no. 3, 763-775. (Authors' summary) **81h:92020** 92A10
- Swinnerton-Dyer, Peter The Royal Society and its impact on the intellectual and cultural life of Britain. *Jbuch. Heidelberger Akad. Wiss.* **1979**, 136-143 (1980). (M. Kline) **81f:00011** 00A99 (01A80)
- Świątek, Piotr Some representation problems for semi-rings. *J. Math. Psych.* **21** (1980), no. 2, 124-135. (Derek C. J. Burgess) **81j:06003** 06A10 (90A08)
- Switzer, Paul Extensions of linear discriminant analysis for statistical classification of remotely sensed satellite imagery. *J. Internat. Assoc. Math. Geol.* **12** (1980), no. 4, 367-376. (Authors' summary) **81h:86013** 86A99 (62H30)
- Switzer, R. M. Rank 2 bundles over P^n and the e-invariant. *Indiana Univ. Math. J.* **29** (1979), no. 6, 961-974. (P. E. Newstead) **81c:55022** 55R25 (14F05, 81E10)
- Swjagin, V. G. See Swjagin, V. G.
- Sworster, David D. (with Kawauchi, Brian H.) Instantaneous cost functions in optimally controlled stochastic systems. *IEEE Trans. Systems Man Cybernet.* **8** (1978), no. 12, 855-859. (C. J. Harris) **81h:93000** 93E20
- Syber, A. N. (with Kammozev, N. F.) Spectral recognition methods for monotonic and threshold functions. *Automat. i Vychisl. Tehn. (Riga)* **12** (1978), no. 5, 23-28. (Russian); translated as *Automat. Control Comput. Sci.* **12** (1978), no. 5, 20-24. (Authors' summary) **81h:94046** 94C10
- (with Kammozev, N. F.) Spectral method of decomposition of Boolean functions. *Automat. i Vychisl. Tehn. (Riga)* **13** (1979), no. 2, 54-58. (Russian); translated as *Automat. Control Comput. Sci.* **13** (1979), no. 2, 46-50. (Authors' summary) **81h:94031** 94C10
- Syber, A. V. Moduli of families of curves and surfaces passing through sets. (Russian) *Metric questions of the theory of functions and mappings, No. VII (Proc. Fourth Colloq. Quasiconformal Mappings and their Generalizations, Donetsk, 1974)* (Russian), pp. 178-188. "Naukova Dumka", Kiev, 1975. (See **80c:30023**) **31B15** (30C60)
- Syber, V. V. (with Ruban, A. I.) Asymptotic theory of laminar boundary layer separation in an incompressible fluid. (Russian. English summary) *Adv. in Mech.* **2** (1979), no. 4, 57-95. (Authors' summary) **81g:76043** 76D15
- Syber, V. V. Asymptotic theory of transient separation. (Russian) *Izv. Akad. Nauk SSSR Meh. Zhid. Gaza* **1979**, no. 6, 21-32. (V. G. Kolomeec) **81h:76020** 76D15
- Sychev, A. N. See Syber, A. N.
- Sydow, Achim See Systems analysis and simulation, **81j:93009**
- Syed, Ansaruddin A remark on generalisation of orthogonal transformations. *Karachi Univ. J. Sci.* **6** (1978), no. 2, 1-5. (Thomas H. Foregger) **81f:15004** 15A04
- Sykes, M. F. (with Gaunt, D. S.; Glen, Maureen) Perimeter polynomials for bond percolation processes. *J. Phys. A* **14** (1981), no. 1, 287-293. (Authors' summary) **81m:82045** 82A67 (05A10, 82A42)
- Sylvester, Richard J. (with Leysieffer, Frederick W.; Savage, I. Richard) Reprinted articles in statistics and probability theory: a bibliography. I. (French summary) *Internat. Statist. Rev.* **48** (1980), no. 2, 205-228. (From the introduction) **81h:62001a** 62-XX (00A15, 01A75)
- (with Leysieffer, Frederick W.; Savage, I. Richard) Reprinted articles in statistics and probability theory: a bibliography. II. *Internat. Statist. Rev.* **48** (1980), no. 3, 289-307. (From the introduction) **81h:62001b** 62-XX (00A15, 01A75)
- Symes, W. W. Systems of Toda type, inverse spectral problems, and representation theory. *Invent. Math.* **59** (1980), no. 1, 13-51. (Tudor S. Ratiu) **81g:58019** 58F07
- Numerical stability in an inverse scattering problem. *SIAM J. Numer. Anal.* **17** (1980), no. 5, 707-732. (Brian DeFazio) **81h:65135** 65N99 (39A11, 46E35)
- Symon, Keith R. (with Lewis, H. Ralph) Erratum: "Linearized analysis of inhomogeneous plasma equilibria: general theory" [*J. Math. Phys.* **20** (1979), no. 3, 413-436; MR **80b:80254a**]. *J. Math. Phys.* **21** (1980), no. 3, 599. **81h:82034** 82A45
- Syngelakis, S. (with Walker, A. C.) Elastic buckling of cylinders with widely spaced stiffeners. *Theory of shells (Proc. Third IUTAM Symp., Thilisi, 1978)*, pp. 553-574. North-Holland, Amsterdam, 1980. (T. J. Mahar) **81h:73048** 73H05 (73L99)
- Synnatzschke, J. Eine Bemerkung zur Anormalität antinormaler Operatoren und zur Struktur von Isomorphismen zwischen bedingt vollständigen Vektorverbänden. *Math. Nachr.* **92** (1979), 261-264. (Björn Textorius) **81f:47039** 47B55
- Syődi, István (with Kasai, Yasuhiro; Takano, Takehiko) Dualities for extended Potts models induced from the percolation problems of block elements. *Progr. Theoret. Phys.* **63** (1980), no. 6, 1917-1931. (Authors' summary) **81h:82041** 82A67
- Syrquin, Moshe Substitution and scale effects with and without homotheticity. An application to the intertemporal consumption decision. *Econom. Lett.* **4** (1979/80), no. 1, 13-18. (Authors' summary) **81g:90018** 90A10
- Sysak, Ja. P. Groups with complemented elementary abelian subgroups of a given rank. (Russian) *Groups defined by properties of a system of subgroups (Russian)*, pp. 38-56, 153. *Akad. Nauk Ukrain. SSR, Inst. Mat., Kiev*, 1979. (Ju. I. Merzljakov) **81f:20036** 20E15
- Syskin, S. A. Centralizers of 2-subgroups in finite groups. (Russian) *Algebra i Logika* **17** (1978), no. 3, 316-354, 358-359. (A. A. Mahnev) **81h:20019** 20D05
- Sysko, Maciej M. A bisection method for the traveling salesman problem. (Polish summary) *Zastos. Mat.* **16** (1977), no. 1, 59-62. (Authors' summary) **81h:90101** 90C10
- A characterization of hypergraphs generated by arborescences. *Kybernetika (Prague)* **15** (1979), no. 6, 403-407. (Authors' summary) **81a:68072** 68E10
- On cycle bases of a graph. *Networks* **9** (1979), no. 2, 123-132. (William T. Trotter, Jr.) **81d:05042** 05C38
- Optimal constructions of project networks (extended abstract). *Optimization techniques (Proc. Ninth IFIP Conf., Warsaw, 1979)*, Part 2, pp. 328-329. *Lecture Notes in*

- Control and Information Sci., 23, Springer, Berlin, 1980. (See 81j:49001b) 68B20 (90B35)
- Szyrov, L. P. Properties of certain classes of experimental block designs and correlation characteristics of observations. *Axiomat. i Telemekh.* 1977, no. 8, 41-53 (Russian. English summary); translated as *Automat. Remote Control* 38 (1977), no. 8, part 1, 1145-1156 (1978). (K. G. Russell) 81a:62081 62K10 (05B05)
- Szyska, G. N. Small spheres of Gaussian measures. (Russian) *Probability distributions in infinite-dimensional spaces* (Russian), pp. 154-170, 179, *Akad. Nauk Ukrain. SSR, Inst. Mat., Kiev*, 1978. (Friedrich Liese) 81i:60039 60G15
- Syvertsen, T. G. (with Hanssen, L.; Bergan, P. G.) Stiffness derivation based on element convergence requirements. *Mathematics of finite elements and applications, III* (Proc. Third MAFELAP Conf., Brunel Univ., Uxbridge, 1978), pp. 83-96, Academic Press, London, 1979. (C. Dieck) 81d:73064 73K25 (65N30)
- Szabados, J. On some convergent interpolatory polynomials. *Fourier analysis and approximation theory* (Proc. Colloq., Budapest, 1976), Vol. II, pp. 805-815, *Colloq. Math. Soc. János Bolyai*, 19, North-Holland, Amsterdam, 1978. (A. K. Varma) 81g:41009 41A05 (30E05, 42A15)
- On an interpolation-theoretic extremum problem. *Period. Math. Hungar.* 11 (1980), no. 2, 145-150. (Paul Nevai) 81e:42006 42A15
- Szabó, A. See Cavelling, Maurice, 81f:01091
- Szabó, Daniel On the rearrangement of infinite series. *Ann. Univ. Sci. Budapest. Eötvös Sect. Math.* 22/23 (1979/80), 125-134. (Hubert Tietz) 81j:40010 40D05
- Szabó, László (with Szendrei, Ágnes) Almost all algebras with triply transitive automorphism groups are functionally complete. *Acta Sci. Math. (Szeged)* 41 (1979), no. 3-4, 391-402. (H. Peter Gumm) 81g:08006 08A35 (20B25)
- See also Kaiser, H. K.; et al., 81g:08006
- Szafron, D. A. (with Collins, C. B.) A new approach to inhomogeneous cosmologies: intrinsic symmetries. I. *J. Math. Phys.* 20 (1979), no. 11, 2347-2353. (F. J. Flaherty) 81g:83065a 83F05
- (with Collins, C. B.) A new approach to inhomogeneous cosmologies: intrinsic symmetries. II. Conformally flat slices and an invariant classification. *J. Math. Phys.* 20 (1979), no. 11, 2354-2361. (F. J. Flaherty) 81g:83065b 83F05
- (with Collins, C. B.) A new approach to inhomogeneous cosmologies: intrinsic symmetries. III. Conformally flat slices and their analysis. *J. Math. Phys.* 20 (1979), no. 11, 2362-2370. (F. J. Flaherty) 81g:83065c 83F05
- Szalay, M. (with Turán, Pál) On some problems of the statistical theory of partitions with application to characters of the symmetric group. III. *Acta Math. Acad. Sci. Hungar.* 32 (1978), no. 1-2, 129-155. (From the text) 81i:10063 10J20 (20C30)
- Szalewicz, Krzysztof (with Jezioraki, Bogumił; Schwalm, William A.) Analytic continuation in exchange perturbation theory. *J. Chem. Phys.* 73 (1980), no. 12, 6215-6224. (Authors' summary) 81k:81111 81G45 (81C12)
- Samokowicz, Lucjan On decomposition of combinatorial homogeneous spheres. (Polish. English and Russian summaries) *Prace Nauk. Inst. Mat. Politech. Wrocław. Ser. Stud. Mathematici* No. 14 *Analiza Dyskretna* (1980), 37-48. (E. Jucović) 81m:57013 57Q05 (05C10, 52A25)
- Samosi, G. (with Rosen, Nathan) Classical particles with unusual properties. *Nuovo Cimento B* (11) 56 (1980), no. 2, 313-323. (Authors' summary) 81d:81143 81M05 (49H05, 83A05)
- Samkowski, A. The space of all bounded operators on Hilbert space does not have the approximation property. *Séminaire d'Analyse Fonctionnelle* (1978-1979), Exp. No. 14-15, 28 pp., *École Polytech., Palaiseau*, 1979. (D. J. H. Garling) 81i:46013 46B05 (47D25)
- See also Pisier, Gilles, 81i:46014
- Sanzo, Ivan (with Saez, Eduardo; Tuma, Elias) On the instability of a nonlinear system. (Spanish. English summary) *Scientia (Valparaíso)* No. 152 (1979), 33-37. (Z. Vorel) 81j:34094 34D20
- Szarek, Stanisław Jerzy (with Kwapien, Stanisław) An estimation of the Lebesgue functions of biorthogonal systems with an application to the nonexistence of some bases in C and L^1 . *Studia Math.* 66 (1979), no. 2, 185-200. (K. Tandori) 81h:42027 42C99 (46E30)
- Nonexistence of Besselian basis in $C(S)$. *J. Funct. Anal.* 37 (1980), no. 1, 56-67. (Marianne Freundlich Smith) 81h:46022 46E15 (46B15)
- Szarski, Jacek Cauchy problem for an infinite system of differential-functional equations with first order partial derivatives. Special issue dedicated to Władysław Orlicz on the occasion of his seventy-fifth birthday. *Comment. Math. Special Issue* 1 (1978), 293-300. (Authors' summary) 81i:35077 35R15
- Comparison theorems for infinite systems of differential-functional equations and strongly coupled infinite systems of first-order partial differential equations. *Rocky Mountain J. Math.* 10 (1980), no. 1, 239-246. (Curtis C. Travia) 81f:35115 35R99 (45F99)
- Szarski, Jan See Dictionary: Russian-Polish, 81m:00012
- Szász, Domokos Joint diffusion on the line. *J. Statist. Phys.* 23 (1980), no. 2, 231-240. (Hermann Rost) 81j:60114 60K35 (80A20)
- Szász, Ferenc Andor (with Hue, Tran Trong) On the homomorphic closure of some semisimple classes. *Math. Sem. Notes Kobe Univ.* 7 (1979), no. 2, 287-290. (H.-J. Hoehne) 81e:16005 16A21
- Szász, G. Characterization of the projectivity of principal ideals by generalized complements. *Publ. Math. Debrecen* 27 (1980), no. 1-2, 61-64. (Manfred Stern) 81m:06023 06C99 (06C20)
- Szász, Levente χ_a method with pseudopotentials. *Z. Naturforsch. A* 35 (1980), no. 6, 628-636. (Authors' summary) 81e:81160 81G45 (81C12)
- Szatkowski, Andrzej Contribution to the qualitative theory of nonlinear systems and networks. *Internat. J. Circuit Theory Appl.* 8 (1980), no. 4, 373-393. (François Aribaud) 81m:94029 94C05 (58F21, 58F40, 93D05)
- Methods for qualitative analysis of nonlinear autonomous electrical networks. (Polish. English, French, German and Russian summaries) *Rozprawy Elektrotech.* 26 (1980), no. 2, 383-401. (Authors' summary) 81j:94041 94C05 (93D99)
- Stratowski, Ted H. (with Herrmann, Nira) Expected sample size savings from curtailed procedures for the t -test and Hotelling's T^2 . *Ann. Statist.* 8 (1980), no. 3, 682-686. (Hisao Nagao) 81j:62057 62F03 (62H15)
- (with Miller, John J. H.) Explicit maximum likelihood estimates from balanced data in the mixed model of the analysis of variance. *Ann. Statist.* 8 (1980), no. 4, 811-819. (C. R. Rao) 81h:62126 62J05 (62F10)
- Szász, Árpád Generalized periodic distributions. *Rev. Roumaine Math. Pures Appl.* 23 (1978), no. 10, 1577-1582. (L. Artega) 81a:46044 46F10
- Periodic generalized functions. *Generalized functions and operational calculus* (Proc. Conf., Varna, 1975), pp. 197-204, *Bulg. Acad. Sci., Sofia*, 1979. (L. Artega) 81a:46043 46F10
- The Mikusiński-type convergences and their induced topologies. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math.* 27 (1979), no. 1, 83-89. (R. A. Struble) 81d:44009 44A40
- (with Szász, G.) Absolutely linear relations. *Aequationes Math.* 21 (1980), no. 1, 8-15. (D. R. Henney) 81j:39005 39B05 (39B70, 54C60)
- Szász, G. (with Szász, Árpád) Absolutely linear relations. *Aequationes Math.* 21 (1980), no. 1, 8-15. (D. R. Henney) 81j:39005 39B05 (39B70, 54C60)
- Szczepankiewicz, Lucyna (with Kula, Mieczysław; Szymiczek, Kazimierz) Quadratic forms over formally real fields with eight square classes. *Manuscripta Math.* 29 (1979), no. 2-4, 295-303. (Craig Cordes) 81h:10011 10C04
- Szczepankiewicz, Eugeniusz Correlation functions of certain random fields. (Polish. English summary) *Zeszyty Nauk. Wyz. Szkoły Ped. w Opolu Mat.* 21 (1980), *Algebra, Dyfuzja, Geom., Geom. Zastos. Mat.*, 169-171. (Authors' summary) 81m:60090 60G60
- Szuczka, Lesław W. Interpretability and axiomatizability. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math.* 27 (1979), no. 6, 425-429. (M. Yasuhara) 81f:03017 03B10
- (with Tarski, A.) Metamathematical discussion of some affine geometries. *Fund. Math.* 104 (1979), no. 3, 155-192. (M. Boffa) 81a:03012 03B30 (03C65, 03D35, 51N10)
- (with Prestel, Alexander) Nonaxiomatizability of real general affine geometry. *Fund. Math.* 104 (1979), no. 3, 193-202. (M. Boffa) 81a:03013 03B30 (03C65, 03D35, 51N10)
- Interpretations with parameters. *Z. Math. Logik Grundlag. Math.* 26 (1980), no. 1, 35-39. (John Cowles) 81k:03062 03F25 (03B25)
- Szuczka, Jerzy Stability criterion for two classes of nonlinear automatic control systems. I. Systems with hysteresis. (Polish. Russian and English summaries) *Prace Inst. Maszyn Przepływowych* 77 (1980), 93-110. (Authors' summary) 81k:93008 93D99 (93C05)
- Szuczka, Wiesław (with Ćwik, Jan; Kowalczyk, Teresa; Kowalski, Adam; Pleszczyńska, Elżbieta; Wierzbowska, Teresa) Monotone dependence function: background, new results and applications. *Mathematical statistics and probability theory* (Proc. Sixth Internat. Conf., Włsta, 1978), pp. 111-121, *Lecture Notes in Statist.*, 2, Springer, New York, 1980. (Jiri Anděl) 81i:62100 62H20
- Szuczka, Władysław (with Dziubdziela, Wiesław) On weak convergence of order statistics. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math.* 27 (1979), no. 6, 499-501. (Aart J. Stam) 81e:60023 60F05 (62G30)
- Central limit theorem in $D[0, \infty)$ for breakdown processes. *Probab. Math. Statist.* 1 (1980), no. 1, 49-57. (Richard F. Serfozo) 81m:60053 60F17 (60K10)
- Szebelly, Victor Long-time predictions in nonlinear dynamics. *Computational methods in nonlinear mechanics* (Proc. Second Internat. Conf., Univ. Texas, Austin, Tex., 1979), pp. 457-462, North-Holland, Amsterdam, 1980. (J. S. Joel) 81h:70006 70H05
- (with Lundberg, John; McGahee, William J.) Potential in the central bar structure. *Astrophys. J.* 239 (1980), no. 3, part 1, 880-881. (Authors' summary) 81h:85004 85A05
- (with Saari, Donald G.; Waldvogel, J.; Kirchgraber, Urs) Eduard L. Stiefel (1909-1978). Proceedings of the Sixth Conference on Mathematical Methods in Celestial Mechanics (Math. Forschungsinstitut, Oberwolfach, 1978), Part I. *Celestial Mech.* 21 (1980), no. 1, 3-4. (Editors) 81a:01042 01A70 (22-03, 57-03, 65-03, 70-03)
- Szegő, G. P. See Nonlinear optimization, 81j:65006
- Szegő, Gábor (with Pólya, George) Problems and theorems in analysis. I. Series, integral calculus, theory of functions. Translated from the German by D. Acemli. Corrected printing of the revised translation of the fourth German edition. *Grundlehren der Mathematischen Wissenschaften* [Fundamental Principles of Mathematical Sciences], 193. Springer-Verlag, Berlin-New York, 1978. xix + 389 pp. ISBN 3-540-05672-6 (Editors) 81c:00002 00A07
- Szeidl, L. Continuity of queueing systems with rejections. (Russian. English summary) *Studies in mathematical statistics, 3. Zap. Nauch. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 87 (1979), 125-142, 209, 214. (I. Ahmarov) 81g:60095 60K25
- Székelyhidi, L. Almost periodic functions and functional equations. *Acta Sci. Math. (Szeged)* 42 (1980), no. 1-2, 165-169. (Thomas A. O'Connor) 81f:39010 39B50 (42A75)
- Szekeres, G. (with Salzborn, F.) A problem in combinatorial group theory. *Ars Combin.* 7 (1979), 3-5. (József Pelikán) 81h:05021 05B10 (05B15, 20K01)
- Szekeres, Peter Naked singularities. *Gravitational radiation, collapsed objects and exact solutions* (Proc. Einstein Centenary Summer School, Perth, 1979), pp. 477-487, *Lecture Notes in Phys.*, 124, Springer, Berlin, 1980. (From the introduction) 81k:83036 83C99 (83C35, 83F05)
- Szeląg, D. (with Mróz, Z.) Optimal design of vibrating beams with unspecified support reactions. *Comput. Methods Appl. Mech. Engrg.* 19 (1979), no. 3, 333-349. (Authors' summary) 81k:73054 73K40
- Szemerédi, Endre Regular partitions of graphs. (French summary) *Problèmes combinatoires et théorie des graphes* (Colloq. Internat. CNRS, Univ. Orsay, Orsay, 1976), pp. 399-401, *Colloques Internat. CNRS*, 260, CNRS, Paris, 1978. (D. A. Klarner) 81i:05095 05C35 (10L10)
- (with Gyárfás, A.; Tuza, Zs.) Induced subtrees in graphs of large chromatic number. *Discrete Math.* 30 (1980), no. 3, 235-244. (Authors' summary) 81e:05060 05C05 (05C15)
- Szeplánska-Stupnicka, W. The effects of geometric nonlinearities on the resonant phenomena in multidegree-of-freedom systems. (German and Russian summaries) Special issue on large elastic deformation of discrete systems (Lectures, Euromech 69 Internat. Colloq., Balatonszemes, 1977). *Acta Tech. Acad. Sci. Hungar.* 67 (1978), no. 1-2, 165-178 (1979). (Authors' summary) 81h:73012 73D35 (34C15, 70K30)
- (with Bajkowski, J.) Multiharmonic response in the regions of instability of

- harmonic solution in multidegree-of-freedom nonlinear systems. (French and German summaries) *Internat. J. Non-Linear Mech.* 15 (1980), no. 1, 1-11. (Authors' summary) **81h:70015** 70K20
- Szendrei, Ágnes On modules in which idempotent reducts form a chain. *Colloq. Math.* 40 (1978/79), no. 2, 191-196. (Thomas Laffey) **81f:16030** 16A44 (16A45)
- On closed sets of linear operations over a finite set of squarefree cardinality. (German and Russian summaries) *Elektron. Informatsionnaya Kibernetika* 14 (1978), no. 11, 547-559. (I. G. Rosenberg) **81e:08006** 08A40 (03B50)
- (with Szabó, László) Almost all algebras with triply transitive automorphism groups are functionally complete. *Acta Sci. Math. (Szeged)* 41 (1979), no. 3-4, 391-402. (H. Peter Gumm) **81g:08006a** 08A35 (20B25)
- See also Káiser, H. K.; et al., **81g:08006b**
- Szendrei, Mária R. On the strong subband-separating extensions by 0- \mathbb{Q} -simple orthodox semigroups. *Algebraic theory of semigroups (Proc. Sixth Algebraic Conf., Szeged, 1976)*, pp. 629-646. *Colloq. Math. Soc. János Bolyai*, 20, North-Holland, Amsterdam, 1979. (D. R. La Torre) **81k:20092** 20M10
- A generalization of the Hall semigroup of a band. *J. Austral. Math. Soc. Ser. A* 30 (1980/81), no. 1, 65-72. (N. R. Reilly) **81j:20092** 20M10
- On a pullback diagram for orthodox semigroups. *Semigroup Forum* 20 (1980), no. 1, 1-10. (T. E. Hall) **81m:20085** 20M10
- Szentmiklóssy, Z. S-spaces and L-spaces under Martin's axiom. *Topology (Proc. Fourth Colloq., Budapest, 1978)*, Vol. II, pp. 1139-1145. *Colloq. Math. Soc. János Bolyai*, 23, North-Holland, Amsterdam, 1980. (Brian M. Scott) **81k:54032** 54D99 (03E50, 54A35)
- Szép, A. Cauchy problems for systems of linear singular partial differential equations. *Studia Sci. Math. Hungar.* 12 (1977), no. 1-2, 215-227 (1980). (Yūsaku Hamada) **81k:35005** 35A05
- Szép, J. (with Migliorini, F.) Equivalences, congruences and decompositions in semigroups. (Italian summary) *Ric. Mat. Univ. Parma (4)* 5 (1979), part 2, 745-752 (1980). (M. Friedberg) **81m:20081** 20M10
- Szép, A. A. Level representation of a graph in a single layer routing problem. *Delft Progr. Rep.* 4 (1979), no. 4, 252-265. (Author's summary) **81d:94050** 94C15 (05C99)
- Sztybel, Paweł Introduction to this issue. *Rocky Mountain J. Math.* 10 (1980), no. 1, 1-6. (Editors) **81m:01076** 01A70
- Szeto, George The localization of zero-dimensional rings. *Bull. Soc. Math. Belg.* 28 (1976), no. 3, 193-196. (J. Lambek) **81d:16004** 16A08 (13A15)
- On Galois extensions over commutative rings. *Ring theory (Proc. Antwerp Conf. (NATO Adv. Study Inst.), Univ. Antwerp, Antwerp, 1978)*, pp. 757-765. *Lecture Notes in Pure and Appl. Math.*, 51, Dekker, New York, 1979. (Lindsay N. Childs) **81b:13002** 13B05
- (with Wong, Yuen Fat) A general Maschke theorem. *Nanta Math.* 12 (1979), no. 1, 1-4. (S. Yuan) **81b:16012** 16A26
- On Goldie theorems for quotient rings. *Rocky Mountain J. Math.* 9 (1979), no. 4, 749-754. (J. K. Luedeman) **81b:16006** 16A08 (16A34)
- On generalized quaternion algebras. *Internat. J. Math. Math. Sci.* 3 (1980), no. 2, 237-245. (Manuel Ojanguren) **81b:16007** 16A16
- A characterization of a cyclic Galois extension of commutative rings. *J. Pure Appl. Algebra* 16 (1980), no. 3, 315-322. (F. DeMeyer) **81b:13003** 13B05 (16A74)
- (with Wong, Yuen Fat) On quaternion algebras over a commutative ring. *Math. Japon.* 25 (1980), no. 1, 55-59. (Manuel Ojanguren) **81b:16008** 16A16
- Szidlovsky, Ferenc (with Galántai, Aurél) On new concepts of game theory. *Applied numerical modelling (Proc. First Internat. Conf., Univ. Southampton, Southampton, 1977)*, pp. 587-593. Wiley, New York, 1978. (Robert Rosenthal) **81b:90165** 90D10 (90A07)
- Sziliágyi, Miklós About an infinite composition attached to a system of partial function in a topological Ω -group. *Rev. Roumaine Math. Pures Appl.* 23 (1978), no. 5, 799-805. (Editors) **81j:20054** 20F38
- Sziliágyi, Tivadar (with Hegedűs, Miklós) Equivalent conditions and a new fixed point theorem in the theory of contractive type mappings. *Math. Japon.* 25 (1980), no. 1, 147-157. (S. Swaminathan) **81a:54061** 54H25 (47H10, 54E50)
- Sziliárd, K. (with Fényes, Tomás) Über diskrete Mikusiński'sche Operatoren, die auf Grund der Dirichlet'schen Produktformel erzeugt werden. *Studia Sci. Math. Hungar.* 11 (1976), no. 1-2, 181-199 (1978). (C. R. Deeter) **81b:44014b** 44A40 (39A12, 46E25)
- Szilas, P. (with Süszmann, G.) A one-dimensional microscopical model for the study of the coherence in the stopping power problem. I. *Z. Phys. B* 39 (1980), no. 2, 125-130. (Authors' summary) **81h:81180** 81Hxx
- Sziráy, J. Test calculation for logic networks by composite justification. (French and German summaries) *Digital Process.* 5 (1979), no. 1-2, 3-15. (Jan Grabowski) **81e:94044** 94C10
- Szlachányi, K. (with Kuti, Julius; Polónyi, J.) Monte Carlo study of SU(2) gauge theory at finite temperature. *Phys. Lett. B* 98 (1981), no. 3, 199-204. (From the summary) **81k:81060** 81E10 (81-04)
- Szlenk, W. On weakly² conditionally compact dynamical systems. *Studia Math.* 66 (1979), no. 1, 25-32. (W. L. Reddy) **81a:54043** 54H20 (28D99, 54C40)
- Szmielew, Janusz The duality theorems. Cyclic representations. Langlands conjectures. *Dissertationes Math. (Rozprawy Mat.)* 168 (1980), 47 pp. (Joe Repka) **81j:22012** 22D35 (10D40, 22E40, 22E45, 43A35)
- Szmyt, Zofia On homogeneous rotation invariant distributions and the Laplace operator. *Ann. Polon. Math.* 36 (1979), no. 3, 249-259. (Jacques Faraut) **81k:43012a** 43A80 (22E30, 46F10)
- (with Ziemian, Bogdan) Fundamental solution E_n of the operator $\partial^2/\partial t^2 - \Delta_n$ for $n > 3$. *Ann. Polon. Math.* 36 (1979), no. 3, 277-286. (Jacques Faraut) **81k:43012c** 43A80 (22E30, 46F10)
- Sz. Nagy, Béla (with Foias, Ciprian; Percy, Carl) The functional model of a contraction and the space L^1 . *Acta Sci. Math. (Szeged)* 42 (1980), no. 1-2, 201-204. (E. Durst) **81b:47016** 47A45
- Szendler, S. (with Zielesny, Z.) On some properties of convolution operators in \mathcal{H}_c^1 and \mathcal{S}' . *J. Math. Anal. Appl.* 65 (1978), no. 3, 543-554. (L. Artega) **81e:46035** 46F10
- Szmitman, Alain-Sol Modèles stationnaires de files d'attente. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 286 (1978), no. 12, A563-A566. (Author's summary) **81e:60104** 60K25 (60G55)
- Szociński, Brunon Homogeneous linear objects of doubly pseudostochastic geometry. (Polish, Russian and English summaries) *Zeszyty Nauk. Politech. Śląsk. Mat.-Fiz.* No. 30 (1979), 227-233. (Z. Moznier) **81b:51005** 51A25 (15A24, 15A51, 53A55)
- Szopa, Halina On a certain variation of a rational function. (Polish, Russian and English summaries) *Zeszyty Nauk. Politech. Śląsk. Mat.-Fiz.* No. 34 (1979), 69-83. (E. Zlotkiewicz) **81d:30028** 30C55
- Szopa, Janusz Variance of the solution of a stochastic linear differential equation in the case when forcing is a sum of random variables. (Polish, Russian and English summaries) *Zeszyty Nauk. Politech. Śląsk. Mat.-Fiz.* No. 29 (1979), 183-187. (Andrzej Tylikowski) **81g:34076** 34F05
- Szopa, Romuald Functions of the moments for the solution of stochastic transient dynamical systems with two degrees of freedom. (Polish, Russian and English summaries) *Zeszyty Nauk. Politech. Śląsk. Mat.-Fiz.* No. 35 (1979), 165-172. (Andrzej Tylikowski) **81h:70020** 70L05
- Szós, Miklós (with Sánta-Tóth, Edit) Colloquium on Logic in Programming, 10-15 September 1978, Salgótarján (Hungary). *Polish Acad. Sci. Inst. Philos. Social. Bull. Sect. Logic* 8 (1979), no. 4, 206-213. (Editors) **81d:68016** 68B05
- Szpakowski, S. (with Gózdź, A.) The orthonormal basis for symmetric irreducible representations of $O(5) \times SU(1,1)$ and its application to the interacting boson model. *Nuclear Phys. A* 340 (1980), no. 1, 76-92. (Philip Huddleston) **81f:81021** 81C40 (81G30)
- (with Gózdź, A.) Complete and orthonormal solution of the five-dimensional spherical harmonic oscillator in Bohr-Mottelson collective internal coordinates. *Nuclear Phys. A* 340 (1980), no. 3-4, 359-364. (Authors' summary) **81k:81105** 81G30 (33A73)
- Szpilecki, Józef Modification of the equation solution method in which the time function is a linear combination of exponential functions with complex exponents. (Polish, Russian and English summaries) *Zeszyty Nauk. Politech. Śląsk. Mat.-Fiz.* No. 32 (1980), 53-60. (Author's summary) **81g:65064** 65H05
- Szpirglas, Jacques (with Kőrežioğlu, Hayri; Mazziotto, Gérald) Équations du filtrage non linéaire pour des processus à deux indices. (English summary) *Stochastic control theory and stochastic differential systems (Proc. Workshop, Deutsch. Forschungsgemeinschaft, Univ. Bonn, Bad Honnef, 1979)*, pp. 481-489. *Lecture Notes in Control and Information Sci.* 16, Springer, Berlin, 1979. (A. F. Gualtierotti) **81g:60043** 60G35 (93E10)
- (with Mazziotto, Gérald) A general nonlinear filtering model and associated stochastic differential equations. *Transactions of the Eighth Prague Conference on Information Theory, Statistical Decision Functions, Random Processes (Prague, 1978)*, Vol. C, pp. 301-309. Reidel, Dordrecht, 1979. (O. A. Glonti) **81e:60045** 60G35 (60H15)
- (with Mazziotto, Gérald) Modèle général de filtrage non linéaire et équations différentielles stochastiques associées. *Ann. Inst. H. Poincaré Sect. B (N.S.)* 15 (1979), no. 2, 147-173. (B. L. Rozovskii) **81e:60056** 60G25 (60G35, 60H10, 62M20)
- (with Mazziotto, Gérald) Un théorème de séparation pour le contrôle impulsif. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 16, A769-A772. (Authors' summary) **81d:93066** 93E11 (60G35)
- Sapiro, L. Sur le théorème de rigidité de Parsin et Arakelov. *Journées de Géométrie Algébrique de Rennes (Rennes, 1978)*, Vol. II, pp. 169-202. *Astérisque*, 64, Soc. Math. France, Paris, 1979. (Gerhard Pfister) **81f:14004** 14D05 (14G25, 14H10)
- Szaroetter, Jerzy A class of parametric tests for heteroscedasticity in linear econometric models. *Econometrica* 46 (1978), no. 6, 1311-1327. (Author's summary) **81d:62116** 62P20
- Sz. Turchányi, Piroška On the optimization problems in packet-switching networks. (Hungarian, English summary) *Alkalmaz. Mat. Lapok* 4 (1978), no. 3-4, 245-270 (1979). (Author's summary) **81e:90044** 90B15 (68A05, 90C30, 90C35)
- Sztyren, Małgorzata Boundary-value problems and surface forces for integral models of nonlocal elastic bodies. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Tech.* 27 (1979), no. 8-9, 657-664 (1980). (E. S. Şuhubi) **81m:73026** 73C99 (73B05)
- Boundary value problems and surface forces for integro-differential models of nonlocal elastic bodies. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Tech.* 27 (1979), no. 8-9, 665-671 (1980). (S. L. Pu) **81j:73015** 73B99
- Szuba, Adam Stochastic method of searching for a global minimum. (Polish, Russian and English summaries) *Arch. Automat. Telemekh.* 25 (1980), no. 2, 179-188. (Author's summary) **81m:90087** 90C15
- Szűcs, Joseph See Weidmann, Joachim, **81e:47001**
- Szufla, Stanisław Sets of fixed points of nonlinear mappings in function spaces. *Funkcial. Ekvac.* 22 (1979), no. 1, 121-126. (M. I. Kamenskii) **81k:47085** 47H10
- The generic property of existence of solutions of integral equations in Banach spaces. *Math. Nachr.* 93 (1979), 305-312. (Seppo Heikkilä) **81h:45030** 45N05
- On the boundedness of solutions of nonlinear differential equations in Banach spaces. *Comment. Math. Prace Mat.* 21 (1980), no. 2, 381-387. (Olusola Akinyele) **81h:34075** 34G20
- holnicki-Szuć, Jan See Holnicki-Szuć, Jan
- Szuć, Alicja On the Wasserstein metric. *Transactions of the Eighth Prague Conference on Information Theory, Statistical Decision Functions, Random Processes (Prague, 1978)*, Vol. B, pp. 267-273. Reidel, Dordrecht, 1978. (V. J. Paulauskas) **81e:60003** 60B05 (90A05)
- Szulkin, Andrzej An example concerning the topological character of the zero-set of a harmonic function. *Math. Scand.* 43 (1978/79), no. 1, 60-62. (John C. Wood) **81e:58033** 58E20 (31B05)
- Szász, P. On the length of continued fractions representing a rational number with given denominator. *Acta Arith.* 37 (1980), 55-59. (F. Drobot) **81m:10097** 10K10
- P. Turán: reminiscences of his student. P. Turán memorial volume. *J. Approx. Theory* 29 (1980), no. 1, 11-12. (Editors) **81m:01077** 01A70
- Szymańska-Bartman, M. Weak orthogonality on a partially ordered set. *Contributions to general algebra (Proc. Klagenfurt Conf., Klagenfurt, 1978)*, pp. 381-388. Heyn, Klagenfurt, 1979. (M. E. Adams) **81e:06002** 06A10 (06B99)
- Szymański, Andrzej (with Piotrowski, Zbigniew) Some remarks on Blumberg spaces. (Russian) Translated from the English by V. V. Fedorchuk. *Uspehi Mat. Nauk* 34 (1979), no. 6(210), 183-184. (Teodor Przymusiński) **81f:54007** 54C05
- Spaces and their subspaces. *Topology (Proc. Fourth Colloq., Budapest, 1978)*, Vol. II, pp. 1147-1151. *Colloq. Math. Soc. János Bolyai*, 23, North-Holland, Amsterdam, 1980. (J. van der Slot) **81m:54035** 54D20 (54A25)
- Szymanski, Thomas G. (with Sedgewick, Robert) The complexity of finding periods.

- Conference Record of the Eleventh Annual ACM Symposium on Theory of Computing (Atlanta, Ga., 1979), pp. 74–80, ACM, New York, 1979. (Authors' summary) **81d:68133** 68J05 (65C10, 68C25)
- Szymanski, Wacław Antisymmetric operator algebras. I, II. *Ann. Polon. Math.* **37** (1980), no. 3, 263–274, 299–311. (Edward Zosif) **81k:46065** 46L05 (46J10)
- Szymczak, Kazimierz (with Kula, Mieczysław; Szczepaniak, Lucyna) Quadratic forms over formally real fields with eight square classes. *Manuscripta Math.* **29** (1979), no. 2–4, 295–303. (Craig Cordes) **81b:10011** 10C04
- Szyslak, Dominik (with Franke, Martin) On a probabilistic generalization of Banach's fixed point theorem. (Polish and Russian summaries) *Ann. Univ. Mariae Curie-Skłodowska Sect. A* **31** (1977), 49–53 (1979). (Schie Park) **81f:54029** 54H25 (08A02)
- (with Morris, Kerwin W.) On the limiting behaviour of some functions of the average of independent random variables. (Polish and Russian summaries) *Ann. Univ. Mariae Curie-Skłodowska Sect. A* **31** (1977), 85–95 (1979). (Toshio Mori) **81h:60033** 60F05
- (with Rychlik, Zdzisław) On the rate of convergence in the central limit theorem. *Probability theory (Papers, VIIIth Semester, Stefan Banach Internat. Math. Center, Warsaw, 1976)*, pp. 221–229, Banach Center Publ., 5, PWN, Warsaw, 1979. (L. Hahn) **81c:60029** 60F05 (60G50)
- (with Hebda-Grabowska, Halina) On the rate of convergence in law for the partial sums of infima of random variables. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math.* **27** (1979), no. 6, 503–509. (Paul Deheuvels) **81e:60018** 60F05 (62G30)
- Tabachnick, B. G. (with Dost, S.) Some variational formulations for large deformation analysis of plates. *Comput. Methods Appl. Mech. Engrg.* **22** (1980), no. 3, 279–288. (Marcelo Epstein) **81k:73039** 73K10 (49A29, 73G05, 73K25)
- Tabata, Masahiko (with Mimura, Masayasu; Hosono, Yuzo) Multiple solutions of two-point boundary value problems of Neumann type with a small parameter. *SIAM J. Math. Anal.* **11** (1980), no. 4, 613–631. (Š. Schwabik) **81g:34025** 34B15 (34E15, 92A15)
- Tabata, Yoshio (with Namekata, Tsuneyuki; Nishida, Toshio) A sequential allocation problem with unknown probabilities of appearance. *Math. Japon.* **24** (1979/80), no. 4, 341–349. (Masafumi Sasaki) **81a:90076** 90B05 (90C50)
- Taberski, Roman On Cesàro means of Fourier series. *Funct. Approx. Comment. Math.* **6** (1978), 97–108. (Naza Tanović-Miller) **81d:42011** 42A24
- Indirect approximation theorems in L^p -metrics ($1 < p < \infty$). *Approximation theory (Papers, VIIIth Semester, Stefan Banach Internat. Math. Center, Warsaw, 1975)*, pp. 247–259, Banach Center Publ., 4, PWN, Warsaw, 1979. (V. N. Temljakov) **81f:41031** 41A50 (42A10)
- Approximation in the Fréchet spaces L^p ($0 < p < 1$). *Funct. Approx. Comment. Math.* **7** (1979), 105–121. (V. N. Temljakov) **81b:41090** 41A65 (42A05, 42A10)
- Táboas, P. (with Hale, Jack K.) On a bifurcation problem. *4th Latin-American School of Mathematics (Lima, 1978)*, pp. 122–125, IV ELAM, Lima, 1979. (A. Vanderbauwhede) **81d:58025** 58E07 (47H15)
- (with Onuchic, Nelson) On the conditional asymptotic stability for a nonlinear ordinary differential equation. *An. Acad. Brasil. Ciênc.* **51** (1979), no. 2, 187–190. (A. I. Kir'jani) **81d:34040** 34D05
- Tabor, Charles D. On extended topologies. *Kyungpook Math. J.* **19** (1979), no. 1, 57–68. (Author's introduction) **81j:54004** 54A10
- Tabor, József On some groups connected with the repers. *Tensor (N.S.)* **33** (1979), no. 1, 21–22. (V. Volence) **81m:20056** 20F26
- On commutative algebraic objects over the group $GL(n, R)$. *Wyz. Szkoła Ped. Krakow. Rocznik Nauk.-Dydakt. Prace Mat.* **9** (1979), 159–163. (Ferenc Fenyes) **81i:08006** 08A99 (20H20, 53A55)
- Tabor, M. (with Berry, M. V.; Balazs, N. L.; Voros, A.) Quantum maps. *Ann. Physics* **122** (1979), no. 1, 26–63. (Jean-Pierre Eckmann) **81b:81034** 81Hxx (58F11, 58F14)
- Taburekian, S. F. Method of successive improvement of the control in a minimax problem. (Russian) *Dynamics of control systems (Third All-Union Control Conf., Irkutsk, 1977)* (Russian), pp. 278–285, 343, "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. (V. F. Dem'janov) **81f:49025** 49B40 (49D05, 93C15)
- Tachibana, Shun-ichi (with Ogata, Koichi) Kaehler manifolds of positive curvature operator. *Proc. Amer. Math. Soc.* **78** (1980), no. 4, 548–550. (H. Jacobowitz) **81c:53063** 53C55
- Tachikawa, M. (with Matsumoto, Hideki; Semenoff, G.; Umezawa, H.) Quantum electrodynamics in solids. *Fortschr. Phys.* **28** (1980), no. 2, 67–98. (Authors' summary) **81d:81136** 81L05 (78A25, 82A55)
- Taci, R. M. (with Andriuk, B. Ja.) Two-sided estimates of eigenvalues of the Laplace operator in domains of complex form. (Russian) *Mat. Metody i Fiz.-Meh. Polja* **No. 10** (1979), 22–24, 133. (J. F. Heyda) **81h:73030** 73K15 (65F15)
- Tacon, D. G. Nonstandard extensions of transformations between Banach spaces. *Trans. Amer. Math. Soc.* **260** (1980), no. 1, 147–158. (Lawrence C. Moore, Jr.) **81e:47021** 47B05 (03H05)
- Taconis-Haanjes, Elsellen (with de Haan, Laurens) On Bahadur's representation of sample quantiles. *Ann. Inst. Statist. Math.* **31** (1979), no. 2, 299–308. (M. Csörgö) **81j:62091** 62G30 (60F15)
- Tada, Toshimasa On a criterion of Picard principle for rotation-free densities. *J. Math. Soc. Japan* **32** (1980), no. 3, 587–592. (M. Nakai) **81k:31005** 31A10 (31A35)
- Tadeuszewicz, Michał Uniqueness of solutions for the equations of nonlinear resistive networks. (Polish, Russian and English summaries) *Arch. Elektrotech. (Warsaw)* **29** (1980), no. 1, 147–159. (Author's summary) **81f:94027** 94C05 (15A90)
- Tadkanalla, Pandu R. R. (with Johnson, Mark E.) Rejection methods for sampling from the normal distribution. *Proceedings of the First International Conference on Mathematical Modeling (St. Louis, Mo., 1977)*, Vol. II, pp. 573–578, Univ. Missouri-Rolla, Rolla, Mo., 1977. (Authors' summary) **81k:65008** 65C05
- Random sampling from the exponential power distribution. *J. Amer. Statist. Assoc.* **75** (1980), no. 371, 683–686. (Authors' summary) **81j:65021** 65C10
- Tadler, G. A. (with Alexopoulos, N. G.; Ualeghli, Piergiorgio L. E.) Scattering from spheroidal composite objects. *J. Franklin Inst.* **309** (1980), no. 3, 147–162. (Authors' summary) **81c:78007** 78A45
- Tadumadze, T. A. Existence of a solution in optimal problems of neutral type. (Russian, Georgian and English summaries) *Sobšt. Akad. Nauk Gruz. SSR* **97** (1980), no. 1, 33–36. (From the text) **81g:49005** 49A10 (34K35)
- Tafel, Jacek Some solutions of the Einstein-Yang-Mills equations. *Geometrical and topological methods in gauge theories (Proc. Canad. Math. Soc. Summer Res. Inst., McGill Univ., Montreal, Que., 1979)*, pp. 134–136, *Lecture Notes in Phys.*, 129, Springer, Berlin, 1980. (José M. Cerveró) **81k:83037** 83C99 (58D25)
- (with Harnad, John; Shnider, Steven) Group actions on principal bundles and dimensional reduction. *Lett. Math. Phys.* **4** (1980), no. 2, 107–113. (Daniel A. Akyeampong) **81k:53043** 53C30 (81E10)
- Taft, Earl J. (with Peterson, Brian) The Hopf algebra of linearly recursive sequences. *Aequationes Math.* **20** (1980), no. 1, 1–17. (A. Küskulej) **81j:16012** 16A24 (10A35)
- (with Wilson, Robert Lee) There exist finite-dimensional Hopf algebras with antipodes of arbitrary even order. *J. Algebra* **62** (1980), no. 2, 283–291. (David E. Radford) **81d:16008** 16A24
- Tagiev, F. A. (with Aliiev, M. A.) A basis for convergence of a Tricomi difference problem for an equation of Čaplygin's type. (Russian) *Studies in some questions of the constructive theory of functions and differential equations (Russian)*, pp. 137–143, *Azerbaidžan. Inst. Nefti i Himii, Baku*, 1974. (See 80d:00021) **65N10**
- (with Guseinov, A. M.) Approximate solution of the Cauchy problem for a degenerate quasilinear equation by the finite difference method. (Russian) *Azerbaidžan. Gos. Univ. Učen. Zap.* **1978**, no. 3, 30–39. (E. G. Džakovon) **81i:65001** 65N10
- Tagiev, M. G. Sufficient condition for strong extremum in a degenerate problem of the calculus of variations. (Russian, Azerbaijani and English summaries) *Izv. Akad. Nauk Azerbaidžan. SSR Ser. Fiz.-Tehn. Mat. Nauk* **1979**, no. 5, 30–36. (Rolf Klötzler) **81i:49012** 49B10
- Tagh-Zade, A. T. The entropy of the motions of amenable groups. (Russian, Azerbaijani and English summaries) *Akad. Nauk Azerbaidžan. SSR Dokl.* **34** (1978), no. 6, 18–22. (A. Precupanu) **81e:28015** 28D20 (54H15, 58F11)
- Taguchi, Tokio On a generalization of Gaussian distribution. *Ann. Inst. Statist. Math.* **30** (1978), no. 2, 211–242. (A. M. Mathai) **81b:62023a** 62E15
- Some corrections and supplements: "On a generalization of Gaussian distribution". *Ann. Inst. Statist. Math.* **30** (1978), no. 3, 473–475. (A. M. Mathai) **81b:62023b** 62E15
- On an asymmetric general error distribution. (Japanese) *Proc. Inst. Statist. Math.* **27** (1980), no. 1, 53–54. (J. S. Huang) **81i:62035** 62E15 (60E05)
- Taheri, Rahab (with Aubert, Gilles) Sur la minimisation d'une fonctionnelle non convexe, non différentiable en dimension 1. (Italian summary) *Bol. Un. Mat. Ital. B* (5) **17** (1980), no. 1, 244–258. (Marco Gaviano) **81g:49017** 49A50
- (with Aubert, Gilles) Sur la faible fermeture de certains ensembles de contrainte en élasticité non linéaire plane. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **290** (1980), no. 12, A537–A540. (Authors' summary) **81d:73013** 73C50
- Tahiriadjan, L. A. (with Vinogradov, A. I.) Theory of the Eisenstein series for the group $SL(3, R)$ and its application to a binary problem. I. Fourier expansion of the highest Eisenstein series. (Russian) *Analytic number theory and the theory of functions. Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* **76** (1978), 5–52, 216. (J. Tunnell) **81m:10061** 10D40 (10H25)
- (with Faddeev, L. D.) The quantum method for the inverse problem and the XYZ Heisenberg model. (Russian) *Uspehi Mat. Nauk* **34** (1979), no. 5(209), 13–63, 256. (M. Lawrence Glasser) **81d:82066** 82A67 (35P20, 58G25, 82A25)
- See also Analytic number theory and the theory of functions, **81a:10003**
- le lyong Tai See Le Lyong Tai
- Tai, C. H. (with Chan, W. L.) Oscillations in a class of nonlinear retarded differential equations. *Southeast Asian Bull. Math.* **3** (1979), no. 2, 93–99. (V. Stakos) **81d:34061** 34K15
- (with Chan, W. L.) Variational approximations in energy space for the regulator problem with time delay. *J. Optim. Theory Appl.* **30** (1980), no. 2, 293–307. (D. H. Chung) **81b:93022** 93C15 (49D15)
- Tai, Kuo Chung Predictors of context-free grammars. *SIAM J. Comput.* **9** (1980), no. 3, 653–664. (Michael Bauer) **81k:68066** 68F25
- Tai, M. L. Stochastic models of self-assembly of linear chains. *Problemy Peredaci Informacii* **15** (1979), no. 4, 40–52. (Russian); translated as *Problems Inform. Transmission* **15** (1979), no. 4, 276–285 (1980). (Author's summary) **81i:92009** 92A09 (82A42, 93E03)
- Talbotson, Mitchell H. (with Weiss, Guido) The molecular characterization of Hardy spaces. *Harmonic analysis in Euclidean spaces (Proc. Sympos. Pure Math., Williams Coll., Williamstown, Mass., 1978)*, Part 1, pp. 281–287, *Proc. Sympos. Pure Math., XXXV, Part 1, Amer. Math. Soc., Providence, R.I.*, 1979. (David A. Stegenga) **81i:42013** 42A50 (30D55, 42B30)
- An introduction to Hardy spaces on local fields. *Harmonic analysis in Euclidean spaces (Proc. Sympos. Pure Math., Williams Coll., Williamstown, Mass., 1978)*, Part 2, pp. 311–316, *Proc. Sympos. Pure Math., XXXV, Part 2, Amer. Math. Soc., Providence, R.I.*, 1979. (David A. Stegenga) **81i:43015** 43A70 (30D55, 42A50)
- (with Chao, Jia Arng) Generalized conjugate systems on local fields. *Studia Math.* **64** (1979), no. 3, 213–225. (James E. Daly) **81f:43010** 43A70
- Talčin, M. A. Program theories of periodic abelian groups. (Russian) *The theory of nonregular curves in various geometric spaces (Russian)*, pp. 98–107, *Kazakh. Gos. Univ., Alma-Ata*, 1979. (O. V. Belegradskij) **81j:03054** 03C60 (20A15, 20K12, 68B10)
- See also Theory of nonregular curves in various geometric spaces, **81c:00007**
- Talfov, L. V. Structural and constructive characteristics of functions from L_2 . (Russian) *Mat. Zametki* **25** (1979), no. 2, 217–223, 317. (D. N. Zarnadze) **81i:42002** 42A10
- Best approximations in $L_2(0, 2\pi)$ of classes of periodic functions with derivatives of bounded variation. (Russian) *Mat. Zametki* **28** (1980), no. 2, 239–242, 318.

- (Hans-Jürgen Albrand) **81m:42002** 42A10 (41A50)
- Taimanov, A. D. Topologizability of countable algebras. (Russian) *Mathematical analysis and related mathematical questions* (Russian), pp. 254–275, 354. "Nauka" Sibirsk. Otdel., Novosibirsk, 1978. (Martin Wess) **81c:00016** 08C10 (03D45, 54H13)
- (with Hmelevskii, Ju. I.) Decidability of the universal theory of a free semigroup. (Russian) *Sibirsk. Mat. Zh.* **21** (1980), no. 1, 228–230, 240. (O. V. Belegradec) **81b:03012** 03B25 (20M05)
- See also Ljapunov, A. A. **81c:01033**
- Taira, Kazuaki Sur l'existence de processus de diffusion. (English summary) *Ann. Inst. Fourier (Grenoble)* **29** (1979), no. 4, ix, 99–126. (D. Kannan) **81h:60105** 60J60 (58G32)
- A strong maximum principle for degenerate elliptic operators. *Comm. Partial Differential Equations* **4** (1979), no. 11, 1201–1212. (Z. C. Motteier) **81b:35039** 35J70 (35J15)
- Tairjan, V. I. On weight structure of some classes of q -ary cyclic codes. (Russian) *English summary* *Problems Control Inform. Theory / Problemy Upravlen. Teor. Inform.* **8** (1979), no. 2, 151–159. (Bal Kishan Dass) **81b:94043** 94B15
- Weight spectra of some classes of binary cyclic codes. *Problemy Peredachi Informacii* **15** (1979), no. 2, 78–84 (Russian); translated as *Problema Inform. Transmission* **15** (1979), no. 2, 139–144. (Bal Kishan Dass) **81b:94044** 94B15
- Talrov, M. A. (with Salimov, A. H.; Nagiev, R. A.) Solution of a boundary value problem for an axially symmetric equation of non-steady-state filtration by the integral correlation method. (Russian) *Studies in some questions of the constructive theory of functions and differential equations* (Russian), pp. 159–166. Azerbaidjan. Inst. Nefti i Himii, Baku, 1974. (See **80d:00021**) 65P05
- Talrov, M. F. An interpretation of a Markovian queueing system with variable parameters. (Russian) *Mathematical analysis and probability theory* (Russian), pp. 172–174, 222. "Naukova Dumka", Kiev, 1978. (Author's summary) **81b:60075** 60J30 (60K25)
- Talrov, S. M. Some results in the theory of topological vector spaces. (Russian) *Tajiki summary* *Izv. Akad. Nauk Tadzhik. SSR Otdel. Fiz.-Mat. i Geol.-Him. Nauk* **1979**, no. 2(72), 83–86. (T. Precupanu) **81f:46009** 46A30 (46A05)
- Talrova, V. G. (with Bronza, S. D.) Profiles of Riemann surfaces. (Russian) *Teor. Funkcii Funkcional. Anal. i Prilozhen.* No. 33 (1980), 12–17, i. (V. G. Šeretov) **81f:30042** 30F99 (30D35)
- Tairyan, V. I. See Tairjan, V. I.
- Talshch, Chr. M. An Archimedean proof of Heron's formula for the area of a triangle; reconstructed. Special issue dedicated to Olaf Pedersen on his sixtieth birthday. *Centaurus* **24** (1980), 110–116. (C. R. Fletcher) **81m:01002** 01A20
- Tajima, T. (with Lebeouf, J. N.; Dawson, J. M.) A magnetohydrodynamic particle code with force free electrons for fluid simulations. *J. Comput. Phys.* **38** (1980), no. 2, 237–250. (Authors' summary) **81m:76059** 76W05 (82A45)
- Takabayashi, Takehiko Relativistic mechanics of confined particles as extended model of hadrons. The bilocal case. Theory of elementary particles extended in space-time. *Progr. Theoret. Phys. Suppl.* No. 67 (1979), 1–68 (1980). (Author's summary) **81c:81192** 81M05 (81G05)
- Takács, Lajos A sum of binomial coefficients. *Math. Comp.* **32** (1978), no. 144, 1271–1273. (Author's summary) **81g:05009** 05A10 (39A05)
- A generalization of the Eulerian numbers. *Publ. Math. Debrecen* **26** (1979), no. 3–4, 173–181. (L. Carlitz) **81j:05020** 05A15 (10A40)
- Queues with infinitely many servers. (French summary) *RAIRO Rech. Opér.* **14** (1980), no. 2, 109–113. (S. Christian Albright) **81m:60172** 60K25 (60K05, 90B22)
- (with Letac, Gérard) Random walks on a 600-cell. *SIAM J. Algebraic Discrete Methods* **1** (1980), no. 1, 114–120. (D. J. Daley) **81d:60068** 60J15 (52A25)
- Takada, Ichiro Computation of cyclic parts of Steinhilber problem for power 8. *Math. Sem. Notes Kobe Univ.* **7** (1979), no. 3, 543–546. (Duncan A. Buell) **81f:10014** 10A30 (10–04)
- (with Iséki, Kiyoshi) On Steinhilber's problem in number theory—computation of cyclic parts of Steinhilber's problem for power 9. *Math. Sem. Notes Kobe Univ.* **8** (1980), no. 1, 227–231. (Péter Kiss) **81j:10090** 10L10 (10A40)
- Takada, Michio (with Nagao, Hideo) On sequential point estimation of the mean of a normal distribution. *Ann. Inst. Statist. Math.* **32** (1980), no. 2, 201–210. (Rasul A. Khan) **81m:62151** 62L12
- Takada, Yoshikazu Stein's positive part estimator and Bayes estimator. *Ann. Inst. Statist. Math.* **31** (1979), no. 2, 177–183. (Arthur Cohen) **81b:62069** 62H12 (62C15)
- Takagi, Shigeo (with Shimodaira, Kazuo; Noguchi, Taisuke; Michiaki, Yoshimasa; Matsuzaki, Toshio; Kuwabara, Hideo; Suzuki, Hisao; Matsuo, Motohisa; Ōya, Shinichi) Perspective of study of history of mathematics. (Japanese) Special issue on the 20th anniversary of Sūgakushi Kenkyū. *Sūgakushi Kenkyū* No. 80 (1979), 3–75. (K. Inoue) **81b:01008** 01A27
- Takagi, Shunsuke Some Bessel function identities arising in ice mechanics problems. *Transactions of the Twenty-Fifth Conference of Army Mathematicians (Johns Hopkins Univ., Baltimore, Md., 1979)*, pp. 625–641. *ARO Rep.* **80**, 1, U. S. Army Res. Office, Research Triangle Park, N. C., 1980. (Author's summary) **81a:73031** 73K10 (33A40)
- Takagi, Teiji See Nakamura, Kōshirō, **81b:01020**
- Takaguchi, Makoto (with Chō, Muneko) Joint spectra of matrices. *Sci. Rep. Hiroaki Univ.* **26** (1979), no. 1, 15–19. (A. T. Dash) **81d:15006** 15A27 (15A18, 47A10)
- (with Chō, Muneko) On joint numerical ranges. *Sci. Rep. Hiroaki Univ.* **26** (1979), no. 1, 20–25. (John Duncan) **81a:47006** 47A12
- (with Chō, Muneko) Boundary of joint numerical range. *Sci. Rep. Hiroaki Univ.* **26** (1979), no. 2, 69–71. (Kiran Chandra Das) **81a:47007** 47A12
- (with Chō, Muneko) Joint numerical range and normal joint dilation. *Sci. Rep. Hiroaki Univ.* **26** (1979), no. 2, 72–75. (Kiran Chandra Das) **81c:47006** 47A12
- (with Chō, Muneko) The joint numerical range and the joint essential numerical range. *Sci. Rep. Hiroaki Univ.* **27** (1980), no. 1, 6–8. (A. T. Dash) **81b:47008** 47A12
- Takahashi, Alonzo Hilbert modules and their representation. *Rev. Colombiana Mat.* **13** (1979), no. 1, 1–38. (David A. Robbins) **81k:46056a** 46H25 (46L05, 46M99)
- A duality between Hilbert modules and fields of Hilbert spaces. *Rev. Colombiana Mat.* **13** (1979), no. 2, 93–120. (David A. Robbins) **81k:46056b** 46H25 (46L05, 46M99)
- Takahashi, Hideo (with Sasao, Seiya) Inner product spaces associated with Poincaré complexes. *Trans. Amer. Math. Soc.* **260** (1980), no. 2, 411–419. (P. J. Kahn) **81i:57013** 57P10
- Takahashi, Hiromitsu (with Matsuyama, Akira) An approximate solution for the Steiner problem in graphs. *Math. Japon.* **24** (1979/80), no. 6, 573–577. (Authors' summary) **81c:60073** 68E10 (05C35)
- Takahashi, Hiroyuki The study of the operating characteristics for the handicap-penalty schemes with the minor and major defectives. *Bull. Fac. Sci. Engrg. Chuo Univ.* **22** (1979), 467–478. (Author's summary) **81j:62191** 62N10 (90B25)
- Takahashi, Ichiro (with Irie, Toshihiro; Yamada, Gen) In-plane vibration of a free-clamped slender arc of varying cross section. *Bull. JSME* **23** (1980), no. 178, 567–573. (Authors' summary) **81g:73093** 73K99 (65D07)
- Takahashi, Katsumichi The factorization in the commutant of a unitary operator. *Hokkaido Math. J.* **8** (1979), no. 2, 253–259. (D. Sarason) **81b:47024** 47A68
- Takahashi, Kiyoshi (with Fujimoto, Hideo; Fujii, Seizo) Improvement of the convergence rate in the transformation method for constrained optimal control problems and its application. *Bull. JSME* **23** (1980), no. 177, 425–431. (Authors' summary) **81d:49024** 49D30 (93C10)
- Takahashi, Michihiro A bordism category for the ordinary homology theory. *Math. Sem. Notes Kobe Univ.* **7** (1979), no. 3, 547–572. (Harvey Margolis) **81c:55009** 55N99
- Takahashi, Moto-o Some simple cases of Poincaré conjecture. *J. Math. Soc. Japan* **32** (1980), no. 2, 373–397. (R. J. Daverman) **81f:57004** 57M40 (57N12)
- Takahashi, Reiji Quelques résultats sur l'analyse harmonique dans l'espace symétrique non compact de rang 1 du type exceptionnel. *Analyse harmonique sur les groupes de Lie (Sém., Nancy-Strasbourg 1976–1978)*, II, pp. 511–567. *Lecture Notes in Math.*, 739, Springer, Berlin, 1979. (Kenneth Johnson) **81i:22012** 22E46 (17B25)
- See also *Analyse harmonique sur les groupes de Lie*, **81c:22002**
- Takahashi, Ryō A note on the cut loci and the first conjugate loci of Riemannian manifolds. *Sci. Rep. Niigata Univ. Ser. A No. 17* (1980), 27–31. (Thomas E. Cecil) **81f:57038** 57R70 (53C22, 58E10)
- Takahashi, S. On the sound field of a plane radiator with an arbitrary contour shape. *Acustica* **44** (1980), no. 4, 336–338. (Author's introduction) **81d:76004** 76Q05
- Takahashi, Satoru (with Hayashi, Kenji; Yabe, Hiroshi) Stability of the general gradient methods for function minimization. *TRU Math.* **15** (1979), no. 2, 63–72. (Jon W. Tolte) **81h:65071** 65K10 (65L07, 90C30)
- Takahashi, Shigeru Almost sure invariance principles for lacunary trigonometric series. *Tōhoku Math. J. (2)* **31** (1979), no. 4, 439–451. (F. Móricz) **81c:60041** 60F15 (42A55)
- Takahashi, Shōichi Über die Relativklassenzahl der algebraischen Funktionenkörper. *Bull. Yamagata Univ. Natur. Sci.* **9** (1979), no. 4, 495–498. (K. Lakkis) **81c:12015** 12A50 (12A90)
- Takahashi, Tadayasu (with Iwamiya, Toshiyuki; Ōharu, Shinnosuke) On periodic travelling wave solutions to nonlinear dispersive equations. *Bull. Sci. Engrg. Res. Lab. Waseda Univ.* No. 87 (1979), 84–89. (Alan Jeffrey) **81b:35091** 35Q99 (35B10)
- (with Kenmochi, Nobuyuki) Nonautonomous differential equations in Banach spaces. *Nonlinear Anal.* **4** (1980), no. 6, 1109–1121. (Robert H. Martin, Jr.) **81j:34113** 34G20
- Takahashi, Takao Deformations of Sasakian structures and its application to the Brieskorn manifolds. *Tōhoku Math. J. (2)* **30** (1978), no. 1, 37–43. (R. E. Stong) **81c:53024** 53C15 (57R15)
- (with Toki, Yasunori) On normal contact metric structures on $SL(2, \mathbb{R})$. I. *Sci. Rep. Hiroaki Univ.* **26** (1979), no. 1, 7–10. (V. Oproiu) **81a:53039** 53C15 (53C25)
- Takahashi, Wataru (with Itoh, Shigeru) The common fixed point theory of singlevalued mappings and multivalued mappings. *Pacific J. Math.* **79** (1978), no. 2, 493–508. (Authors' summary) **81k:47080** 47H10 (47H09)
- Takahashi, Yasushi (with Kobayashi, Masanori) Ambiguities of quantization of the spin-1 field with external electromagnetic interaction. A Hamiltonian formalism with a linear supplementary condition. *Sci. Rep. Fac. Ed. Gifu Univ. Natur. Sci.* **6**, no. 3, 407–419 (1979). (Tuan W. Chen) **81d:81044** 81E05 (58F40)
- (with Aurilia, A.; Kobayashi, Masanori) Remarks on the constraint structure and the quantization of the Rarita-Schwinger field. *Phys. Rev. D* **3** (1978), no. 6, 1368–1374. (Authors' summary) **81b:81057** 81D25 (58F06, 81E99)
- Takahashi, Yutaka (with Miyahara, Hideo; Hasegawa, Toshiharu) An approximation method for open restricted queueing networks. *Oper. Res.* **28** (1980), no. 3, part 1, 594–602. (Authors' summary) **81d:90047** 90B22
- Takahasi, Kōiti (with Barankin, Edward W.) Betweenness for real vectors and lines. II. Relatedness of betweennesses. *Ann. Inst. Statist. Math.* **30** (1978), no. 3, 443–464. (J. Kist) **81j:06004** 06A15 (46C05)
- Takahasi, Shin-ei Korovkin's theorems for C^* -algebras. *J. Approx. Theory* **27** (1979), no. 3, 197–202. (M. Nakamura) **81i:46073** 46L05 (41A36, 46L30)
- Continuous linear functional on closed two-sided ideals of C^* -algebras. *Bull. Fac. Sci. Ibaraki Univ. Ser. A No. 12* (1980), 1–3. (Christopher Lance) **81h:46078** 46L05
- Takahata, Hiroshi Remarks on uniform integrability of functions related to sums of random variables. *Bull. Tokyo Gakuuei Univ.* **(4)** **30** (1978), 35–40. (Guti J. Babu) **81b:60040** 60F05
- Takai, Hiroshi (with Imai, Shō) On a duality for C^* -crossed products by a locally compact group. *J. Math. Soc. Japan* **30** (1978), no. 3, 495–504. (Authors' summary) **81h:46090** 46L55 (22D35)
- (with Pedersen, Gert Kjaergård) Crossed products of C^* -algebras by approximately uniformly continuous actions. *Math. Scand.* **45** (1979), no. 2, 282–288. (Claude Schochet) **81g:46098** 46L55 (46L05)
- Takamatsu, T. (with Oi, K.; Sayama, H.) Multimodality analysis of a class of multistage allocation problems. *J. Optim. Theory Appl.* **25** (1978), no. 1, 33–48. (Authors' summary) **81f:90095** 90C30 (49D99, 80A30, 90B05)
- Takamatsu, Yuzo (with Kinoshita, Kozo; Shibata, Masaharu) Test generation for combinational circuits by structure description functions. *FTCS-10 (Tenth Internat. Sympos. Fault-Tolerant Comput., Kyoto, 1980)*, pp. 152–154. *IEEE, New York, 1980.* (See **81m:94002**) 94C05
- Takamiyawa, K. (with Nishizeki, Takao; Saito, Nobuyuki) An algorithm for finding a short closed spanning walk in a graph. *Networks* **10** (1980), no. 3, 249–263. (Claude Benzenen) **81k:05074** 05C45 (68C25)
- Takanami, Itsuo (with Inoue, Katsushi) A note on closure properties of the classes of sets

- accepted by tape-bounded two-dimensional Turing machines. *Systems-Comput.-Controls* 9 (1978), no. 3, 11–19 (1980). (Authors' summary) **81f:68071** 68C40 (03D10)
- (with Inoue, Katsushi) Closure properties of the classes of sets accepted by automata on a two-dimensional tape under two operations. *Systems-Comput.-Controls* 9 (1978), no. 6, 10–17 (1980). (From the summary) **81f:68075** 68D05 (03D05)
- (with Inoue, Katsushi; Nakamura, Akira; Ae, Tadashi) One-way simple multithread finite automata. *Theoret. Comput. Sci.* 9 (1979), no. 3, 311–328. (I. Hal Sudborough) **81c:68030** 68C25 (68F10)
- (with Inoue, Katsushi) A note on decision problems for three-way two-dimensional finite automata. *Inform. Process. Lett.* 10 (1980), no. 4–5, 245–248. (From the introduction) **81h:68036** 68D05 (03D05)
- (with Inoue, Katsushi; Nakamura, Akira) Nonclosure property of nondeterministic two-dimensional finite automata under cyclic closure. *Inform. Sci.* 22 (1980), no. 1, 45–50. (Authors' summary) **81h:68037** 68D05
- Takano, Katsuo** One-parameter semigroups of the Gaussian and Poisson integral transforms on the W^2 -space. *Bull. Fac. Sci. Ibaraki Univ. Ser. A No. 11* (1979), 39–45. (J. R. Dorroh) **81a:47043** 47D05 (44A15)
- Takano, Takehiko** (with Kasai, Yasuhiro; Syōji, Itiro) Dualities for extended Potts models induced from the percolation problems of block elements. *Progr. Theoret. Phys.* 63 (1980), no. 6, 1917–1931. (Authors' summary) **81f:82041** 82A67
- Takase, Masahito** (with Kajiwara, Ijō) Steinitude des domaines à cohomologie nulle dans un produit de deux tores complexes de dimension un. *Mem. Fac. Sci. Kyushu Univ. Ser. A* 33 (1979), no. 1, 159–171. (Gerd Fischer) **81d:32027** 32E10 (32F30)
- Takashima, M.** Electrohydrodynamic instability in a dielectric fluid between two coaxial cylinders. *Quart. J. Mech. Appl. Math.* 33 (1980), no. 1, 93–103. (Authors' summary) **81g:76056** 76E25
- Takasu, S.** See *Mathematical studies of information processing*, **81f:68006**
- Takata, Masaru** (with Fukata, Satoru; Mohri, Akira) On the determination of the optimal feedback gains for multivariable linear systems incorporating integral action. *Internat. J. Control* 31 (1980), no. 6, 1027–1040. (Authors' summary) **81d:93032** 93C35 (49B36, 49B50)
- Takatsu, S.** Characterization of a linear decision rule. *Kybernetes* 10 (1981), no. 1, 31–33. (Authors' summary) **81k:90006** 90A05
- Takayama, Akira** (with Anderson, Richard K.) Comparative statics with discrete jumps in shift parameters, or, how to do economics on the saddle (point). *J. Econom. Theory* 21 (1979), no. 3, 491–509. (From the introduction) **81a:90060** 90A14
- Takayama, Hajime** (with Wada, Koh) Nonlinear susceptibilities of the Sherrington-Kirkpatrick model and the spherical model. *Progr. Theoret. Phys.* 64 (1980), no. 1, 327–329. (Authors' summary) **81h:82024** 82A25 (82A55)
- Takeda, Eiji** (with Nishida, Toshiro) Multiple criteria decision problems with fuzzy domination structures. *Fuzzy Sets and Systems* 3 (1980), no. 2, 123–136. (Authors' summary) **81a:90024** 90A06
- Takeda, Masaharu** (with Osaki, Shunji) A two-unit paralleled redundant system with bivariate exponential failure law and allowed down time. *Cahiers Centre Études Rech. Opér.* 21 (1979), no. 1, 55–62. (Peter Franken) **81h:68089** 68K10 (62N05, 90B25)
- Takeda, T.** (with Azumi, M.; Kurita, G.; Matsura, T.; Tanaka, Yutaka; Tsunematsu, T.) A fluid model numerical code system for tokamak fusion research. *Computing methods in applied sciences and engineering (Proc. Fourth Internat. Sympos., Versailles, 1979)*, pp. 335–356. North-Holland, Amsterdam, 1980. (Authors' summary) **81h:76086** 76X05 (65N30, 76W05)
- Takemasa, Hiroaki** (with Enomoto, Masatoshi; Watatani, Yasuo) Automorphisms on Cuntz algebras. *Math. Japon.* 24 (1979/80), no. 2, 231–234. (William L. Green) **81h:46066a** 46L40
- (with Enomoto, Masatoshi; Fujii, Masatoshi; Watatani, Yasuo) Automorphisms on Cuntz algebras. II. *Math. Japon.* 24 (1979/80), no. 4, 463–468. (William L. Green) **81h:46066b** 46L40
- Takemura, Shin-ichi** A sensitivity analysis on optimal economic growth. *J. Math. Econom.* 7 (1980), no. 2, 193–208. (Mohamed El-Hodiri) **81g:90031** 90A16 (49A34)
- Takemitsu, Nobumasa** (with Matunobu, Yasuo) Unsteady stagnation-point flow impinging obliquely on an oscillating flat plate. *J. Phys. Soc. Japan* 47 (1979), no. 4, 1347–1353. (Claude Demuth) **81h:76022** 76D05 (76Z05)
- On a finite-difference approximation for the steady-state Navier-Stokes equations. *J. Comput. Phys.* 36 (1980), no. 2, 236–248. (Authors' summary) **81e:76030** 76D05 (65N05)
- Takenaka, Yoshiya** (with Sakamoto, Kunio) On almost contact structures belonging to a CR-structure. *Kodai Math. J.* 3 (1980), no. 1, 144–161. (S. M. Webster) **81f:53014** 53B05 (32F30, 53A40)
- Takenaka, Yoshiko** (with Kitagawa, Genshiro) Complete connectivity of a graph. *Keio Engrg. Rep.* 31 (1978), no. 12, 131–138. (W. Mader) **81d:05045** 05C40
- Takeno, Hyōtiro** On the theory of plane symmetric space-times. II. *Tensor (N.S.)* 32 (1978), no. 3, 257–262. (Shin-ichi Kitamura) **81a:83010** 83C20 (53B30)
- On the theory of plane symmetric space-times. III. *Tensor (N.S.)* 33 (1979), no. 1, 63–71. (Shin-ichi Kitamura) **81g:83021** 83C20 (53B30)
- Takeno, Shozo** Nonlinear excitations and coherent states in the Ising model in a transverse field. *J. Phys. Soc. Japan* 48 (1980), no. 4, 1075–1083. (Authors' summary) **81f:82044** 82A67
- Takenouchi, Osamu** A non- W^* , AW^* -factor. C^* -algebras and applications to physics (Proc. Second Japan-USA Sem., Los Angeles, Calif., 1977), pp. 135–139. *Lecture Notes in Math.*, 650, Springer, Berlin, 1978. (J. D. Maitland Wright) **81c:46052** 46L35
- (with Herman, Richard H.) Extensions of d/dx . *Math. Japon.* 25 (1980), no. 2, 207–209. (C. J. K. Batty) **81h:46053** 46J10
- Takens, Floris** Moduli and bifurcations; nontransversal intersections of invariant manifolds of vectorfields. *Functional differential equations and bifurcation (Proc. Conf., Inst. Ciênc. Mat. São Carlos, Univ. São Paulo, São Carlos, 1979)*, pp. 368–384. *Lecture Notes in Math.*, 799, Springer, Berlin, 1980. (S. Ju. Pilugin) **81m:58058** 58F14 (34C35)
- Takeno, Fumiko** The absolute value of an element of the complexification of a simplex space. *Natur. Sci. Rep. Ochanomizu Univ.* 30 (1979), no. 2, 47–52. (P. J. Stacey) **81f:46015** 46A55 (46A40, 52A01)
- Takenaki, Masamichi** ★Theory of operator algebras. I. Springer-Verlag, New York-Heidelberg, 1979. vii + 415 pp. ISBN 0-387-90391-7 (Christopher Lance) **81c:46038** 46Lxx
- (with Nakagami, Yoshiomi) ★Duality for crossed products of von Neumann algebras. *Lecture Notes in Mathematics*, 731, Springer-Verlag, Berlin-New York, 1979. ix + 139 pp. ISBN 3-540-09522-5 (William Paschke) **81c:46053** 46L10
- (with Kastler, D.) Group duality and the Kubo-Martin-Schwinger condition. *Comm. Math. Phys.* 70 (1979), no. 3, 193–212. (Etang Chen) **81f:46083** 46L60 (82A15)
- Takeuchi, Akikazu** (with Amari, Shun-ichi) Mathematical theory on formation of category detecting nerve cells. *Biol. Cybernet.* 29 (1978), no. 3, 127–136. (Authors' summary) **81g:92002** 92A09
- (with Amari, Shun-ichi) Formation of topographic maps and columnar microstructures in nerve fields. *Biol. Cybernet.* 35 (1979/80), no. 2, 63–72. (J. D. Cowan) **81f:92017** 92A09
- Takeuchi, Jiro** On the Cauchy problem for some non-Kowalewskian equations with distinct characteristic roots. *J. Math. Kyoto Univ.* 20 (1980), no. 1, 105–124. (S. Cinquini) **81f:35013** 35A99
- Takeuchi, Junji** Potential operators associated with absorbing Bessel processes. *Proc. Japan Acad. Ser. A Math. Sci.* 56 (1980), no. 3, 93–96. (L. Stoica) **81h:60061** 60J35 (60J60)
- Takeuchi, Kei** (with Akahira, Masafumi) Discretized likelihood methods—asymptotic properties of discretized likelihood estimators (DLEs). *Ann. Inst. Statist. Math.* 31 (1979), no. 1, 39–56. (Christian Hipp) **81h:62033** 62F12
- (with Akahira, Masafumi) Asymptotic optimality of the generalized Bayes estimator in multiparameter cases. *Ann. Inst. Statist. Math.* 31 (1979), no. 3, 403–415. (J. Steinbach) **81g:62069** 62F12 (62F10)
- (with Akahira, Masafumi) Note on nonregular asymptotic estimation—what “nonregularity” implies. *Rep. Univ. Electro-Comm.* 30 (1979/80), no. 1, 63–66. (Lionel Weiss) **81a:62026** 62F12
- Takeuchi, Masaru** On foliations with the structure group of automorphisms of a geometric structure. *J. Math. Soc. Japan* 32 (1980), no. 1, 119–152. (I. Vaisman) **81f:57026** 57R30
- (with Sakane, Yusuke) Geometry of Yang-Mills fields—introduction to lectures by Prof. Bourguignon. (Japanese) *Sigaku* 32 (1980), no. 1, 44–63. (A. Morimoto) **81h:53032** 53C05 (58E20, 81E10)
- Takeuchi, Mitsuhiro** On extensions of Lie algebras by algebras. *J. Math. Soc. Japan* 32 (1980), no. 3, 477–515. (Timo Neuvonen) **81f:14030** 14L15 (17B50)
- Takeuchi, Shigeru** (with Shiga, Kiyoshi) Equivariant fibrations of homogeneous complex manifolds. *Bull. Fac. Gen. Ed. Gifu Univ.* No. 15 (1979), 14–19. (A. L. Oniščik) **81h:32018** 32M10
- Cohomological dimension of homogeneous spaces of complex Lie groups. II. *Sci. Rep. Fac. Ed. Gifu Univ. Natur. Sci.* 6, no. 3, 391–393 (1979). (A. L. Oniščik) **81h:32037** 32M10
- Takeuchi, Teruo** Notes on the class field towers of cyclic fields of degree l . *Tōhoku Math. J. (2)* 31 (1979), no. 3, 301–307. (Jan Šliwa) **81d:12008** 12A65 (12A35)
- On the l -class field towers of cyclic fields of degree l . *Sci. Rep. Niigata Univ. Ser. A No. 17* (1980), 23–25. (Susumu Shirai) **81e:12012** 12A65
- Takeuchi, Yasuji** On (x) -complexes. *J. Math. Soc. Japan* 32 (1980), no. 1, 99–103. (J. Ohm) **81d:13014** 13D25 (13H10)
- Takeuti, Gaisi** Boolean valued analysis. *Applications of sheaves (Proc. Res. Sympos. Appl. Sheaf Theory to Logic, Algebra and Anal., Univ. Durham, Durham, 1977)*, pp. 714–731. *Lecture Notes in Math.*, 753, Springer, Berlin, 1979. (J. L. Bell) **81c:03045** 03E40 (47D25, 81B05)
- Work of Kurt Gödel. (Japanese) *Sigaku* 31 (1979), no. 4, 369–374 (1 plate). (Editors) **81f:01037** 01A70
- Takizawa, Kunio** (with Tomaru, Tadashi) Quotient analytic spaces. *J. Saitama Univ. Fac. Ed. Math. Natur. Sci.* 27 (1978), 1–4 (1979). (Alan T. Huckleberry) **81f:32030** 32G99 (32M05)
- Quotients of C^m —(0) by diagonal C^* -actions. *Proc. Amer. Math. Soc.* 79 (1980), no. 4, 581–584. (Andrew J. Sommese) **81g:32030** 32M99 (14B05)
- Takizawa, Ryuzo** A learning procedure for multisurface method of pattern separation. *Pattern Recognition* 12 (1980), no. 2, 75–82. (Authors' summary) **81e:68112** 68G10
- Takizawa, Kiyoshi** Orthogonal semigroups and E -unitary regular semigroups. *Bull. Tokyo Gakugei Univ.* (4) 31 (1979), 41–43. (H. D'Alarcos) **81a:20066** 20M10
- ben-Tal, Aharon** See Ben-Tal, Aharon
- Tal, Yoram** (with Levy, Mel) Expectation values of atoms and ions: the Thomas-Fermi limit. *Phys. Rev. A* (3) 23 (1981), no. 2, 408–415. (Authors' summary) **81a:81079** 81G45
- Tatagrand, Michel** Une remarque sur les espaces de Banach mesure-compact. *Séminaire Choquet, 17e année (1977/78), Initiation à l'analyse, Fac. 2, Comm. No. 7, 2 pp., Secrétariat Math., Paris, 1978.* (Peter Dodds) **81c:46037** 46E40 (28A20)
- Espaces de Banach faiblement Σ -analytiques. *Ann. of Math. (2)* 110 (1979), no. 3, 407–438. (M. M. Day) **81a:46021** 46B20 (46E15, 54D20)
- A simple example of pathological submeasure. *Math. Ann.* 252 (1979/80), no. 2, 97–102. (J. P. Christensen) **81h:28005** 28A12
- (with Fremlin, David H.) On CS-closed sets. *Mathematika* 26 (1979), no. 1, 30–32. (René Fourneau) **81f:46002** 46A05
- (with Fremlin, David H.) A decomposition theorem in tensor products of Archimedean vector lattices. *Mathematika* 26 (1979), no. 2, 302–305 (1980). (S. J. Bernau) **81h:46026** 46B30 (46M05)
- Les mesures gaussiennes qui ne sont pas de Radon. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 291 (1980), no. 3, A223–A225. (Authors' summary) **81m:60011** 60B11 (28C20)
- Certaines formes linéaires pathologiques sur un espace de Banach dual. (English summary) *Israel J. Math.* 35 (1980), no. 1–2, 171–176. (H. Hogbe-Nlend) **81g:46017** 46B10
- (with Edgar, G. A.) Liftings of functions with values in a completely regular space. *Proc. Amer. Math. Soc.* 78 (1980), no. 3, 345–349. (Robert E. Huff) **81g:46057** 46G15 (28A51)

- (with Bourgain, Jean) Compacité extrême. *Proc. Amer. Math. Soc.* 80 (1980), no. 1, 68–70. (M. M. Day) **81h:46011** 46B10 (46A50)
- Talagrand, Olivier** Initialisation d'un modèle numérique d'atmosphère à partir de données distribuées dans le temps. *Computing methods in applied sciences and engineering (Proc. Third Internat. Sympos., Versailles, 1977)*, II, pp. 217–231, *Lecture Notes in Phys.*, 91, Springer, Berlin, 1979. (Kenneth P. Bube) **81h:34007** 86A10 (65M99)
- Talagrand, Alessandro** See **Figli-Talagrand, Alessandro**
- Talano, Rodolfo** (with Demaria, Davide Carlo) Uniform homotopy. (Italian. English summary) *Ann. Mat. Pura Appl.* (4) 121 (1979), 131–144. (W. J. R. Mitchell) **81d:55015** 55Q05
- A topological characterization of a class of cardinals. *Rend. Sem. Mat. Univ. Politec. Torino* 37 (1979), no. 3, 67–71 (1980). (Eric K. van Douwen) **81j:54035** 54D20 (03E55)
- A topological characterization of a class of cardinals. *Proc. Amer. Math. Soc.* 80 (1980), no. 2, 363–366. (W. W. Comfort) **81h:54005** 54A25 (03E55, 54D60)
- Talano, A. L.** (with Pokrovskii, V. L.) The theory of two-dimensional incommensurate crystals. *Z. Eksp. Teor. Fiz.* 78 (1980), no. 1, 269–295 (Russian); translated as *Soviet Phys. JETP* 51 (1980), no. 1, 134–148. (Authors' summary) **81e:82054** 82A60
- Talano, V. A.** (with Il'ichev, A. P.) Three-index transportation problems and compiling school timetables. (Russian) *Ekonom. i Mat. Metody* 15 (1979), no. 4, 806–811. (R. Bolstein) **81e:90065** 90C08 (90B35)
- Talapin, V. S.** \mathbb{R} -planar transformation of a connection in real realizations of manifolds over algebras. (Russian) *Izv. Vysš. Ucheb. Zaved. Matematika* 1979, no. 12, 72–76. (Adrian C. Albu) **81e:53020** 53C05
- Talavage, J.** (with Azadivar, F.) Optimization of stochastic simulation models. *Math. Comput. Simulation* 22 (1980), no. 3, 231–241. (Authors' summary) **81h:93117** 93E20 (65C20)
- Talenti, Olympia** On cohomological periodicity of ZG-lattices. *Math. Z.* 169 (1979), no. 2, 119–126. (Wolfgang Grötz) **81a:16008** 16A26 (20J06)
- On cohomological periodicity for infinite groups. *Comment. Math. Helv.* 55 (1980), no. 2, 178–192. (D. F. Holt) **81h:20065** 20J99
- Talenti, Giorgio** Nonlinear elliptic equations, rearrangements of functions and Orlicz spaces. *Ann. Mat. Pura Appl.* (4) 120 (1979), 160–184. (H. Triebel) **81i:35068** 35J60 (46E30)
- Tall, A.** A method for constructing convex families of summability methods. (Russian. Estonian and English summaries) *Tartu Riikl. Ül. Toimetised* No. 448 (1978), 55–65. (E. Reimers) **81f:40006** 40E99
- Tallaferrro, Steven D.** A nonlinear singular boundary value problem. *Nonlinear Anal.* 3 (1979), no. 6, 897–904. (Richard Brown) **81i:34011** 34B10
- An inversion of the Lagrange-Dirichlet stability theorem. *Arch. Rational Mech. Anal.* 73 (1980), no. 2, 183–190. (S. Cinquini) **81c:70012** 70H35 (49H05, 70H30)
- Stability for two-dimensional analytic potentials. *J. Differential Equations* 35 (1980), no. 2, 248–265. (Ju. E. Giklikh) **81d:70004** 70D05 (34D20, 58F10)
- On the angular variation of solutions of second order linear systems. *SIAM J. Math. Anal.* 11 (1980), no. 1, 173–180. (A. Averna) **81h:34008** 34A30 (49A10)
- Talla, Jari** A technical note on Lars Lindahl's Position and change. *J. Philos. Logic* 9 (1980), no. 2, 167–183. (Audrey McKinney) **81h:03045** 03B45 (90A06)
- Talkner, P.** (with Grabert, Hermann; Hänggi, P.) Microdynamics and nonlinear stochastic processes of gross variables. *J. Statist. Phys.* 22 (1980), no. 5, 537–552. (Authors' summary) **81i:82011** 82A35
- Tall, David** (with Stewart, Ian) \star Algebraic number theory. Chapman and Hall Mathematics Series. Chapman and Hall, London; A Halsted Press Book, John Wiley & Sons, New York, 1979. xvii+257 pp. ISBN 0-470-26660-0 (Charles J. Parry) **81g:12001** 12-01 (10B15)
- Looking at graphs through infinitesimal microscopes, windows and telescopes. *Math. Gaz.* 64 (1980), no. 427, 22–49. (D. G. Tacon) **81g:03083** 03H05 (26E35)
- Tall, Franklin D.** The normal Moore space problem. *Topological structures, II (Proc. Sympos. Topology and Geom., Amsterdam, 1978)*, Part 2, pp. 243–261, *Math. Centre Tracts*, 116, Math. Centrum, Amsterdam, 1979. (Teodor Przymusiński) **81f:54016** 54E30
- Large cardinals for topologists. *Surveys in general topology*, pp. 445–477, Academic Press, New York, 1980. (D. Kurepa) **81h:03100** 03E55 (54A35)
- Some applications of small cardinal collapse in topology. *Topology (Proc. Fourth Colloq., Budapest, 1978)*, Vol. II, pp. 1161–1166, *Colloq. Math. Soc. János Bolyai*, 23, North-Holland, Amsterdam, 1980. (William G. Fleissner) **81m:03061** 03E35 (54A35)
- Tallini, Giuseppe** Combinatorial spaces and Steiner systems. (Italian. English summary) *Riv. Mat. Univ. Parma* (4) 5 (1979), part 1, 221–248 (1980). (Maria Ferro) **81m:05050** 05B25 (51E10)
- Talman, A. J. J.** A simple proof of the optimality of the best N -policy in the $M/G/1$ queueing control problem with removable server. *Statist. Neerlandica* 33 (1979), no. 3, 143–150. (Micha Yadin) **81h:60102** 60K25
- (with van der Laan, Gerard) A new subdivision for computing fixed points with a homotopy algorithm. *Math. Programming* 19 (1980), no. 1, 78–91. (J. L. Solomon) **81g:65059** 65H05 (55M20, 90C30)
- Talman, James D.** Eigenvalue correction estimates for the one-dimensional Schrödinger equation. *J. Comput. Phys.* 37 (1980), no. 1, 19–40. (Cornelius O. Horgan) **81j:81012** 81C05 (49H05, 65P05)
- Talpaier, Pavel** Asymptotic behaviour of perturbed difference equations. (Italian summary) *Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur.* (8) 64 (1978), no. 6, 563–571. (Shigeru Haruki) **81h:39002** 39A10
- Asymptotic behaviour of perturbed difference equations. *Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur.* (8) 65 (1978), no. 1–2, 43–50 (1979). (Shigeru Haruki) **81f:39004** 39A10
- Talukdar, B.** (with Chatterjee, M.; Mallick, N.) Off-shell wave matrix in the two-body scattering. *Progr. Theoret. Phys.* 63 (1980), no. 4, 1245–1251. (Authors' summary) **81d:81085** 81F05
- Talwalker, Sheela** On characterizing the normal and Poisson distributions. *Comm. Statist. A—Theory Methods* 9 (1980), no. 3, 347–354. (Mir Maswood Ali) **81h:62090** 62H05
- A note on the generalized Rao-Rubin condition and characterization of certain discrete distributions. *J. Appl. Probab.* 17 (1980), no. 2, 563–569. (Javad Behboodiani) **81i:62028** 62E10
- On the property of dullness of Pareto distribution. *Metrika* 27 (1980), no. 2, 115–119. (Barry C. Arnold) **81h:62030** 62E10 (90A19)
- Talwar, Sudha** Modules over bounded hereditary Noetherian prime rings. II. *Arch. Math. (Basel)* 34 (1980), no. 1, 21–26. (J. C. Robson) **81j:16036** 16A64
- Talyev, A. A.** (with Krendel, S. F.) Systems of partial differential equations that admit nontrivial tangent transformations. (Russian) *Dinamika Splošn. Sredy No. 40 Dinamika Židkosti so Svobod. Granic.* (1979), 134–140, 142. (J. Chastina) **81h:58006** 58A15 (35A22)
- Tam, Christopher K. W.** Excitation of instability waves in a two-dimensional shear layer by sound. *J. Fluid Mech.* 89 (1978), no. 2, 357–371. (Pierre Lesaint) **81e:76064** 76Q05 (76E05)
- (with Block, Patricia J. W.) On the tones and pressure oscillations induced by flow over rectangular cavities. *J. Fluid Mech.* 89 (1978), no. 2, 373–399. (Pierre Lesaint) **81e:76065** 76Q05 (76G99)
- (with Morris, Philip J.) The radiation of sound by the instability waves of a compressible plane turbulent shear layer. *J. Fluid Mech.* 98 (1980), no. 2, 349–381. (Authors' summary) **81d:76085** 76Q05 (76N10)
- Tam, P. K.** Isometries of L_p -spaces associated with semifinite von Neumann algebras. *Trans. Amer. Math. Soc.* 254 (1979), 339–354. (Jean-Marie Schwartz) **81h:46079** 46L10 (46L50, 47D15)
- Tamaki, Mitsumi** Recognizing both the maximum and the second maximum of a sequence. *J. Appl. Probab.* 16 (1979), no. 4, 803–812. (W. T. Rasmussen) **81e:60058** 60G40 (62L12)
- Secretary problem with uncertain employment when backward solicitation is permitted. *Math. Japon.* 24 (1979/80), no. 4, 439–450. (Tamer Başar) **81e:90172** 90B40 (90C40)
- Tamamura, Akie** (with Kōno, Susumu; Fujii, Michikazu) J -groups of the orbit manifold $(S^{2m+1} \times S^1)/D_n$ by the dihedral group D_n . *Math. J. Okayama Univ.* 22 (1980), no. 2, 205–221. (J. F. Adams) **81m:55006** 55N15
- Tamamura, Chiharu** (with Kakita, Takao; Nishihara, Kenji) Time decay and scattering for some nonlinear wave equation. *Publ. Res. Inst. Math. Sci.* 15 (1979), no. 3, 749–766. (R. Glassey) **81f:35079** 35L70 (35L15, 35P30)
- Tamassini, Italo** (with Gonzalez, Eduardo H. A.) Convexity of the supported drop. (Italian) *Rend. Sem. Mat. Univ. Padova* 58 (1977), 35–43 (1978). (Natalia Berruti Onesti) **81f:49040** 49F22
- Tamjan, G. Ju.** Gaps in the spectrum of Hill's operator. (Russian. Armenian summary) *Akad. Nauk Armjan. SSR Dokl.* 70 (1980), no. 2, 96–99. (P. A. Mišnaevskii) **81j:34040** 34B25
- Tamásy, Lajos** (with Matsumoto, Makoto) Direct method to characterize conformally Minkowski-Finsler spaces. *Tensor (N.S.)* 33 (1979), no. 3, 380–384. (Yoshihiro Ichijō) **81h:53026** 53B40
- Tamburini Bellani, Maria Chiara** See **Bellani Tamburini, Maria Chiara**
- Tamburini Bellani, Maria Chiara** See **Bellani Tamburini, Maria Chiara**
- Tamhane, Ajit C.** Selecting the better Bernoulli treatment using α matched samples design. *J. Roy. Statist. Soc. Ser. B* 42 (1980), no. 1, 26–30. (Mir Maswood Ali) **81e:62024** 62F07
- Tamir, Arle** (with Felzenbaum, A.) Cyclic permutations and nearly symmetric integer vectors. *Linear Algebra Appl.* 27 (1979), 159–166. (Gerald Hammer) **81g:90064** 90C10 (05A05, 15A51, 65K05)
- (with Kress, Moshe) The use of Jacobi's lemma in unimodularity theory. *Math. Programming* 18 (1980), no. 3, 344–348. (M. Shafqat Ali) **81k:15007** 15A15
- Efficient algorithms for a selection problem with nested constraints and its application to a production-sales planning model. *SIAM J. Control Optim.* 18 (1980), no. 3, 282–287. (James R. Evans) **81e:90073** 90C10 (68C25, 90B30)
- Tamir, T.** (with Chang, Kai Chiang; Shah, V.) Scattering and guiding of waves by dielectric gratings with arbitrary profiles. *J. Opt. Soc. Amer.* 70 (1980), no. 7, 804–812. (Authors' summary) **81h:78026** 78A45
- Tamm, B.** (with Tyugu, E. H.) Introduction to data bases. *Izv. Akad. Nauk SSSR Teh. Kibernet.* 1979, no. 2, 53–64, 221 (Russian); translated as *Engng. Cybernetics* 17 (1979), no. 2, 35–43 (1979). (Authors' summary) **81h:68022** 68B15
- Tammage, Alan** Creativity. *Math. Gaz.* 63 (1979), no. 425, 145–163. (Michael Otte) **81k:00009** 00A25
- Tamme, E.** A difference method for solving the Neumann problem in a two-dimensional domain. (Russian. German summary) *Tartu Riikl. Ül. Toimetised* No. 492 (1979), 80–85. (T. Stjäs) **81k:65110** 65N05
- Tammerall, I.** Some Tauberian remainder theorems for gap series. (Russian. Estonian and English summaries) *Tartu Riikl. Ül. Toimetised* No. 448 (1978), 52–54. (M. S. Rangachari) **81h:40016** 40E15 (40E05)
- Tammet, H. F.** Two-dimensional indeterminacy of the solution of ill-posed inverse problems. (Russian. English summary) *Tartu Riikl. Ül. Toimetised* No. 479 (1979), 3–6, 22. (S. V. Temko) **81d:65025** 65J05 (35J60, 35R25)
- Tammi, Olli** On generalizing the power inequality for the first coefficient region in the class of bounded univalent functions. *Proceedings of the Rolf Nevanlinna Symposium on Complex Analysis (Math. Res. Inst., Univ. Istanbul, Silivri, 1976)*, pp. 103–129, *Publ. Math. Res. Inst. Istanbul, 7, Univ. Istanbul, Istanbul, 1978*. (W. C. Royster) **81j:30014** 30C45
- (with Lehto, Olli) Schwarzian derivative in domains of bounded boundary rotation. *Ann. Acad. Sci. Fenn. Ser. A I Math.* 4 (1979), no. 2, 253–257. (Bruce Palka) **81h:30014** 30C20 (30C70)
- (with Kortram, R. A.) Nonhomogeneous combinations of coefficients of univalent functions. *Ann. Acad. Sci. Fenn. Ser. A I Math.* 5 (1980), no. 1, 131–144. (W. C. Royster) **81m:30017** 30C55
- Tamoni, Grazia** On a generalization of the notion of glueing. (Italian. English summary) *Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur.* (8) 65 (1978), no. 3–4, 107–112 (1979). (Marco Fontana) **81h:13004** 13B20 (14A15)
- Tamrazov, P. M.** Finite difference identities and estimates of the moduli of smoothness of composite functions. (Russian) *Akad. Nauk Ukrain. SSR Inst. Mat. Preprint No. 5* (1977), 20 pp. (Author's summary) **81h:30045** 30D05 (41A25, 58C25)
- Finite-difference smoothness and approximation. *Fourier analysis and*

- approximation theory (Proc. Colloq., Budapest, 1976), Vol. II, pp. 827-843, Colloq. Math. Soc. János Bolyai, 19, North-Holland, Amsterdam, 1978. (G. D. Taylor) **81g:30051** 30E10
- Condenser capacities and A. A. Gončar's extremal problem. (Russian) *Akad. Nauk Ukrain. SSR Inst. Mat. Preprint No. 5* (1979), 12 pp. (G. V. Kuz'mina) **81d:31002a** 31A15
- A. A. Gončar's extremal problem and condenser capacities. (Russian) *Dokl. Akad. Nauk SSSR* **250** (1980), no. 5, 1066-1070. (G. V. Kuz'mina) **81d:31002b** 31A15
- Tamura, K. (with Ichikawa, K.; Kamiya, M.) An optimal control problem with design parameter variables. *IEEE Trans. Automat. Control* **24** (1979), no. 5, 775-779. (S. P. Bingulac) **81f:49010** 49A36 (93C99)
- Tamura, Ryoji A test of Wilcoxon type for homogeneity of marginal distributions against ordered alternatives. *Kumamoto J. Sci. (Math.)* **14** (1980/81), no. 1, 34-41. (Pi-Erh Lin) **81f:62080** 62G10 (62G20)
- Tamura, Takayoshi The status of mathematical inventory theory. I. (Japanese. English summary) *Bull. Nagoya Inst. Tech.* **31** (1979), 419-426. (Author's summary) **81j:90069** 90B05
- Tamura, Takayuki Finite semigroups whose congruences form chains. *Proceedings of the Conference on Semigroups in Honor of Alfred H. Clifford* (Tulane Univ., New Orleans, La., 1978), pp. 94-116, Tulane Univ., New Orleans, La., 1979. (H. D'Almeida) **81j:20093** 20M10
- (with Clarke, J.; Pfeifer, R.) Identities E-2 and exponentiality. *Proc. Japan Acad. Ser. A Math. Sci.* **55** (1979), no. 7, 250-251. (Joseph Chacron) **81e:20068** 20M10
- Structure groups of nontrivial abelian groups. *Math. Japon.* **25** (1980), no. 1, 101-109. (Roger H. Hunter) **81k:20080** 20K99
- Extensions of partially ordered abelian groups. *Proc. Japan Acad. Ser. A Math. Sci.* **56** (1980), no. 3, 130-132. (T. S. Blyth) **81f:06022** 06F20 (20K35)
- Tamura, Takeshi Eigenvalue problem of consolidation. *Mem. Fac. Engrg. Kyoto Univ.* **42** (1980), no. 1, 35-52. (Author's summary) **81e:76073** 76S05 (65N30)
- Ta'ouri, Mustafa See Ibn al-Razziz al-Jazari, Badi' al-Zaman Abi al-'Izz Isma'il, **81e:01010**
- van Tan See Vo Van Tan
- Tan, C. K. (with Ling, K. D.) On predictive distributions based on samples with missing observations—exponential distribution. *Nanta Math.* **12** (1979), no. 2, 173-181. (P. W. Jones) **81e:62036** 62F15
- (with Ling, K. D.) On inference based on samples with missing observations. *Soochow J. Math.* **5** (1979), 85-91. (Smiley W. Cheng) **81g:62062** 62F15 (62G30)
- Tan, C. L. (with Fenner, R. T.) Elastic fracture mechanics analysis by the boundary integral equation method. *Proc. Roy. Soc. London Ser. A* **369** (1979), no. 1737, 243-260. (I. N. Molčanov) **81e:73082** 73M05
- (with Fenner, R. T.) Stress intensity factors for semi-elliptical surface cracks in pressurized cylinders using the boundary integral equation method. (French summary) *Internat. J. Fracture* **16** (1980), no. 3, 233-245. (Authors' summary) **81d:73086** 73M05
- Tan, Harry H. Two-user interference channels with correlated information sources. *Inform. and Control* **44** (1980), no. 1, 77-104. (G. Dueck) **81e:94026** 94A40
- Tan, Kok Keong (with Ko, Hwei Mei) Contrification of a semigroup of maps. *Proc. Amer. Math. Soc.* **77** (1979), no. 2, 267-275. (N. Hadžiivanov) **81e:54045** 54E10
- (with Ko, Hwei Mei) Attractors and a fixed point theorem in locally convex space. *Comment. Math. Univ. Carolin.* **21** (1980), no. 1, 71-79. (L. Janos) **81e:47060** 47H10
- Tan, Peter (with Bernholtz, Ben) Applications of structural models in statistics. *Math. Sci.* **5** (1980), no. 1, 31-44. (John Kalbfleisch) **81f:62004** 62A25
- Tan, Sha Leng Integrability of complementary distributions. *Southeast Asian Bull. Math.* **3** (1979), no. 1, 57. (J. L. Koszul) **81d:58006** 58A30
- Tan, Soo Tang (with Russak, I. Bert) Necessary conditions for problems with higher derivative bounded state variables. *J. Optim. Theory Appl.* **26** (1978), no. 4, 601-636. (Emmanuel Nicholas Barron) **81f:49012** 49B10 (65K10)
- Tan, Soon Teck (with Baartmans, A.; Danhof, K.) Quasiregular quasismetric designs. *Discrete Math.* **30** (1980), no. 2, 69-81. (R. G. Stanton) **81g:05023** 05B05
- Tan, Tey (with Koh, Khue Meng; Rogers, Douglas G.) On graceful trees. *Nanta Math.* **10** (1977), no. 2, 207-211. (A. Rosa) **81b:05033** 05C05
- (with Koh, Khue Meng; Lee, Peng Yee) Fibonacci trees. *Southeast Asian Bull. Math.* **2** (1978), no. 1, 45-47. (Gary S. Bloom) **81b:05055** 05C05
- (with Koh, Khue Meng; Rogers, Douglas G.) Interlaced trees: a class of graceful trees. *Combinatorial mathematics, VI* (Proc. Sixth Austral. Conf., Univ. New England, Armidale, 1978), pp. 65-78, Lecture Notes in Math., 748, Springer, Berlin, 1979. (A. Rosa) **81b:05054** 05C05
- (with Koh, Khue Meng; Rogers, Douglas G.) Products of graceful trees. *Discrete Math.* **31** (1980), no. 3, 279-292. (Jean-Claude Bermond) **81j:05100** 05C99 (05C05)
- Tan, W. Y. On the quadratic estimation of covariance matrices in multivariate linear models. *J. Multivariate Anal.* **9** (1979), no. 3, 452-459. (Friedrich Pukelsheim) **81d:62045** 62H12 (62J10)
- On probability distributions from mixtures of multivariate densities. *South African Statist. J.* **14** (1980), no. 1, 47-59. (A. W. Davis) **81f:62097** 62H10
- See also Wilson, S. R., **81j:62140**
- Tanabe, Hiroki Note on nonlinear Volterra integral equation in Hilbert space. *Proc. Japan Acad. Ser. A Math. Sci.* **56** (1980), no. 1, 9-11. (K. Kutzler) **81f:45027** 45N05 (34G20, 45D05, 47H15)
- Tanay, V. S. (with Levin, G. M.) ★Декомпозиционные методы оптимизации проектных решений. (Russian) [Decomposition methods of optimization of planning decisions] Edited by A. D. Zakrevskii. "Nauka i Tekhnika", Minsk, 1978. 240 pp. (Bruce D. Craven) **81b:90143** 90C31 (90B35)
- (with Sannikova, A. K.) A class of extremal permutation problems. (Russian. English summary) *Dokl. Akad. Nauk BSSR* **23** (1979), no. 9, 784-786, 859. (E. Ja. Gabovici) **81e:05010** 05A05
- Tanaka, Akio (with Noguchi, Shoichi; Sugawara, Kenji) Properties of analogue neural networks. *J. Cybernet.* **10** (1980), no. 4, 265-281. (H. C. Tuckwell) **81f:92015** 92A09 (45K05)
- Tanaka, Chaji On the boundary behavior of Taylor series of regular functions of some classes in the unit circle. *Proc. Japan Acad. Ser. A Math. Sci.* **55** (1979), no. 6, 213-218. (A. Peyerimhoff) **81j:40015** 40G10 (30B30)
- Tanaka, Genjro On the group of automorphisms of cyclic automata. *Comment. Math. Univ. St. Paul.* **29** (1980), no. 1, 65-85. (V. D. Mazurov) **81k:20086** 20B25 (68D30)
- Tanaka, Hidenori On unions of r -embedded sets. *Proc. Amer. Math. Soc.* **79** (1980), no. 3, 474-476. (Anne K. Steiner) **81e:54015** 54C45 (54D60)
- Tanaka, Hiroshi Boundary behaviors of quasiregular mappings. *Complex analysis Joensuu 1978* (Proc. Colloq., Univ. Joensuu, Joensuu, 1978), pp. 405-408, Lecture Notes in Math., 747, Springer, Berlin, 1979. (Olli Martio) **81d:30037** 30C60 (30D40)
- Tanaka, Hiroshi On the uniqueness of Markov process associated with the Boltzmann equation of Maxwellian molecules. *Proceedings of the International Symposium on Stochastic Differential Equations* (Res. Inst. Math. Sci., Kyoto Univ., Kyoto, 1976), pp. 409-425, Wiley, New York, 1978. (Mark Pinsky) **81d:60063** 60H20 (60J75, 82A40)
- Tanaka, Hisao Recursion theory in analytical hierarchy. *Comment. Math. Univ. St. Paul.* **27** (1978/79), no. 2, 113-132. (Douglas Cenzer) **81j:03069** 03D25 (03D55, 03E60)
- Tanaka, Jun-ichi A certain class of total variation measures of analytic measures. *Pacific J. Math.* **82** (1979), no. 2, 547-558. (A. G. A. Babiker) **81m:28014** 28C15
- Tanaka, Kazuo A dynamic processing approach to phoneme recognition. I. Feature extraction. *IEEE Trans. Acoust. Speech Signal Process.* **27** (1979), no. 6, part 1, 596-608. (Author's summary) **81a:68105** 68G10
- Tanaka, Kenzuke (with Homma, Hisafumi) Noncooperative n -person semi-Markov game. *Sci. Rep. Niigata Univ. Ser. A No. 16* (1979), 23-34. (From the introduction) **81j:90148** 90D15
- Tanaka, Kichinosuke (with Kon-no, Akira) Harmonic viscoelastic waves propagating normal to the layers of laminated media. *Bull. JSME* **23** (1980), no. 181, 1092-1099. (Authors' summary) **81g:73025** 73D15 (73F15, 73K20)
- Tanaka, Kikichi (with Tsuji, Tatsuo) Tree-array composite structures and their addressing functions. *Systems-Comput.-Controls* **9** (1978), no. 3, 35-43 (1980). (Authors' summary) **81f:68035** 68B15
- (with Mizumoto, Masaharu; Fukami, Satoru) Some methods of fuzzy reasoning. *Advances in fuzzy set theory and applications*, pp. 117-136, North-Holland, Amsterdam, 1979. (S. K. Pal) **81g:03027** 03B52
- (with Mizumoto, Masaharu) Some properties of fuzzy numbers. *Advances in fuzzy set theory and applications*, pp. 153-164, North-Holland, Amsterdam, 1979. (W. Wechsler) **81e:03054** 03E72 (94D05)
- Tanaka, Makoto (with Kashiwara, Masaki; Kowata, Atsutaka; Minemura, K.; Okamoto, Kiyosato; Ohshima, Toshio) Eigenfunctions of invariant differential operators on a symmetric space. *Ann. of Math. (2)* **107** (1978), no. 1, 1-39. (Kenneth Johnson) **81f:43013** 43A80 (22E30)
- (with Kowata, Atsutaka) Global solvability of the Laplace operator on a noncompact affine symmetric space. *Hiroshima Math. J.* **10** (1980), no. 2, 409-417. (Rolf Sulanke) **81i:53041** 53C35 (58G30)
- Tanaka, Masataka (with Hamada, Minoru; Nagasuna, Kazutaro) Elastoplastic analysis of unsymmetrical bending of axisymmetric shells. *Bull. JSME* **23** (1980), no. 177, 345-352. (Authors' summary) **81g:73041** 73L99
- Finite element investigation of plane elastoplasticity subjected to large strains. *Tech. Rep. Osaka Univ.* **30** (1980), no. 1517-1550, 207-216. (Author's summary) **81f:73040** 73K25 (73E99)
- Tanaka, Minoru On generalized Nörlund methods of summability. *Bull. Austral. Math. Soc.* **19** (1978), no. 3, 381-402. (Kusum Soni) **81e:40009** 40G05 (40D25)
- Compact Riemannian manifolds which are isospectral to three-dimensional lens spaces. I. *Minimal submanifolds and geodesics* (Proc. Japan-United States Sem., Tokyo, 1977), pp. 273-282, North-Holland, Amsterdam, 1979. (Harold Donnelly) **81f:58044a** 58G25 (53C21)
- Compact Riemannian manifolds which are isospectral to three-dimensional lens spaces. II. *Proc. Fac. Sci. Tokai Univ.* **14** (1979), 11-34. (Harold Donnelly) **81f:58044b** 58G25 (53C21)
- Some results on additive number theory. III. *Tokyo J. Math.* **2** (1979), no. 1, 159-182. (George E. Andrews) **81d:10037** 10J15 (10J20)
- Some results on additive number theory. IV. *Tokyo J. Math.* **2** (1979), no. 1, 183-191. (George E. Andrews) **81d:10038** 10J15
- Tanaka, Shigeru (with Ito, Shunji; Nakada, Hitoshi) On unimodal linear transformations and chaos. *Proc. Japan Acad. Ser. A Math. Sci.* **55** (1979), no. 7, 231-236. (From the introduction) **81a:58035** 58F13
- (with Ito, Shunji; Nakada, Hitoshi) On unimodal linear transformations and chaos. I. II. *Tokyo J. Math.* **2** (1979), no. 2, 221-239, 241-259. (Leo Jonker) **81d:58040** 58F13 (28D20)
- Tanaka, Sho Extended particle model of leptons and quarks and generalized Kaluza's unified field theory. Theory of elementary particles extended in space-time. *Progr. Theoret. Phys. Suppl.* **67** (1979), 282-334 (1980). (Author's summary) **81e:81140** 81G25 (83E15)
- Tanaka, Shogo (with Sagara, Setsuo) Optimization of an adaptive observation system in a linear dynamical system. *Internat. J. Control* **30** (1979), no. 4, 695-712. (O. A. Sebakh) **81a:93051** 93C40 (93E10)
- Tanaka, Soseo (with Kawamura, Masahiko) Proof of sampling theorem in frequency analysis using extended Walsh functions. *Systems-Comput.-Controls* **9** (1978), no. 5, 10-15 (1980). (Authors' summary) **81f:94004** 94A11
- Tanaka, Yutaka (with Asano, Chooichiro) Some generalized methods of optimal scaling and their asymptotic theories: the case of single response-multiple factors. I. *Res. Inst. Fund. Inform. Sci. Res. Rep. No. 77* (1978), 38 pp. (From the introduction) **81j:62116a** 62H99
- (with Asano, Chooichiro) Some generalized methods of optimal scaling and their asymptotic theories: the case of single response-multiple factors. II. *Res. Inst. Fund. Inform. Sci. Res. Rep. No. 78* (1978), 41 pp. (From the introduction) **81j:62116b** 62H99
- Optimal scaling for arbitrarily ordered categories. *Ann. Inst. Statist. Math.* **31** (1979), no. 1, 115-124. (P. A. K. Covey-Crump) **81d:62059** 62H99 (90C15, 90C30)
- (with Azumi, M.; Kurita, G.; Matsura, T.; Takeda, T.; Tsunematsu, T.) A fluid model numerical code system for tokamak fusion research. *Computing methods in applied sciences and engineering* (Proc. Fourth Internat. Symp., Versailles, 1979).

- pp. 335-356, North-Holland, Amsterdam, 1980. (Authors' summary) **81k:76086**
76X05 (65N30, 76W05)
- An application of methods of quantification to analyze the effects of qualitative factors. *Recent developments in statistical inference and data analysis (Proc. Internat. Conf., Inst. Statist. Math., Tokyo, 1979)*, pp. 287-299, North-Holland, Amsterdam, 1980. (Author's summary) **81m:62191** 62P15
- Tanaka, Yuzuru** Logical design of a relational schema and integrity of a data base. *Data base architecture (Proc. Fifth IFIP Working Conf., Venice, 1979)*, pp. 297-316, North-Holland, Amsterdam, 1979. (See **81b:68005**) 68B15
- Tanana, V. P.** (with Koršunov, V. A.; Starkman, A. A.) The principle of minimal residuals in the solution of ill-posed problems. (Russian) *Studies in functional analysis (Russian)*, pp. 99-104, iv, Ural. Gos. Univ., Sverdlovsk, 1978. (L. B. Rall) **81g:65074** 65J10 (47A05)
- Optimal methods for solving ill-posed problems with supplementary information and their application to the solution of the γ -probing of boreholes. (Russian) *Studies in functional analysis (Russian)*, pp. 105-121, v, Ural. Gos. Univ., Sverdlovsk, 1978. (V. V. Vasin) **81m:65090** 65J10 (47A50)
- (with Koršunov, V. A.) Selection of the regularization parameter in the solution of ill-posed problems. (Russian) *Sibirsk. Mat. Ž.* 21 (1980), no. 4, 161-168, 239. (A. G. Ramm) **81g:65075** 65J10
- Tănăsescu, Cristian** (with Necula, Maria-Ana) Algorithms for determining LODECC which has a given time function as solution. (Romanian summary) *Bul. Inst. Politehn. București Ser. Electrotehn.* 41 (1979), no. 2, 95-105. (Authors' summary) **81b:65078** 65L99
- (with Necula, Maria-Ana) Algorithms for determining LEFD which has a given discrete time function as solution. (Romanian summary) *Bul. Inst. Politehn. București Ser. Electrotehn.* 42 (1980), no. 2, 95-102. (Authors' summary) **81m:68084** 68J05
- Tanai, Corrado** (with Grimaldi, Valeria) Geometric probability of "Buffon" type for trirectangular tetrahedra in E_3 . (Italian. French summary) *Atti Accad. Sci. Lett. Arti Palermo Parte I* (4) 36 (1976/77), 491-501 (1978). (L. A. Santaló) **81a:60018a** 60D05 (53C65)
- (with Grimaldi, Valeria) Families of parabolas that admit a measure in the projective space P_2 . (Italian. French summary) *Atti Accad. Sci. Lett. Arti Palermo Parte I* (4) 36 (1976/77), 503-510 (1978). (L. A. Santaló) **81a:60018b** 60D05 (53C65)
- (with Grimaldi, Valeria) Subfamilies of parabolas that admit a measure in the projective space P_2 . (Italian. English summary) *Rend. Circ. Mat. Palermo* (2) 28 (1979), no. 2, 281-312. (M. Stoka) **81h:53073** 53C65
- Statistical distribution of convex spherical domains in the unit sphere. *Rend. Sem. Mat. Univ. Politec. Torino* 37 (1979), no. 3, 139-144 (1980). (L. A. Santaló) **81j:60017** 60D05 (53C65)
- Tandon, O. P.** Contiguous relations for the H -function of n variables. *Indian J. Pure Appl. Math.* 11 (1980), no. 3, 321-325. (R. G. Buschman) **81a:33009** 33A35
- Finite summation formulas for the H -function of n variables. *Pure Appl. Math. Sci.* 11 (1980), no. 1-2, 23-30. (R. G. Buschman) **81e:33012** 33A35
- Tandori, Károly** New results concerning the convergence of function series. (Hungarian) *Mat. Lapok* 26 (1975), no. 3-4, 155-160 (1978). (J. Németh) **81c:41069** 41A58
- On the Lebesgue functions. *Fourier analysis and approximation theory (Proc. Colloq., Budapest, 1976)*, Vol. II, pp. 845-859, Colloq. Math. Soc. János Bolyai, 19, North-Holland, Amsterdam, 1978. (J. J. Price) **81j:42030** 42C15
- Bemerkung zur Konvergenz der Funktionenreihen. Special issue dedicated to George Alexits on the occasion of his 80th birthday. *Acta Math. Acad. Sci. Hungar.* 33 (1979), no. 1-2, 211-215. (A. E. Danese) **81h:42075** 42C05
- Gewisse Abschätzungen über beschränkte orthonormierte Systeme. *Acta Math. Acad. Sci. Hungar.* 34 (1979), no. 1-2, 85-90. (F. Móricz) **81c:42033** 42C05 (42C15)
- On the divergence of de la Vallée Poussin means of Fourier series. (Russian summary) *Anal. Math.* 5 (1979), no. 2, 149-166. (G. M. Petersen) **81b:42032** 42A20
- (with Móricz, Ferenc) On the divergence of multiple orthogonal series. *Acta Sci. Math. (Szeged)* 42 (1980), no. 1-2, 133-142. (A. Oleviski) **81h:42016** 42B05
- Bemerkung zu einem Satz von S. Kaczmarz. *Acta Sci. Math. (Szeged)* 42 (1980), no. 1-2, 171-173. (J. J. Price) **81j:42031** 42C15
- Über einen Satz von Alexits und Sharma. *Acta Sci. Math. (Szeged)* 42 (1980), no. 1-2, 175-182. (J. J. Price) **81j:42032** 42C15
- On a problem of B. I. Golubov. (Russian summary) *Anal. Math.* 6 (1980), no. 2, 157-164. (Tamotsu Tsuchikura) **81h:40009** 40F05 (42C15)
- Taneja, Inder Jeet** On information improvement of 2 and N revisions. (French summary) *Information theory (Proc. Internat. CNRS Colloq., Cachan, 1977)* (French), pp. 89-97, Colloques Internat. CNRS, 276, CNRS, Paris, 1978. (J. Aczél) **81j:94011** 94A17 (39B40)
- Some contributions to information theory. I. A survey: on measures of information. *J. Combin. Inform. System Sci.* 4 (1979), no. 4, 253-274. (I. Vajda) **81h:94013** 94A17
- (with Arora, Prem Nath) Characterization of information improvement due to N revisions and its generalization by a functional equation. *Inform. Sci.* 20 (1980), no. 2, 127-136. (P. Kannappan) **81h:94010** 94A15 (39B40)
- Taneja, V. S.** (with Janardan, Konanur G.) Some theorems concerning characterization of the Weibull distribution. *Biometrical J.* 21 (1979), no. 2, 139-144. (B. L. S. Prakasa Rao) **81e:62009** 62E10
- Tanemura, Masaharu** (with Tōry, Elmer M.; Pickard, David K.; Hori, Motoo) Some comments on a paper by H. J. Weiner: "Sequential random packing in the plane" [J. Appl. Probab. 15 (1978), no. 4, 803-814; MR 80a:60015]. With an answer by Howard Weiner. *J. Appl. Probab.* 16 (1979), no. 3, 697-707. (Adrian Baddeley) **81b:60013** 60D05
- (with Hasegawa, Masami) Geometrical models of territory. I. Models for synchronous and asynchronous settlement of territories. *J. Theoret. Biol.* 82 (1980), no. 3, 477-496. (Marcus W. Feldman) **81b:92009** 92A15 (52A22)
- Nguyen Tang** See **Nguyen Tang**
- Tang, Adrian** (with Sethi, Ravi) Constructing call-by-value continuation semantics. *Automata, languages and programming (Sixth Colloq., Graz, 1979)*, pp. 556-570, *Lecture Notes in Comput. Sci.*, 71, Springer, Berlin, 1979. (Authors' summary) **81e:68106** 68F20
- (with Sethi, Ravi) Constructing call-by-value continuation semantics. *J. Assoc. Comput. Mach.* 27 (1980), no. 3, 580-597. (Authors' summary) **81f:68096** 68F20
- Tang, Ao Qing** (with Jiang, Yuan Sheng) Graph theory of the eigenvalue problem. (Chinese) *Kexue Tongbao* 22 (1977), no. 11, 494-497. (Editors) **81h:65037** 65F15
- Tang, L.** (with Millett, T.) Using inners to determine multiple roots of polynomials. *Southeast Asian Bull. Math.* 3 (1979), no. 2, 203-211. (Edward W. Kamen) **81c:12034** 12D10
- Tang, Min Ming** Some results on a reaction-diffusion system. *Nonlinear partial differential equations in engineering and applied science (Proc. Conf., Univ. Rhode Island, Kingston, R.I., 1979)*, pp. 275-284, *Lecture Notes in Pure and Appl. Math.*, 54, Dekker, New York, 1980. (J. Smoller) **81k:35082** 35K55
- (with Ho, Chung You) Numerical solutions of competing species equations with diffusion. *Proceedings of the Second International Conference on Mathematical Modelling (St. Louis, Mo., 1979)*, Vol. I, II, pp. 295-303, Univ. Missouri-Rolla, Rolla, Mo., 1980. (Authors' summary) **81m:92048** 92A15 (65M99)
- Tang, Ren Ji** (with Wang, Kai) Griffith crack problem under asymmetrical loads. (Chinese. English summary) *Acta Mech. Sinica (Beijing)* 1980, no. 3, 269-278. (Authors' summary) **81k:73061** 73M05 (45E05)
- Tang, Wang** (with Michel, Anthony N.; Hale, Harry W.) On structure and stability of interconnected dynamical systems. *IEEE Trans. Circuits and Systems* 27 (1980), no. 5, 391-405. (Authors' summary) **81s:93083** 93D25 (05C20, 93A15)
- Tango, Hiroshi** On the Cartan-Burau variety. IV. *Bull. Kyoto Univ. Ed. Ser. B No. 55* (1979), 1-20. (W. Burau) **81h:14030** 14M10 (14M17)
- Tani, Tugio** Perfectly finally compact spaces are hard. *Math. Japon.* 24 (1979/80), no. 3, 323-326. (Sergio Salbany) **81e:54021** 54C35 (54D30)
- Taniguchi, Kazuo** (with Kumano-go, Hitoshi) Fourier integral operators of multiphase and the fundamental solution for a hyperbolic system. *Funkcial. Ekvac.* 22 (1979), no. 2, 161-196. (Rémi Vaillancourt) **81g:35071** 35L45 (35S05, 47G05)
- (with Tozaki, Yoshiharu) A hyperbolic equation with double characteristics which has a solution with branching singularities. *Math. Japon.* 25 (1980), no. 3, 279-300. (Alan Jeffrey) **81k:35097** 35L30
- Taniguchi, Kenichi** (with Hagihara, Kenichi; Ito, Minoru; Kasami, T.) Membership problem for multivalued dependencies in relational databases. *Systems-Comput.-Controls* 9 (1978), no. 6, 62-70 (1980). (Authors' summary) **81i:68033** 68B15
- (with Matsuura, Toshio; Sugiyama, Yuji; Kasami, T.) On equivalence of safe Petri nets. *Fundamentals of computation theory (Proc. Conf. Algebraic, Aritih. and Categorical Methods in Comput. Theory, Berlin/Wendisch-Rietz, 1979)*, pp. 430-436, *Math. Research*, 2, Akademie-Verlag, Berlin, 1979. (Dorothy Bollman) **81e:68074** 68D90 (68C25)
- Taniguchi, Masahiko** Remarks on topologies associated with squeezing a nondividing loop on compact Riemann surfaces. *J. Math. Kyoto Univ.* 19 (1979), no. 2, 203-214. (C. Earle) **81h:32011** 32G15 (30F30)
- On certain boundary points on the Wiener's compactifications of open Riemann surfaces. *J. Math. Kyoto Univ.* 20 (1980), no. 4, 709-721. (C. Wang) **81k:30064** 30F10 (30F35)
- Taniguchi, Masanobu** On estimation of the integrals of certain functions of spectral density. *J. Appl. Probab.* 17 (1980), no. 1, 73-83. (Brian D. Ripley) **81g:62162** 62M15 (60G15)
- Taniguchi, Tsuneo** (with Yamashita, Katsumi) A method of optimization with power system nonlinear properties. *Bull. Univ. Osaka Prefect. Ser. A* 28 (1979), no. 2, 139-148 (1980). (Authors' summary) **81e:93046** 93C10 (34C15)
- (with Miyagi, H.) Application of the Lagrange-Charpit method to analyse the power system's stability. *Internat. J. Control* 32 (1980), no. 2, 371-379. (Authors' summary) **81g:93077** 93D05
- Taniguchi, Yoshiaki** On a kind of pairs of Lie triple systems. *Math. Japon.* 24 (1979/80), no. 6, 605-608. (W. Hein) **81d:17002** 17A40 (17B60)
- Tanino, Tetsuzō** (with Nakayama, Hirokazu; Matsumoto, Keinosuke; Matsuo, Hirofumi; Inoue, Koichi; Sawaragi, Yoshikazu) Methodology for group decision support with an application to assessment of residential environment. *IEEE Trans. Systems Man Cybernet.* 9 (1979), no. 9, 477-485. (Authors' summary) **81a:90027** 90A07
- (with Nakayama, Hirokazu; Sawaragi, Yoshikazu) An interactive optimization method in multicriteria decision making. *IEEE Trans. Systems Man Cybernet.* 10 (1980), no. 3, 163-169. (Authors' summary) **81a:90015** 90A05
- (with Sawaragi, Yoshikazu) Stability of nondominated solutions in multicriteria decision-making. *J. Optim. Theory Appl.* 30 (1980), no. 2, 229-253. (P. L. Yu) **81e:90085** 90C31
- Taniyama, Nobuyuki** (with Hasegawa, Eiji) Effect of the wind fluctuation on the stability of a liquid layer flowing down an inclined plane. *Bull. JSME* 23 (1980), no. 179, 705-710. (Authors' summary) **81d:76056** 76E99
- Tankeev, S. G.** Algebraic cycles on abelian varieties. II. (Russian) *Izv. Akad. Nauk SSSR Ser. Mat.* 43 (1979), no. 2, 418-429. (Michiel Hazewinkel) **81h:14023** 14K22 (14K10)
- Tankó, József** Dominating schedules of steady job-flow pairs. (Hungarian. English summary) *Alkalmaz. Mat. Lapok* 4 (1978), no. 3-4, 271-325 (1979). (Author's summary) **81g:90059** 90B35
- Dominant schedules of a steady job-flow pair. *Acta Cybernet.* 5 (1980), no. 1, 87-115. (Author's summary) **81h:90054** 90B35 (68C15)
- Tannenbaum, Allen** Feedback stabilization of linear dynamical plants with uncertainty in the gain factor. *Internat. J. Control* 32 (1980), no. 1, 1-16. (Author's summary) **81f:93061** 93D15
- Tannenbaum, Peter** (with Araoz, Julian) Minimal sets of conditions for balanced incomplete block designs. *Second International Conference on Combinatorial Mathematics (New York, 1978)*, pp. 28-32, *Ann. New York Acad. Sci.*, 319, New York Acad. Sci., New York, 1979. (Robert B. Feinberg) **81h:05021** 05B05 (05B20)
- Tanner, R. C. H.** The ordered regiment of the minus sign: off-beat mathematics in Harriot's manuscripts. *Ann. of Sci.* 37 (1980), no. 2, 127-158. (Jon V. Pepper) **81e:01015** 01A40 (01A45)
- The alien realm of the minus: deviatoric mathematics in Cardano's writings. *Am. of Sci.* 37 (1980), no. 2, 159-178. (P. Bockstaele) **81h:01003** 01A40
- Tanno, Shūichi** Geodesic flows on C_1 -manifolds and Einstein metrics on $S^3 \times S^2$. *Minimal submanifolds and geodesics (Proc. Japan-United States Sem., Tokyo, 1977)*, pp. 283-292, North-Holland, Amsterdam, 1979. (Wolfgang Ziller) **81g:58027** 58F17 (53C25)

- Real 4-dimensional Kählerian manifolds of constant scalar curvature. *J. Differential Geom.* 14 (1979), no. 2, 237-240. (A. Appell) **81j:53062** 53C55
- Conformally flat Riemannian manifolds of constant scalar curvature. *Hokkaido Math. J.* 9 (1980), no. 1, 83-90. (R. L. Bishop) **81j:53044** 53C20 (53C55)
- Tanny, Stephen M. (with Reilly, James W.) Counting successions in permutations. *Stud. Appl. Math.* 61 (1979), no. 1, 73-81. (D. P. Roselle) **81b:05014** 05A15
- (with Reilly, James W.) Counting permutations by successions and other figures. *Discrete Math.* 32 (1980), no. 1, 69-76. (D. P. Roselle) **81j:05017** 05A15
- Tanović-Miller, Naza On strong regularity. (Serbo-Croatian summary) *Akad. Nauka Umjet. Bosne Hercegov. Rad. Odjeli. Prirod. Mat. Nauka* No. 19 (1980), 59-69. (B. Kuttner) **81j:40012** 40F05 (40C05)
- Inclusion relations for some composed matrix transformations. (Serbo-Croatian summary) *Akad. Nauka Umjet. Bosne Hercegov. Rad. Odjeli. Prirod. Mat. Nauka* No. 19 (1980), 77-86. (Włodzimirz Lenski) **81m:40011** 40G05
- Tamé, Daniel Connexion homologique de Chen et modèle de Quillen. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 23, 1099-1102. (Author's summary) **81i:55011** 55P62 (58A10)
- Tanaka, J. T. A self-tuning predictor for a class of multivariable stochastic processes. *Internat. J. Control* 32 (1980), no. 2, 359-370. (Author's summary) **81g:93101** 93E03 (62M20)
- Tanyi, G. E. On the critical points of the classical elastic energy functional. *Afrika Mat.* 1, no. 1, 35-43 (1978). (J. E. Marsden) **81g:73020** 73C99 (58E05)
- Tanzi Cattabianchi, Luigi The influence of the Levi-Civita sign on time formulas: a comparison theorem. (Italian. English summary) *Ric. Mat. Univ. Parma* (4) 5 (1979), part 2, 855-860 (1980). (Author's summary) **81g:70034** 70N05
- Tao, Hua Cheng (with Zhao, Zhong Xin) Optimum selection with time delay. (Chinese. English summary) *Acta Math. Sinica* 22 (1979), no. 2, 129-139. (Authors' summary) **81k:62115** 62L10
- Tao, L. N. On free boundary problems with arbitrary initial and flux conditions. *Z. Angew. Math. Phys.* 30 (1979), no. 3, 416-426. (Antonino Maugeri) **81f:35051** 35K20 (35R35, 80A20)
- On solidification of a binary alloy. *Quart. J. Mech. Appl. Math.* 33 (1980), no. 2, 211-225. (Author's summary) **81i:80008** 80A20
- Tao, Rui Bao (with Pu, Fu Ke) The spin wave theory of a Heisenberg ferromagnetic system with biquadratic exchange interaction at low temperatures. (Chinese. English summary) *Acta Phys. Sinica* 29 (1980), no. 5, 635-643. (Authors' summary) **81j:82035** 82A67
- Tao, Yee Chee (with Ramnath, Rudrapatna V.) Nonlinear attitude dynamics of satellites. *New approaches to nonlinear problems in dynamics (Proc. Conf., Pacific Grove, Calif., 1979)*, pp. 107-125. (SIAM, Philadelphia, Pa., 1980. (See **81h:00006**) 70M05
- Ta Phuoc Loc (with Roux, Bernard; Bontoux, Patrick; Daube, O.) Optimisation of Hermitian methods for Navier-Stokes equations in the vorticity and stream-function formulation. *Approximation methods for Navier-Stokes problems (Proc. Sympos., Univ. Paderborn, Paderborn, 1979)*, pp. 450-468. *Lecture Notes in Math.*, 771, Springer, Berlin, 1980. (P. C. Jain) **81f:76028** 76D05 (65P05)
- Tapia, Molez A. (with Tucker, Jerry H.) Complete solution of Boolean equations. *IEEE Trans. Comput.* 29 (1980), no. 7, 662-665. (Authors' summary) **81h:94036** 94C10
- Tapia, R. A. (with Thompson, James R.) Nonparametric density estimation: where do we go from here? *Proceedings of the 1979 Army Numerical Analysis and Computers Conference (White Sands Missile Range, White Sands, N.M., 1979)*, pp. 457-466. *ARO Rep.* 79, 3, U. S. Army Res. Office, Research Triangle Park, N.C., 1979. (Authors' summary) **81b:62055** 62G05
- (with Scott, David W.; Thompson, James R.) Nonparametric probability density estimation by discrete maximum penalized-likelihood criteria. *Ann. Statist.* 8 (1980), no. 4, 820-832. (S. A. Hasimov) **81j:62079** 62G05
- Tapia-Recillas, Horacio Ultrametric theta functions and abelian varieties. *Nagoya Math. J.* 69 (1978), 65-96. (From the introduction) **81m:10054** 10D30 (14G20, 14K25)
- Tapiero, Charles S. A generalization of the Nerlove-Arrow model to multi-firms advertising under uncertainty. *Management Sci.* 25 (1979), no. 9, 907-915 (1980). (Author's summary) **81a:90175** 90D45 (90A99, 90D25)
- (with Zuckerman, Dror) Optimum claims truncation of an insurance firm with a compound Poisson claim process: a diffusion approximation. (French summary) *RAIRO Rech. Opér.* 14 (1980), no. 2, 129-136. (Jean Lemaire) **81f:62154** 62P05 (90A09)
- (with Zuckerman, Dror) Random vehicle dispatching with options and optimal fleet size. *Transportation Res. Part B* 14 (1980), no. 4, 361-368. (Peter Purdue) **81m:90064** 90B35
- Tapiero, R. (with Bourgeat, A.) Singular perturbations and boundary layer correctors for a system of two quasilinear parabolic evolution equations with two parameters ϵ and η . *Numerical analysis of singular perturbation problems (Proc. Conf., Math. Inst., Catholic Univ., Nijmegen, 1978)*, pp. 409-416. *Academic Press, London, 1979.* (From the summary) **81a:65114** 65P05 (76X05)
- Tappe, Jürgen Autoclinisms and automorphisms of finite groups. II. *Glasgow Math. J.* 21 (1980), no. 2, 205-207. (Richard Davitt) **81k:20036** 20D45
- Taqqu, Murad S. A representation for self-similar processes. *Stochastic Process. Appl.* 7 (1978), no. 1, 55-64. (Ronald F. Fox) **81c:60050** 60G15 (60K35, 82A05, 86A05)
- Convergence of integrated processes of arbitrary Hermite rank. *Z. Wahrsch. Verw. Gebiete* 50 (1979), no. 1, 53-83. (B. S. Nahapetjan) **81i:60020** 60F05 (60G15, 60K35)
- Tar, M. M. Conditions for monogenicity of complex functions. (Russian) *Complex analysis and manifolds (Russian)*, pp. 153-157. *Inst. Mat., Akad. Nauk Ukrain. SSR, Kiev*, 1978. (J. G. Krzyż) **81i:30001** 30A05
- Tarabukin, N. V. (with Gnedenkov, L. N.) An approach to the solution of the problem of mathematical programming by the regular search method. (Russian) *Application of computers to the solution of problems in mathematical physics and automatic control systems (Russian)*, pp. 227-234. *Kazan. Univ., Kazan*, 1978. (G. S. Tarasenko) **81d:90088** 90C30
- Tarass, Sigeo Un exemple dans le problème de Cauchy pour les équations faiblement hyperboliques. *Publ. Res. Inst. Math. Sci.* 15 (1979), no. 2, 455-468. (A. Haimovici) **81a:35054** 35L15
- Taraz, M. D. The method of particles of finite size for modeling of two-dimensional problems of gas dynamics. (Russian) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 177* (1979), 19 pp. (Nina B. Maslova) **81h:76041** 76N15 (65N30)
- (with Gasilov, V. A.; Goloviznin, V. M.; Tiškin, V. F.; Favorukil, A. P.; Šalkov, M. Ju.) Numerical simulations of the Rayleigh-Taylor instability in an incompressible fluid. (Russian. English summary) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 70* (1979), 61 pp. (Ilija Lukačević) **81h:76033** 76E25 (65C20)
- Taranko, E. (with Taranko, R.; Wysokiński, K. I.; Pilat, M.) Optical conductivity of substitutionally disordered alloys: intraband transitions. *Z. Phys. B* 39 (1980), no. 3, 187-192. (Authors' summary) **81h:82037** 82A42 (82-04)
- Taranko, R. (with Taranko, E.; Wysokiński, K. I.; Pilat, M.) Optical conductivity of substitutionally disordered alloys: intraband transitions. *Z. Phys. B* 39 (1980), no. 3, 187-192. (Authors' summary) **81h:82037** 82A42 (82-04)
- Taranov, A. Ju. (with Hrustalev, O. A.; Razumov, A. V.) Collective coordinate method in the canonical formalism: Bogolubov's transformation. *Nuclear Phys. B* 172 (1980), no. 1, 44-58. (From the summary) **81h:81095** 81E99
- Taranola, Albert Inversion totale: une méthode générale de résolution des problèmes inverses linéaires. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 2, A115-A118. (Author's summary) **81d:65013** 65F05
- Tarasenko, G. S. Determination of a parametric and structural adaptation in random search algorithms. (Russian) *Problemy Shucha. Poiska No. 8 Voprosy Strukturalnoi Adaptatsii* (1980), 127-134, 333. (A. G. Žilinskas) **81g:65087** 65K10 (90B40)
- Estimate of the convergence rate of an adaptive random search method. (Russian) *Problemy Shucha. Poiska No. 8 Voprosy Strukturalnoi Adaptatsii* (1980), 162-185, 334. (A. G. Žilinskas) **81g:65088** 65K10 (90C15)
- (with Erenstein, M. H.) Study of the convergence of a learning process. (Russian) *Problemy Shucha. Poiska No. 8 Voprosy Strukturalnoi Adaptatsii* (1980), 280-288, 335. (Authors' summary) **81g:68082** 68D27 (68G05)
- Tarasenko, L. N. Numerical solution of the problem of toroidal axially symmetric flows with a free boundary. (Russian) *Z. Vyčisl. Mat. i Mat. Fiz.* 20 (1980), no. 1, 245-249, 263. (Author's summary) **81d:76022** 76C05
- Tarashkin, A. F. Limit distributions of martingales. (Russian) *Dokl. Akad. Nauk SSSR* 253 (1980), no. 1, 44-48. (G. K. Eagleson) **81h:60064** 60G44 (60E07, 60F05)
- Tarasov, O. V. (with Gerdt, V. P.; Širkov, D. V.) Analytic calculations on digital computers for applications in physics and mathematics. *Uspehi Fiz. Nauk* 130 (1980), no. 1, 113-147 (Russian); translated as *Soviet Phys. Uspekhi* 23 (1980), no. 1, 59-77. (Menachem Dishon) **81j:68047** 68C20 (65-04, 81C99, 83C99)
- Tarasov, R. P. (with Bakaev, N. Ju.) Stable solution of a class of convolution type integral equations of the first kind. (Russian) *Differentsial'nye Uravneniya* 15 (1979), no. 12, 2228-2237, 2302. (N. K. Karapetjan) **81a:45004** 45E10 (45L05, 47D05)
- (with Bakaev, N. Ju.) An inverse problem. (Russian) *Funktsional. Anal. i Prilozhen.* 13 (1979), no. 4, 89-90. (Angelo Favini) **81h:34053** 34G10 (47D05)
- (with Bakaev, N. Ju.) A method of stable solution of the Cauchy problem for an equation of elliptic type. (Russian) *Sibirsk. Mat. Ž.* 20 (1979), no. 6, 1198-1205, 1406. (V. G. Romanov) **81h:35095** 35R30
- (with Bakaev, N. Ju.) A problem of transformation of three-dimensional potential fields. (Russian) *Z. Vyčisl. Mat. i Mat. Fiz.* 20 (1980), no. 3, 648-655, 812. (P. Szepietki) **81h:65105** 65M30 (31B15, 78A30)
- Tarasov, S. P. (with Kozlov, M. K.; Hačijan, L. G.) Polynomial solvability of convex quadratic programming. (Russian) *Dokl. Akad. Nauk SSSR* 248 (1979), no. 5, 1049-1051. (J. Abraham) **81h:90117** 90C20 (65K05, 68C25)
- Tarasov, V. F. (with Vladimirov, V. A.) Formation of vortex rings. (Russian) *Izv. Sibirsk. Otdel. Akad. Nauk SSSR Ser. Tehn. Nauk* 1980, no. 3, 3-11, 145. (Authors' summary) **81g:76031** 76C05
- Tarasov, V. G. (with Nižnik, L. P.) Inverse scattering problem for a transport equation that is discrete in directions. (Russian) *Ukrain. Mat. Ž.* 32 (1980), no. 5, 678-683. (D. ter Haar) **81h:35162** 35R30 (35Q20, 82A70)
- Tarasova, L. Z. Stability of the rotation of a heavy solid body of variable mass, having a cavity filled with a fluid, subject to reactive forces in a case of Lagrange type. (Russian) *Applied mechanics. Applications of mathematical methods in the natural sciences (Russian)*, pp. 104-109. *Kazakh. Gos. Univ., Alma-Ata*, 1979. (G. Bojardžiev) **81h:70002** 70E99 (34D20, 93D05)
- Tarasova, T. A. An iteration method for solving a convex programming problem with an infinite system of constraints. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1979, no. 8, 65-69. (W. W. Breckner) **81f:90083** 90C25
- Tarasova, Pablo (with Marchi, Ezio) Some studies for a general n -person game arising from a generalization of von Neumann's assignment problem. *J. Math. Anal. Appl.* 74 (1980), no. 1, 152-163. (Mamoru Kaneko) **81f:90125** 90D10
- Tardiff, Robert M. On a functional inequality arising in the construction of the product of several metric spaces. *Aequationes Math.* 20 (1980), no. 1, 51-58. (B. Crstici) **81e:39013** 39C05 (39B20, 54E35)
- Targamatzis, A. Ž. (with Abraitis, L. B.; Šeinauskas, R. I.) Creation of complete fault-detection tests for combination devices by the method of maximum covering of equivalent forms. *Automat. i Vyčisl. Tehn. (Riga)* 1979, no. 4, 33-38, 93 (Russian); translated as *Automat. Control Comput. Sci.* 13 (1979), no. 4, 29-34. (Authors' summary) **81h:94030** 94C10
- Targhetta, M. Luisa Confidence intervals for a one-parameter family of multivariate distributions. *Biometrika* 66 (1979), no. 3, 687-688. (Author's summary) **81g:62082** 62G15
- (with Cubeddu, C.) On the construction of an asymptotically optimal estimate. (Italian. English summary) *Rend. Sem. Fac. Sci. Univ. Cagliari* 49 (1979), no. 1-2, 97-104. (Authors' summary) **81h:62015** 62C12 (62F15)
- Targosz, Jadwiga (with Targosz, Roman) The variational method applied to Gel'fer bounded functions. (Polish. Russian and English summaries) *Zeszyty Nauk. Politech. Śląsk. Mat.-Fiz. No. 34* (1979), 127-135. (Authors' summary) **81h:30042** 30C70
- Targosz, Karolina Les "Polonica" dans la correspondance de Marin Mersenne des années 1644-1645. Translated by Krystyna Jachiec. *Kwart. Hist. Nauk. Tech.* 24 (1979), no. 3, 611-622. (William R. Shea) **81c:01017** 01A45
- Targosz, Roman Formulas for the Nehari coefficients for Aharonov pairs of univalent functions. (Polish. Russian and English summaries) *Zeszyty Nauk. Politech. Śląsk. Mat.-Fiz. No. 34* (1979), 117-126. (Author's summary) **81h:30032** 30C50

- (with Targosz, Jadwiga) The variational method applied to Gel'fer bounded functions. (Polish, Russian and English summaries) *Zeszyty Nauk. Politech. Śląsk. Mat.-Fiz. No. 34* (1979), 127-135. (Authors' summary) **81h:30042** 30C70
- Tarhanov, N. N.** Formulae and estimates for solutions of the equation $\Delta u = f$ in a domain and on the boundary of a domain. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1980, no. 5, 58-66. (Harold P. Boas) **81h:32017** 32F20 (14F40, 35N15)
- Tartakowsky, V. I.** Characterization of covariance operators which guarantee the CLT. *Mathematical statistics and probability theory (Proc. Sixth Internat. Conf., Włsa, 1978)*, pp. 348-359, *Lecture Notes in Statist.*, 2, Springer, New York, 1980. (M. G. Hahn) **81h:60007** 60B11 (60G17)
- Tartar, Marian** Development of geometry in the period of the French Revolution. (Romanian) *Gaz. Mat. (Bucarest)* 84 (1979), no. 11, 407-409. (J. Dieudonné) **81h:01016** 01A50 (01A55)
- Equivalent connections on G -structures of order 2. (Romanian. English summary) *Studia Univ. Babeş-Bolyai Math.* 25 (1980), no. 1, 20-27. (I. Vaisman) **81m:53041** 53C05
- Tarjan, Robert Endre** (with Paul, Wolfgang J.; Celoni, James R.) Space bounds for a game on graphs. *Math. Systems Theory* 10 (1976/77), no. 3, 239-251. (Authors' summary) **81h:68030a** 68C25 (68B20)
- (with Paul, Wolfgang J.; Celoni, James R.) Correction to: "Space bounds for a game on graphs". *Math. Systems Theory* 11 (1977/78), no. 1, 85. (Editors) **81h:68030b** 68C25 (68B20)
- Complexity of monotone networks for computing conjunctions. Algorithmic aspects of combinatorics (Conf., Vancouver Island, B.C., 1976). *Ann. Discrete Math.* 2 (1978), 121-133. (Author's summary) **81h:68058** 68C25 (94C10)
- (with Valdes, Jacobo; Lawler, Eugene L.) The recognition of series parallel digraphs. *Conference Record of the Eleventh Annual ACM Symposium on Theory of Computing (Atlanta, Ga., 1979)*, pp. 1-12, ACM, New York, 1979. (Authors' summary) **81h:68088** 68E10 (68C05)
- (with Gilbert, John R.; Lengauer, Thomas) The pebbling problem is complete in polynomial space. *Conference Record of the Eleventh Annual ACM Symposium on Theory of Computing (Atlanta, Ga., 1979)*, pp. 237-248, ACM, New York, 1979. (C. F. Kelemen) **81h:68031** 68C25
- (with Lengauer, Thomas) Upper and lower bounds on time-space tradeoffs. *Conference Record of the Eleventh Annual ACM Symposium on Theory of Computing (Atlanta, Ga., 1979)*, pp. 262-277, ACM, New York, 1979. (D. T. Lee) **81j:68054** 68C25
- (with Yao, Andrew Chi Chih) Storing a sparse table. *Comm. ACM* 22 (1979), no. 11, 606-611. (Armin Cremers) **81h:68019** 68B15 (68H05)
- Applications of path compression on balanced trees. *J. Assoc. Comput. Mach.* 26 (1979), no. 4, 690-715. (Claude Benzenen) **81h:68052** 68E10 (68B10, 68C25)
- (with Downey, Peter J.; Sethi, Ravi) Variations on the common subexpression problem. *J. Assoc. Comput. Mach.* 27 (1980), no. 4, 758-771. (Authors' summary) **81j:68077** 68E10 (05C20, 68B15)
- Tarn, Tryn Jong** (with Nonoyama, Shigeki) Structure and realization of decomposable biplane systems. *Recent developments in variable structure systems, economics and biology (Proc. US-Italy Sem., Taormina, 1977)*, pp. 252-259, *Lecture Notes in Econ. and Math. Systems*, 162, Springer, Berlin, 1978. (K. B. Datta) **81m:93020** 93B15
- (with Nonoyama, Shigeki) An algebraic structure of discrete-time biplane systems. *Proceedings of the 1978 IEEE Conference on Decision and Control including the 17th Symposium on Adaptive Processes (San Diego, Calif., 1979)*, pp. 139-150, IEEE, New York, 1979. (Authors' summary) **81h:93058** 93C55
- (with Swamy, K. N.) Deterministic and stochastic control of discrete-time bilinear systems. *Automatica—J. IFAC* 15 (1979), no. 6, 677-682. (From the summary) **81h:93056** 93C55
- (with Zaborsky, J.) Reply to: "Topological equivalence of state spaces in the interconnected power system in emergency control" [IEEE Trans. Automat. Control 24 (1979), no. 3, 514-516; MR 81f:93008]. *IEEE Trans. Automat. Control* 24 (1979), no. 3, 516. (B. D. Doneski) **81f:93008b** 93A15
- (with Inagaki, Masato; Funahashi, Yasuyuki) Further results on realization of biplane systems. *IEEE Trans. Automat. Control* 25 (1980), no. 3, 548-549. (Authors' summary) **81f:93053** 93C55
- See also Funahashi, Yasuyuki, **81h:93019**
- Tartakowsky, Sten Åke** (with Brown, Frank Malloy) Inductive reasoning on recursive equations. *Artificial Intelligence* 12 (1979), no. 3, 207-229. (A. G. Hitchcock) **81h:68029** 68C01 (00A25, 03B35, 03B60)
- Tarantolka-Weiss, Marylin** On the number of lattice points in planar domains. *Proc. Amer. Math. Soc.* 69 (1978), no. 2, 308-311. (From the text) **81h:10068** 10J20
- Tarpanian, G. G.** Expansion in a generalized Fourier integral with respect to eigenfunctions in the theory of thin elastic shells of evolution. (Russian) *Uspehi Mat. Nauk* 33 (1978), no. 5(203), 199-200. (R. Kodnar) **81m:35110** 35P20 (73L20)
- Tarr, David G.** Expectations and stability with gross complements. *Rev. Econom. Stud.* 45 (1978), no. 3, 617-620. (From the text) **81d:90029** 90A14
- Tarr, Girard** Pythagoras and his theorem. *Nepali Math. Sci. Rep.* 4 (1979), no. 1, 35-45. (O. Botta) **81h:01009** 01A20 (51-03)
- Tarrach, R.** See Quantum chromodynamics, **81h:81004**
- Tarsi, Michael** Decomposition of complete multigraphs into stars. *Discrete Math.* 26 (1979), no. 3, 273-278. (A. Rosa) **81h:05028** 05B30 (05C05)
- Tarski, A.** (with Szczepa, Lesław W.) Metamathematical discussion of some affine geometries. *Fund. Math.* 104 (1979), no. 3, 155-192. (M. Boffa) **81a:03012** 03B30 (03C65, 03D35, 51N10)
- Tartaglia, A.** General Lagrangians for the motion of a point particle in a viscous medium and the problem of quantization. (Italian and Russian summaries) *Nuovo Cimento B* (11) 57 (1980), no. 1, 131-145. (Author's summary) **81h:70022** 70H99 (81D99)
- Tartakoff, David S.** The local real analyticity of solutions to \square , and the 3-Neumann problem. *Acta Math.* 145 (1980), no. 3-4, 177-204. (Makhlof Derridj) **81h:35033** 35H05 (32F20, 35N15)
- Tartakowski, A. G.** (with Sosulin, Ju. G.; Fišman, M. M.) Sequential detection of a correlated Gaussian signal in white noise. *Radiotekhn. i Elektron. 24* (1979), no. 4, 720-732. (Russian) translated as *Radio Engng. Electron. Phys.* 24 (1979), no. 4, 43-53. (Authors' summary) **81h:94020** 94A12
- Tartakowski, I. I.** (with Sviridova, E. A.) Questions on the effective generation of graphs. (Russian) *Radiotekhn. (Har'kov) No. 52* (1980), 132-137, vi. (V. B. Alekseev) **81h:05095** 05C99
- Tartakowski, A. G.** See Tartakowski, A. G.
- Tartar, John** See Drangpita, Subrata, **81f:60006**; Barnes, Gary E., **81f:60006b** and Adams, Edward N., III, **81f:60006c**
- Tartar, Luc** Topics in nonlinear analysis. *Publications Mathématiques d'Orsay* 78, 13. Université de Paris-Sud, Département de Mathématique, Orsay, 1978. ii+271 pp. (not consecutively pagged). (Editors) **81h:35001** 35-02 (49-02)
- Compensated compactness and applications to partial differential equations. *Nonlinear analysis and mechanics: Heriot-Watt Symposium, Vol. IV*, pp. 136-212, *Res. Notes in Math.*, 39, Pitman, San Francisco, Calif., 1979. (R. Schumann) **81m:35014** 35A35 (35Q99, 49A50, 49D50)
- Homogénéisation et compacité par compensation. *Séminaire Goulaouic-Schwartz* (1978/1979), Exp. No. 9, 9 pp. *École Polytech., Palaiseau*, 1979. (René Hayart) **81h:73012** 73C50 (35K70)
- (with Crandall, Michael G.; Pazy, A.) Remarks on generators of analytic semigroups. *Israel J. Math.* 32 (1979), no. 4, 363-374. (Olusola Akinyele) **81g:47043** 47D05 (47F05, 47H20)
- (with Crandall, Michael G.) Some relations between nonexpansive and order preserving mappings. *Proc. Amer. Math. Soc.* 78 (1980), no. 3, 385-390. (A. J. B. Potter) **81h:47054** 47H07
- Tarter, Michael E.** Trigonometric maximum likelihood estimation and application to the analysis of incomplete survival information. *J. Amer. Statist. Assoc.* 74 (1979), no. 365, 132-139. (Author's summary) **81h:62099** 62N05 (62G05)
- (with Clark, Virginia A.) Correction to: "Properties of the median and other order statistics of logistic variates" [Ann. Math. Statist. 36 (1965), 1779-1786; MR 32 # 1796]. *Ann. Statist.* 8 (1980), no. 4, 935. (Editors) **81h:62056** 62G30
- See also Parzen, Emanuel, **81h:62053** and Good, I. J., et al., **81h:62073**
- Tarumi, Tomoyuki** (with Kudō, Akio) 2×2 tables emerging out of different chance mechanisms. Special issue on theory and practice for categorical data analysis. *Comm. Statist. A—Theory Methods* 7 (1978), no. 10, 977-986. (See **80d:62042**) **62H30**
- Tarunin, E. L.** Flow of a viscous fluid in a closed cavity in the presence of slip effects. *Izv. Akad. Nauk SSSR Meh. Zidk. Gaza* 1980, no. 1, 10-16. (Russian); translated as *Fluid Dynamics* 15 (1980), no. 1, 6-11. (From the summary) **81f:76018** 76D05 (76P05)
- Tasche, Manfred** Zur Konvergenzbeschleunigung von Fourier-Reihen. *Math. Nachr.* 90 (1979), 123-134. (Masako Izumi) **81h:42033** 42A20 (47A70)
- Taschner, R. J.** Gleichverteilte Doppelfolgen und eine Abschätzung der C-Diskrepanz. (English summary) *Monatsh. Math.* 88 (1979), no. 4, 321-330. (Harald Niederreiter) **81h:10071** 10K05 (10K30)
- Taiev, Spas P.** (with Petrușev, P. P.) Converse theorems in Hausdorff's metric. *Fourier analysis and approximation theory (Proc. Colloq., Budapest, 1976)*, Vol. II, pp. 625-631, *Colloq. Math. Soc. János Bolyai*, 19, North-Holland, Amsterdam, 1978. (T. Bojanov) **81h:41035** 41A27 (41A44)
- Existence of the solution of a differential equation with a many-valued right-hand side. (Russian) *Serdica* 6 (1980), no. 1, 98-104. (Stefan Mirica) **81h:34012** 34A60
- Taiev, Ž.** (with Džurmadov, N.) A singular operator equation with Carleman shift of order two in a normed ring with involution. (Russian) *Research in mathematics and physics (Russian)*, pp. 102-107, 147, *Taškent. Gos. Ped. Inst., Tashkent*, 1979. (Georg Heing) **81m:45008** 45E99 (45F99, 45P05)
- A singular operator equation with a Carleman shift of order three. (Russian) *Voprosy Vyssh. i Prikl. Mat. (Tashkent)* No. 56 (1979), 3-7, 137. (Author's summary) **81g:47012** 47A50
- Taicher, Sp.** See Taiev, Spas P.
- Tashjian, Gloria** Cartesian-closed coreflective subcategories of Tychonoff spaces. *Pacific J. Math.* 81 (1979), no. 2, 547-558. (Jerry F. Williams) **81h:54011** 54B30 (54B10, 54E15)
- Tashkarev, A.** Existence of convex hypersurfaces of R -curvature, which is a sum of integral conditional curvatures. (Russian) *Izv. Akad. Nauk UzSSR Ser. Fiz.-Mat. Nauk* 1979, no. 3, 21-26, 92. (V. T. Fomenko) **81h:53058** 53C45 (53A07)
- Tashkova, B. S.** (with Velinov, Ju. P.) Equivalence relations agreeing with a tolerance relation. (Bulgarian. Russian and English summaries) *Godišnik Viss. Učebn. Zaved. Plovdiv Mat. 14* (1978), no. 1, 77-84. (E. Kurepa) **81h:05096** 05C35 (04A05, 05C70)
- Tatimirzaev, Ju. U.** Uniqueness theorems for equations of mixed type with a nonsmooth line of degeneracy. (Russian) *Izv. Akad. Nauk UzSSR Ser. Fiz.-Mat. Nauk* 1979, no. 5, 70-71. (V. V. Kovrizkin) **81h:35091** 35M05
- Tatnadi, A. L.** (with Tövissi, L.; Spiricu, Tiberiu) Economic system structure hierarchization. (French and Russian summaries) *Econom. Comput. Econom. Cybernet. Stud. Res.* 1978, no. 1, 45-61. (Authors' summary) **81h:90030** 90A17 (05C99, 15A21, 90A15)
- Tatsoev, B. G.** A way of solving a class of Diophantine equations. (Russian. Georgian and English summaries) *Trudy Tbiliss. Univ.* 189 (1977), 17-28. (A. Pethő) **81h:10034** 10B15 (10A32)
- Tatpulatov, B.** Formulas of Weil-Eichler type for certain quaternion quadratic forms. (Russian) *Research in mathematics and physics (Russian)*, pp. 130-132, 148, *Taškent. Gos. Ped. Inst., Tashkent*, 1979. (K. Szymiczek) **81h:10034** 10C05 (10E25)
- Tauske, L. J.** (with Koo, W. K.) Properties of the inelastic form factors of the nucleus. *Austral. J. Phys.* 31 (1978), no. 1, 9-25. (Authors' summary) **81h:81104** 81G35
- (with Koo, W. K.) Bounds for the centre-of-mass-corrected energy-weighted sum rules for nuclear form factors and multipole moments. *Austral. J. Phys.* 32 (1979), no. 5, 427-438. (Ian P. Grant) **81h:81072** 81G30
- Tauso, H.** (with Teichmann, Jiri) On the generalization of the Cole-Hopf transformation. (German summary) *Z. Angew. Math. Phys.* 30 (1979), no. 6, 1023-1025. (Jiří Nedoma) **81h:35013** 35A30 (35Q20)
- (with Teichmann, Jiri) A stability theorem for systems with discrete parameters and arbitrary circulatory forces. (German summary) *Z. Angew. Math. Phys.* 30 (1979), no. 6, 1027-1029. (O. Gürel) **81h:70011** 70J25 (93D05)
- Tatarkiewicz, Krzysztof** L'application d'une méthode géométrique à l'étude des équations différentielles ordinaires du second ordre. *Demonstratio Math.* 11 (1978), no. 4, 853-873 (1979). (C. S. Hartzman) **81h:34030** 34C10

- Sur les équations qui devraient osciller. *Demonstratio Math.* 12 (1979), no. 1, 23-35. (Yiannis Sficas) **81m:34048** 34C10 (34C15)
- Tataru-Mihal, P. On the origin of the infinite series of conservation laws for the two-dimensional α -models. *Lett. Nuovo Cimento* (2) 27 (1980), no. 16, 523-528. (From the text) **81e:8107** 81E99 (58F07)
- A model-independent sufficient condition for static quark confinement. (Italian and Russian summaries) *Nuovo Cimento A* (11) 57 (1980), no. 3, 342-348. (Authors' summary) **81h:81139** 81G05
- Tatsumi, Arifoshi (with Okazaki, Akihiko) On the equations of motion of multilayer cylindrical shells with viscoelastic damping layer. (Japanese. English summary) *Bull. Nagoya Inst. Tech.* 31 (1979), 247-253. (Authors' summary) **81j:73069** 73L20 (35J60)
- Tatsumi, Shigeaki (with Shibahara, Masao; Kuroyanagi, Osamu) Diffraction of steady stress waves by arbitrary shaped discontinuities in elastic medium. *Bull. JSME* 23 (1980), no. 178, 493-500. (Authors' summary) **81g:73031** 73D25
- Tatjewski, P. (with Michalak, P.) Algorithms of prediction methods in multilevel optimization. (Russian summary) *Systems Sci.* 6 (1980), no. 1, 23-43. (Y. Cherruault) **81k:69027** 49D30 (65K10)
- Tatjewski, D. The study of strong interactions in a gravitational field. (French summary) *Rev. Roumaine Phys.* 25 (1980), no. 3, 277-282. (Author's summary) **81h:81140** 81G05 (83C99)
- Taton, René Sur la diffusion des théories newtoniennes en France. Clairaut et le problème de la figure de la terre. Newton and the Enlightenment (Proc. Internat. Sympos., Cagliari, 1977). *Vistas Astronom.* 22 (1978), no. 4, 485-509 (1979). (Peeter Müürsepp) **81h:01014** 01A50
- See also *Cahiers du Séminaire d'Histoire des Mathématiques*, **81j:01001**
- Tatsumi, Takeshi Renormalization-group transformation for site percolation problem with distant-neighbor interactions. *Progr. Theoret. Phys.* 64 (1980), no. 3, 803-812. (Author's summary) **81k:82036** 82A42
- Tatsumi, Nobuhiko Duality theorem for locally compact groups and some related topics. (French summary) *Algèbres d'opérateurs et leurs applications en physique mathématique* (Proc. Colloq., Marseille, 1977), pp. 387-408. *Colloques Internat. CNRS*, 274, CNRS, Paris, 1979. (André R. Magid) **81h:22010** 22D35
- Tatur, V. E. (with Malinin, Ju. V.) A method for diagnosing complex computation systems. (Russian. English summary) *Elektronnoe Modelirovanie* 1980, no. 4, 92-93, 112. (Authors' summary) **81j:68008** 68A05
- Taub, A. H. Space-times with distribution-valued curvature tensors. *J. Math. Phys.* 21 (1980), no. 6, 1423-1431. (Author's summary) **81j:83014** 83C20 (53C50, 58D25)
- Taub, Allan J. Prediction in the context of the variance-components model. *J. Econometrics* 10 (1979), no. 1, 103-107. (R. W. Farebrother) **81g:62179** 62P20
- Tauber, Gerald E. Einstein and Zionism. *Einstein*, pp. 199-207. *Harvard Univ. Press*, Cambridge, Mass., 1979. (See **81h:01053**) 01A70
- Classification of Bianchi cosmologies in conformal flat space-times. *Internat. J. Theoret. Phys.* 18 (1979), no. 5, 371-396. (George Debnay) **81e:83015** 83C20 (53C50)
- Taubes, Clifford Henry Solution of the almost-Killing equation and conformal almost-Killing equation in the Kerr spacetime. *J. Math. Phys.* 19 (1978), no. 7, 1515-1525. (Author's summary) **81e:83025** 83C40 (53B50)
- Taunsky, Olga From cyclic algebras of quadratic fields to central polynomials. *J. Austral. Math. Soc. Ser. A* 25 (1978), no. 4, 503-506. (S. I. Gendler) **81h:15017** 15A36 (15A15)
- A Diophantine problem arising out of similarity classes of integral matrices. *J. Number Theory* 11 (1979), no. 3, S. Chowla Anniversary Issue, 472-475. (Masahiko Fujiwara) **81h:10010** 10B15 (10C10)
- Results concerning composition of sums of three squares. *Linear and Multilinear Algebra* 8 (1979/80), no. 3, 231-233. (O. H. Körner) **81h:10027** 10C02 (15A36)
- (with Shapiro, H.) Alternative proofs of a theorem of Moys and Marcus on the numerical range of a square matrix. *Linear and Multilinear Algebra* 8 (1979/80), no. 4, 337-340. (Bryan E. Cain) **81f:15034** 15A60 (15A57, 47A12)
- More on norms from algebraic number fields, commutators and matrices which transform a rational matrix into its transpose. *Linear Algebra Appl.* 29 (1980), 459-464. (John D. Fulton) **81k:15023** 15A33 (12A45)
- Taradze, A. D. (with Smel'kin, A. L.) Subgroups of free pronilpotent groups. (Russian. Georgian and English summaries) *Sobšč. Akad. Nauk Gruzin. SSR* 93 (1979), no. 2, 277-279. (Ju. I. Merzljakov) **81e:20035** 20E18 (17B30, 20F19)
- Taradze, R. U. (with Mdzinarisvili, V. V.) Principle of mapping nonlinear stochastic control systems. (Russian. Georgian and English summaries) *Sobšč. Akad. Nauk Gruzin. SSR* 94 (1979), no. 1, 157-160. (D. M. Sudakov) **81h:93064** 93E03
- Taran, Paul (with Schulten, Klaus) An efficient approach to CI: general matrix element formulas for spin-coupled particle-hole excitations. *J. Chem. Phys.* 72 (1980), no. 6, 3547-3576. (A. Corciovei) **81h:81041** 81C99 (81G50)
- Tararé, S. A note on finite homogeneous continuous-time Markov chains. (French summary) *Biometrics* 35 (1979), no. 4, 831-834. (I. W. Saunders) **81f:60100** 60J27 (92A10)
- Dual diffusions, killed diffusions, and the age distribution problem in population genetics. *Theoret. Population Biol.* 16 (1979), no. 3, 253-266. (Anthony G. Pakes) **81h:60078** 60J60 (92A10)
- Time reversal and age distributions. I. Discrete-time Markov chains. *J. Appl. Probab.* 17 (1980), no. 1, 33-46. (Edward Pollak) **81b:92005** 92A10 (60J10)
- Tarkhvidze, A. N. (with Krasnikov, N. V.; Matveev, V. A.; Rubakov, V. A.; Tokarev, V. F.) Double- θ vacuum structure and the functional integral in the Schwinger model. *Phys. Lett. B* 97 (1980), no. 1, 103-106. (Authors' summary) **81j:81049** 81E99 (81C35)
- Tarkhvidze, D. S. (with Davitashvili, N. S.) Determination of the link dimensions of a plane five-linked hinged mechanism. (Russian. Georgian and English summaries) *Sobšč. Akad. Nauk Gruzin. SSR* 97 (1980), no. 2, 385-388. (Hans Sachs) **81j:53011** 53A17 (70B15)
- Tarkhvidze, I. N. Asymptotic behavior of solutions of a polyharmonic equation in the neighborhood of points of the boundary and at infinity. (Russian) *Uspehi Mat. Nauk* 34 (1979), no. 5(209), 229-230. (Stefan Balint) **81e:35012** 35B40 (31B30)
- Tavis, M. T. (with Meecham, W. C.) Theoretical pressure correlation functions in turbulent boundary layers. *Phys. Fluids* 23 (1980), no. 6, 1119-1131. (Authors' summary) **81d:76059** 76F10 (76D10)
- Tavkhelidze, A. N. See Tavkhelidze, A. N.
- Tavlas, George S. A note on monetary policy effectiveness. The correspondence principle, and the positively sloped IS curve. *Econom. Lett.* 4 (1979/80), no. 4, 313-317. (Author's summary) **81h:90028** 90A12
- Abdel-Tawab, Y. See Abdel-Tawab, Y.
- Tawada, Makoto The production possibility set with public intermediate goods. *Econometrica* 48 (1980), no. 4, 1005-1012. (Editors) **81g:90021** 90A11
- Tawakley, V. B. (with Jain, S. C.) Minimum ballistic factor problem of slender axial symmetric missiles. *Defence Sci. J.* 29 (1979), no. 1, 11-20. (E. G. Broadbent) **81h:76038** 76K05 (49B40)
- Taya, M. (with Nemat-Nasser, S.) Numerical studies of void growth in a necked bar. *Internat. J. Solids and Structures* 16 (1980), no. 6, 483-494. (Authors' summary) **81h:73047** 73M15 (73E99)
- Tayar, Abdelhamid (with Raoult, Jean-Pierre) Rangement en contexte aléatoire. (English summary) *Rev. CETHEDC* No. 62 (1980), 31-54. (Françoise Garcia-Schaeffer) **81h:62014** 62C10 (62H30, 62L10)
- Taylor, R. J. Cosmology, astrophysics and elementary particle physics. *Rep. Progr. Phys.* 43 (1980), no. 3, 253-299. (Author's summary) **81h:85013** 85A40 (81G99, 83F05)
- Taylor, Angus Ellis (with Lay, David C.) Introduction to functional analysis. Second edition. *John Wiley & Sons, New York-Chichester-Brisbane*, 1980. xi + 467 pp. ISBN 0-471-84646-5 (Editors) **81h:46001** 46-01 (47-01)
- Taylor, B. A. (with Bedford, Eric) Two applications of a nonlinear integral formula to analytic functions. *Indiana Univ. Math. J.* 29 (1980), no. 3, 463-465. (Guy Laville) **81e:32020** 32F05 (32H25)
- (with Berenstein, Carlos A.) Mean-periodic functions. *Internat. J. Math. Math. Sci.* 3 (1980), no. 2, 199-235. (L. A. Ivanov) **81k:42014** 42A75 (32A15, 35E10, 46-02)
- Taylor, Bernard W., III (with Moore, Laurence J.; Hammesfahr, R. D.) Global analysis of a multiproduct, multiline production system using Q-GERT modeling and simulation. *AIIE Trans.* 12 (1980), no. 2, 145-155. (Authors' summary) **81h:90072** 90B30
- Taylor, C. (with Morgan, K.; Hughes, T. G.) Analysis of turbulent free shear flow and heat transfer using the mixing length hypothesis. *Mathematics of finite elements and applications, III* (Proc. Third MAEELAP Conf., Brunel Univ., Uxbridge, 1978), pp. 247-254. *Academic Press, London*, 1979. (D. Schultz) **81e:76047** 76F10
- See also *Recent advances in numerical methods in fluids*, **81j:76002**
- Taylor, C. J. (with Beale, E. M. L.; Forrest, J. J. H.) Multi-time-period stochastic programming. *Stochastic programming* (Proc. Internat. Conf., Univ. Oxford, Oxford, 1974), pp. 387-402. *Academic Press, London*, 1980. (Authors' summary) **81m:90061** 90C15
- Taylor, D. C. The strong bidual of $\mathcal{I}(K)$. *Pacific J. Math.* 77 (1978), no. 2, 541-556. (Author's summary) **81g:46001** 46L05 (46K05)
- (with Henry, Myron S.) Approximation in a Banach space defined by a continuous field of Banach spaces. *J. Approx. Theory* 27 (1979), no. 1, 76-92. (P. D. Morris) **81h:41029** 41A65
- (with Gillette, R. M.) The minimal dense two-sided ideal of a C^* -algebra with continuous trace. *Math. Scand.* 44 (1979), no. 1, 201-206. (G. A. Elliott) **81a:46072** 46L05
- Taylor, David J. (with Morgan, David E.; Black, James P.) Redundancy in data structures: improving software fault tolerance. *IEEE Trans. Software Engng.* 6 (1980), no. 6, 585-594. (From the conclusion) **81k:68019a** 68B15
- (with Morgan, David E.; Black, James P.) Redundancy in data structures: some theoretical results. *IEEE Trans. Software Engng.* 6 (1980), no. 6, 595-602. (From the conclusion) **81k:68019b** 68B15
- Taylor, G. C. Abstract credibility. *Scand. Actuar. J.* 1977, no. 3, 149-168. (Fl. De Vylder) **81h:62115** 62P05
- An investigation of the use of weighted averages in the estimation of the mean of a long-tailed claim size distribution. *Astin Bull.* 10 (1978/79), no. 1, 87-98. (Jean Lemaire) **81j:62194** 62P05
- Probability of ruin under inflationary conditions or under experience rating. *Astin Bull.* 10 (1978/79), no. 2, 149-162. (Fl. De Vylder) **81m:62187** 62P05
- Rating a motor insurance portfolio by statistical techniques. *Interaction statistics* (Proc. Appl. Statist. Conf., Macquarie Univ., Sydney, 1979), pp. 217-224. *North-Holland, Amsterdam*, 1979. (See **81f:62003**) 62P05
- Probability of ruin with variable premium rate. *Scand. Actuar. J.* 1980, no. 2, 57-76. (Fl. De Vylder) **81m:62188** 62P05
- Taylor, G. D. (with Meinardus, Günter) Optimal partitioning of Newton's method for calculating roots. *Math. Comp.* 35 (1980), no. 152, 1221-1230. (Derek W. Arthur) **81j:65069** 65H05 (41A30)
- Taylor, Herbert (with Bloom, Gary S.; Hell, Pavol) Collecting autographs: n -node graphs that have n -integer signatures. *Second International Conference on Combinatorial Mathematics* (New York, 1978), pp. 93-102. *Ann. New York Acad. Sci.*, 319, New York Acad. Sci., New York, 1979. (M. E. Watkins) **81e:05076** 05C75 (05C05)
- (with Simoncini, Luca) Subgraphs smaller than the girth. *J. Graph Theory* 4 (1980), no. 1, 101-105. (W. D. Wallis) **81e:05054** 05C35
- Taylor, J. C. (with Doria, R.; Frenkel, J.) Counterexample to nonabelian Bloch-Nordsieck conjecture. *Nuclear Phys. B* 168 (1980), no. 1, 93-110. (Authors' summary) **81g:81093** 81G05
- Taylor, James G. Theoretical analysis of Lanchester-type combat between two homogeneous forces with supporting fires. *Naval Res. Logist. Quart.* 27 (1980), no. 1, 109-121. (Author's summary) **81h:90185** 90D25 (93C15)
- Taylor, James H. A general limit cycle analysis method for multivariable systems. *New approaches to nonlinear problems in dynamics* (Proc. Conf., Pacific Grove, Calif., 1979), pp. 521-529. *SIAM, Philadelphia, Pa.*, 1980. (See **81h:90006**) 93C35
- Taylor, John B. (with Anderson, T. W.) An inequality for a sum of quadratic forms with applications to probability theory. *Linear Algebra Appl.* 30 (1980), 93-99. (Winston T. Lin) **81h:15020** 15A63 (26D15, 62J05)
- Taylor, John G. (with Birrell, N. D.) Analysis of interacting quantum field theory in curved spacetime. *J. Math. Phys.* 21 (1980), no. 7, 1740-1760. (Authors' summary) **81j:81077** 81M05 (81E99)

- Do electroweak interactions imply six extra time dimensions? *J. Phys. A* 13 (1980), no. 5, 1861-1866. (Author's summary) **81d:8112** 81G25
- On representations of extended supersymmetry algebras on superfields. *Nuclear Phys. B* 169 (1980), no. 5-6, 484-500. (Author's summary) **81i:8100** 81E99 (17A70, 17B10, 81G20)
- A superfield formulation of extended supersymmetric gauge theories. *Phys. Lett. B* 94 (1980), no. 2, 174-178. (Author's summary) **81f:81046** 81E10
- Taylor, John R. (with Goodmans, David M.) Coulomb scattering as the limit of scattering off smoothly screened Coulomb potentials. *J. Math. Phys.* 21 (1980), no. 8, 2202-2207. (Francesco Calogero) **81i:81004** 81F05
- Taylor, Keith (with Baggett, Larry) A sufficient condition for the complete reducibility of the regular representation. *J. Funct. Anal.* 34 (1979), no. 2, 250-265. (G. L. Litvinov) **81f:22005** 22D10 (22D30, 43A30, 43A35)
- Taylor, Laurence (with Williams, Bruce) Local surgery: foundations and applications. *Algebraic topology, Aarhus 1978 (Proc. Sympos., Univ. Aarhus, Aarhus, 1978)*, pp. 673-695, *Lecture Notes in Math.*, 763, Springer, Berlin, 1979. (Frank Quinn) **81d:57024** 57R65 (57R40)
- (with Williams, Bruce) Surgery spaces: formulae and structure. *Algebraic topology, Waterloo, 1978 (Proc. Conf., Univ. Waterloo, Waterloo, Ont., 1978)*, pp. 170-195, *Lecture Notes in Math.*, 741, Springer, Berlin, 1979. (Ian Hambleton) **81k:57034** 57R67
- (with Woitwod, I. P.; Perry, J. N.) The negative binomial as a dynamic ecological model for aggregation, and the density dependence of k . *J. Animal Ecology* 48 (1979), no. 1, 289-304. (Authors' summary) **81m:92056** 92A17 (62P10)
- (with Cohen, F. R.; May, J. P.) Splitting of some more spaces. *Math. Proc. Cambridge Philos. Soc.* 86 (1979), no. 2, 227-236. (Stanley Kochman) **81b:55016** 55P10
- Taylor, M. S. (with Grubbs, F. E.) Use of tail areas for testing goodness-of-fit. *Comm. Statist. A—Theory Methods* 8 (1979), no. 15, 1575-1584. (G. E. Noether) **81i:62059** 62G10
- Taylor, Martin J. Local Gauss sums. *Séminaire de Théorie des Nombres, 1978-1979, Exp. No. 8, 9 pp., CNRS, Talence, 1979*. (J. C. Lagarias) **81j:12021** 12B99 (10G05)
- The locally free classgroup of the symmetric group. *Illinois J. Math.* 23 (1979), no. 4, 687-702. (Jürgen Ritter) **81j:12005** 12A57 (20C10)
- Adams operations, local root numbers, and the Galois module structure of rings of integers. *Proc. London Math. Soc.* (3) 39 (1979), no. 1, 147-175. (Jürgen Ritter) **81j:12008** 12A70 (12A55)
- Galois module structure of rings of integers in Kummer extensions. *Bull. London Math. Soc.* 12 (1980), no. 2, 96-98. (Pierre Damey) **81e:12010** 12A55
- Taylor, Michael E. First-order hyperbolic systems with a small viscosity term. *Comm. Pure Appl. Math.* 31 (1978), no. 6, 707-786. (Vesselin M. Petkov) **81e:35078** 35L45
- Fourier integral operators and harmonic analysis on compact manifolds. *Harmonic analysis in Euclidean spaces (Proc. Sympos. Pure Math., Williams Coll., Williamstown, Mass., 1978)*, Part 2, pp. 115-136, *Proc. Sympos. Pure Math.*, XXXV, Part 2, Amer. Math. Soc., Providence, R.I., 1979. (M. S. Agranovič) **81i:58042** 58G15 (35P05, 35S05, 43-06, 47G05)
- Estimate on the fundamental frequency of a drum. *Duke Math. J.* 46 (1979), no. 2, 447-453. (J. Hersch) **81g:35097** 35P15 (35J05)
- Taylor, P. J. (with Usmani, Riaz A.) Convergence of numerical approximations to a fourth order boundary value problem. *Internat. J. Comput. Math.* 8 (1980), no. 3, 265-270. (William B. Day) **81h:65086** 65L10
- Taylor, Peter R. (with Roos, Björn; Siegbahn, Per E. M.) A complete active space SCF method (CASSCF) using a density matrix formulated super-CI approach. *Chem. Phys.* 48 (1980), no. 2, 157-173. (From the summary) **81d:81121** 81G55
- Taylor, R. S. Note: "Charge singularity at the corner of a flat plate" [SIAM J. Appl. Math. 31 (1976), no. 2, 233-250; MR 54 #4348] by J. A. Morrison and J. A. Lewis. *SIAM J. Appl. Math.* 34 (1978), no. 1, 198-199. (Author's summary) **81e:78020** 78A30
- Taylor, Robert Lee Properties of stochastic processes characterized as function-valued random variables. *Bull. Inst. Math. Acad. Sinica* 7 (1979), no. 4, 381-393. (M. G. Hahn) **81i:60006** 60B11
- (with Pinsky, Peter M.) A finite deformation formulation for elasto/viscoplastic beam structures. *Computational methods in nonlinear mechanics (Proc. Second Internat. Conf., Univ. Texas, Austin, Tex., 1979)*, pp. 393-411, North-Holland, Amsterdam, 1980. (Authors' summary) **81g:73086** 73K25 (73E99, 73K05)
- (with Daffer, Peter Z.) Convergence of weighted sums of random elements in $D[0, 1]$. *J. Multivariate Anal.* 10 (1980), no. 1, 95-106. (V. K. Rohatgi) **81b:60007** 60B10 (60F15)
- Taylor, Stephen J. Conjectured models for trends in financial prices, tests and forecasts. *J. Roy. Statist. Soc. Ser. A* 143 (1980), no. 3, 338-362. (L. G. Godfrey) **81k:62156** 62P20 (62M10, 90A12)
- Taylor, Thomas D. (with Murdock, John W.) Application of spectral methods to the solution of Navier-Stokes equations. *Approximation methods for Navier-Stokes problems (Proc. Sympos., Univ. Paderborn, Paderborn, 1979)*, pp. 519-537, *Lecture Notes in Math.*, 771, Springer, Berlin, 1980. (Authors' summary) **81g:76038** 76D05 (35Q30, 65P05)
- Taylor, W. E., Jr. (with Etgen, Garret J.) Wronskians and subspaces of certain fourth order differential equations. *Internat. J. Math. Math. Sci.* 3 (1980), no. 2, 275-292. (W. J. Kim) **81j:34057** 34C10
- Taylor, Walter (with Freese, Ralph; Lampe, William A.) Congruence lattices of algebras of fixed similarity type. I. *Pacific J. Math.* 82 (1979), no. 1, 59-68. (Joel Berman) **81d:08004** 08A30
- Mal'tsev conditions and spectra. *J. Austral. Math. Soc. Ser. A* 29 (1980), no. 2, 143-152. (L. Klukovits) **81h:08006** 08B05
- Taylor, William E. Small sample considerations in estimation from panel data. *J. Econometrics* 13 (1980), no. 2, 203-223. (D. E. A. Giles) **81h:62188** 62P20
- Tazawa, Shinsuke Claw-decomposition and evenly-partite-claw-decomposition of complete multipartite graphs. *Hiroshima Math. J.* 9 (1979), no. 2, 503-531. (Charlotte Huang) **81h:05100** 05C99 (68B15)
- (with Yamamoto, Sumiyasu) Combinatorial aspects of balanced file organization schemes. *J. Inform. Process.* 2 (1979/80), no. 3, 127-133. (Authors' summary) **81h:68025** 68B15
- Tazbir, József Wojciech Tytkowski—the ridiculed encyclopedist. (Polish. Russian and German summaries) *Kwart. Hist. Nauk. Tech.* 23 (1978), no. 1, 83-100. (Author's summary) **81m:01019** 01A45
- Tazzi Cantalupi, Gabriella On the traceability of finite graphs on compact surfaces. (Italian. English summary) *Rend. Sem. Mat. Fis. Milano* 48 (1978), 87-103 (1980). (Riccardo Benedetti) **81f:05073** 05C10 (57M15)
- Tchakerian, K. B. See Čukerjan, K. B.
- Tchakerian, Keropé B. See Čuk'ran, Keropé
- Tchen, Chan Mou Fermeture par relaxation d'un modèle cinétique de plasma en turbulence forte. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 286 (1978), no. 13, A605-A607. (Author's summary) **81e:76091** 76X05 (82A45)
- Tcheremissine, F. G. See Čeremisin, F. G.
- Tchou, Krzysztof (with Jacak, Witold) On two ways of state space constructing for general dynamical systems. (Russian summary) *Systems Sci.* 5 (1979), no. 3, 251-264 (1980). (Authors' summary) **81e:93009** 93A10
- Tchuente, M. (with Naddaf, D.; Sbihi, Najiba) Independence systems with continuous cardinality of bases. *Discrete Math.* 31 (1980), no. 1, 107-109. (J. E. Graver) **81g:05008** 05B35 (05C99)
- Teague, Michael Reed Image analysis via the general theory of moments. *J. Opt. Soc. Amer.* 70 (1980), no. 8, 920-930. (Author's summary) **81f:78002** 78A10 (68G10, 94A05)
- Teaney, Dale T. (with Moruzzi, Victor L.; Mintzer, Frederick C.) The tempered Fourier transform. *J. Acoust. Soc. Amer.* 67 (1980), no. 6, 2063-2067. (Authors' summary) **81c:44010** 44A15 (42A38)
- Tebaldi, Claudio (with Franceschini, Valter) Sequences of infinite bifurcations and turbulence in a five-mode truncation of the Navier-Stokes equations. *J. Statist. Phys.* 21 (1979), no. 6, 707-726. (L. A. Bunimovich) **81e:35018** 35B32 (58F13, 58F14, 76D05)
- Teboulle, Marc (with Ben-Tal, Aharon; Zowe, Jochen) Second order necessary optimality conditions for semi-infinite programming problems. *Semi-infinite programming (Proc. Workshop, Bad Honnef, 1978)*, pp. 17-30, *Lecture Notes in Control and Information Sci.*, 15, Springer, Berlin, 1979. (V. F. Dem'janov) **81c:90072** 90C30 (26B05)
- Těbýřec, E. I. Prime torsion and the spectrum of Āring. (Russian) Algebraic structures. *Mat. Issled.* No. 56 (1980), 132-137, 162. (Petr Němec) **81i:16039** 16A63
- Tecklenburg, Helga (with Misfeld, Jürgen) Dimension of nearaffine spaces. *Geometry and differential geometry (Proc. Conf., Univ. Haifa, Haifa, 1979)*, pp. 97-109, *Lecture Notes in Math.*, 792, Springer, Berlin, 1980. (J. André) **81m:51013** 51D15 (51B99)
- Tedeschi, Giulio On homotopy by interrupted paths. (Italian. English summary) *Rend. Sem. Mat. Univ. Politec. Torino* 36 (1977/78), 271-278 (1979). (Mario Pezzana) **81e:55019** 55P99
- Tee, Garry J. H. G. Wells and statistics. *Historia Math.* 6 (1979), no. 4, 447-448. (J. I. Good) **81d:01019** 01A60
- Letter. *Math. Intelligencer* 2 (1979/80), no. 2, 65. (Editors) **81m:01020** 01A45
- Teteller, S. C. Second order differential systems with nonseparated boundary conditions. *Math. Nachr.* 82 (1978), 181-189. (G. J. Eigen) **81a:34018** 34B05
- Nonhomogeneous second order differential systems with integral boundary conditions. *SIAM J. Math. Anal.* 9 (1978), no. 4, 583-590. (G. J. Eigen) **81a:34019** 34B05
- Existence of eigenvalues for second-order differential systems. *Pacific J. Math.* 96 (1980), no. 2, 601-610. (Harold E. Benzing) **81j:34025** 34B05 (34C20)
- Teghem, J., Jr. On uniform hysteretic policies in a queueing system with variable service rates. *Cahiers Centre Études Rech. Opér.* 21 (1979), no. 2, 121-125. (Micha Yadin) **81b:60103** 60K25 (90B22)
- Tegze, Miron Dyck language D_2 is not absolutely parallel. *Mathematical foundations of computer science, 1979 (Proc. Eighth Sympos., Olomouc, 1979)*, pp. 434-442, *Lecture Notes in Comput. Sci.*, 74, Springer, Berlin, 1979. (Author's introduction) **81e:68096** 68F05
- Teh, H. H. (with Shee, S. C.) Colour graphs and inverse semigroups. *Southeast Asian Bull. Math.* 3 (1979), no. 2, 254-269. (J. Dénes) **81f:05096** 05C25 (20B25)
- Telch, Malvin Carl (with Prucnal, Paul R.) An increment threshold law for stimuli of arbitrary statistics. *J. Math. Psych.* 21 (1980), no. 2, 168-177. (Authors' summary) **81d:94020** 94A34 (92A27)
- Teicher, Henry (with Fernholz, Luisa Turrian) Stability of random variables and iterated logarithm laws for martingales and quadratic forms. *Ann. Probab.* 8 (1980), no. 4, 765-774. (David J. Scott) **81j:60037** 60F15 (60G50)
- Teichmann, Jiri Stochastic stability of MHD equilibria. *Phys. Lett. A* 72 (1979), no. 2, 117-119. (Author's summary) **81j:76039** 76E25 (76W05, 82A45)
- (with Tasso, H.) On the generalization of the Cole-Hopf transformation. (German summary) *Z. Angew. Math. Phys.* 30 (1979), no. 6, 1023-1025. (Jifi Nedoma) **81e:35013** 35A30 (35Q20)
- (with Tasso, H.) A stability theorem for systems with discrete parameters and arbitrary circulatory forces. (German summary) *Z. Angew. Math. Phys.* 30 (1979), no. 6, 1027-1029. (O. Gürel) **81i:70011** 70J25 (93D05)
- Teirlinck, Luc On projective and affine hyperplanes. *J. Combin. Theory Ser. A* 28 (1980), no. 3, 290-306. (W. M. Kantor) **81j:05038** 05B25
- Teissier, B. See Zariski, Oscar. **81f:01049**
- daguenet-Teissier, Maryvonne See Daguenet-Teissier, Maryvonne
- Teixeira, A. F. da F. Motions in the relativistic fields of charged dust. (Italian and Russian summaries) *Nuovo Cimento B* (11) 55 (1980), no. 2, 276-282. (Author's summary) **81e:83012** 83C10
- Teixeira, J. (with Stanley, H. Eugene) Interpretation of the unusual behavior of H_2O and D_2O at low temperatures: tests of a percolation model. *J. Chem. Phys.* 73 (1980), no. 7, 3404-3422. (From the summary) **81m:82034** 82A50 (82A42)
- Teixeira, Marco Antonio On local first order structural stability of pairing of vector fields and functions. *Czechoslovak Math. J.* 30 (1985) (1980), no. 2, 228-249. (Michal Kryš) **81k:58052** 58F14
- Tejumola, H. O. On a Liénard type matrix differential equation. *VII. Internationale Konferenz über Nichtlineare Schwingungen (Berlin, 1975), Band I, Teil 2*, pp. 329-346, Abh. Akad. Wiss. DDR, Abt. Math. Naturwiss. Tech., 1977, 4, Akademie-Verlag, Berlin, 1977. (From the introduction) **81f:34050** 34C25 (34D05)
- Tekumalla, A. R. Unitary diagonalisation of a class of matrices. *Proceedings of the Conference on Mathematical Methods in Physics (Mysore, 1978), Part A*, pp. 247-253.

- Matscience Rep., 96, Inst. Math. Sci., Madras, 1979. (R. Pizak) **81f:81026** 81C99 (15A90)
- Telet, Peter Sequenzen und strukturierte Zeichenreihen. *Z. Math. Logik Grundlag. Math.* 25 (1979), no. 6, 531-548. (G. Asser) **81j:83081** 03E30 (68F05)
- Telega, J. J. Variational principles for rate boundary value problems in nonassociated plasticity. (German and Russian summaries) *Z. Angew. Math. Mech.* 60 (1980), no. 2, 71-82. (Petr Procházka) **81j:73037** 73E05 (49H05)
- Telega, László (with Tusnady, Gábor; Czeizel, Endre) On the genetic laws of congenital malformations. (Hungarian. English summary) *Alkalmaz. Mat. Lapok* 4 (1978), no. 1-2, 1-25 (1979). (Authors' summary) **81b:92006** 92A10 (62P10)
- Telesman, Nicolae Combinatorial Hodge theory and signature theorem. *Geometry of the Laplace operator (Proc. Sympos. Pure Math., Univ. Hawaii, Honolulu, Hawaii, 1979)*, pp. 287-292. *Proc. Sympos. Pure Math., XXXVI, Amer. Math. Soc., Providence, R.I., 1980* (József Dodziuk) **81e:58005** 58A14 (57Q99, 58G05)
- Combinatorial Hodge theory and signature operator. *Invent. Math.* 61 (1980), no. 3, 227-249. (József Dodziuk) **81m:58005** 58A14 (57Q99, 57R20, 58G10)
- Telesman, Silvia See Strătilă, Șerban; et al. **81j:46009**
- Telesin, V. R. Optimization of transient distortions. (Russian) *Dokl. Akad. Nauk SSSR* 253 (1980), no. 5, 1055-1059. (Erich Miersemann) **81k:49011** 49B10 (90C50)
- Teĭskiy, Ratislav Topological games and measures. *Proceedings of the Conference on Topology and Measure, I (Zinnowitz, 1974)*, Part 2, pp. 333-342. *Ernst-Moritz-Arndt Univ., Greifswald, 1978*. (Y. I. Kannai) **81b:90191** 90D26 (28C15, 54H99)
- Tell, M. T. Quaternionic form of unified Lorentz transformations. *Phys. Lett. A* 75 (1979/80), no. 6, 460-462. (Helmut K. Urbantke) **81m:83006** 83A05 (22E43, 51B20)
- Teĭskiy, S. A. ★Сборник задач по теории функций действительного переменного. (Russian) [A collection of problems in the theory of functions of a real variable] "Nauka", Moscow, 1980. 112 pp. (From the publisher's annotation) **81j:28002** 28-01 (00A07, 26-01)
- Teĭskiy, O. V. (with Pergament, A. H.) The regularization method and the maximum likelihood method in solution of integral equations of the first kind. (Russian) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 111* (1979), 21 pp. (V. V. Vasin) **81k:65150** 65R20 (45L10)
- Teller, Edward Memoir. *Einstein*, p. 24. *Harvard Univ. Press, Cambridge, Mass., 1979*. (See **81k:01053**) 01A70
- Teller-Arenas, A. (with Fronteau, Jean) A time-dependent Schrödinger equation deduced from time evolution in a subquantum model. (Italian and Russian summaries) *Nuovo Cimento B* (11) 44 (1978), no. 1, 39-46. (Iraj Hormozdiani) **81g:81043** 81D99 (28A25)
- (with Fronteau, Jean; Santilli, Ruggero Maria) Lie-admissible structure of statistical mechanics. *Proceedings of the Second Workshop on Lie-Admissible Formulations (Sci. Center, Harvard Univ., Cambridge, Mass., 1979)*, Part B. *Hadronic J.* 3 (1979/80), no. 1, 130-176. (D. A. Dubin) **81e:82005** 82A05 (17A30)
- (with Fronteau, Jean; Santilli, Ruggero Maria) Closed systems with nonconservative internal forces. *Proceedings of the Second Workshop on Lie-Admissible Formulations (Sci. Center, Harvard Univ., Cambridge, Mass., 1979)*, Part B. *Hadronic J.* 3 (1979/80), no. 1, 177-195. (John McEwan) **81g:81099** 81G05
- (with Grmela, Miroslav; Fronteau, Jean) Inverse Liouville problem. *Hadronic J.* 3 (1979/80), no. 4, 1209-1241. (Carlo Cercignani) **81h:82027** 82A35 (35Q20, 58F05)
- Telieps, John (with Ohring, Samuel) The direct matrix imbedding technique for computing three-dimensional potential flow about arbitrarily shaped bodies. *Comput. Methods Appl. Mech. Engrg.* 21 (1980), no. 3, 315-336. (Authors' summary) **81b:76013** 76B20 (65N05)
- Teman, Roger (with Ekeland, Ivar) ★Выпуклый анализ и вариационные проблемы. (Russian) (Convex analysis and variational problems) Translated from the English by V. M. Timonov. "Mir", Moscow, 1979. 399 pp. (Editors) **81b:49002** 49-02 (46G05, 90C25)
- Numerical problems in plasma physics. *Numerical methods for partial differential equations (Proc. Adv. Sem., Math. Res. Center, Univ. Wisconsin, Madison, Wis., 1978)*, pp. 307-327. *Publ. Math. Res. Center Univ. Wisconsin, 42, Academic Press, New York, 1979*. (Magdi M. Shourci) **81a:82036** 82A45 (65N25)
- (with Foias, Ciprian) Some analytic and geometric properties of the solutions of the evolution Navier-Stokes equations. *J. Math. Pures Appl.* (9) 58 (1979), no. 3, 339-368. (A. A. Arsen'ev) **81k:35130** 35Q10 (58F12, 76D05)
- Mathematical problems in plasticity. *Computational methods in nonlinear mechanics (Proc. Second Internat. Conf., Univ. Texas, Austin, Tex., 1979)*, pp. 475-483. *North-Holland, Amsterdam, 1980*. (From the introduction) **81m:73038** 73E99 (73E20)
- Mathematical problems in plasticity theory. *Variational inequalities and complementarity problems (Proc. Internat. School, Erice, 1978)*, pp. 357-373. *Wiley, Chichester, 1980*. (Michel Chipot) **81k:49009** 49A55 (49A27, 73E99)
- Teĭchenko, M. E. (with Ilinskii, A. Ju.; Malaĭchenko, S. V.; Storozhenko, V. O.; Šilkin, P. G.) Method of balancing rotating bodies on a string drive. *Izv. Akad. Nauk SSSR Meh. Tverd. Tela* 14 (1979), no. 5, 3-18. (Russian); translated as *Mech. Solids* 14 (1979), no. 5, 1-14. (Authors' summary) **81d:70006** 70E99
- (with Ilinskii, A. Ju.; Storozhenko, V. O.) Motion of an axisymmetric solid suspended on a string. *Izv. Akad. Nauk SSSR Meh. Tverd. Tela* 14 (1979), no. 6, 3-16. (Russian); translated as *Mech. Solids* 14 (1979), no. 6, 1-12. (Authors' summary) **81d:70007** 70E15
- Teĭchenko, A. N. Lanczos-transformed Einstein equations. (Russian) *Izv. Vysš. Učebn. Zaved. Fizika* 1980, no. 8, 67-69. (Author's summary) **81k:83011** 83C05
- Teĭshbulator, S. I. The mixed problem for the wave equation. (Russian) *Differentsial'nye Uravneniya* 16 (1980), no. 3, 532-536, 575. (M. A. Atabodžev) **81e:35073** 35L05
- Teĭshbulator, N. Embedding in some Lorentz spaces. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1980, no. 6, 83-85. (A. J. Lazar) **81j:46043** 46E30 (42B30)
- Temlov, Č. A local limit theorem for a queueing system. (Russian) *Izv. Akad. Nauk UzSSR Ser. Fiz.-Mat. Nauk* 1979, no. 5, 18-24, 79. (W. Szczęotka) **81j:60112** 60K25
- Temkin, L. A. Transient heating of inhomogeneous bodies. (Russian) *Studies in the theory of operators and their applications (Russian)*, pp. 107-123, 178. "Naukova Dumka", Kiev, 1979. (Author's summary) **81e:80017** 80A20
- On the construction of periodic solutions of an equation of parabolic type. (Russian. Estonian and English summaries) *Eesti NSV Tead. Akad. Toimetised Füüs.-Mat.* 29 (1980), no. 3, 261-271. (B. P. Tkáč) **81m:35016** 35B10 (35K20)
- Temljakov, V. N. On the question of the asymptotic behavior of the best approximations of continuous functions. (Russian) *Mat. Sb. (N.S.)* 110(152) (1979), no. 3, 399-413, 471. (B. Sendov) **81e:42006** 42A10 (41A50)
- Approximation of periodic functions of several variables with bounded mixed difference. (Russian) *Dokl. Akad. Nauk SSSR* 253 (1980), no. 3, 544-548. (M. Tomić) **81j:42030** 42B05 (41A25)
- Tempehman, A. A. Specific characteristics and a variational principle for homogeneous random fields. (Russian) *Dokl. Akad. Nauk SSSR* 254 (1980), no. 2, 297-302. (J. Fritz) **81m:60091** 60G60 (60K35, 82A05)
- Tempehman, H. Die Bestimmung des optimalen Standorts eines Auslieferungslagers bei entfernungsabhängiger Nachfrage und nichtlinearen Transportkosten. (English summary) *Z. Oper. Res. Ser. A-B* 24 (1979), no. 6, B167-B187. (Author's summary) **81k:90032** 90B05
- Temperley, H. N. V. Graph theory and continuum statistical mechanics. *Applications of graph theory*, pp. 121-148. *Academic Press, London, 1979*. (See **81h:05050**) 82A67 (05C99)
- Lattice models in discrete statistical mechanics. *Applications of graph theory*, pp. 149-175. *Academic Press, London, 1979*. (See **81h:05050**) 82A67 (05C99)
- Temperton, Clive On the FACR(I) algorithm for the discrete Poisson equation. *J. Comput. Phys.* 34 (1980), no. 3, 314-329. (Author's summary) **81a:65112** 65N99
- Templeton, Alan R. (with Rothman, Edward D.) Evolution and fine-grained environmental runs. *Foundations and applications of decision theory (Papers, Internat. Workshop, Univ. Western Ontario, London, Ont., 1975)*, Vol. II, pp. 131-183. *Univ. Western Ontario Series in Philos. Sci., 13, Reidel, Dordrecht, 1978*. (Susan Wilson) **81g:92022** 92A17 (90A05)
- A frequency dependent model of brood selection. *Amer. Natur.* 114 (1979), no. 4, 515-524. (Author's summary) **81k:92042** 92A10
- Templeton, James G. C. (with Hoq, A. K. M. Sirajul; Ali, Mir M.) Distribution of Student's ratio based on half-Gaussian population. *Transactions of the Eighth Prague Conference on Information Theory, Statistical Decision Functions, Random Processes (Prague, 1978)*, Vol. A, pp. 293-303. *Reidel, Dordrecht, 1978*. (M. M. Siddiqui) **81e:62014** 62E15
- (with Chaudhry, M. L.) The queueing system $M/G^k/1$ and its ramifications. *European J. Oper. Res.* 6 (1981), no. 1, 56-60. (U. Narayan Bhat) **81m:60164** 60K25
- Ten, V. D. (with Krasnov, Ja. A.) Roots of polynomials with real coefficients. (Russian. Kazakh summary) *Izv. Akad. Nauk Kazah. SSR Ser. Fiz.-Mat.* 1980, no. 1, 83-84, 94. (Z. Rubinstein) **81c:30015** 30C15
- Tena Ayuso, Juan G. Rational subgroups over elliptic curves. (Spanish) *Proceedings of the First Spanish-Portuguese Mathematical Conference (Madrid, 1973)* (Spanish), pp. 386-388. *Consejo Sup. Inv. Cient., Madrid, 1977*. (Editors) **81m:14021** 14G25 (10D12)
- Ten Berge, Jos M. F. See ten Berge, Jos M. F.
- Tenenbaum, Gerald Lois de répartition des diviseurs. *Séminaire de Théorie des Nombres 1977-1978*, Exp. No. 9, 8 pp. *CNRS, Talence, 1978*. (Editors) **81h:10072** 10K20 (10L10)
- Sur le procédé de sommation de Borel et la répartition du nombre des facteurs premiers des entiers. *Séminaire de Théorie des Nombres, 1978-1979*, Exp. No. 23, 21 pp. *CNRS, Talence, 1979*. (Kenneth A. Jukes) **81g:10058** 10H15
- (with Desbouillers, Jean-Marc; Dress, François) Lois de répartition des diviseurs. I. *Acta Arith.* 34, no. 4, 273-285 (loose errata) (1979). (J. W. Porter) **81d:10043** 10K20 (10H25)
- Tenenblat, Ketl A rigidity theorem for three-dimensional submanifolds in Euclidean six-space. *J. Differential Geom.* 14 (1979), no. 2, 187-203. (V. T. Fomenko) **81m:53007** 53A07 (53C45)
- On infinitesimal isometric deformations. *Proc. Amer. Math. Soc.* 75 (1979), no. 2, 269-275. (H. Jacobowitz) **81a:53028** 53B25
- Teneva, St. G. (with Todorinov, S. A.) Lattice-ordered rings. *Publ. Math. Debrecen* 26 (1979), no. 1-2, 51-53. (From the text) **81d:06032** 06F25
- Teng, Ching Hwa (with Pu, Hui Min; Pu, Huan Wen) Symmetric and approximate symmetric derivatives for symmetric functions. *Soochow J. Math.* 5 (1979), 1-7. (William Eames) **81b:26004** 26A24
- Teng, T. H. (with Pu, Huan Wen; Pu, Hui Min) Conditions for the uniform continuity of a real function. *Rev. Roumaine Math. Pures Appl.* 25 (1980), no. 3, 441-444. (F. Brooks) **81e:26001** 26A15
- Ten Hagen, Paul J. W. See ten Hagen, Paul J. W.
- Ten Men Jan Block method for solving two-dimensional Volterra integral equations of the first kind. (Russian) *Differentsial'nye Uravneniya* 15 (1979), no. 6, 1121-1126, 1151. (R. S. Andersson) **81e:45021** 45L05 (45D05, 65R20)
- Tennant, Neil ★Natural logic. With loose corrigenda. *Edinburgh University Press, Edinburgh, 1978*. ix+196 pp. ISBN 0-85224-347-2 (Robert P. McArthur) **81i:03004** 03-01
- Language games and intuitionism. *Philosophical logic. Synthese* 42 (1979), no. 2, 297-314. (David W. Miller) **81b:03006** 03A05 (03B20)
- A proof-theoretic approach to entailment. *J. Philos. Logic* 9 (1980), no. 2, 185-209. (Editors) **81j:03035** 03B45 (03F05)
- Tennardi, C. (with Bondi, P.; Fergola, P.; Gambardella, L.) Stability in guaranteed cost control problems of large-scale systems with uncertain unbounded parameters. *Simulation of systems '79 (Proc. Ninth IMACS Congress, Sorrento, 1979)*, pp. 73-78. *North-Holland, Amsterdam, 1980*. (Authors' summary) **81m:49044** 49E20 (93A10)
- Tennyson, Stephen A. (with King, Albert I.) Mathematical models of the spine. *Proceedings of the First International Conference on Mathematical Modeling (St. Louis, Mo., 1977)*, Vol. II, pp. 977-985. *Univ. Missouri-Rolla, Rolla, Mo., 1977*. (See **81i:98005**) 92A07
- Teo, K. L. (with Ahmed, Nasiruddin) On the optimal controls of a class of systems governed by second order parabolic partial delay-differential equations with first boundary conditions. *Ann. Mat. Pura Appl.* (4) 122 (1979), 61-82. (I. Randvee) **81e:49004** 49A22

- Existence of optimal controls for systems governed by second order linear parabolic partial delay-differential equations with first boundary conditions. *J. Austral. Math. Soc. Ser. B* 21 (1979/80), no. 1, 21-36. (H. S. P. Grasser) **81d:49005** 49A22
- (with Craven, B. D.) On a computational algorithm for time-lag optimal control problems with restricted phase coordinates. *J. Austral. Math. Soc. Ser. B* 21 (1979/80), no. 4, 385-397. (C. A. Botsaris) **81f:49031** 49D07 (90B05)
- (with Moore, E. J.) Computational methods for a class of time-delayed optimal control problems. *Nanta Math.* 12 (1979), no. 2, 203-221. (J. E. Rubio) **81f:49032** 49D20 (93C15)
- Existence and uniqueness of solutions of system governed by second-order quasilinear integro-partial differential equations of parabolic type. *Aequationes Math.* 20 (1980), no. 2-3, 133-148. (A. Borzjowski) **81j:35066** 35K60 (35D05, 45K05)
- (with Nababan, S.) Existence and uniqueness of weak solutions of the Cauchy problem for parabolic delay-differential equations. *Bull. Austral. Math. Soc.* 21 (1980), no. 1, 65-80. (Curtis C. Travis) **81f:35111** 35R10 (35K35)
- (with Nababan, S.) On the existence of optimal controls of the first boundary value problems for parabolic partial delay-differential equations in divergence form. *J. Math. Soc. Japan* 32 (1980), no. 2, 343-362. (V. L. Bakke) **81d:49004** 49A22 (35K20, 35R10)
- Teodorescu, Ion D.** Founders of Romanian mathematical education. (Romanian) *Gaz. Mat. (Bucharest)* 85 (1980), no. 4, 145-146. (Editors) **81f:01018** 01A55
- Teodorescu, Nicolae** Basic notions of a mathematical system theory. *Proceedings of the International Symposium on Applications of Mathematics in System Theory (Univ. Braşov, Braşov, 1978)*, I, pp. 3-15. Univ. Braşov, Braşov, 1979. (See **81j:93006a**) 93A05
- Gheorghe Vrăncanu. *Bull. Math. Soc. Sci. Math. R. S. Roumanie (N.S.)* 24(72) (1980), no. 1, 3-4. (Editors) **81k:01050** 01A70
- Teodorescu, P. P.** Sur quelques problèmes bidimensionnels de la théorie de l'élasticité. *Rev. Roumaine Sci. Tech. Sér. Méc. Appl.* 25 (1980), no. 3, 401-420. (Author's summary) **81k:73010** 73C02
- Teodorescu, Radu I.** (with Dan, Ştefan) Sur le commutant d'une contraction $T \in C_0 \cup C_0'$. *Proceedings of the International Symposium on Applications of Mathematics in System Theory (Univ. Braşov, Braşov, 1978)*, II, pp. 329-332. Univ. Braşov, Braşov, 1979. (R. G. Douglas) **81m:47019** 47A45 (47D25)
- Teolis, Antonio G. B.** (with Casadei, Giorgio; Righi, Roberto) An algebraic theory for the "guarded commands" of Dijkstra. (Italian) *Rend. Sem. Mat. Univ. Padova* 59 (1978), 269-283 (1979). (From the introduction) **81d:68040** 68B05
- Teplý, Mark L.** (with Miller, Robert W.) On flatness relative to a torsion theory. *Comm. Algebra* 6 (1978), no. 10, 1037-1071. (K. M. Rangaswamy) **81a:16016** 16A50 (18E40)
- (with Miller, Robert W.) The descending chain condition relative to a torsion theory. *Pacific J. Math.* 83 (1979), no. 1, 207-219. (Jonathan Golan) **81b:16019** 16A63 (16A08)
- Semiprime semigroup rings and a problem of J. Weissglass. *Glasgow Math. J.* 21 (1980), no. 2, 131-134. (Robert Gilmer) **81j:20096** 20M25 (16A45)
- (with Turman, E. Geis; Quesada, Antonio) On semiprime semigroup rings. *Proc. Amer. Math. Soc.* 79 (1980), no. 2, 157-163. (J. K. Luedeman) **81f:20094** 20M25 (16A12)
- Teplý, M. I.** Determination of the stress in a circular ring compressed by two presses. *Prikl. Meh.* 16 (1980), no. 3, 75-80, 142 (Russian); translated as *Soviet Appl. Mech.* 16 (1980), no. 3, 234-239. (From the text) **81m:73079** 73T05
- Teppell, Giancarlo** (with Scaravelli, Corrado) A result concerning a class of ladder operators. (Italian summary) *Rend. Istit. Mat. Univ. Trieste* 9 (1977), no. 1-2, 134-140 (1978). (M. Cotlar) **81b:47040** 47B37 (81D05)
- Tepper, David E.** (with Poreda, S. J.) Approximation to linear functionals on H^1 by point evaluations. *Numer. Funct. Anal. Optim.* 1 (1979), no. 3, 273-280. (Charles K. Chui) **81e:41051** 41A65 (30D55)
- (with Wildenberg, Gerald) Some infinite free boundary problems. *Trans. Amer. Math. Soc.* 240 (1979), no. 1, 135-144. (Tadashi Murazawa) **81c:31005** 31A25
- Ternada, Toshiji** A note on first countable compactifications. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math.* 27 (1979), no. 5, 369-371. (Melvin Henriksen) **81c:54040** 54D35
- On spaces whose Stone-Čech compactification is Oz. *Pacific J. Math.* 85 (1979), no. 1, 231-237. (A. I. Bakikrov) **81g:54021** 54D35 (54C45)
- On remote points in $wX - X$. *Proc. Amer. Math. Soc.* 77 (1979), no. 2, 264-266. (Stephen Willard) **81b:54026** 54D60 (54D40)
- Terakado, Ryutii** (with Kobayashi, Masanori) New view on an anisotropic medium and its application to transformation from anisotropic to isotropic problems. *IEEE Trans. Microwave Theory Tech.* 27 (1979), no. 9, 769-775. (G. S. Agarwal) **81g:78014** 78A30
- Terao, Yutaka** (with Kera, Kazuo; Kitsunozaki, Naoki) Countable-codimensional subspaces of topological vector spaces. *TRU Math.* 15 (1979), no. 2, 47-50. (N. T. Peck) **81e:46002** 46A07 (46A09)
- Ternak, Yoshinobu** A single-bullet duel with uncertain information available to the duelists. *Bull. Math. Statist.* 18 (1978/79), no. 3-4, 69-83. (R. L. Kashyap) **81j:93053** 93E05 (90D15)
- A two-person game of timing with random arrival time of the object. *Math. Japon.* 24 (1979/80), no. 4, 427-438. (Kare M. Mjelde) **81a:90164** 90D05
- Ternak, Haruo** (with Kanoh, Hideaki; Marubuchi, Masami) Approximate dynamic analysis of crossflow heat exchanger by the method of weighted residuals. *Bull. JSME* 23 (1980), no. 177, 432-438. (Authors' summary) **81b:80005** 80A20
- Ter Berg, Peter** See **ter Berg, Peter**
- Terceiro Lomba, Jaime** Applications of the Kalman filter in economics. (Spanish. English summary) *Estadist. Española* No. 80-81 (1978), 25-38. (G. Tintner) **81c:62200** 62P20
- Terehko, I. I.** (with Zoril, L. M.) Application of the method of characteristic series to qualitative investigation of the dynamics of elastic pipelines. (Russian) *Mat. Metody i Fiz.-Meh. Polja* No. 11 (1980), 115-117, 124. (Authors' summary) **81g:73094** 73K99
- Teregov, I. G.** (with Sirazetdinov, F. G.) A geometrically nonlinear problem of the dynamics of a plastic shallow spherical shell. (Russian) *Dinamika Splošn. Sredy* No. 41 Meh. Deformir. Tverd. Tela (1979), 105-111, 134. (N. Cristescu) **81h:73046** 73L15 (73D05, 73E05)
- Terehin, A. P.** A multiparameter semigroup of operators, mixed moduli and partial approximations. (Russian) *The theory of the approximation of functions (Proc. Internat. Conf., Kahga, 1975) (Russian)*, pp. 351-356. "Nauka", Moscow, 1977. (Editors) **81b:41091** 41A65 (47D05)
- Estimation of a multiple integral by integrals of lower multiplicity. (Russian) *Mat. Zametki* 25 (1979), no. 3, 379-392, 476. (M. F. Timan) **81h:41035** 41A55 (28B15, 65D30)
- A mixed q -integral p -variation, and theorems of equivalence and imbedding of classes of functions with a mixed modulus of smoothness. (Russian) *Studies in the theory of differentiable functions of several variables and its applications, VII. Trudy Mat. Inst. Steklov.* 150 (1979), 306-319, 324. (Pavel Doktor) **81f:46050** 46E35 (26A45)
- Terehin, M. T.** The existence, uniqueness and continuous dependence of solutions of a system of differential equations with retarded argument. (Russian) *Differentsial'nye Uravneniya (Ryazan)* No. 13 (1979), 130-141. (K. Smítalová) **81h:34076** 34K05
- Teren'tev, M. V.** (with Marinov, M. S.) Dynamics on the group manifold and path integral. *Fortschr. Phys.* 27 (1979), no. 11-12, 511-545. (J. S. Joel) **81c:81049** 81C35 (58D20, 58D30, 58G40)
- Terenzi, Paolo** Properties of structure and completeness, in a Banach space, of the sequences without an infinite minimal subsequence. (Italian summary) *Istit. Lombardo Accad. Sci. Lett. Rend. A* 112 (1978), no. 1, 47-66 (1979). (Ivan Singer) **81e:46014** 46B20 (46B15)
- Tereščenko, G. M.** Some properties of integrals of Temljakov type with unbounded complete bicircular determining domain. (Russian) *Mathematical analysis and the theory of functions, No. 8 (Russian)*, pp. 74-78. Mosk. Oblast. Ped. Inst., Moscow, 1977. (G. Lukankin (RZMat 1978:2 B147)) **81c:32009** 32A25
- Limit values of an analogue of an integral of Temljakov type of the first kind at the points of the circle of singularities. (Russian) *Mathematical analysis and the theory of functions, No. 8 (Russian)*, pp. 79-82. Mosk. Oblast. Ped. Inst., Moscow, 1977. (G. Lukankin (RZMat 1978:2 B146)) **81c:32010** 32A25
- Tereščenko, M. I.** (with Lerman, L. B.) Application of normal-regular solutions to problems of heat conduction. (Ukrainian. English and Russian summaries) *Vysok. Kib. Univ. Ser. Mat. Meh.* No. 20 (1978), 73-78, 165. (A. Borzjowski) **81c:35000** 35K20 (35K05)
- Tereščenko, V. Ja.** The Ritz process in the construction of approximate solutions of problems of the theory of elasticity by the generalized Trefftz method. (Russian) *Ž. Vychisl. Mat. i Mat. Fiz.* 20 (1980), no. 4, 1063-1066, 1088. (A. V. Deikariani) **81h:65117** 65N30 (73C99)
- Terešin, V. G.** (with Il'čaninov, V. P.) Integration of the equations of motion of a one-axis gyroscope on a rotating base. *Izv. Akad. Nauk SSSR Meh. Tverd. Tela* 15 (1980), no. 1, 48-50 (Russian); translated as *Mech. Solids* 15 (1980), no. 1, 42-44. (Authors' summary) **81g:70002** 70E05
- Ter Haar, D.** See **ter Haar, D.**
- Te Riele, H. J. J.** See **te Riele, H. J. J.**
- Terjaev, E. D.** (with Belonogov, V. D.; Nikolaev, Ju. A.; Šamrikov, B. M.) Estimation of aircraft parameters for design of adaptive digital control/ Identification and system parameter estimation (Proc. Fourth IFAC Sympos., Tbilisi, 1976), Part 2, pp. 927-940. North-Holland, Amsterdam, 1978. (See **80d:93010b**) 93E10
- Terjanian, Guy** L'équation $x^p - y^q = ax^2$ et le théorème de Fermat. *Séminaire de Théorie des Nombres 1977-1978, Exp. No. 29, 7 pp.*, CNRS, Talence, 1978. (E. L. Cohen) **81m:10027** 10B15
- Formes p -adiques anisotropes. *J. Reine Angew. Math.* 313 (1980), 217-220. (Carl Riehm) **81i:10028** 10C10 (10C20, 12B99)
- Terlecki, Ja. P.** (with Kassandrov, V. V.) Charged particles in the classical Maxwell-Dirac field model. (Russian) *Problems of quantum physics (Russian)*, pp. 39-51. Univ. Druliy Narodov im. Patrisa Lumumby, Moscow, 1977. (M. M. Skriganov) **81b:81038** 81L05 (81E99)
- (with Nguen Tang) On the statistical determination of nonequilibrium entropy. (Russian) *Dokl. Akad. Nauk SSSR* 255 (1980), no. 1, 83-85. (V. Protopopescu) **81m:82023** 82A35 (28D20)
- Terlecki, Ju. A.** (with Malyšev, V. A.) A limit theorem for noncommutative fields. (Russian. English summary) *Vestnik Moskov. Univ. Ser. I Mat. Meh.* 1978, no. 3, 47-51. (R. A. Minlos) **81d:60009** 60B99 (46I50, 81C20)
- Termini, Settimio** (with De Luca, Aldo) Entropy and energy measures of a fuzzy set. *Advances in fuzzy set theory and applications*, pp. 321-338. North-Holland, Amsterdam, 1979. (Aldo G. S. Ventre) **81c:94067** 94D05 (03E72, 94A17)
- Terog, Chuu Lian** Natural vector bundles and natural differential operators. *Amer. J. Math.* 100 (1978), no. 4, 775-828. (D. B. A. Epstein) **81c:58009** 58A99 (58R10)
- (with Chern, Shing Shen) An analogue of Bäcklund's theorem in affine geometry. *Rocky Mountain J. Math.* 10 (1980), no. 1, 105-124. (Ngô Van Quê) **81h:58004** 58A15 (35A30, 53A15)
- Ternau, Johannes** (with Schiebel, Wolfgang; Unger, Gerhard) Ein Beitrag zur Klassifizierung von Rundreiseproblemen. (English and Russian summaries) *Math. Operationsforsch. Statist. Ser. Optim.* 10 (1979), no. 4, 523-528. (Authors' summary) **81m:90079** 90C10
- krasňkov-Ternovskii, I. F.** See **Krasňkov-Ternovskii, I. F.**
- Terp, Marianne** (with Eymard, Pierre) La transformation de Fourier et son inverse sur le groupe des $ax + b$ d'un corps local. *Analyse harmonique sur les groupes de Lie (Sim. Nancy-Strasbourg, 1976-1978)*, II, pp. 207-248. *Lecture Notes in Math.* 739, Springer, Berlin, 1979. (L. Corwin) **81f:22027** 22E50 (22E27, 43A30)
- Terpe, F.** On a suitable notion of convergence for the space of matrix summations. *Measure theory, Oberwolfach 1979 (Proc. Conf., Oberwolfach, 1979)*, pp. 566-573. *Lecture Notes in Math.* 794, Springer, Berlin, 1980. (A. Császár) **81i:40005** 40C05 (28C15, 54A20)
- Terpugov, A. F.** (with Livšic, K. I.) Identification of hydrolocation objects. (Russian) *Proceedings of the Seventh All-Union School-Seminar on Statistical Hydroacoustics (L'vov, 1975) (Russian)*, pp. 266-270. Akad. Nauk SSSR Sibirsk. Otdel., Inst. Mat. Novosibirsk, 1977. (From the text) **81c:93006** 93E12
- Terrano, Anthony E.** A method for Feynman diagram evaluation. *Phys. Lett. B* 93 (1980), no. 4, 424-428. (Author's summary) **81c:81043** 81C30 (33A50)
- Terras, Audrey** Applications of special functions for the general linear group to number

- theory. *Séminaire Delange-Pisot-Poitou*, 18e année: 1976/77, *Théorie des nombres*, Fasc. 2, Exp. No. 23, 16 pp., *Secrétariat Math.*, Paris, 1977. (Editors) **81m:10060** 10D40
- The minima of quadratic forms and the behavior of Epstein and Dedekind zeta functions. *J. Number Theory* 12 (1980), no. 2, 258–272. (O. M. Fomenko) **81m:10043** 10C15 (10H10)
- Terra, Ribo** The determination of incomplete gamma functions through analytic integration. *J. Comput. Phys.* 31 (1979), no. 1, 146–151. (From the introduction) **81d:65010** 65D30 (33A10)
- Reliable evaluation of Gaussian integrals. *J. Comput. Phys.* 33 (1979), no. 3, 411–416. (C. Dagnino) **81g:65033** 65D30
- Terrell, George R.** (with Scott, David W.) On improving convergence rates for nonnegative kernel density estimators. *Ann. Statist.* 8 (1980), no. 5, 1160–1163. (Gilbert Walter) **81i:62009** 62G05
- Tersenov, S. A.** The first boundary value problem for an equation of nonclassical type. (Russian) *Dokl. Akad. Nauk SSSR* 250 (1980), no. 5, 1070–1074. (A. A. Novruzov) **81g:35092** 35M05
- Tertis, Gerhard** Fallunterscheidungen beim Klassifizieren. *Wiss. Z. Karl-Marx-Universität Leipzig Ges. Sprachwiss. Reihe* 28 (1979), no. 3, 275–281. (Jan Berg) **81m:03011** 03A05
- Tertych, V. Ju.** Adaptive C_0 -stability of a nonlinear dynamical control system. (Russian. English summary) *Vestnik Leningrad. Univ. Mat. Meh. Astronom.* 1980, *typ.* 2, 44–47, 124. (Author's summary) **81h:93051** 93C40 (93C10, 93D99)
- Terukhin, A. G.** (with Alvaizyan, S. N.) A structural model of material-financial balance. (Russian) *Ekonom. i Mat. Metody* 16 (1980), no. 2, 300–314. (From the introduction) **81f:90031** 90A17 (90A14)
- Terzner, E. D.** See Terzner, E. D.
- Terz, D. G.** Investigation of discrete programming algorithms. (Russian) Mathematical modeling of planning and control processes. *Mat. Issled.* No. 60 (1980), 153–160, 172. (Author's summary) **81i:90153** 90C10 (10B05)
- Terzija, T.** (with Ramanujan, M. S.) Compact and nuclear maps on power series spaces. *Math. Nachr.* 93 (1979), 159–164. (Manjul Gupta) **81h:46007** 46A45 (47B73)
- Tesslov, Zuzana** (with Dody, Ondřej) General uniqueness theorems for ordinary differential equations. *Arch. Math. (Brno)* 16 (1980), no. 4, 217–223. (V. Lakshmikantham) **81m:34002** 34A10
- Teschke, L.** (with Thron, R.) Eine Verallgemeinerung der Theorie der linearen Optimierung. (English and Russian summaries) *Math. Operationsforsch. Statist. Ser. Optim.* 10 (1979), no. 2, 207–212. (Authors' summary) **81a:90109** 90C05
- Tesell, Alberto** (with de Mottoni, Piero) On the solutions of a class of nonlinear Sturm-Liouville problems. *SIAM J. Math. Anal.* 9 (1978), no. 6, 1020–1029. (Authors' summary) **81h:34031** 34B25
- (with de Mottoni, Piero; Orlandi, E.) Asymptotic behavior for a system describing epidemics with migration and spatial spread of infection. *Nonlinear Anal.* 3 (1979), no. 5, 663–675. (From the introduction) **81a:92015** 92A15 (35K55)
- Approximation results for Volterra integro-partial differential equations. *Numerical treatment of integral equations (Workshop, Math. Res. Inst., Oberwolfach, 1979)*, pp. 213–227. *Internat. Ser. Numer. Math.*, 53, Birkhäuser, Basel, 1980. (J. M. Cushing) **81m:45017** 45K05 (35K99)
- Tetstetson, Leigh** A conditional expected utility model for myopic decision makers. *Theory and Decision* 12 (1980), no. 2, 185–206. (Author's summary) **81g:90019** 90A10 (90A05, 90A08)
- Tes, F.** (with Bellavia, G.; Laschi, R.) Parametric analysis of closed queueing networks using equivalent systems in simulation problems. *Simulation of systems '79 (Proc. Ninth IMACS Congress, Sorrento, 1979)*, pp. 95–104, North-Holland, Amsterdam, 1980. (Authors' summary) **81m:68032** 68C15 (68A05, 90B22)
- Tesima, Kiyomu** (with Nishijima, Kazuhiko; Okawa, Masanori) Anomalous dimensions of composite particles. *Progr. Theor. Phys.* 63 (1980), no. 3, 999–1015. (From the summary) **81g:81096** 81G05
- Tetshenko, L. S.** (with Mihalčin, G. O.) (C)-property of the (A, α) - and $A \times (C, \alpha)$ -methods of summation of series, and Tauberian type theorems. (Russian) *Teor. Funktsii Funktsional. Anal. i Prilozhen.* No. 31 (1979), 160–163, 169. (M. S. Rangachari) **81e:40006a** 40E05 (40E15)
- Tetta, F.** (with Seatzu, S.) Interpolation and one- and two-dimensional smoothing relative to linear differential operators. (Italian. English summary) *Calcolo* 14 (1977), no. 1, 1–23. (P. J. Laurent) **81f:41013** 41A15 (65D07, 65D10)
- Tetta, Stefano** Construction of a universe of maximal cyclicly monotone devices. (Italian) *Rend. Sem. Mat. Univ. Padova* 58 (1977), 101–116 (1978). (Ioan Tofan) **81a:18005** 18B99
- Tetser, V. A.** Structurally ordered quasigroups with two nontrivial supports. (Russian) *Semigroup varieties and semigroups of endomorphisms (Russian)*, pp. 143–148, Leningrad. Gos. Ped. Inst., Leningrad, 1979. (See **81b:20004**) 20N05 (06F99)
- Tetelbaum, A. Ja.** (with Šramčenko, B. L.) Application of hypergraphs in the study of planarity of electronic circuits. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* 1978, no. 5, 127–136, 222 (Russian); translated as *Engng. Cybernetics* 16 (1978), no. 5, 95–102. (A. N. Melikhov (Melihov)) **81e:94049** 94C15
- Tetelbaum, Ja. I.** (with Vahitov, G. G.; Maksimov, M. M.) A parallel microprocessor system design for simulation of multiphase flow problems. *Simulation of systems '79 (Proc. Ninth IMACS Congress, Sorrento, 1979)*, pp. 189–198, North-Holland, Amsterdam, 1980. (See **81g:68009**) 68C05 (65P05)
- Tetshner, M. D.** (with Noye, B. J.) Tidal and thermal propagation in a tidal estuary. *Numerical simulation of fluid motion (Proc. Internat. Conf. Numerical Simulation of Fluid Dynamic Systems, Monash Univ., Melbourne, 1976)*, pp. 383–405, North-Holland, Amsterdam, 1978. (See **81a:76005**) 76B15 (65P05, 86A05)
- (with Webber, B.; Rienecker, M. M.; Noye, B. J.) Comparison of some finite difference and analytical methods of solving tidal propagation equations. *Numerical simulation of fluid motion (Proc. Internat. Conf. Numerical Simulation of Fluid Dynamic Systems, Monash Univ., Melbourne, 1976)*, pp. 453–465, North-Holland, Amsterdam, 1978. (See **81a:76005**) 76B15 (65P05)
- Tetzel, Eberhard** Eine differentialtopologische Berechnung der totalen Krümmung und Totalen Absolutkrümmung in der sphärischen Differentialgeometrie. (English summary) *Manuscripta Math.* 31 (1980), no. 1–3, 119–147. (Wolfgang Kühnel and T. Banchoff) **81m:53065a** 53C42 (57R70)
- Anwendungen der differentialtopologischen Berechnung der totalen Krümmung und totalen Absolutkrümmung in der sphärischen Differentialgeometrie. (English summary) *Manuscripta Math.* 32 (1980), no. 3–4, 239–262. (Wolfgang Kühnel and T. Banchoff) **81m:53065b** 53C42 (57R70)
- Teugels, Josef L.** (with Chow, Te Lin) The sum and the maximum of i.i.d. random variables. *Proceedings of the Second Prague Symposium on Asymptotic Statistics (Hradec Králové, 1978)*, pp. 81–92, North-Holland, Amsterdam, 1979. (C. W. Anderson) **81f:60031** 60F05
- (with De Meyer, A.) On the asymptotic behaviour of the distributions of the busy period and service time in $M/G/1$. *J. Appl. Probab.* 17 (1980), no. 3, 802–813. (Anthony G. Pakes) **81f:60101** 60K25 (60E10)
- (with Bingham, Nicholas H.) Mercerian and Tauberian theorems for differences. *Math. Z.* 170 (1980), no. 3, 247–262. (William T. Sledd) **81c:40011** 40B05
- Teuhola, Jukka** (with Nevalainen, Olli) The efficiency of two indexed priority queue algorithms. *BIT* 18 (1978), no. 3, 320–333. (Authors' summary) **81i:68050** 68C15 (68J05)
- Teukolsky, Saul A.** (with Lightman, Alan P.; Press, William H.; Price, Richard H.) *★Сборник задач по теории относительности и гравитации. (Russian)* [Problem book in relativity and gravitation] Edited by I. M. Halatnikov. Translated from the English by A. P. Bondarev and Ju. A. Danilov. "Mir", Moscow, 1979. 536 pp. (Editors) **81f:83001** 83–01
- Tevalier, A. D.** (with Evdokimov, A. G.; Petrov, A. S.) A problem of bounding the states of a steady-state flow distribution in engineering networks. (Russian) *Axiomat. Sistemy Upravleniya i Prirody Axiomat.* No. 54 (1980), 66–73, iii. (From the text) **81k:90037** 90B15
- Tevy, Ismael** (with Calude, Cristian; Marcus, Solomon) Recursive properties of Sudan function. *Rev. Roumaine Math. Pures Appl.* 25 (1980), no. 4, 503–507. (Authors' summary) **81f:03053** 03D20 (01A60, 03–03)
- Tevzadze, G. D.** One-dimensional convergence to a constant of a function from a weight class. (Russian. Georgian and English summaries) *Sobrem. Akad. Nauk Gruzii. SSR* 91 (1978), no. 1, 37–40. (Ju. A. Abramovici) **81e:46038** 46E35
- Tevzadze, G. N.** (with Čogolvič, G. S.) A. I. Čaburani (on the occasion of his 70th birthday). (Russian) Collection of articles on geometry, II. With an English translation. *Trudy Tbilis. Mat. Inst. Razmadze Akad. Nauk Gruzii. SSR* 64 (1980), 5–11 (1 plate). (Editors) **81f:51038** 51A70
- Tewari, K.** (with Verma, S.) Compact rings and natural topology. *Bull. Calcutta Math. Soc.* 71 (1979), no. 2, 67–76. (S. Warner) **81k:16040** 16A80
- (with Wangne, C. L.) Right Noetherian rings integral over their centers. *Comm. Algebra* 7 (1979), no. 15, 1573–1598. (A. V. Jategaonkar) **81e:16012** 16A34 (16A46, 16A64)
- Tewarson, R. P.** A numerical method for solving two-point boundary value problems for nonlinear ordinary differential equations. *Internat. J. Numer. Methods Engrg.* 15 (1980), no. 3, 464–469. (Author's summary) **81a:65082** 65L10
- Teymour, M.** (with Oğuzörel, Mehmet Namık; Şuhubi, E. S.) An initial value problem in the theory of nonlinear wave propagation. *Nonlinear Anal.* 4 (1980), no. 4, 781–789. (Alan Jeffrey) **81g:35080** 35L67 (73B15)
- Tezka, A. M.** On the measures and orders of smallness of integral curves in a neighborhood of a singular point. (Russian) *Proceedings of a Seminar on Differential Equations*, No. 3 (Russian), pp. 103–115, 149, Kulbylov. Gos. Univ., Kuybyshev, 1977. (Author's summary) **81g:34033** 34C05
- Zero and infinite orders of smallness of integral curves determined by generalized first-order differential equations. (Russian) *Approximate methods for investigating differential equations and their applications*, No. 4 (Russian), pp. 90–102, 137, Kulbylov. Gos. Univ., Kuybyshev, 1978. (P. Brunovský) **81m:34035** 34C05
- Analogues of some theorems from mathematical analysis of discontinuous functions. (Russian) *Kulbylov. Gos. Ped. Inst. Naučn. Trudy* 226 (1978), *Funktsional. Anal. i Differentsial. Uravneniya*, 38–49. (Luděk Zajíček) **81i:26004** 26A24 (26B20)
- Method of rotation of an accompanying chord inside the evolve of a phase cylinder. (Russian) *Kulbylov. Gos. Ped. Inst. Naučn. Trudy* 226 (1978), *Funktsional. Anal. i Differentsial. Uravneniya*, 49–59. (P. Talpalaru) **81k:34033** 34C25
- (with Sadovnikov, E. G.) Limit cycles around intersecting closed lines of contact. (Russian) *Kulbylov. Gos. Ped. Inst. Naučn. Trudy* 226 (1978), *Funktsional. Anal. i Differentsial. Uravneniya*, 73–78. (A. Halanay) **81k:34022** 34C05
- Tezuka, Yoshikazu** (with Akamatsu, Akio; Kajitani, Koji) An organization of minimum searching domain file. *Systems Comput.-Controls* 9 (1978), no. 4, 17–24 (1980). (Authors' summary) **81i:68029** 68B15
- Thacker, Henry C., Jr.** New backward recurrences for Bessel functions. *Math. Comp.* 33 (1979), no. 146, 744–764. (R. G. Langebartel) **81b:65019** 65D20 (33A40)
- Thacker, H. B.** (with Creamer, Dennis B.; Wilkinson, David) Gel'fand-Levitan method for operator fields. *Phys. Rev. D* (3) 21 (1980), no. 6, 1523–1528. (Authors' summary) **81a:81004** 81F30 (35P25)
- Thacker, W. C.** A geodesic finite-difference method for curved domains: simulations of tidal motion on a sphere. *J. Comput. Phys.* 37 (1980), no. 3, 355–370. (Author's summary) **81h:86005** 86A05 (65M05, 86A10)
- Thal, V. N.** (with Kuničyn, A. L.; Medvedev, S. V.) The development of an algorithm and the compiling of a program for the computer solution of some resonance problems in the stability of dynamical systems. (Russian) *Problems of stability of motion, analytical mechanics and control of motion (Third All-Union Četvero Conf., Irkutsk, 1977)* (Russian), pp. 56–63, 321, "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. (Authors' summary) **81g:93090** 93D99
- Thakare, Nimbakrishna** (with Phadke, S. V.) Projection operators on uniformly convex semi-inner product spaces. *Indian J. Pure Appl. Math.* 7 (1976), no. 12, 1438–1447. (M. M. Day) **81d:47027** 47B50 (46B20)
- (with Khasbardar, Sunanda) Some counterexamples for quasilinear operators and related results. *Indian J. Pure Appl. Math.* 9 (1978), no. 12, 1263–1270. (Authors' summary) **81h:47024** 47B20
- (with Pethe, Prakash) Property (I) does not imply smoothness. *Indian J. Pure Appl. Math.* 11 (1980), no. 5, 562–564. (S. Swaminathan) **81f:46030** 46B99
- Note on: "Some formulas involving the products of several Jacobi or Laguerre

- polynomials" [Acad. Roy. Belg. Bull. Cl. Sci. (5) **58** (1972), 1238-1247; MR **47** #7085] by H. M. Srivastava and J. P. Singhal. *Indian J. Pure Appl. Math.* **11** (1980), no. 9, 1158-1161. (A. G. Law) **81k:33015** 33A65
- See also Brining, Jochen; et al. **81e:47064**
- Thakkar, M. V.** (with Meyer, R. R.; Hallman, W. P.) Rational mixed-integer and polyhedral union minimization models. *Math. Oper. Res.* **5** (1980), no. 1, 135-146. (M. Mafias) **81c:90061** 90C11
- Thakur, K. P.** (with Sharma, R. C.) Rayleigh-Taylor instability of a composite mixture through porous medium. *Acta Phys. Acad. Sci. Hungar.* **46** (1979), no. 4, 247-252. (D. A. Nield) **81e:76040** 76E25 (76S05)
- Thakur, Lakshman S.** Error analysis for convex separable programs: the piecewise linear approximation and the bounds on the optimal objective value. *SIAM J. Appl. Math.* **34** (1978), no. 4, 704-714. (Author's summary) **81e:90080** 90C25 (65K05)
- Error analysis for convex separable programs: bounds on optimal and dual optimal solutions. *J. Math. Anal. Appl.* **75** (1980), no. 2, 486-494. (G. D. Malstrovskii) **81k:90084** 90C25
- Thakur, P. J.** (with Prasad, S. N.) Two-dimensional universal motions of Navier-Stokes fluids. *Math. Ed. (Sivan)* **10**, no. 1, A1-A7. (P. D. S. Verma) **81j:76025** 76D05 (35Q10, 76C05)
- Thakur, S. N.** See Guha Thakurta, S. N.
- Thalheimer, W.** (with Constantinescu, Fl.) Ultradistributions and quantum fields: Fourier-Laplace transforms and boundary values of analytic functions. *Rep. Math. Phys.* **16** (1979), no. 2, 167-180. (Raymond Streater) **81j:81041** 81E10 (32A45, 46F05)
- Thall, Peter F.** Huber-sense robust M -estimation of a scale parameter, with application to the exponential distribution. *J. Amer. Statist. Assoc.* **74** (1979), no. 365, 147-152. (Rudolph J. Beran) **81e:62046** 62G05 (62F35)
- Thaller, B.** (with Gesztesy, F.; Plessner, W.) On the high-energy behaviour of scattering phase shifts for Coulomb-like potentials. *J. Phys. A* **13** (1980), no. 8, 2659-2671. (Marcel Coz) **81k:81083** 81F05 (35P25)
- Tham, Din Hai** See Din Hai Tham
- Thammet, Wolfgang** Zum Satz von Tucker in halbgeordneten Vektorräumen. (English and Russian summaries) *Wiss. Z. Tech. Hochsch. Leuna-Merseburg* **22** (1980), no. 1, 107-114. (G. J. O. Jameson) **81g:46012** 46A40 (90C25)
- Thandapani, E.** (with Agarwal, Ravi P.) On the uniqueness of solutions of hyperbolic delay differential equations. *Proceedings of the Conference on Mathematical Methods in Physics (Mysore, 1978), Part B*, pp. 22-30. *Matscience Rep.*, 96, Inst. Math. Sci., Madras, 1979. (R. R. Ahmerov) **81i:35154** 35R10 (35K05)
- (with Agarwal, Ravi P.) Existence and uniqueness of solutions of hyperbolic delay differential equations. *Math. Sem. Notes Kobe Univ.* **7** (1979), no. 3, 531-541. (L. E. Bobisud) **81b:35092** 35R10
- (with Agarwal, Ravi P.) On some new discrete inequalities. *Appl. Math. Comput.* **7** (1980), no. 3, 205-224. (B. G. Pachpatte) **81k:39004** 39A99
- (with Agarwal, Ravi P.) Asymptotic behaviour and oscillation of solutions of differential equations with deviating arguments. (Italian summary) *Boll. Un. Mat. Ital. B* (5) **17** (1980), no. 1, 82-93. (Ch. G. Philos) **81e:34059** 34K15
- Thangamani, J.** The radius of univalence of certain analytic functions. *Indian J. Pure Appl. Math.* **10** (1979), no. 11, 1369-1373. (Carl P. McCarty) **81c:30012** 30C45
- On starlike functions with respect to symmetric points. *Indian J. Pure Appl. Math.* **11** (1980), no. 3, 392-405. (Sanford S. Miller) **81i:30031** 30C45
- le cong Thanh** See Le Cong Thanh
- vo Thanh Liem** See Vo Thanh Liem
- nguyen Thanh Van** See Nguyen Thanh Van
- Thangnamlam, K.** On sums of powers and a related problem. *Acta Arith.* **36** (1980), no. 2, 125-141. (R. J. Cook) **81k:10061** 10J10
- Thapliyal, P. S.** Green's function solution of second-order differential equations. *Internat. J. Math. Ed. Sci. Tech.* **11** (1980), no. 3, 447-451. (E. Pinney) **81m:34029** 34B27
- Tharthare, Suresh K.** Symmetric regular GD designs and finite projective planes. *Utilitas Math.* **16** (1979), 145-149. (A. K. Nigam) **81f:05038** 05B25
- Thas, C.** On minimal n -dimensional submanifolds of a space form $R^n(k)$, which are foliated by $(n-1)$ -dimensional totally geodesic submanifolds of $R^n(k)$. *Kodai Math. J.* **2** (1979), no. 3, 287-292. (D. J. Shetty) **81e:53034** 53C40
- Thas, Joseph A.** Geometries in finite projective and affine spaces. *Surveys in combinatorics (Proc. Seventh British Combinatorial Conf., Cambridge, 1979)*, pp. 181-210. *London Math. Soc. Lecture Note Ser.* **38**, Cambridge Univ. Press, Cambridge, 1979. (I. Debroey) **81f:05039** 05B25 (51Exx)
- A restriction on the parameters of a suboctagon. *J. Combin. Theory Ser. A* **27** (1979), no. 3, 385-387. (Stanley E. Payne) **81e:05050** 05B25
- (with Fisher, J. Chris) Flocks in $PG(3, q)$. *Math. Z.* **169** (1979), no. 1, 1-11. (Christiane Lefevre-Percy) **81a:05023** 05B25 (51B99)
- Partial three-spaces in finite projective spaces. *Discrete Math.* **32** (1980), no. 3, 299-322. (Renu Laskar) **81m:05051** 05B25
- tuong ton That** See Tuong Ton That
- Thatcher, James W.** (with Wagner, Eric G.; Wright, Jesse B.) More on advice on structuring compilers and proving them correct. *Automata, languages and programming (Sixth Colloq., Graz, 1979)*, pp. 596-615. *Lecture Notes in Comput. Sci.*, **71**, Springer, Berlin, 1979. (Authors' summary) **81i:68018** 68B05
- (with Wagner, Eric G.; Wright, Jesse B.) Notes on algebraic fundamentals for theoretical computer science. *Foundations of computer science, III (Third Adu. Course, Amsterdam, 1978), Part 2*, pp. 83-164. *Math. Centre Tracts*, **109**, Math. Centrum, Amsterdam, 1979. (V. Ju. Mel'tus) **81g:68035** 68B15 (18C10, 68F20)
- (with Ehrig, Hartmut; Kreowski, Hans-Jörg; Wagner, Eric G.; Wright, Jesse B.) Parameterized data types in algebraic specification languages (short version). *Automata, languages and programming (Proc. Seventh Internat. Colloq., Noordwijkerhout, 1980)*, pp. 157-168. *Lecture Notes in Comput. Sci.*, **85**, Springer, Berlin, 1980. (From the introduction) **81j:68030** 68B15
- Thathachar, M. A. L.** (with Gajendran, F.) A structural principle for a class of adaptive systems. *Internat. J. Control* **31** (1980), no. 3, 519-538. (Authors' summary) **81f:93050** 93C40
- Thattai, Satish M.** (with Abraham, Jacob A.) Test generation for general microprocessor architectures. *FTCS-9 (Ninth Annual Internat. Sympos. Fault-Tolerant Comput., Madison, Wis., 1979)*, pp. 203-210. *IEEE, New York, 1979*. (See **81m:94001**) **94C99**
- (with Abraham, Jacob A.) Test generation for microprocessors. *IEEE Trans. Comput.* **29** (1980), no. 6, 429-441. (Authors' summary) **81c:94066** 94C99 (68A05)
- Thayer F., F. Javier** Lifting positive elements. *Bol. Soc. Brasil. Mat.* **8** (1977), no. 1, 79-85. (Man-Duen Choi) **81a:46016** 46A99 (46L05, 46M99)
- (with Hofmann, Karl Heinrich) Approximately finite-dimensional C^* -algebras. *Dissertationes Math. (Rozprawy Mat.)* **174** (1980), 59 pp. (Horst Behncke) **81h:46072** 46L05
- Thayse, A.** (with Davio, M.; Deschamps, J.-P.) Optimization of multivalued decision algorithms. *Proceedings of the Eighth International Symposium on Multiple-Valued Logic (Rosemont, Ill., 1978)*, pp. 171-178. *IEEE, Long Beach, Calif., 1978*. (Authors' summary) **81b:94073** 94C10 (03-04, 03B50)
- Discrete function expansions in integer powers. *Discrete Appl. Math.* **1** (1979), no. 1-2, 127-136. (Author's summary) **81a:94066** 94C10
- Taylor expansions of Boolean functions and test functions for switching networks. *Philips J. Res.* **34** (1979), no. 3-4, 143-146. (Author's summary) **81a:94067** 94C10
- Theodoff, William A.** The cohomology of the projective n -plane. *Proc. Amer. Math. Soc.* **76** (1979), no. 2, 327-332. (M. Arkowitz) **81a:55026** 55R35 (57T25)
- Thell, Dietlind-Sigrid** Algebraic considerations connected with a complex structure. (Romanian. German summary) *Bul. Inst. Politehn. Bucuresti Ser. Chim.-Metal.* **4** (1978), no. 3, 3-8. (Adrian C. Albu) **81d:58002** 58A05
- Thell, Henri** The effect of measurement errors on the estimation of demand systems. *Econom. Lett.* **3** (1979), no. 4, 373-376. (Kazuo Sato) **81b:90054** 90A20 (62P20, 90A10)
- A differential approach to input-output analysis. *Econom. Lett.* **3** (1979), no. 4, 381-385. (Author's summary) **81a:90043** 90A11
- (with Fiebig, Denzil) The precision gain from adding an equation in joint linear estimation. *Econom. Lett.* **4** (1979/80), no. 3, 257-259. (Bert M. Steece) **81g:62100** 62P20 (62J05)
- (with Maasoumi, Esfandiar) The effect of the shape of the income distribution on two inequality measures. *Econom. Lett.* **4** (1979/80), no. 3, 289-291. (Authors' summary) **81e:90031** 90A19 (62P20)
- (with Laitinen, Kenneth) Singular moment matrices in applied econometrics. *Multivariate analysis, V (Proc. Fifth Internat. Sympos., Univ. Pittsburgh, Pittsburgh, Pa., 1978)*, pp. 629-649. *North-Holland, Amsterdam, 1980*. (R. W. Farebrother) **81f:62080** 62H12 (62P20)
- A simple form of the maximum entropy moment matrix and its inverse. *Econom. Lett.* **5** (1980), no. 1, 53-57. (V. K. Srivastava) **81j:62135** 62J07
- (with Fiebig, Denzil) The precision gain from additional predictions. *Econom. Lett.* **5** (1980), no. 1, 59-61. (Authors' summary) **81i:90053** 90A20
- The entropy of the maximum entropy distribution. *Econom. Lett.* **5** (1980), no. 2, 145-148. (Author's summary) **81m:94016** 94A17 (62B10)
- The independence transformation under almost additivity. *Econom. Lett.* **5** (1980), no. 3, 281-284. (Author's summary) **81m:90027** 90A12 /
- pham The Lai** See Pham The Lai
- colliot-Thélène, Jean-Louis** See Colliot-Thélène, Jean-Louis
- Theocaris, P. S.** (with Tsamasyphros, G. J.; Andrianopoulos, N.) The problem of the infinite wedge. (German summary) *Acta Mech.* **34** (1979), no. 1-2, 63-87. (R. Muli) **81c:73015** 73C99
- (with Tsamasyphros, G. J.) Cubature formulas for the evaluation of surface singular integrals. *BIT* **19** (1979), no. 3, 368-377. (T. N. L. Patterson) **81a:65037** 65D32
- (with Ioakimidis, N. I.) The Gauss-Jacobi numerical integration method applied to the solution of singular integral equations. *Bull. Calcutta Math. Soc.* **71** (1979), no. 1, 29-43. (Charles W. Groetsch) **81h:65134** 65R20
- (with Tsamasyphros, G. J.) On the solution of the sector problem. (French summary) *J. Elasticity* **9** (1979), no. 3, 271-281. (J. L. Nowinski) **81c:73006** 73C05 (44A15)
- (with Ioakimidis, N. I.) On the numerical solution of singular integro-differential equations. *Quart. Appl. Math.* **37** (1979/80), no. 3, 325-331. (Christopher T. H. Baker) **81a:65124** 65R20
- (with Ioakimidis, N. I.) On convergence of two direct methods for solution of Cauchy-type singular integral equations of the first kind. *BIT* **20** (1980), no. 1, 83-87. (Baruch Cahlon) **81g:65178** 65R20 (45E05)
- (with Ioakimidis, N. I.; Chrysakias, A. C.) On the application of numerical integration rules to the solution of some singular integral equations. *Comput. Methods Appl. Mech. Engrg.* **24** (1980), no. 1, 1-11. (Authors' summary) **81i:65109** 65R20 (65D30)
- (with Ioakimidis, N. I.; Kazantzakis, J. G.) On the numerical evaluation of two-dimensional principal value integrals. *Internat. J. Numer. Methods Engrg.* **15** (1980), no. 4, 629-634. (P. Linz) **81g:65034** 65D30
- (with Ioakimidis, N. I.) The modified Lobatto-Chebyshev method applied to the numerical evaluation of stress intensity factors in cracks with a corner point. *Rev. Roumaine Sci. Tech. Sér. Méc. Appl.* **25** (1980), no. 2, 151-159. (Authors' summary) **81d:73081** 73M05 (65R20)
- (with Ioakimidis, N. I.) A comparison between the direct and the classical numerical methods for the solution of Cauchy type singular integral equations. *SIAM J. Numer. Anal.* **17** (1980), no. 1, 115-118. (Authors' summary) **81a:65125** 65R20
- (with Ioakimidis, N. I.) Stress-intensity factors and complex path-independent integrals. *Trans. ASME Ser. E J. Appl. Mech.* **47** (1980), no. 2, 342-346. (Maria Comninou) **81f:73049** 73M05
- Theodorescu, Radu** (with Pruscha, Helmut) Recurrence and transience for discrete parameter stochastic processes. *Transactions of the Eighth Prague Conference on Information Theory, Statistical Decision Functions, Random Processes (Prague, 1978), Vol. B*, pp. 97-105. *Reidel, Dordrecht, 1978*. (Richard Isaac) **81a:60068** 60G99 (60J10)
- (with Herkenrath, Ulrich) On a stochastic approximation procedure applied to the bandit problem. (German, Russian and French summaries) *Elektron. Informationsverarb. Kybernet.* **15** (1979), no. 5-6, 301-307. (Madelan T. Watan) **81d:62088** 62L20 (90A05, 90C15)
- (with Hengartner, Walter) A characterization of strictly unimodal distribution

- functions by their concentration functions. Unimodal distribution functions. With an appendix by Paul Deheuvels. *Publ. Inst. Statist. Univ. Paris* 24 (1979), no. 1-2, 1-12. (Peter Flusser) **81b:60014** 60E05 (26A15)
- The minimax principle and random programs. *Rend. Circ. Mat. Palermo* (2) 28 (1979), no. 1, 151-160. (Wolf-Rüdiger Heilmann) **81c:90064** 90C15 (90C25)
- Theodore of Cyrene See Giacardi, Livia, **81k:01008**
- Theodore, N. J. (with King, R. A.) State-space discrete systems: computation of the transition matrix. *IEEE Trans. Automat. Control* 25 (1980), no. 2, 296-297. (Authors' summary) **81a:93057** 93C55
- Theodoropoulos, M. (with Grecos, A. P.) Linear transport equations for classical fluids. *Phys. Lett. A* 71 (1979), no. 5-6, 441-444. (Authors' summary) **81h:82057** 82A70 (76A02)
- (with Arnold, L.) Deterministic limit of the stochastic model of chemical reactions with diffusion. *Adv. in Appl. Probab.* 12 (1980), no. 2, 367-379. (Jesús Hernández) **81f:35061** 35K55 (60J75, 80A30)
- Theodorescu, Radu (with Herkenrath, Ulrich) On the bandit problem. *Stochastic control theory and stochastic differential systems (Proc. Workshop, Deutsch. Forschungsgemeinschaft, Univ. Bonn, Bad Honnef, 1979)*, pp. 423-434. *Lecture Notes in Control and Information Sci.*, 16, Springer, Berlin, 1979. (Nicole El Karoui) **81j:93052** 93E05 (62L20, 90D15)
- Thérèse, Michel (with Maliver, Christian; Penot, Jean-Paul) Minimisation d'une fonction régulière sur un fermé non régulier et non convexe d'un espace de Hilbert. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 286 (1978), no. 24, A1191-A1193. (Authors' summary) **81e:58019** 58E05 (47H05, 90C30)
- Calcul e-sous-différentiel des applications convexes vectorielles. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 12, A549-A551. (Authors' summary) **81d:46046** 46G05 (46A40, 49A50, 58C20, 90C25)
- Therrien, Norbert (with Flacke, Werner) Bayesian sufficient statistics and invariance. (French summary) *Ann. Inst. H. Poincaré Sect. B (N.S.)* 15 (1979), no. 4, 303-314 (1980). (Daniel Solomon) **81j:62019** 62B20 (62F15)
- Thérèse-Fosse, Pascale (with David, René) Detecting transition sequences: application to random testing of sequential circuits. *FTCS-9 (Ninth Annual Internat. Sympos. Fault-Tolerant Comput., Madison, Wis., 1979)*, pp. 121-124. *IEEE, New York, 1979*. (See **81m:94001**) 94C05
- (with David, René) Random testing of intermittent faults in digital circuits. *FTCS-10 (Tenth Internat. Sympos. Fault-Tolerant Comput., Kyoto, 1980)*, pp. 182-184. *IEEE, New York, 1980*. (See **81m:94002**) 94C05
- (with David, René) Minimal detecting transition sequences: application to random testing. *IEEE Trans. Comput.* 29 (1980), no. 6, 514-518. (Authors' summary) **81g:94073** 94C99
- Thews, Klaus Nontrivial solutions of elliptic equations at resonance. *Proc. Roy. Soc. Edinburgh Sect. A* 85 (1980), no. 1-2, 119-129. (R. Kent Nagle) **81c:35054** 35J65 (85E05)
- thao cong thi See Dao Cong Thi
- Thibault, Lionel Espérances conditionnelles d'intégrales lipschitziennes et d'intégrales semi-continues inférieures. *Traçaux Sémin. Anal. Convexe* 9 (1979), no. 2, Exp. No. 16, 48 pp. (Michel Valadier) **81h:60006** 60A10 (28B05, 49A60)
- Épédifférentiels de fonctions vectorielles. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 2, A87-A90. (J. Dancé) **81f:49015** 49A50 (46G05, 58C20, 90C25)
- (with Hiriart Urruty, Jean-Baptiste) Existence et caractérisation de différentielles généralisées d'applications localement lipschitziennes d'un espace de Banach séparable dans un espace de Banach réflexif séparable. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 23, 1091-1094. (Authors' summary) **81h:90125** 90C30 (46G05, 58C20)
- Espérances conditionnelles d'intégrales lipschitziennes et d'intégrales semi-continues inférieures. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 291 (1980), no. 9, A551-A554. (Authors' summary) **81m:60004** 60A10 (28B05, 90A14, 90C15)
- Thibodeau, L. A. (with Cook, R. Dennis) Marginally restricted D-optimal designs. *J. Amer. Statist. Assoc.* 75 (1980), no. 370, 366-371. (J. Kiefer) **81h:62132** 62K05
- Thickstun, T. L. (with McMillan, D. R., Jr.) Open three-manifolds and the Poincaré conjecture. *Topology* 19 (1980), no. 3, 313-320. (G. Burde) **81g:57007** 57M40 (57N30)
- Thiele, Bo Phase-integral calculation of physically important quantities for nonrelativistic bound s states of the linear central potential. *J. Math. Phys.* 21 (1980), no. 6, 1408-1415. (B. A. Hargrave) **81k:81020** 81C05 (34E20)
- Thiébaut, Christine See Laurent-Thiébaut, Christine
- Thiel, Christian See Frege, Gottlob, **81d:03001**
- Thiele, Bärbel Eine Umkehrformel für einfache stationäre Punktprozesse endlicher Intensität im \mathbb{R}^d . *Math. Nachr.* 91 (1979), 171-179. (R. V. Ambarcumjan) **81g:60053** 60G55
- Thielme, H. P. See Levin, B. Ja., **81k:30011**
- Thieme, Horst R. On the boundedness and the asymptotic behaviour of the nonnegative solutions of Volterra-Hammerstein integral equations. *Manuscripta Math.* 31 (1980), no. 4, 379-412. (J. Kolomý) **81f:45006** 45D05 (45M99)
- Phan-Thien, N. See Phan-Thien, N.
- Thierri, Gabriel (with Paradis, André D.) Strong endomorphisms of automata. *Fundamentals of computation theory (Proc. Conf. Algebraic, Arith. and Categorical Methods in Comput. Theory, Berlin/Wendisch-Rietz, 1979)*, pp. 318-324. *Math. Research*, 2, Akademie-Verlag, Berlin, 1979. (Authors' introduction) **81h:68068** 68D30
- Context-free and stationary languages. *Internat. J. Comput. Math.* 7 (1979), no. 4, 297-301. (Joffroy Beauquier) **81f:68069** 68F05
- (with Rankin, S. A.; Reis, C. M.) Right subdirectly irreducible semigroups. *Pacific J. Math.* 85 (1979), no. 2, 403-412. (T. Tamura) **81h:20084** 20M10
- (with Paradis, André D.) Strong endomorphisms of π -connected automata. *Semigroup Forum* 20 (1980), no. 1, 91-93. (P. Dömös) **81h:68045** 68D30
- (with Jürgensen, Helmut) Semigroups with each element disjunctive. *Semigroup Forum* 21 (1980), no. 2-3, 127-141. (John M. Howie) **81m:20078** 20M10
- Thierry-Mieg, Jean Geometrical reinterpretation of Faddeev-Popov ghost particles and BR transformations. *J. Math. Phys.* 21 (1980), no. 12, 2834-2838. (Authors' summary) **81k:81066** 81E10 (58F06)
- Explicit classical construction of the Faddeev-Popov ghost field. (Italian and Russian summaries) *Nuovo Cimento A* (11) 56 (1980), no. 4, 396-404. (Authors' summary) **81c:81078** 81E10 (53C10)
- Thiery-Thiet-Dung See Thiery-Thiet-Dung
- Thirring, W. Gauge theories of gravitation. *Facts and prospects of gauge theories (Proc. XVII. Internat. Universitätswochen für Kernphysik, Schladming, 1978)*, pp. 439-462. *Acta Phys. Austriaca Suppl.*, XIX, Springer, Vienna, 1978. (J. S. Joel) **81d:83036** 83C45 (53C80)
- Bounds on the entropy in terms of one-particle distributions. *Lett. Math. Phys.* 4 (1980), no. 1, 67-70. (F. Rocca) **81h:82018** 82A15
- Thirumachandran, D. See Govinda Thirumachandran, D.
- Thirumachandran, T. (with Power, E. A.) A canonical transformation in neoclassical radiation theory. *Foundations of radiation theory and quantum electrodynamics*, pp. 65-81. Plenum, New York, 1980. (See **81e:81002**) 78A40
- (with Power, E. A.) The multipolar Hamiltonian in radiation theory. *Proc. Roy. Soc. London Ser. A* 372 (1980), no. 1749, 265-273. (Authors' summary) **81h:81196** 81K05
- Thisted, Ronald A. See Smith, Gary, et al., **81m:62131**
- Thuy, Van Thoi See Nguyen Van Thoi
- Thobois, C. See Godet-Thobie, C.
- Tholen, Walter Lifting semifinal liftings. *Categorical topology (Proc. Internat. Conf., Free Univ. Berlin, Berlin, 1978)*, pp. 376-385. *Lecture Notes in Math.*, 719, Springer, Berlin, 1979. (A. Pultr) **81a:18004** 18A40 (18A99)
- General machines and concrete functors. *Fundamentals of computation theory (Proc. Conf. Algebraic, Arith. and Categorical Methods in Comput. Theory, Berlin/Wendisch-Rietz, 1979)*, pp. 443-449. *Math. Research*, 2, Akademie-Verlag, Berlin, 1979. (Jiří Adámek) **81e:18006** 18B20 (68D30)
- (with Wischnewsky, Manfred Bernd) Structure functors. External characterizations. *Structure of topological categories (Proc. Conf., Univ. Bremen, Bremen, 1978)*, pp. 241-252. *Mathematik-Arbeitspapiere*, 18, Univ. Bremen, Bremen, 1979. (From the introduction) **81f:18011** 18A99 (18D99, 54B30)
- Note on total categories. *Bull. Austral. Math. Soc.* 21 (1980), no. 2, 169-173. (Jiří Adámek) **81h:18002** 18A40 (18B30)
- (with Street, Ross; Wischnewsky, Manfred Bernd; Wolff, Harvey) Semitopological functors. III. Lifting of monads and adjoint functors. *J. Pure Appl. Algebra* 16 (1980), no. 3, 299-314. (M. Hulek) **81g:18003** 18A40
- Thom, René Symmetries gained and lost. *Mathematical physics and physical mathematics (Proc. Internat. Sympos., Warsaw, 1974)*, pp. 293-320. *Math. Phys. and Appl. Math.*, 2, Reidel, Dordrecht, 1976. (I. Stewart) **81k:58020** 58C28
- Stable defects in ordered media. *Structural stability in physics (Proc. Internat. Symposia Appl. Catastrophe Theory and Topological Concepts in Phys., Inst. Inform. Sci., Univ. Tübingen, Tübingen, 1978)*, pp. 129-133. *Springer Ser. in Synergetics*, 4, Springer, Berlin, 1979. (M. I. Monastyrskii) **81j:82007** 82A05 (58C28, 58H05, 81M05, 82A60)
- Thoma, Karlheinz Die Untermoduln von $M(n, K)$. *Arch. Math. (Basel)* 33 (1979/80), no. 4, 326-333. (Martin Lindner) **81k:16042** 16A53 (15A33, 20G35)
- Thomas, A. D. (with Cook, Roger J.) Line bundles and homogeneous matrices. *Quart. J. Math. Oxford Ser. (2)* 30 (1979), no. 120, 423-429. (V. L. Popov) **81e:14031** 14M12
- (with Wood, G. V.) \star Group tables. *Shiva Mathematics Series*, 2, Shiva Publishing Ltd., Nantwich; distributed by Imprint Editions, Inc., Fort Collins, Colo., 1980. 174 pp. (not consecutively pagged) (errata). ISBN 0-906812-04-6, 0-906812-02-X (Editors) **81d:20002** 20-01 (20-04)
- (with Clarke, F. W.; Waller, Derek A.) Embeddings of covering projections of graphs. *J. Combin. Theory Ser. B* 28 (1980), no. 1, 10-17. (W. Dörfler) **81h:05066** 05C10 (05C70)
- Thomas, A. W. Application of three-body techniques to pion-nucleus scattering. *Theoretical methods in medium-energy and heavy-ion physics (Proc. NATO Adv. Stud. Inst. Theory. Nuclear Phys., Univ. Wisconsin, Madison, Wis., 1978)*, pp. 667-738. *NATO Adv. Study Inst. Ser. B: Physics*, 38, Plenum, New York, 1978. (See **81h:81030**) 81F20
- Thomas, Barbara V. Smith (with Fay, Temple H.) Remarks on the free product of two Hausdorff groups. *Arch. Math. (Basel)* 33 (1979/80), no. 1, 57-65. (M. I. Kabenjuk) **81c:22004** 22A05
- (with Ordman, Edward T.) Sequential conditions and free topological groups. *Proc. Amer. Math. Soc.* 79 (1980), no. 2, 319-326. (M. Rajagopalan) **81c:54042** 54D55 (22A99, 54G20)
- Thomas, C. B. Homotopy classification of free actions by finite groups on S^3 . *Proc. London Math. Soc.* (3) 40 (1980), no. 2, 284-297. (J. P. E. Hodgson) **81c:57045** 57S17
- Thomas, D. H. (with Nielson, Gregory M.; Wikom, J. A.) Interpolation in triangles. *Bull. Austral. Math. Soc.* 20 (1979), no. 1, 115-130. (T. J. Rivlin) **81j:65026** 65D05 (65D10)
- Thomas, D. K. (with Noor, Khalida Inayat) Quasiconvex univalent functions. *Internat. J. Math. Math. Sci.* 3 (1980), no. 2, 255-266. (K. S. Padmanabhan) **81f:30010** 30C45
- Thomas, Daniel (with Kernevez, J. P.; Joly, G.; Bunow, Barry) Pattern formation and wave propagation in the s-a system. *Bifurcation and nonlinear eigenvalue problems (Proc., Session, Univ. Paris XIII, Villetaneuse, 1978)*, pp. 201-221. *Lecture Notes in Math.*, 782, Springer, Berlin, 1980. (John J. Tyson) **81g:35085** 35B32 (35K55, 92A09)
- Thomas, David R. (with Pierce, Donald A.) Neyman's smooth goodness-of-fit test when the hypothesis is composite. *J. Amer. Statist. Assoc.* 74 (1979), no. 366, part 1, 441-445. (M. Knott) **81f:62044** 62F03 (62F05)
- Thomas, Emory Fundamental units for orders in certain cubic number fields. *J. Reine Angew. Math.* 310 (1979), 33-55. (Charles J. Parry) **81h:12009** 12A45 (12A30)
- (with Vasquez, A. T.) On the resolution of cusp singularities and the Shintani decomposition in totally real cubic number fields. *Math. Ann.* 247 (1980), no. 1, 1-20. (V. V. Sokurov) **81h:10037** 10D21 (14G25, 14J17, 14J30)
- (with Rees, Elmer) Realizing homology classes by almost-complex submanifolds. *Math. Z.* 172 (1980), no. 2, 195-201. (P. J. Kahn) **81f:57035** 57R95 (57R77)
- Thomas, Erik G. F. Représentation intégrale dans les cônes convexes. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 286 (1978), no. 11, A515-A518. (Authors' summary) **81f:46016** 46A55

- Integral representations of invariant reproducing kernels. *Proceedings, Bicentennial Congress Wiskundig Genootschap (Vrije Univ., Amsterdam, 1978), Part II*, pp. 391-404, *Math. Centre Tracts*, 101, *Math. Centrum, Amsterdam*, 1979. (Boris Sagraloff) **81c:46041** 46G12 (22D10, 46A12, 46F05)
- A converse to Edgar's theorem. *Measure theory, Oberwolfach 1979 (Proc. Conf., Oberwolfach, 1979)*, pp. 497-512, *Lecture Notes in Math.*, 794, *Springer, Berlin*, 1980. (Benno Fuchssteiner) **81k:46019** 46B22
- Thomas, Gerald F. (with Meath, William J.) On the time dependence of a degenerate two-level system interacting with a pulse of radiation. *Phys. Lett. A* **70** (1979), no. 5-6, 396-398. (Authors' summary) **81h:81021** 81C05
- Thomas, Günfried P. On Schensted's construction and the multiplication of Schur functions. *Adv. in Math.* **30** (1978), no. 1, 8-32. (Author's summary) **81g:05022** 05A17
- A note on Young's raising operator. *C. R. Math. Rep. Acad. Sci. Canada* **2** (1980), no. 1, 35-36. (Editors) **81e:10012** 10A40 (20C30)
- Thomas, H. (with Büttiker, M.) Periodic and solitary states of the driven sine-Gordon chain. *Phys. Lett. A* **77** (1980), no. 5, 372-374. (Authors' summary) **81m:82039** 82A67 (35Q20)
- Thomas, H. R. (with Morgan, K.; Lewis, R. W.) A fully nonlinear analysis of heat and mass transfer problems in porous bodies. *Internat. J. Numer. Methods Engrg.* **15** (1980), no. 9, 1381-1393. (Authors' summary) **81g:80008** 80A20
- Thomas, I. L. Solutions to the time-dependent, forced quantum oscillator equation in the coordinate representation. *Chem. Phys. Lett.* **70** (1980), no. 2, 413-419. (Author's summary) **81a:81025** 81C05
- Bulmer-Thomas, Ivor See Bulmer-Thomas, Ivor
- Thomas, J. M. See Thomas, Jean-Marie
- Thomas, J. P., Jr. A new class of unsteady solutions of the Navier-Stokes equations. *Mech. Res. Comm.* **7** (1980), no. 3, 135-140. (Michael J. O'Carroll) **81k:76020** 76D05 (35Q10)
- Thomas, James A., Jr. (with Curtiss, C. F.) The transport properties of binary gas mixtures in applied magnetic fields. *J. Chem. Phys.* **72** (1980), no. 10, 5581-5590. (Authors' summary) **81g:82032a** 82A35 (82A70)
- (with Curtiss, C. F.) Evaluation of kinetic theory collision integrals using the generalized phase shift approach. *J. Chem. Phys.* **72** (1980), no. 10, 5591-5602. (Authors' summary) **81g:82032b** 82A35 (82A70)
- Thomas, James D. (with Hultquist, Robert A.) Interval estimation for the unbalanced case of the one-way random effects model. *Ann. Statist.* **6** (1978), no. 3, 582-587. (Hardeo Sahai) **81h:62008** 62J10
- Thomas, Jean-Claude Sur les fibrations de Serre pures. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **290** (1980), no. 17, A811-A813. (Author's summary) **81f:55018** 55R05 (55P62)
- Modèle d'Eilenberg-Moore d'une fibration de Serre. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **290** (1980), no. 21, A1017-A1020. (Author's summary) **81g:55012** 55P62 (55R05)
- Thomas, Jean-Marie (with Amara, M.) Equilibrium finite elements for the linear elastic problem. *Numer. Math.* **33** (1979), no. 4, 367-383. (Ranbir S. Sandhu) **81b:65096** 65N30 (73K25)
- Thomas, John D. (with Zund, Joseph D.) A note on the theory of immanants. *Rend. Circ. Mat. Palermo (2)* **28** (1979), no. 1, 143-150. (D. Livingstone) **81i:15008** 15A15 (20C30, 65F99)
- Thomas, L. C. Connectedness conditions used in finite state Markov decision processes. *J. Math. Anal. Appl.* **68** (1979), no. 2, 548-556. (A. A. Juškevič) **81k:90107** 90C40
- (with Phelps, R. L.) On optimal performance in self-organizing paging algorithms. *J. Inform. Optim. Sci.* **1** (1980), no. 1, 80-93. (Authors' summary) **81g:68044** 68B20 (90B40)
- Thomas, Lawrence E. (with Babbitt, Donald) Ground state representation of the infinite one-dimensional Heisenberg ferromagnet. IV. A completely integrable quantum system. *J. Math. Anal. Appl.* **72** (1979), no. 1, 305-328. (Klaus-Jürgen Eckardt) **81b:81033** 81Hxx (47A70, 81C99)
- Birman-Schwinger bounds for the Laplacian for point interactions. *J. Math. Phys.* **20** (1979), no. 9, 1848-1850. (Teruo Ikebe) **81h:35036** 35P15 (81C05)
- Quantum Heisenberg ferromagnets and stochastic exclusion processes. *J. Math. Phys.* **21** (1980), no. 7, 1921-1924. (Etang Chen) **81f:82007** 82A15 (60K35, 81E10)
- Thomas, Marc Algebra homomorphisms and the functional calculus. *Pacific J. Math.* **79** (1978), no. 1, 251-269. (Author's summary) **81f:46063** 46J05 (46H30)
- Thomas, P. D. (with Middlecoff, J. F.) Direct control of the grid point distribution in meshes generated by elliptic equations. *AIAA J.* **18** (1980), no. 6, 652-656. (Authors' summary) **81f:65071** 65N05
- Thomas, R. S. D. An exploratory algorithm and some results on braids closed to a circle. *Proceedings of the Sixth Manitoba Conference on Numerical Mathematics (Univ. Manitoba, Winnipeg, Man., 1976)*, pp. 447-462, *Congress. Numer., XVIII, Utilitas Math., Winnipeg, Man., 1977*. (Hale F. Trotter) **81c:20025** 20F36 (57M25)
- Thomas, René See Kinetic logic: a Boolean approach to the analysis of complex regulatory systems. **81k:92046a**
- Thomas, Wolfgang (with Ebbinghaus, Heinz-Dieter; Flum, Jörg) ★Einführung in die mathematische Logik. (German) [Introduction to mathematical logic] Die Mathematik: Einführungen in Gegenstand und Ergebnisse ihrer Teilgebiete und Nachbarwissenschaften. [Mathematics: Introductions to the subject and results of its branches and related sciences] *Wissenschaftliche Buchgesellschaft, Darmstadt*, 1978. ix + 288 pp. ISBN 3-534-06354-6 (I. H. Bekker (Zbl 399:03001)) **81h:03001** 03-01
- On the bounded monadic theory of well-ordered structures. *J. Symbolic Logic* **45** (1980), no. 2, 334-338. (S. R. Kogalovskii) **81h:03000** 03C85 (03B25)
- Thomason, A. G. (with Cockayne, E. J.; Ruskey, Frank) An algorithm for the most economic link addition in a tree communications network. *Inform. Process. Lett.* **9** (1979), no. 4, 171-175. (From the introduction) **81g:94065** 94C15 (68C25)
- Critically partitionable graphs. I. *J. Combin. Theory Ser. B* **27** (1979), no. 3, 254-259. (J. Mitchell) **81m:05112** 05C70 (05C15)
- Thomson, R. W. First quadrant spectral sequences in algebraic K-theory. *Algebraic topology, Aarhus 1978 (Proc. Sympos., Univ. Aarhus, Aarhus, 1978)*, pp. 332-355, *Lecture Notes in Math.*, 763, *Springer, Berlin*, 1979. (Ross Staffeldt) **81c:18018** 18F25 (54B30, 57R67)
- Beware the phony multiplication on Quillen's \mathcal{E}^1 . *Proc. Amer. Math. Soc.* **80** (1980), no. 4, 569-573. (Jean-Louis Loday) **81k:18010** 18F25 (55N45, 55S99)
- Thomson, Richmond H. A note on syntactical treatments of modality. *Synthese* **44** (1980), no. 3, 391-395. (Jaakko Hintikka) **81g:03021** 03B45
- Thomson, S. K. Modal operators and functional completeness. II. *J. Symbolic Logic* **42** (1977), no. 3, 391-399. (Editors) **81g:03022** 03B45
- Independent propositional modal logics. *Studia Logica* **39** (1980), no. 2-3, 143-144. (Audrey McKinney) **81m:03026** 03B45
- Thomassen, Carsten Long cycles in digraphs with constraints on the degrees. *Surveys in combinatorics (Proc. Seventh British Combinatorial Conf., Cambridge, 1979)*, pp. 211-228, *London Math. Soc. Lecture Note Ser.*, 38, *Cambridge Univ. Press, Cambridge*, 1979. (F. Harary) **81c:05045** 05C20 (05C45)
- (with Andersen, L. D.) The cover-index of infinite graphs. *Aequationes Math.* **29** (1980), no. 2-3, 244-251. (Rudolf Halin) **81m:05107** 05C70 (05C15)
- On the number of Hamiltonian cycles in tournaments. *Discrete Math.* **31** (1980), no. 3, 315-323. (Guy Chay) **81h:05073** 05C20 (05C38)
- Planarity and duality of finite and infinite graphs. *J. Combin. Theory Ser. B* **29** (1980), no. 2, 244-271. (W. T. Tutte) **81j:05056** 05C10
- Thomasset, D. (with Reynaud, R.) Commande modale découplée des systèmes multivariables retardés. (English summary) With a comment by L. Le Letty. *RAIRO Automat.* **13** (1979), no. 3, 283-301. (Luciano Pandolfi) **81c:93052** 93C35
- Thomasset, P.-(with Fortin, M.) Mixed finite-element methods for incompressible flow problems. *J. Comput. Phys.* **31** (1979), no. 1, 113-145. (Authors' summary) **81h:76015** 76D05 (65N30)
- (with Dervieux, A.) A finite element method for the simulation of a Rayleigh-Taylor instability. *Approximation methods for Navier-Stokes problems (Proc. Sympos., Univ. Paderborn, Paderborn, 1979)*, pp. 145-158, *Lecture Notes in Math.*, 771, *Springer, Berlin*, 1980. (V. Girault) **81k:76024** 76E99 (65N30)
- Thomason, S.-I. On the absorption coefficient. (German and French summaries) *Acustica* **44** (1980), no. 4, 265-273. (From the summary) **81d:76006** 76Q05
- Thomchick, John (with McKelvey, J. P.; Elliott, Claud F., Jr.) Exactly soluble anharmonic potential models. *Phys. Lett. A* **66** (1978), no. 2, 86-90. (Authors' summary) **81m:81017** 81C05
- Thomse, Vidar Galerkin-finite element method for parabolic equations. *Bull. Iranian Math. Soc. No. 10* (1978/79), 31-17L. (Hans-Peter Helfrich) **81b:65107** 65N30
- Galerkin-finite element methods for parabolic equations. *Proceedings of the International Congress of Mathematicians (Helsinki, 1978)*, pp. 943-952, *Acad. Sci. Fennica, Helsinki*, 1980. (M. Zlamal) **81b:65100** 65N30
- (with Schatz, Alfred H.; Wahlbin, Lars B.) Maximum norm stability and error estimates in parabolic finite element equations. *Comm. Pure Appl. Math.* **33** (1980), no. 3, 265-304. (Georges A. Lebaud) **81g:65136** 65N10
- Negative norm estimates and superconvergence in Galerkin methods for parabolic problems. *Math. Comp.* **34** (1980), no. 149, 93-113. (N. Gass) **81a:65092** 65N15 (65N30)
- (with Brenner, Philip) On rational approximations of groups of operators. *SIAM J. Numer. Anal.* **17** (1980), no. 1, 119-125. (T. Kato) **81m:47056** 47D10 (65J10)
- Thomén, David S. (with Brown, Gerald G.) Automatic identification of generalized upper bounds in large-scale optimization models. *Management Sci.* **26** (1980), no. 11, 1166-1184. (Authors' summary) **81k:90062** 90C06
- Thomson, J. D. (with Brace, J. W.) Function space completions. *Illinois J. Math.* **22** (1978), no. 4, 581-603. (Warren Pace) **81j:46028** 46E10 (46A05)
- Thompson, A. C. (with Holmes, R. D.) n -dimensional area and content in Minkowski spaces. *Pacific J. Math.* **85** (1979), no. 1, 77-110. (P. R. Goodey) **81k:52023** 52A40
- Thompson, C. D. Area-time complexity for VLSI. *Conference Record of the Eleventh Annual ACM Symposium on Theory of Computing (Atlanta, Ga., 1979)*, pp. 81-88, *ACM, New York*, 1979. (Author's summary) **81f:94047** 94C10 (68C25)
- Thompson, C. P. (with Jones, I. P.) A note on the use of nonuniform grids in finite difference calculations. *Boundary and interior layers—computational and asymptotic methods (Proc. Conf., Trinity College, Dublin, 1980)*, pp. 332-341, *Boole, Dún Laoghaire*, 1980. (J. T. Oden) **81m:65154** 65N05
- Thompson, Colin J. (with McGuire, James B.) Distribution of iterates of first order difference equations. *Bull. Austral. Math. Soc.* **22** (1980), no. 1, 133-143. (Leo Jonker) **81m:58048** 58F11 (28C10, 39A10, 82A05, 92A17)
- Thompson, Gerald L. Computing the core of a market game. *Extremal methods and systems analysis (Internat. Sympos., Univ. Texas, Austin, Tex., 1977)*, pp. 312-334, *Lecture Notes in Econom. and Math. Systems*, 174, *Springer, Berlin*, 1980. (V. K. Balakrishnan) **81j:90156** 90D45
- (with Derzko, N.; Sethi, Suresh P.) Distributed parameter systems approach to the optimal cattle ranching problem. *Optimal Control Appl. Methods* **1** (1980), no. 1, 3-10. (Authors' summary) **81g:93056** 93C20 (49B22, 90B05)
- Thompson, J. G. Remarks on finite groups. *Proceedings of the 5th School of Algebra (Rio de Janeiro, 1978)*, pp. 75-77, *Soc. Brasil. Mat., Rio de Janeiro*, 1978. (Editors) **81j:20006** 20B20 (20D06)
- Uniqueness of the Fischer-Griess monster. *Bull. London Math. Soc.* **11** (1979), no. 3, 340-346. (Arthur Reifart) **81e:20024** 20D08
- Finite groups and modular functions. *Bull. London Math. Soc.* **11** (1979), no. 3, 347-351. (Stephen D. Smith) **81j:20029** 20D08 (10D12)
- Some numerology between the Fischer-Griess Monster and the elliptic modular function. *Bull. London Math. Soc.* **11** (1979), no. 3, 352-353. (Stephen D. Smith) **81j:20030** 20D08 (10D12)
- Thompson, J. M. T. Bifurcational aspects of catastrophe theory. *Bifurcation theory and applications in scientific disciplines (Papers, Conf., New York, 1977)*, pp. 553-571, *Am. New York Acad. Sci.*, 316, *New York Acad. Sci., New York*, 1979. (I. Stewart) **81h:58011** 58C28 (58E07, 73H05)
- Thompson, James R. (with Tapia, R. A.) Nonparametric density estimation: where do we go from here? *Proceedings of the 1979 Army Numerical Analysis and Computers Conference (White Sands Missile Range, White Sands, N.M., 1979)*, pp. 457-466, *ARO Rep.* **79**, 3, *U. S. Army Res. Office, Research Triangle Park, N.C.*, 1979. (Authors' summary) **81b:62055** 62G05
- (with Scott, David W.; Tapia, R. A.) Nonparametric probability density estimation

- by discrete maximum penalized-likelihood criteria. *Ann. Statist.* **8** (1980), no. 4, 820-832. (S. A. Hasimov) **81j:62079** 62G05
- Thompson, K. W. (with Schonbek, T.) A problem of the Pompeii type. *Amer. Math. Monthly* **87** (1980), no. 1, 32-36. (Carlos A. Berenstein) **81d:26008** 26B99 (28A99)
- Thompson, M. E. Stratified sampling with exchangeable prior distributions. *Ann. Statist.* **6** (1978), no. 5, 1168-1169. (Author's summary) **81d:62011** 62D05
- (with Atkinson, C.) Analysis of two parallel queues with common exit service and infinite queue size. *Adv. in Appl. Probab.* **13** (1981), no. 1, 147-166. (D. C. McNickle) **81m:60162** 60K25 (68C15, 90B22)
- Thompson, Mark Asymptotic elliptic estimates and the evaluation of certain trace formulae. (Italian summary) *Boll. Un. Mat. Ital. B* (5) **16** (1979), no. 1, 120-133. (Ju. V. Kostarčuk) **81c:35013** 35B40 (35J40)
- Thompson, Maynard (with Shonkwiler, Ronald) A model for common source epidemics. *Proceedings of the Second International Conference on Mathematical Modelling* (St. Louis, Mo., 1979), Vol. I, II, pp. 1065-1074. Univ. Missouri-Rolla, Rolla, Mo., 1980. (Authors' summary) **81m:92047** 92A15
- Thompson, N. E. (with Freasier, B. C.) A new method of solution of the Ornstein-Zernike equation for a two-dimensional fluid. *Molecular Phys.* **41** (1980), no. 1, 127-135. (From the introduction) **81k:82042** 82A50 (65R20)
- Thompson, Philip Duncan The mathematics of meteorology. *Mathematics today*, pp. 127-152. Springer, New York, 1978. (See **80b:00007**) 86A10
- Thompson, R. C. See Thompson, Robert C.
- Thompson, R. W. (with Cauley, D. A.) A population balance model for fish population dynamics. *J. Theoret. Biol.* **81** (1979), no. 2, 289-307. (Authors' summary) **81a:92017** 92A15
- Thompson, Richard A. (with Gray, F. Gail) Universal modular trees: a design procedure. *IEEE Trans. Comput.* **27** (1978), no. 1, 53-63. (Authors' summary) **81c:94050** 94C15 (68D15, 68E10)
- Thompson, Richard J. Embeddings into finitely generated simple groups which preserve the word problem. *Word problems, II* (Conf. on Decision Problems in Algebra, Oxford, 1976), pp. 401-441. *Studies in Logic and Foundations of Math.*, 95, North-Holland, Amsterdam, 1980. (F. B. Cannonito) **81k:20050** 20F10 (03D40)
- Thompson, Robert C. Invariant factors of complementary minors of integral matrices. *Houston J. Math.* **5** (1979), no. 3, 421-426. (Thomas Laffey) **81c:15015** 15A21
- Interlacing inequalities for invariant factors. *Linear Algebra Appl.* **24** (1979), 1-31. (Author's summary) **81j:15014** 15A33 (15A45)
- The congruence numerical range. *Linear and Multilinear Algebra* **8** (1979/80), no. 3, 197-206. (B. N. Moyle) **81b:15026** 15A63 (15A60, 47A12)
- Invariant factors under rank one perturbations. *Canad. J. Math.* **32** (1980), no. 1, 240-245. (J. L. Zemmer) **81f:15028** 15A36 (15A18)
- Thompson, Rory O. R. Y. Bias and monotonicity for goodness-of-fit tests. *J. Amer. Statist. Assoc.* **74** (1979), no. 368, 875-876. (M. L. Tiku) **81g:62000** 62G10
- Thompson, Russell C. (with Gupta, Chaitan P.) Boundary value problems for a system of ordinary differential equations. *Funkcial. Ekvac.* **22** (1979), no. 3, 285-296. (R. E. Gaines) **81g:34022** 34B15
- Thompson, Wiley E. (with Boussalis, Dhemetrios; Ryacioti-Boussalis, Helen) Vector Lyapunov functions for a class of decentralized systems. *Proceedings of the Second International Conference on Mathematical Modelling* (St. Louis, Mo., 1979), Vol. I, II, pp. 601-610. Univ. Missouri-Rolla, Rolla, Mo., 1980. (Authors' summary) **81m:93054** 93D05
- Thomson, Per Grove (with Zlatev, Zahari) Two-parameter families of predictor-corrector methods for the solution of ordinary differential equations. *BIT* **19** (1979), no. 4, 503-517. (E. L. Albassiny) **81i:65064** 65L05
- Thomson, B. S. On the derived numbers of VBG_s functions. *J. London Math. Soc.* (2) **22** (1980), no. 3, 473-485. (A. M. Bruckner) **81c:26004** 26A24 (26A45)
- Thomson, D. J. (with Kleiner, B.; Martin, R. Douglas) Robust estimation of power spectra. With discussion. *J. Roy. Statist. Soc. Ser. B* **41** (1979), no. 3, 313-351. (V. J. Yohai) **81b:62168** 62M15 (62F35)
- Thomson, James E. (with Olin, Robert F.) Some index theorems for subnormal operators. *J. Operator Theory* **3** (1980), no. 1, 115-142. (John B. Conway) **81f:47031** 47B20
- Milne-Thomson, L. M. See Milne-Thomson, L. M.
- Thomson, Michael W. (with Baumslag, Gilbert; Strebel, Ralph) On the multiplier of $F/\gamma, R$. *J. Pure Appl. Algebra* **16** (1980), no. 2, 121-132. (John D. P. Meldrum) **81c:20039** 20F05 (20F40)
- Thomson, Robin (with Schaeffer, L. R.; Wilton, J. W.) Simultaneous estimation of variance and covariance components from multitrait mixed model equations. (French summary) *Biometrics* **34** (1978), no. 2, 199-208. (R. Zmysłony) **81c:62066** 62J05
- Thomson, William Eliciting production possibilities from a well-informed manager. *J. Econom. Theory* **20** (1979), no. 3, 360-380. (Andrew P. Sage) **81f:90009** 90A06 (90A11)
- (with Myerson, R. B.) Monotonicity and independence axioms. *Internat. J. Game Theory* **9** (1980), no. 1, 37-49. (Hans Keiding) **81h:90147** 90D12
- nguyen-quang-do Thong See Nguyen-Quang-Do Thong
- Thore, Sten Multipurpose format economic systems. *Extremal methods and systems analysis* (Internat. Sympos., Univ. Texas, Austin, Tex., 1977), pp. 52-67. *Lecture Notes in Econom. and Math. Systems*, 174, Springer, Berlin, 1980. (Author's summary) **81a:90069** 90A17
- Thores, Victor E. The comet of 1577 and Tycho Brahe's system of the world. *Arch. Internat. Hist. Sci.* **29** (1979), no. 104, 53-67. (Peeter Müürsepp) **81j:01013** 01A40
- Thornild-Petersen, Lars A note on balanced growth. *J. Econom. Theory* **23** (1980), no. 1, 123-126. (Author's summary) **81h:90032** 90A11
- Thornhill, A. S. (with Cooley, C. R.; Nye, J. F.) The structure and evolution of flow fields and other vector fields. *J. Phys. A* **11** (1978), no. 8, 1455-1490. (Authors' summary) **81m:58022** 58C28 (57R45, 76C99, 86A35, 86A99)
- (with Nye, J. F.) Events in evolving three-dimensional vector fields. *J. Phys. A* **13** (1980), no. 1, 1-14. (D. K. Arrowsmith) **81c:57025** 57R25 (58C27)
- Thorne, K. S. (with Blandford, R. D.) Black hole astrophysics. *General relativity*, pp. 454-503. Cambridge Univ. Press, Cambridge, 1979. (See **81i:83002**) 83C20 (85A99)
- Thorne, Kip S. Multipole expansions of gravitational radiation. *Rev. Modern Phys.* **52** (1980), no. 2, part 1, 299-339. (J. D. Finley, III) **81c:83024** 83C35 (83C30)
- Relativistic radiative transfer: moment formalisms. *Monthly Notices Roy. Astronom. Soc.* **194** (1981), no. 2, 439-473. (Author's summary) **81m:85007** 85A25 (83C99)
- Thornton, Catherine L. (with Bierman, Gerald J.) UDU^T covariance factorization for Kalman filtering. *Control and dynamic systems*, Vol. 16, pp. 177-248. Academic Press, New York, 1980. (See **81j:93002**) 93E11
- Thorpe, B. (with Kuttner, B.) Strong convergence. *J. Reine Angew. Math.* **311/312** (1979), 42-56. (B. E. Rhoades) **81a:40002** 40C05 (40F05, 40H05)
- Thorpe, M. F. (with Galeener, F. L.) Network dynamics. *Phys. Rev. B* (3) **22** (1980), no. 6, 3078-3092. (Authors' summary) **81g:82078** 82A67
- Thouless, D. J. (with Anderson, P. W.; Abrahams, E.; Fisher, D. S.) New method for a scaling theory of localization. *Phys. Rev. B* (3) **22** (1980), no. 8, 3519-3526. (Authors' summary) **81i:82039** 82A42
- Thouvenot, Jean-Paul La démonstration de Furstenberg du théorème de Szemerédi sur les progressions arithmétiques. *Séminaire Bourbaki, 30e année* (1977/78), Exp. No. 518, pp. 221-232. *Lecture Notes in Math.*, 710, Springer, Berlin, 1979. (M. Mendes France) **81c:10072** 10L20
- Thowson, Arild Control of time-delay systems. *Proceedings of the Eleventh Annual Southeastern Symposium on System Theory* (Clemson Univ., Clemson, S. C., 1979), pp. 1-4. IEEE, New York, 1979. (V. M. Popov) **81h:93058** 93C45 (93C05)
- Characterization of state controllable time-delay systems with piecewise constant inputs. I. Derivation of general conditions. *Internat. J. Control* **31** (1980), no. 1, 31-42. (Szymon Dolecki) **81h:93010a** 93B05 (93C45)
- Characterization of state controllable time-delay systems with piecewise constant inputs. II. Analysis of second and third order systems. *Internat. J. Control* **31** (1980), no. 1, 43-49. (Szymon Dolecki) **81h:93010b** 93B05 (93C45)
- Computer control for low-order time-delay systems. *Internat. J. Systems Sci.* **11** (1980), no. 8, 1011-1019. (Author's summary) **81j:93039** 93C60
- Thrall, Robert M. See Decision Information, **81c:93001**
- Thron, R. (with Teschke, L.) Eine Verallgemeinerung der Theorie der linearen Optimierung. (English and Russian summaries) *Math. Operationsforsch. Statist. Ser. Optim.* **10** (1979), no. 2, 207-212. (Authors' summary) **81a:90109** 90C05
- Thron, W. J. (with Waadeland, Haakon) Accelerating convergence of limit periodic continued fractions $K(a_n/1)$. *Numer. Math.* **34** (1980), no. 2, 155-170. (H. I. Kufminska) **81c:30008** 30B70 (40A15)
- (with Jones, William B.; Waadeland, Haakon) A strong Stieltjes moment problem. *Trans. Amer. Math. Soc.* **261** (1980), no. 2, 503-528. (E. P. Merkes) **81j:30055** 30E05 (30B70)
- Thrun, R. Linear estimation and prediction in stochastic processes. *Math. Operationsforsch. Statist. Ser. Statist.* **10** (1979), no. 2, 333-346. (I. W. Saunders) **81m:62178** 62M20 (60G25)
- nguyen van Thu See Nguyen Van Thu
- Thurston, David J. (with Little, Charles H. C.) Complete bipartite graphs and the Hadamard conjecture. *Proceedings of the Tenth Southeastern Conference on Combinatorics, Graph Theory and Computing* (Florida Atlantic Univ., Boca Raton, Fla., 1979), pp. 721-726. *Congress. Numer.*, XXIII-XXIV, Utilitas Math., Winnipeg, Man., 1979. (Jean H. Bevis) **81f:05034** 05B20
- nguyen Thuong Uen See Nguyen Thuong Uen
- Thurlow, Christine A generalisation of the inverse spectral theorem of Levitan and Gasymov. *Proc. Roy. Soc. Edinburgh Sect. A* **84** (1979), no. 3-4, 185-196. (R. R. D. Kemp) **81c:34017** 34B25
- The point-continuous spectrum of second-order, ordinary differential operators. *Proc. Roy. Soc. Edinburgh Sect. A* **84** (1979), no. 3-4, 197-211. (R. R. D. Kemp) **81c:34018** 34B25
- Thurnheer, Peter Une généralisation du théorème de Wiener-Ikehara. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **290** (1980), no. 11, A499. (Editors) **81c:10051** 10H22 (40E10)
- Le terme de reste dans un problème de réseau hyperbolique. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **290** (1980), no. 13, A581-A583. (Author's summary) **81c:10061** 10J25 (35P25, 58G25)
- Thurston, William P. (with Handel, Michael) Anosov flows on new three manifolds. *Invent. Math.* **59** (1980), no. 2, 95-103. (Zbigniew Nitecki) **81i:58032** 58F15
- (with Hatcher, A. E.) A presentation for the mapping class group of a closed orientable surface. *Topology* **19** (1980), no. 3, 221-237. (Frank Quinn) **81k:57008** 57N05
- Thue, H. Frequency planning as a set partitioning problem. *European J. Oper. Res.* **6** (1981), no. 1, 29-37. (Author's summary) **81j:90084** 90C10
- Thyagarajan, Rajeswari A characterization of regular points for the Dirichlet problem in a harmonic space. *Indian J. Pure Appl. Math.* **11** (1980), no. 8, 1007-1010. (Ursula Schirmeier) **81h:31026** 31D05
- Tiago de Oliveira, J. Extreme values and applications. *Applications of statistics and probability in soil and structural engineering* (Proc. Third Internat. Conf., Sydney, 1979), Vol. I, II, pp. 127-135. *Unisearch, Kensington*, 1979. (W. Dziubdziela) **81c:62004** 62G30 (60F05)
- Bivariate extremes: foundations and statistics. *Multivariate analysis, V* (Proc. Fifth Internat. Sympos., Univ. Pittsburgh, Pittsburgh, Pa., 1978), pp. 349-366. North-Holland, Amsterdam, 1980. (P. K. Sen) **81f:62005** 62G30 (60F05, 62H10)
- Tian, Feng (with Zhu, Yong Jin) On the strong path connectivity of a tournament. *Sci. Sinica* **1979, Special Issue II on Math.**, 18-28. (Brian Alspach) **81g:05065** 05C20 (05C38)
- Tiao, George C. (with Hillmer, Steven C.) Some consideration of decomposition of a time series. *Biometrika* **65** (1978), no. 3, 497-502. (Benjamin Kedem-Kimelfeld) **81a:62097** 62M20
- (with Hillmer, Steven C.) Likelihood function of stationary multiple autoregressive moving average models. *J. Amer. Statist. Assoc.* **74** (1979), no. 367, 652-660. (William D. Ray) **81c:62102** 62M10
- (with Liu, Lon Mu) Parameter estimation in dynamic models. *Comm. Statist. A—Theory Methods* **9** (1980), no. 5, 501-517. (Frederick N. Fritsch) **81h:62171** 62M99 (62J02)
- (with Liu, Lon Mu) Random coefficient first-order autoregressive models. *J.*

- Econometrics* 13 (1980), no. 3, 305-325. (D. E. A. Giles) **81i:62195** 62P20
- Tiba, Dan** General boundary value problems for second order differential equations. *Nonlinear Anal.* 2 (1978), no. 4, 447-455. (From the introduction) **81i:34015** 34B15 (47H05)
- Tibenský, Ján** Specific conditions for the development of science in Slovakia during 1918-1953. (Slovak) *Science in Czechoslovakia, 1918-1952* (Czech), pp. 23-54, *Prace Dětín. Přírod. Věd. II, ČSAV, Prague, 1979*. (See **81j:01032**) 01A60
- Tiberio, Umberto** On the maximal subgroups of a finite solvable group. (Italian) *Matematiche (Catania)* 32 (1977), no. 2, 258-270. (H. Heineken) **81j:20034** 20D10 (with Fedri, Valeria) The finite groups whose proper local subgroups are supersolvable. (Italian. English summary) *Boll. Un. Mat. Ital. A* (5) 17 (1980), no. 1, 73-78. (M.ª Jesús Iranzo) **81i:20043** 20F19 (20D10)
- Tiberio Bianchini, Rosa Maria** The bang-bang principle for bilinear affine control processes. (Italian. English summary) *Matematiche (Catania)* 32 (1977), no. 1, 119-125 (1979). (Author's summary) **81i:93042** 93C15 (34H05)
- Tichonova, T. N.** See **Marchionna Tibiletti, Cesarina**
- Tichonov, Rainer** Stetigkeitseigenschaften und Konvergenz von Folgen diskretisierter semi-infiniten konvexer Optimierungsaufgaben. *Wiss. Z. Tech. Hochsch. Karl-Marx-Stadt* 21 (1979), no. 5, 577-586. (Gerhard Telschow) **81g:65089** 65K10 (90C25) (with Posthoff, Christian) Zu einigen philosophischen Aspekten der mathematischen Durchdringung der Wissenschaften unter besonderer Berücksichtigung der Rolle der Digitaltechnik. *Wiss. Z. Tech. Hochsch. Karl-Marx-Stadt* 21 (1979), no. 7, 941-952. (F. J. Murray) **81i:00007** 00A25
- Tichonov, A. N.** See **Thionor, A. N.**
- Tichy, Robert F.** Zum Approximationssatz von Dirichlet. (English summary) *Monatsh. Math.* 88 (1979), no. 4, 331-333. (R. P. Bambah) **81i:10027** 10F10 (10E30)
- Tichy, Robert F.** Polynomial functions over monoids. *Semigroup Forum* 18 (1979), no. 4, 371-380. (D. B. McAlister) **81i:20074** 20M99
- Tichy, Robert F.** Diskrepanz von Ketten. II. (English summary) *Monatsh. Math.* 89 (1980), no. 2, 131-140. (Harald Rindler) **81i:10063** 10K05
- Tien, Nguyen Zai** See **Nguyen Zai Tien**
- Tien, Nguyen Zai** See **Nguyen Zai Tien**
- Tien, Y. L.** Method of conjugate gradient for solving a large sparse linear system. *Proceedings of the First International Conference on Mathematical Modeling* (St. Louis, Mo., 1977), Vol. 1, pp. 393-402, Univ. Missouri-Rolla, Rolla, Mo., 1977. (Author's summary) **81i:65039** 65F10
- Tiersten, H. F.** A theory of interpenetrating solid continua and some applications. *Transactions of the Twenty-Fifth Conference of Army Mathematicians* (Johns Hopkins Univ., Baltimore, Md., 1979), pp. 745-774, ARO Rep. 80, 1, U. S. Army Res. Office, Research Triangle Park, N.C., 1980. (See **80m:73002**) 73T05
- Tietjen, Gary L.** (with Johnson, Mark E.; Beckman, Richard J.) A new family of probability distributions with applications to Monte Carlo studies. *J. Amer. Statist. Assoc.* 75 (1980), no. 370, 276-279. (Authors' summary) **81i:62032** 62E15 (65C05)
- Tietz, Hubert** (with Ishiguro, Kazuo) Diskontinuierliche (J, p_2) -Matrizen vom Typ M. Special issue dedicated to Władysław Orlicz on the occasion of his seventy-fifth birthday. *Comment. Math. Special Issue* 2 (1979), 149-152. (W. Beckmann) **81a:40003** 40C15 (40G10) (with Jakimovski, A.) Regularly varying functions and power series methods. *J. Math. Anal. Appl.* 73 (1980), no. 1, 65-84. (Kazuo Ishiguro) **81i:40011** 40E05
- Tietz, Hubert** Fundstellen für biographische und bibliographische Angaben über deutsche Mathematiker, die nach 1933 verstorben sind (Stand 1977). *Jahresber. Deutsch. Math.-Verein.* 82 (1980), no. 4, 181-192. (Editors) **81i:01015** 01A70 (00A15)
- Tignol, Jean-Pierre** Les corps universels d'Amitsur. *Bull. Soc. Math. Belg.* 28 (1976), no. 2, 121-130. (Louis Rowen) **81i:16026** 16A38 (16A39)
- Tignol, Jean-Pierre** Les corps à involution de dimension finie sur leur centre. *Bull. Soc. Math. Belg.* 30 (1978), no. 2, 195-204. (S. S. Holland, Jr.) **81i:16014** 16A28 (12E15)
- Tignol, Jean-Pierre** Central simple algebras with involution. *Ring theory (Proc. Anwerp Conf. (NATO Adv. Study Inst.), Univ. Anwerp, Anwerp, 1978)*, pp. 279-285, *Lecture Notes in Pure and Appl. Math.*, 51, Dekker, New York, 1979. (S. Elliger) **81i:16022** 16A39 (16A28) (with Amitsur, S. A.; Rowen, Louis Halle) Division algebras of degree 4 and 8 with involution. *Israel J. Math.* 33 (1979), no. 2, 133-148. (B. Fein) **81i:16029** 16A39 (16A28)
- Thionor, A. S.** A four-dimensional family of quadrics and a monad. (Russian) *Izv. Akad. Nauk SSSR Ser. Mat.* 44 (1980), no. 1, 219-232, 240. (P. E. Newstead) **81i:14011** 14F05 (14D22, 81E10)
- Thionor, A. S.** Geometry of the Fano surface of a double P^3 branched in a quartic. (Russian) *Izv. Akad. Nauk SSSR Ser. Mat.* 44 (1980), no. 2, 415-442, 479. (Werner Kleinert) **81g:14017** 14J25 (14J30, 14K30)
- Thionor, N. B.** (with Rjatin, A. G.) ★Линейные положительные операторы и сингулярные интегралы. (Russian) [Linear positive operators and singular integrals] *Kalinin. Gos. Univ., Kalinin, 1979*, 76 pp. (M. Z. Berkolaiko) **81m:45024** 45P05 (45E99)
- Thionor, V. M.** (with Alekseev, V. M.; Fomin, S. V.) ★Оптимальное управление. (Russian) [Optimal control] "Nauka", Moscow, 1979, 430 pp. (Erich Miersemann) **81g:49001** 49-01 (93-01)
- Thionor, V. M.** Theory of extremal problems, and approximation theory. (Russian) *Approximation theory (Papers, Vth Semester, Stefan Banach Internat. Math. Center, Warsaw, 1975)*, pp. 273-286, Banach Center Publ., 4, PWN, Warsaw, 1979. (P. S. Kenderov) **81g:41001** 41-02 (41A10, 42A10) (with Ismagilov, R. S.; Babadžanov, S. B.) Geometry of Banach space and diameters of sets. (Russian) *Izv. Akad. Nauk UzSSR Ser. Fiz.-Mat. Nauk* 1979, no. 4, 25-32, 87. (M. I. Kadec) **81i:46022** 46B20 (41A65) (with Bojanov, Borislav D.) Some convex problems of approximation theory. (Russian) *Serdica* 5 (1979), no. 1, 83-96. (J. Peetre) **81a:41062** 41A65 (90C25) (with Din' Zung) Inequalities for derivatives in the metric of \mathcal{E}_2 . (Russian. English summary) *Vestnik Moskov. Univ. Ser. I Mat. Meh.* 1979, no. 5, 7-11, 86. (A. Lupas) **81i:42017** 42B10 (26D10)
- See also **Ekeland, Ivar**; et al., **81i:49002**
- Thion, Anne** Un traité astronomique chypriote du XIVe siècle. II. *Janus* 66 (1979), no. 1-3, 49-81. (Author's introduction) **81i:01013** 01A30 (01A35)
- Thionenko, M. Ja.** (with Didenko, V. D.) The approximate solution of a matrix Riemann problem. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1980, no. 1, 16-19. (S. A. Terzenov) **81i:30050** 30E25
- Thionenko, M. Ja.** Approximate methods in the theory of boundary value problems with shift. (Russian) *Teor. Funkcii Funkcional. Anal. i Priložen.* No. 33 (1980), 124-132, iv. (A. P. Soldatov) **81i:30048** 30E25 (45E05)
- Thionor, A. N.** Die Automatisierung der Verarbeitung von Beobachtungen. *Festakt und Tagung aus Anlass des 200. Geburtstages von Carl Friedrich Gauss* (Berlin, 1977), pp. 51-58, Abh. Akad. Wiss. DDR, Abt. Math. Naturwiss. Tech., 1978, 3, Akademie-Verlag, Berlin, 1978. (E. Seneta) **81g:65053** 65F35 (01A55, 15A12) (with Glasko, V. B.; Kriksin, Ju. A.) On the question of quasi-optimal choice of a regularized approximation. (Russian) *Dokl. Akad. Nauk SSSR* 248 (1979), no. 3, 531-535. (V. V. Ivanov) **81i:65024** 65H05 (65J10) (with Krasovskii, N. N.; Sobolev, S. L.) Valentin Konstantinovič Ivanov (on the occasion of his seventieth birthday). (Russian) *Uspehi Mat. Nauk* 34 (1979), no. 2(206), 229-234. (Editors) **81i:01019** 01A70
- Thionor, A. N.** Numerical mathematics and scientific and technological progress. (Russian) *Vestnik Moskov. Univ. Ser. XV Vychisl. Mat. Kibernet.* 1979, no. 4, 5-13. (A. Cimescu) **81i:00005** 00A69 (01A72, 65-XX) (with Yasil'eva, A. B.; Svešnikov, A. G.) ★Дифференциальные уравнения. (Russian) [Differential equations] Курс Высшей Математики и Математической Физики [Course in Higher Mathematics and Mathematical Physics], 7. "Nauka", Moscow, 1980, 232 pp. (From the preface) **81i:34005** 34-01 (with Bicadze, A. V.; Il'in, V. A.; Svešnikov, A. G.; Arsen'ev, A. A.) Academician Aleksandr Andreevič Samarskii (on the occasion of his sixtieth birthday). (Russian) *Uspehi Mat. Nauk* 35 (1980), no. 1(211), 223-232 (1 plate). (Editors) **81i:01078** 01A70
- See also **Problems of numerical mathematics**, **81m:00019**
- Thionor, V. S.** (with Mosolov, V. E.) Determination of the transfer function of a flexible unstretchable thread in the case of three-dimensional flow around it. *Avtomatika* 1979, no. 4, 24-30, 94 (Russian); translated as *Soviet Automat. Control* 12 (1979), no. 4, 18-23. (Authors' summary) **81i:73036** 73K12 (70J99, 93C20)
- Thionor, I. F.** (with Petuhova, N. V.; Petrojan, L. A.) A hierarchical model of planning industrial production. (Russian) *Some questions of differential and integral equations and their applications*, No. 2 (Russian), pp. 86-98, 190, *Jakutsk. Gos. Univ., Yakutsk, 1977*. (Authors' summary) **81i:90018** 90A11
- Thion, É. A.** (with Levisto, A.) Comparison of regression in different subpopulations. (Russian) *Trudy Vychisl. Centra Tartu. Gos. Univ. No. 44* (1980), 45-54. (M. Riedel) **81i:62109** 62J05 (62P99)
- Tijdeman, R.** Distance sets of sequences of integers. *Proceedings, Bicentennial Congress Wiskundig Genootschap (Vrije Univ., Amsterdam, 1978), Part II*, pp. 405-415, *Math. Centre Tracts*, 101, Math. Centrum, Amsterdam, 1979. (M. Mendès France) **81i:10050** 10L99 (05B10, 10L10)
- Tijdeman, R.** Exponential Diophantine equations. *Proceedings of the International Congress of Mathematicians (Helsinki, 1978)*, pp. 381-387, *Acad. Sci. Fennica, Helsinki, 1980*. (T. N. Shorey) **81i:10035** 10B25 (with Wagner, Gerold) A sequence has almost nowhere small discrepancy. *Monatsh. Math.* 90 (1980), no. 4, 315-329. (Henri Faure) **81i:10100** 10K30 (10K05)
- Tijms, H. C.** (with Federgruen, Awi; Hordijk, Arie) Denumerable state semi-Markov decision processes with unbounded costs, average cost criterion. *Stochastic Process. Appl.* 9 (1979), no. 2, 223-235. (S. K. Srinivasan) **81i:90150** 90C40 (with Federgruen, Awi) Computation of the stationary distribution of the queue size in an M/G/1 queueing system with variable service rate. *J. Appl. Probab.* 17 (1980), no. 2, 515-522. (Jacqueline Loris-Teghem) **81i:60115** 60K25 (90B22)
- Tijs, S. H.** e-equilibrium points theorems for two-person games. *First Symposium on Operations Research (Univ. Heidelberg, Heidelberg, 1976), Teil 2*, pp. 755-766, *Operations Research Verfahren, XXVII*, Hain, Meisenheim, 1977. (G. Owen) **81i:90159** 90D05 (with Vrieze, O. J.) Perturbation theory for games in normal form and stochastic games. *J. Optim. Theory Appl.* 30 (1980), no. 4, 549-567. (Tamer Başar) **81i:90089** 90D05 (93E05)
- Tikhar, V. G.** (with Rangaswamy, S. V.; Chakrapani, N.) A computational algorithm for the verification of tautologies in propositional calculus. *J. Indian Inst. Sci.* 62 (1980), no. 3, 71-81. (Authors' summary) **81i:68131** 68G15 (03B05, 03B35) (with Seshan, C. R.) On Sharma-Swarup algorithm for time minimising transportation problems. *Proc. Indian Acad. Sci. Sect. A Math. Sci.* 89 (1980), no. 2, 101-102. (Authors' summary) **81i:90081** 90B35 (90C08)
- Tikhonov, V. S.** See **Thionor, V. S.**
- Tikoo, M. L.** (with Naipally, S. A.) On T_1 -compactifications. *Pacific J. Math.* 84 (1979), no. 1, 183-190. (Aleksander Blaszczyk) **81i:54024** 54D35 (54E05)
- Tikovsky, H.-D.** (with Jürgensen, Helmut) Abgeschwächte Observabilitätsbegriffe für stochastische Automaten. *Kybernetika (Prague)* 15 (1979), no. 5, 388-397. (Ernst-Erich Doberkat) **81i:68046** 68D25
- van Tilborg, H. C. A.** (with Solomon, G.) A connection between block and convolutional codes. *SIAM J. Appl. Math.* 37 (1979), no. 2, 358-369. (Philippe Piret) **81i:94037** 94B10 (94B05)
- Tilmesov, S. T.** (with Kazyhanov, H. R.) Kinematic analysis of mechanisms of higher classes by means of graph theory. (Russian) *Collection of questions on mechanics and applied mathematics* (Russian), pp. 81-89, *Kazakh. Gos. Univ., Alma-Ata, 1978*. (V. Topenčarov) **81i:70004** 70B15
- Tiller, John A.** Component subcategories. *Questiones Math.* 4 (1980/81), no. 1, 19-40. (H. Herrlich) **81i:18001** 18A32 (54B30, 54D05)
- Timan, A. F.** (with Strukov, L. I.) Sharpening and generalization of some theorems of approximation by polynomials of S. N. Bernstein. (Russian) *The theory of the approximation of functions* (Proc. Internat. Conf., Kaluga, 1975) (Russian), pp. 338-341, "Nauka", Moscow, 1977. (Wiesław Pleśniak) **81i:41003** 41A10 (41A17)
- Timan, M. F.** (with Natanson, G. I.) The geometric means of the sequence of best approximations. (Russian. English summary) *Vestnik Leningrad. Univ. Mat. Mek. Astronom.* 1979, vyp. 4, 50-52, 123. (V. N. Malozemov) **81i:42003** 42A05 (42A10)

- Timoch, W.** (with Länger, Helmut) The evolution of a population for a certain viability system. (German summary) *Z. Angew. Math. Phys.* 31 (1980), no. 4, 538–541. (Susan Wilson) **81k:92031** 92A10
- Timmer, Joachim** (with Kühnau, Reiner) Asymptotische Koeffizientenabschätzungen für die quasikonform fortsetzbaren Abbildungen der Klasse S bzw. S^* . *Math. Nachr.* 91 (1979), 357–362. (Matti Lehtinen) **81k:30019** 30C60
- Timmer, G. T.** (with Boender, C. G. E.; Rinnooy Kan, A. H. G.; Stougie, L.) Global optimization: a stochastic approach. *Numerical techniques for stochastic systems* (Conf., Gargano, 1979), pp. 387–394, North-Holland, Amsterdam, 1980. (Authors' introduction) **81k:90107** 90C15
- Timmermann, B.** (with Timmermann, W.) Über einige Topologien auf der Algebra der CCR (endlich viele Freiheitsgrade). *Wiss. Z. Karl-Marx-Universität Leipzig Math.-Natur. Reihe* 27 (1978), no. 3, 287–292. (B. Fische) **81k:47060** 47D40
- Timmermann, W.** (with Timmermann, B.) Über einige Topologien auf der Algebra der CCR (endlich viele Freiheitsgrade). *Wiss. Z. Karl-Marx-Universität Leipzig Math.-Natur. Reihe* 27 (1978), no. 3, 287–292. (B. Fische) **81k:47060** 47D40
- On an ideal in algebras of unbounded operators. *Math. Nachr.* 91 (1979), 347–355. (S. Kantorovitz) **81k:47061a** 47D40
- Ideals in algebras of unbounded operators. *Math. Nachr.* 92 (1979), 99–110. (S. Kantorovitz) **81k:47061b** 47D40
- Ideals in algebras of unbounded operators. II. *Math. Nachr.* 93 (1979), 313–318. (S. Kantorovitz) **81k:47061c** 47D40
- Timmesfeld, Franz** Finite simple groups in which the generalized Fitting group of the centralizer of some involution is extraspecial. *Ann. of Math.* (2) 107 (1978), no. 2, 297–369. (George Glauberman) **81i:20016a** 20D05
- Correction to: "Finite simple groups in which the generalized Fitting group of the centralizer of some involution is extraspecial". *Ann. of Math.* (2) 109 (1979), no. 2, 413–414. (George Glauberman) **81i:20016b** 20D05
- Timmer, Jerry** Representation of series in the space E^n . (Polish. Russian and English summaries) *Zeszyty Nauk. Politech. Śląsk. Mat.-Fiz. No. 30* (1979), 289–293. (T. Ślali) **81k:40003** 40A05
- The proof for a theorem presented by Dvoretzky and Hanani. (Polish. Russian and English summaries) *Zeszyty Nauk. Politech. Śląsk. Mat.-Fiz. No. 30* (1979), 295–300. (T. Ślali) **81k:40005** 40A99
- Timofeev, G. V.** Automorphisms of free groupoids of certain R' -varieties. (Russian) *Modern algebra* (Russian), pp. 129–143, Leningrad. Gos. Ped. Inst., Leningrad, 1980. (V. A. Artamonov) **81m:20094** 20N99
- Timofeev, A. A.** Some numerical characteristics of the modular product of graphs. (Russian) *Vysisl. Sistemy No. 77* (1978), 38–41, 115. (Author's summary) **81a:05051** 05C15
- Timofeev, A. V.** (with Malyšev, V. A.) Algorithms for construction of programmed manipulator motions with consideration of constructional constraints and obstacles. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* 1978, no. 6, 64–72 (Russian); translated as *Engng. Cybernetics* 16 (1978), no. 6, 46–53. (Authors' summary) **81i:68131** 68G99 (68J05)
- (with Samarskii, V. G.) Optimal multistep finitely converging algorithms for solution of systems of target inequalities and their application. (Russian) *Mathematical methods of solution of economic problems*, No. 8 (Russian), pp. 82–95, "Nauka", Moscow, 1979. (B. T. Poljak) **81i:90179** 90C30
- Adaptive stabilization of programmed motion and the estimation of adaptation time. (Russian) *Dokl. Akad. Nauk SSSR* 248 (1979), no. 3, 545–549. (Ju. A. Nikolaev) **81k:93069** 93D99
- Timofeev, G. N.** Conformal mappings of a product space. (Russian) *Modern geometry* (Russian), pp. 114–122, Leningrad. Gos. Ped. Inst., Leningrad, 1978. (Valentin Boju) **81k:53016** 53A30
- Timofeev, Ju. A.** (with Bogaenko, I. N.) Solution of a nonlinear boundary value problem for elliptic equations. II. (Russian) *Differentsial'nye Uravnenija* 15 (1979), no. 12, 2263–2265, 2302. (M. A. Atahodžev) **81c:35050** 35J65
- (with Lakusta, K. V.) Estimating the range of applicability of the hyperbolic thermal conductivity equation. *Int.-Fed. Z.* 37 (1979), no. 2, 366–370 (Russian); translated as *J. Engng. Phys.* 37 (1979), no. 2, 966–1000 (1980). (W. F. Ames) **81g:35085** 35L80 (35K05, 80A20)
- An approximate method for calculating temperature fields of piecewise homogeneous bodies. (Russian) *Differentsial'nye Uravnenija* 16 (1980), no. 8, 1492–1503, 1534. (B. Vujanović) **81j:80004** 80A20 (65P05)
- Timofeev, V. V.** (with Sidorov, I. M.) Analysis of nonlinear automatic control systems in a resonance region. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* 1979, no. 3, 175–183, 223 (Russian); translated as *Engng. Cybernetics* 17 (1979), no. 3, 128–135 (1980). (Authors' summary) **81g:93047** 93C10 (70K30)
- Timofeev, Yu. A.** See **Timofeev, Ju. A.**
- Timofeeva, T. S.** (with Babe, G. D.; Vasil'ev, V. I.; Kanibolotskii, M. A.) A difference method for solving the problem of non-steady-state isothermic gas filtration. (Russian) *Methods in continuum mechanics* (Russian), pp. 50–58, 124, *Akad. Nauk SSSR Sibirsk. Otdel. Jakutsk. Filial, Yakutsk*, 1977. (Jaroslav Jelen) **81k:76068** 76S05
- Timofeevskaja, O. D.** (with Krivčenko, I. V.) Solution of the Schrödinger equation by unitary iterations. (Russian. English summary) *Teoret. Mat. Fiz.* 41 (1979), no. 2, 256–272. (I. Ju. Krivčik) **81a:81022** 81C05
- Timofeyev, A. V.** See **Timofeev, A. V.**
- Timofeyev, V. V.** See **Timofeev, V. V.**
- Timoshin, V. L.** Nagata spaces and wM -spaces. (Russian) *Vestnik Beloruss. Gos. Univ. Ser. I* 1978, no. 3, 12–14, 86. (Author's summary) **81h:54035** 54E35
- Timoney, Richard M.** An example of a Bloch function. *Internat. J. Math. Math. Sci.* 2 (1979), no. 1, 147–150. (P. L. Duren) **81b:30068** 30D55
- Timur, U.** Improved decoding scheme for frequency-hopped multilevel FSK system. *Bell System Tech. J.* 59 (1980), no. 10, 1839–1855. (Author's summary) **81k:94012** 94A14 (94B35)
- Timonin, T. G.** (with Mirzozhmedov, F.) An approach to the solution of the problem of control of the operation of a single reservoir. (Russian) *Stochastic optimization models. Akad. Nauk Ukrain. SSR Inst. Kibernet. Preprint* 1979, no. 13, 45–51, 55. (Authors' summary) **81k:90035** 90A30 (90C15)
- Timonienko, V. V.** Three-webs over an algebra whose curvature is a zero divisor. (Russian) *Ukrain. Geom. Sb. No. 20* (1977), 102–114, 4. (R. M. Geidel'man) **81f:53013** 53A60
- Three-webs over some classes of commutative associative algebras. (Russian) *Geometry of imbedded manifolds* (Russian), pp. 104–111, *Moskov. Gos. Ped. Inst., Moscow*, 1978. (V. Cruceanu) **81f:53022** 53A60 (16A36, 53C10)
- Tin, Pyke** (with Phatarfod, Ravindra M.) On the first emptiness time of an infinite dam. *Oper. Res.* 16 (1979), no. 4, 136–142. (Neil S. Barnett) **81i:60176** 60K30
- Tind, Jergen** Certain kinds of polar sets and their relation to mathematical programming. *Survey of mathematical programming* (Proc. Ninth Internat. Math. Programming Sympos., Budapest, 1976), Vol. 1, pp. 321–328, North-Holland, Amsterdam, 1979. (K. Zimmermann) **81h:52002** 52A20 (90C30)
- On duality in non-convex and integer programming. *Third Symposium on Operations Research* (Univ. Mannheim, Mannheim, 1978), Section 2, pp. 193–201, *Operations Research Verfahren*, 32, Hain, Meisenheim, 1979. (See **80d:90004b**) 90C10
- Tindell, Ralph** (with Dostal, Milos) The Jordan curve theorem revisited. *Jahresber. Deutsch. Math. Verein.* 80 (1978), no. 3, 111–128. (David C. Kay) **81d:55007** 55M99 (30A99, 54D99, 54F50)
- Covering digraphs and structured program schemes. *Topics in graph theory* (New York, 1977), pp. 201–208, *Ann. New York Acad. Sci.*, 328, New York Acad. Sci., New York, 1979. (Author's summary) **81a:68019** 68B10 (05C20)
- (with Bloom, Stephen L.) Algebraic and graph-theoretic characterizations of structured flowchart schemes. *Theoret. Comput. Sci.* 9 (1979), no. 3, 265–286. (Richard A. DeMillo) **81e:68006** 68B05 (68E10)
- Ting, Benjamin S.** (with Kuh, Ernest S.; Sangiovanni-Vincentelli, Alberto) Via assignment problem in multilayer printed circuit board. *IEEE Trans. Circuits and Systems* 26 (1979), no. 4, 261–272. (O. D'Antona) **81a:94068** 94C15 (68C25)
- Ting, D. W.** (with Coffman, E. G., Jr.; Leung, Joseph Y.-T.) Bin packing: maximizing the number of pieces packed. *Acta Inform.* 9 (1977/78), no. 3, 263–271. (Authors' summary) **81e:68032** 68C05 (90B05)
- Ting, T. C. T.** Further study on one-dimensional shock waves in nonlinear elastic media. *Quart. Appl. Math.* 37 (1979/80), no. 4, 421–429. (G. Eason) **81h:73010** 73D05 (35L67)
- The effects of dispersion and dissipation on wave propagation in viscoelastic layered composites. *Internat. J. Solids and Structures* 16 (1980), no. 10, 903–911. (Author's summary) **81g:73054** 73F15 (73D25, 73K20)
- Wave propagation in periodically layered media. *Transactions of the Twenty-Sixth Conference of Army Mathematicians* (Hanover, N.H., 1980), pp. 371–388, *ARO Rep.* 81, 1, U. S. Army Res. Office, Research Triangle Park, N.C., 1981. (See **81m:90000**) 73D99
- Ting, Tsuan Wu** The repeated loading-unloading processes of elastic-plastic torsion of solid bars. *Ann. Mat. Pura Appl.* (4) 119 (1979), 333–378. (Vladimir Kerchman) **81a:73023** 73E99 (35J99, 49A29, 73K05)
- Elastic-plastic torsional rigidities over multiply-connected domains. (Italian summary) *Rend. Mat.* (6) 12 (1979), no. 3–4, 537–556 (1980). (R. D. Bhargava) **81k:73025** 73E99
- Ting, Wei Lung** On nontrivial characteristic classes of contact foliations. *Proc. Amer. Math. Soc.* 75 (1979), no. 1, 131–138. (Author's summary) **81f:57027** 57R30 (57R20)
- Tin'kov, L. A.** (with Berzilevič, E. Ju.; Pavlenko, M. I.) Optimal servicing of systems with dependent elements. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* 1979, no. 3, 80–85, 220 (Russian); translated as *Engng. Cybernetics* 17 (1979), no. 3, 56–61 (1980). (Authors' summary) **81h:90064** 90B25 (90B22)
- Tomio, J.** (with Bollini, C. G.; Giambiagi, J. J.) Singular potentials and analytic regularization in classical Yang-Mills equations. *J. Math. Phys.* 20 (1979), no. 9, 1967–1971. (Martin Costabel) **81a:81048** 81E10 (35Q20)
- (with Bollini, C. G.; Giambiagi, J. J.) Hidden singularities in nonabelian gauge fields. (Italian and Russian summaries) *Nuovo Cimento A* (11) 55 (1980), no. 1, 91–100. (Authors' summary) **81d:81070** 81E99 (58E20)
- Tip, A.** (with Grossmann, A.) Hydrogen atoms interacting with a quantized radiation mode. *J. Phys. A* 13 (1980), no. 11, 3381–3397. (Authors' summary) **81i:81022** 81C10 (81K05)
- Tipler, Frank J.** Energy conditions and space-time singularities. *Gen. Relativity Gravitation* 10 (1979), no. 12, 985–986. (Nicholas M. J. Woodhouse) **81a:83026** 83C99
- The growth of curvature near a space-time singularity. *Gen. Relativity Gravitation* 10 (1979), no. 12, 1005–1006. (Nicholas M. J. Woodhouse) **81a:83027** 83C99
- Tipplitz, Charles** Comments on: "Optimal jury selection: a game-theoretic model for the exercise of peremptory challenges" [Oper. Res. 26 (1978), no. 6, 966–991; MR 80a:90161] by Steven J. Brams and Morton D. Davis. With a reply by Brams and Davis. *Oper. Res.* 28 (1980), no. 4, 1022–1025. (J. Moulen) **81k:90120** 90D45
- Tippenhauer, Ulrich** Eine Projektionsmethode für das biharmonische Problem. (English summary) *Multivariate approximation theory* (Proc. Conf., Math. Res. Inst., Oberwolfach, 1979), pp. 436–455, *Internat. Ser. Numer. Math.*, 51, Birkhäuser, Basel, 1979. (Author's summary) **81a:65111** 65N35
- Approximation von Operatorgleichungen mit Reprokernen. (English summary) *Applicable Anal.* 9 (1979), no. 3, 179–189. (Klaus Kalb) **81d:47007** 47A50 (65J10)
- Tiras, Juan Alfredo** Antipodal manifolds in compact symmetric spaces of rank one. *Proc. Amer. Math. Soc.* 72 (1978), no. 1, 143–149. (Author's summary) **81h:53052** 53C35
- Tirapegui, E.** (with Langouche, F.; Roekaerts, D.) WKB-type expansion for Langevin equations. *Phys. A* 101 (1980), no. 2–3, 301–323. (Authors' summary) **81d:82005** 82A05 (58G32, 60J70, 81C35)
- (with Langouche, F.; Roekaerts, D.) Comment on functional integration and the Onsager-Machlup Lagrangian in Riemannian geometries. *Phys. Rev. A* (3) 21 (1980), no. 4, 1344–1346. (Authors' summary) **81h:81031** 81C35 (58D20, 82A35)
- (with Brachet, M. E.) On the critical behaviour of the Schögl model. *Phys. Lett. A* 81 (1981), no. 4, 211–214. (Authors' summary) **81m:80013** 80A30 (82A25)
- Trasupa, Yupporn** Weakly factorizable inverse semigroups. *Semigroup Forum* 18 (1979), no. 4, 283–291. (John W. Hogan) **81i:20120** 20M10
- Tironi, G.** (with Isler, R.) Cardinal dependent closures in topological spaces. *Topology* (Proc. Fourth Colloq., Budapest, 1978), Vol. II, pp. 663–669, *Colloq. Math. Soc. János Bolyai*, 23, North-Holland, Amsterdam, 1980. (Richard Wilson) **81m:54005** 54A05
- Tirozzi, Brunello** (with Campanino, Massimo; Capocaccia, D.) The local central limit

- theorem for a Gibbs random field. *Comm. Math. Phys.* **70** (1979), no. 2, 125–132. (J. Fritz) **81c:60105** 60K35 (60G60, 82A05)
- (with Campanino, Massimo; Del Grosso, Gabriella) Local limit theorem for Gibbs random fields of particles and unbounded spins. *J. Math. Phys.* **20** (1979), no. 8, 1752–1758. (Richard S. Ellis) **81c:82003** 82A05 (60K35)
- Tiňakova, R. S.** Some properties of the space $BV_p^+(D)$. (Russian) *Izv. Severo-Kavkaz. Nauch. Centra Vysš. Školy Ser. Estestv. Nauk.* **1979**, no. 2, 8–13, 109. (Ju. K. Dem'janovič) **81i:46040** 46E35
- Nonnegativity of generalized solutions of the first and third boundary value problems for elliptic systems of differential equations. (Russian) *Izv. Severo-Kavkaz. Nauch. Centra Vysš. Školy Ser. Estestv. Nauk.* **1980**, no. 1, 24–26, 108. (V. Lakshmikantham) **81i:35070** 35K10 (35J45)
- Tičenko, A. V.** The finiteness of a base of identities for five-element monoids. *Semigroup Forum* **20** (1980), no. 2, 171–186. (Sheila Oates-Williams) **81f:20075** 20M07 (08B99)
- Tischer, Jürgen** A note on the Radon-Nikodým theorem of Pedersen and Takesaki. *Acta Sci. Math. (Szeged)* **41** (1979), no. 3–4, 411–418. (Richard I. Loeb) **81g:46084** 46L10
- Tičchenko, A. V.** See **Tičenko, A. V.**
- Tiĭla, Ju. V.** Linearity of generalized free products of abelian linear groups. (Russian. English summary) *Dokl. Akad. Nauk BSSR* **24** (1980), no. 1, 7–10, 91. (Ju. I. Merzjakov) **81c:20059** 20K25 (20E06, 20F29)
- Normal subgroups of generalized free products satisfying a nontrivial identity. (Russian. English summary) *Dokl. Akad. Nauk BSSR* **24** (1980), no. 7, 581–584, 667. (N. G. Šahova) **81i:20028** 20E06
- Tičkin, V. F.** (with Koršija, T. K.; Favorskii, A. P.; Šalkov, M. Ju.) A variational approach to the construction of difference schemes for equations of diffusion of an electromagnetic field. (Russian. English summary) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 179* (1979), 30 pp. (Authors' summary) **81a:78006** 78A25 (65P05)
- (with Gasilov, V. A.; Golovizin, V. M.; Taran, M. D.; Favorskii, A. P.; Šalkov, M. Ju.) Numerical simulations of the Rayleigh-Taylor instability in an incompressible fluid. (Russian. English summary) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 70* (1979), 61 pp. (Ilija Lukačević) **81i:76033** 76E25 (65C20)
- (with Koršija, T. K.; Favorskii, A. P.; Šalkov, M. Ju.) Difference schemes for equations of electromagnetic field diffusion with an anisotropic conductivity coefficient. (Russian. English summary) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 4* (1980), 16 pp. (Authors' summary) **81a:78007** 78A25 (65P05)
- (with Koršija, T. K.; Favorskii, A. P.; Šalkov, M. Ju.) A variational approach to the construction of difference schemes on curvilinear grids for the heat equation. (Russian) *Ž. Vychisl. Mat. i Mat. Fiz.* **20** (1980), no. 2, 401–421, 551. (G. I. Sulhanisvili) **81i:65113** 65N10
- Tijā, Nicolae** On A - p -summing operators. (Italian summary) *Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur.* (8) **65** (1978), no. 1–2, 1–4 (1979). (A. Pietsch) **81c:47026** 47B10
- Operators of A - ϕ type. (Italian summary) *Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur.* (8) **65** (1978), no. 3–4, 97–99 (1979). (A. Pietsch) **81c:47027** 47B10 (47D30)
- On some classes of operators. (Romanian. French summary) *Bul. Univ. Braşov Ser. C* **20** (1978), 151–156. (Author's summary) **81c:47022** 47B10
- Some operator ideals stable to the tensor product. *Proceedings of the International Symposium on Applications of Mathematics in System Theory (Unio. Braşov, Braşov, 1978)*, II, pp. 325–327. *Unio. Braşov, Braşov, 1979.* (A. Pietsch) **81m:47063** 47D30
- l_p operators and (Φ, ψ) -spaces. *Collect. Math.* **30** (1979), no. 1, 3–10. (Bernard Rosenberger) **81f:47027** 47B10 (46A12)
- Titchmarsh, E. C.** See **Hardy, Godfrey Harold**, **81c:91028**
- Titchcomb, T.** (with Herrlich, Horst; Nakagawa, R.; Strecker, George E.) Equivalence of topologically-algebraic and semitopological functions. *Canad. J. Math.* **32** (1980), no. 1, 34–39. (Hans-E. Porst) **81f:18006** 18A99 (18D99, 54B30, 55U40)
- Tjefica, Gh.** See **Rimer, David**, **81k:91044**
- Titel, Robert J.** On self-sustenance in systems of epistemic logic. *Notre Dame J. Formal Logic* **21** (1980), no. 3, 585–590. (Scott K. Lehmann) **81i:03046** 03B45
- Titi, André** (with Singh, Madan G.) Large scale stochastic systems: identification, estimation and control. *Handbook of large scale systems engineering applications*, pp. 167–179. North-Holland, Amsterdam, 1979. (Jerry M. Mendel) **81i:93031** 93E10 (93E12, 93E20)
- See also **Handbook: Large scale systems engineering applications**, **81d:93004**
- Tivov, V. A.** (with Šilkin, G. I.) Numerical solution of the Cauchy problem for an ordinary differential equation with a small parameter multiplying the derivative. (Russian) *Čisl. Metody Meh. Splōin. Sredy* **9** (1978), no. 7 *Vjazkaja Židkost'*, 112–121. (E. S. Čičkin) **81g:65103** 65L05
- Titova, T. N.** Derivatives of vector-valued measures. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* **1979**, no. 6, 58–65. (Alan Shuchat) **81d:28009** 28B05
- Tits, J.** (with Curtis, Charles W.; Lehrer, G. I.) Spherical buildings and the character of the Steinberg representation. *Invent. Math.* **58** (1980), no. 3, 201–210. (Wim H. Hesselink) **81f:20060** 20C40
- van Tits, Martien** (with van der Veeken, Henk) Simulation of a queueing problem with balking. *Simulation* **35** (1980), no. 3, 88–93. (Authors' summary) **81h:90063** 90B22 (68J05)
- Titterton, D. M.** Aspects of optimal design in dynamic systems. *Technometrics* **22** (1980), no. 3, 287–299. (J. Kiefer) **81i:62132** 62K05
- Titulaer, U. M.** The Chapman-Enskog procedure as a form of degenerate perturbation theory. *Phys. A* **100** (1980), no. 2, 234–250. (Carlo Cercignani) **81c:82032** 82A40 (47A55)
- Corrections to the Smoluchowski equation in the presence of hydrodynamic interactions. *Phys. A* **100** (1980), no. 2, 251–265. (Author's summary) **81d:82042** 82A42
- Thurny, Jerzy** Fixed points and algebras with infinitely long expressions. II. μ -clones of regular algebras. *Fund. Inform.* (4) **2** (1978/79), no. 3, 317–335. (Author's summary) **81c:08007** 08A40 (68B10)
- (with Bergstra, Jan) Implicit definability of algebraic structures by means of program properties (extended abstract). *Fundamentals of computation theory (Proc. Conf. Algebraic, Arith. and Categorical Methods in Comput. Theory,*
- Berlin/Wendisch-Rietz, 1979)*, pp. 58–63. *Math. Research*, 2, Akademie-Verlag, Berlin, 1979. (From the text) **81d:03048** 03D80 (03B50, 68C99)
- Continuity problems in the power-set algebra of infinite trees. *Les arbres en algèbre et en programmation (4ème Colloq., Lille, 1979)*, pp. 241–260. *Univ. Lille I, Lille, 1979.* (Irène Guessarian) **81c:68053** 68E10 (02G05, 06B30, 68B10)
- Tivončuk, V. I.** Solution of Volterra linear integral equations by the method of averaging functional corrections in combination with splines. (Russian) *Ukrain. Mat. Ž.* **32** (1980), no. 3, 415–422. (Gheorghe Micula) **81g:65185** 65R20
- Tiwari, A. K.** On a generalized Stieltjes transform of a class of generalized functions. *J. Maulana Azad College Tech.* **11** (1978), 57–64. (J. N. Pandey) **81c:44011** 44A15
- A distributional generalized Stieltjes transformation. *Indian J. Pure Appl. Math.* **11** (1980), no. 8, 1045–1054. (Ram Kishore Saxena) **81j:46065** 46F12 (44A15)
- Tiwari, R. K.** (with Khatwani, K. J.; Bajwa, J. S.) On Chuang's continued fraction method of model reduction. *IEEE Trans. Automat. Control* **25** (1980), no. 4, 822–824. (Authors' summary) **81h:93056** 93C45
- Tiwari, R. N.** (with Rao, P. P.; Rao, J. R.) A class of stationary Brans-Dicke vacuum fields. *Indian J. Pure Appl. Math.* **10** (1979), no. 9, 1140–1145. (Alan Barnes) **81c:83036** 83D05
- Tiwari, U. N.** (with Pandey, Jagdish N.) The Stieltjes transform of distributions. *Internat. J. Math. Math. Sci.* **2** (1979), no. 3, 441–458. (E. R. Love) **81f:44012** 44A15 (46F12)
- (with Pandey, Jagdish N.) The Mehler-Fock transform of distributions. *Rocky Mountain J. Math.* **10** (1980), no. 2, 401–408. (R. S. Pathak) **81m:46058** 46F12 (44A15)
- Tiwary, A. K.** (with Kumar, Awadhesh) On endomorphism ring of a pseudoprojective module. *Ann. Fac. Sci. Univ. Nat. Zaira (Kinshasa) Sect. Math.-Phys.* **4** (1978), no. 1, 67–73. (Authors' summary) **81c:16016** 16A50
- (with Bhargadwaj, P. C.) Direct projective modules. *Bull. Inst. Math. Acad. Sinica* **7** (1979), no. 4, 349–355. (J. Jirásko) **81g:16031** 16A50
- Semenov-Tjan-Schanskii, M. A.** See **Semenov-Tjan-Schanskii, M. A.**
- Tjotjinkin, A. I.** (with Matrosov, V. M.; Vasil'ev, S. N.; Divakov, O. G.) On technology of modelling and optimization of complex systems. *Modelling and optimization of complex systems (Proc. IFIP-TC 7 Working Group, Nicosia, 1978)*, pp. 220–239. *Lecture Notes in Control and Information Sci.*, 18, Springer, Berlin, 1979. (P. Bertrand) **81c:93011** 93A10
- Tjufin, Y. S.** (with Davies, M. E.; Abalakin, V. K.; Cross, C. A.; Duncombe, R. L.; Masursky, H.; Morando, B.; Owen, T. C.; Seidelmann, P. K.; Sinclair, A. T.; Wilkins, G. A.) Report of the IAU Working Group on Cartographic Coordinates and Rotational Elements of the Planets and Satellites. *Celestial Mech.* **22** (1980), no. 3, 205–230. (Authors' summary) **81i:70009** 70F15
- Tjakovski, S.** See **Toukolsky, Saul A.**
- Tjurin, A. N.** Generalization of the Weierstrass P -function and the moduli variety of marked Riemann surfaces. (Russian) *Izv. Akad. Nauk SSSR Ser. Mat.* **42** (1978), no. 5, 1151–1161, 1184. (J. Čizmar) **81i:14015** 14H15 (30F30, 32G15)
- Periods of quadratic differentials. (Russian) *Uspehi Mat. Nauk* **33** (1978), no. 6(204), 149–195, 272. (J. Čizmar) **81i:14009** 14F05 (14H10, 30F30)
- The intermediate Jacobian of three-dimensional varieties. (Russian) *Current problems in mathematics, Vol. 12* (Russian), pp. 5–57, 239 (loose errata), VINITI, Moscow, 1979. (Miles Reid) **81i:14026a** 14J30
- Tjurin, Ju. N.** (with Jah'ja, A. Ju.) Confidence estimation of order on the basis of ranks. (Russian) *Expert estimates. Voprosy Kibernet. (Moscow)* No. 58 (1979), 66–72. (Authors' summary) **81i:62064** 62G15 (62J15)
- See also **Expert estimates**, **81i:50001**
- Tjurin, N. E.** (with Edneral, V. F.; Trošin, S. M.) Expansion of scattering amplitude at large momentum transfer. (Russian. English summary) *Teoret. Mat. Fiz.* **44** (1980), no. 1, 138–143. (Authors' summary) **81i:81123** 81F20 (35B40, 41A60)
- Tjurin, V. M.** Invertibility of linear differential operators with almost periodic coefficients in some function spaces. (Russian) *Approximate methods for investigating differential equations and their applications*, No. 4 (Russian), pp. 102–106, 138, Kuibyshev. Gos. Univ., Kuibyshev, 1978. (P. P. Zabreiko) **81k:34021** 34B99 (47B38)
- Tjurnop, H.** See **Tjurnop, H.**
- Tjutekin, V. V.** (with Ukolov, A. T.; Fedorjuk, M. V.) Active quenching of electromagnetic waves. *Radioelektr. i Elektron.* **24** (1979), no. 10, 1982–1988 (Russian); translated as *Radio Engng. Electron. Phys.* **24** (1979), no. 10, 27–32 (1980). (Authors' summary) **81g:78020** 78A40 (78A50)
- Tjutjukin, G. V.** (with Leonov, M. Ja.; Gol'denshtejn, S. V.) Longitudinal-lateral bending of an elastoplastic rod. (Russian) *Izv. Akad. Nauk Kirgiz. SSR* **1979**, no. 3, 3–9, 106. (I. L. Nowinski) **81c:73026** 73E99 (73K05)
- Tkač, V. I.** (with Geršun, V. D.) Spontaneous violation of expanded super-symmetry. (Russian. English summary) *Ukrain. Fiz. Ž.* **25** (1980), no. 1, 36–40, 167. (H. S. Green) **81c:81025** 81D20 (22E70, 83D05)
- Tkačenko, Ju. T.** Maximal sets of integers that do not contain an arithmetic progression of length 3 on $[0; 3^n - 1]$. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* **1979**, no. 11, 65–68. (András Sárközy) **81i:10092** 10L20 (10H20)
- Tkačenko, M. G.** Continuous images of dense subspaces of topological products. (Russian) *Uspehi Mat. Nauk* **34** (1979), no. 6(210), 199–202. (V. V. Miškin) **81i:54010** 54A25 (54B10)
- On π -bases of rank 1 in infinite Cartesian products. (Russian. English summary) *Vestnik Moskov. Univ. Ser. I Mat. Meh.* **1980**, no. 3, 52–55, 108. (Z. Balogh) **81h:54006** 54A25 (54B10)
- Tkačenko, V. A.** Solvability of an inhomogeneous equation of convolution type in spaces of analytic functionals. (Russian) *Studies in the theory of operators and their applications* (Russian), pp. 123–128, 178, "Naukova Dumka", Kiev, 1979. (Editors) **81c:46046** 46F15 (47B38)
- Spectral expansions in spaces of analytic functionals. (Russian) *Izv. Akad. Nauk SSSR Ser. Mat.* **43** (1979), no. 3, 654–713, 735. (S. V. Hruščev) **81g:47021** 47A70 (30H05, 46E15, 46F99, 47E05)
- The transformation operator in spaces of entire functions. (Russian) *Sibirsk. Mat. Ž.* **20** (1979), no. 1, 152–163, 206. (M. I. Nagnibida) **81a:30028** 30H05 (47E05)
- See also **Control of objects with distributed parameters**, **81a:93058a**
- Tkačenko, V. O.** Study of irregular waves in a fluid layer by the method of numerical

- inversion of the integral Laplace transform. (Russian) *Gidromek. (Kiev) No. 42* (1980), 3-6, 121. (Author's summary) **81h:76014** 76B15 (76D99)
- Thack, M. (with Grochulski, J.; Konik, T.) On the equivalence of certain relations of tangency of arcs in metric spaces. *Demonstratio Math.* **11** (1978), no. 2, 261-271. (Authors' introduction) **81h:54034** 54E35
- Thibault, G. E. On unconditional convergence of Haar series. *Approximation theory (Papers, Vth Semester, Stefan Banach Internat. Math. Center, Warsaw, 1975)*, pp. 261-272, Banach Center Publ., 4, PWN, Warsaw, 1979. (V. A. Skvortsov) **81h:42067** 42C10 (42C20, 46E30)
- Thienkovi, S. K. (with Erzanov, Z. S.; Zubaev, N. Z.) On the study of cylindrical waves on a cross section with viscous friction. (Russian. Kazakh summary) *Izv. Akad. Nauk Kazah. SSR Ser. Fiz.-Mat.* **1980**, no. 1, 32-37, 92. (Boris Pavlovich Belinskii and Alexander Alenicyan) **81h:73015** 73D25 (45P05)
- Tindler, C. Generalizations of some unidimensional continuous statistical distributions. (French and Russian summaries) *Econom. Comput. Econom. Cybernet. Stud. Res.* **13** (1979), no. 4, 51-58. (A. K. Agarwal) **81h:62036** 62E15
- Tonder, G. On uniformly equicontinuous dynamical systems. *Anal. Numer. Theor. Approx.* **7** (1978), no. 1, 107-112. (N. E. Folland) **81d:54034** 54H20
- On the classification of dynamical systems. *Anal. Numer. Theor. Approx.* **8** (1979), no. 1, 99-109. (Zbigniew Nitecki) **81h:58036** 58F99 (54C99, 54H20)
- huang kuok Toan See Hoang Kuok Toan
- nguyen ky Toan See Nguyen Ky Toan
- Tobin, Jeffrey M. See Language design and programming methodology, **81h:68002**
- Tobias, T. Approximation method for the solution of programming problems with operator constraints. *Eesti NSV Tead. Akad. Toimetised Füüs.-Mat.* **29** (1980), no. 1, 101-104, 111. (Valdas Pukas) **81h:90113** 90C15 (65K05)
- Tobies, Renate Zur wissenschaftsorganisatorischen Tätigkeit von Felix Klein (1849-1925) im Rahmen der Breslauer Unterrichtskommission. *NTM Schr. Geschichte Natur. Tech. Medizin* **16** (1979), no. 2, 50-63. (M. Kline) **81h:01051** 01A70
- See also Wussing, Hans, **81g:01001**
- Tobis, Dianne See Women and the mathematical mystique, **81j:00005**
- Tobis, Frank L. (with Bowman, Joel M.) An SCF-state interaction method for coupled oscillator systems. *Chem. Phys.* **47** (1980), no. 2, 151-159. (Authors' summary) **81h:81124** 81G55
- Toczyłowski, Eugeniusz Large scale steady state process simulation methods. *Simulation of systems '79 (Proc. Ninth IMACS Congress, Sorrento, 1979)*, pp. 51-57, North-Holland, Amsterdam, 1980. (Author's summary) **81m:73061** 73K40 (90C30)
- Tod, K. P. Remarks on asymptotically flat \mathcal{K} -spaces. *Complex manifold techniques in theoretical physics (Proc. Workshop, Lawrence, Kan., 1978)*, pp. 166-179, Res. Notes in Math., 32, Pitman, San Francisco, Calif., 1979. (Garry Ludwig) **81h:83018** 83C30 (53C55, 53C80)
- (with Ward, R. S.) Self-dual metrics with self-dual Killing vectors. *Proc. Roy. Soc. London Ser. A* **368** (1979), no. 1734, 411-427. (George Debnay) **81h:83011** 83C15 (53C05, 58G10)
- (with Winicour, J.) Singularities at real points of \mathcal{K} -space. *Gen. Relativity Gravitation* **12** (1980), no. 2, 99-108. (Garry Ludwig) **81h:83016** 83C30 (53C80)
- (with Newman, E. T.) A note on left-flat space-times. *J. Math. Phys.* **21** (1980), no. 4, 874-877. (Authors' summary) **81d:83021** 83C20 (53C50)
- Tod, Paul Some symplectic forms arising in twistor theory. *Rep. Math. Phys.* **11** (1977), no. 3, 339-346. (A. Crumeyrolle) **81h:83040** 83C99 (53B30, 83A05)
- Toda, Mitsuhiro (with Patel, R. V.) Bounds on estimation errors of discrete-time filters under modeling uncertainty. *Proceedings of the 1978 IEEE Conference on Decision and Control including the 17th Symposium on Adaptive Processes (San Diego, Calif., 1979)*, pp. 612-617, IEEE, New York, 1979. (Seihaku Higuchi) **81h:93004** 93E11
- (with Patel, R. V.) Algorithms for adaptive stochastic control for a class of linear systems. *J. Math. Anal. Appl.* **72** (1979), no. 1, 122-149. (S. E. Dreyfus) **81h:93086** 93E20
- (with Patel, R. V.) Bounds on estimation errors of discrete-time filters under modeling uncertainty. *IEEE Trans. Automat. Control* **25** (1980), no. 6, 1115-1121. (Authors' summary) **81h:93077** 93E11
- Todd, A. M. M. (with de Lucia, J.; Jardin, S. C.) An iterative metric method for solving the inverse tokamak equilibrium problem. *J. Comput. Phys.* **37** (1980), no. 2, 183-204. (Authors' summary) **81h:76113** 76W05 (65N10, 76E25)
- Todd, Aaron R. Coverings of products of linear topological spaces. *J. Austral. Math. Soc. Ser. A* **29** (1980), no. 3, 281-290. (T. Husain) **81h:46004** 46A15
- Todd, D. G. Multipliers of certain convolution algebras over locally compact semigroups. *Math. Proc. Cambridge Philos. Soc.* **87** (1980), no. 1, 51-59. (Charles D. Lahr) **81h:43008** 43A22
- Todd, John ★Basic Numerical Mathematics. Vol. 1. Numerical analysis. International Series of Numerical Mathematics, 14. Birkhäuser Verlag, Basel-Stuttgart, 1979. 253 pp. ISBN 3-7643-0729-3 (A. S. Householder) **81h:65001** 65-02
- Todd, Michael J. Hamiltonian triangulations of R^n . *Functional differential equations and approximation of fixed points (Proc. Summer School and Conf., Univ. Bonn, Bonn, 1978)*, pp. 470-483, *Lecture Notes in Math.*, 730, Springer, Berlin, 1979. (Ramesh Saigal) **81h:57018** 57Q15 (55M20)
- (with Acar, Robert C.) A note on optimally dissecting simplices. *Math. Oper. Res.* **5** (1980), no. 1, 63-66. (Authors' summary) **81h:57013** 57Q15 (58C15, 90C30)
- Traversing large pieces of linearity in algorithms that solve equations by following piecewise-linear paths. *Math. Oper. Res.* **5** (1980), no. 2, 242-257. (Kurt Georg) **81h:90131** 90C30 (55M20, 65H05)
- A quadratically convergent fixed-point algorithm for economic equilibria and linearly constrained optimization. *Math. Programming* **18** (1980), no. 2, 111-126. (Henry Wolkowicz) **81h:90132** 90C30 (55M20, 90A14)
- Exploiting structure in piecewise-linear homotopy algorithms for solving equations. *Math. Programming* **18** (1980), no. 3, 233-247. (Ramesh Saigal) **81h:65055** 65H10 (55M20, 90C30)
- (with Wright, Alden H.) A variable-dimension simplicial algorithm for antipodal fixed-point theorems. *Numer. Funct. Anal. Optim.* **2** (1980), no. 2-3, 155-186. (Kurt Georg) **81h:65076** 65H10 (55M20, 58C30, 90C30)
- (with Rovinsky, Robert B.; Shoemaker, Christine A.) Determining optimal use of resources among regional producers under differing levels of cooperation. *Oper. Res.* **28** (1980), no. 4, 859-866. (Authors' summary) **81h:90022** 90A11
- Todorčević, Stevo Rigid Boolean algebras. *Publ. Inst. Math. (Beograd) (N.S.)* **25** (39) (1979), 219-224. (Sabine Koppelberg) **81j:06017** 06E05 (03G05)
- Todorinov, S. A. (with Dimitrov, Z. I.) Groups, directed in the extended sense. (Bulgarian. Russian and English summaries) *Godišnik Vis. Učebn. Zaved. Plovdiv Mat.* **13** (1977), no. 2, 9-20 (1978). (From the summary) **81d:06029** 06F15
- (with Teneva, St. G.) Lattice-ordered rings. *Publ. Math. Debrecen* **26** (1979), no. 1-2, 51-53. (From the text) **81d:06032** 06F25
- Todoroi, D. N. (with Zabolotnyĭ, P. A.) Geometric problems of computer graphics. (Russian) *Contemporary questions of applied mathematics and programming (Russian)*, pp. 44-50, 167, "Siliica", Kishinev, 1979. (Authors' summary) **81h:68136** 68K05 (68B99)
- Todorov, A. N. The period mapping that is surjective for $K3$ -surfaces representable as a double plane. *Math. Zametki* **26** (1979), no. 3, 465-474, 494. (I. Dolgachev) **81d:14022** 14J25 (14J15)
- Todorov, Ivan Svetlana Georgieva Petrova (1948-1978). (Bulgarian) *Fiz.-Mat. Spis. B' Igar. Akad. Nauk.* **21** (54) (1978), no. 4, 322-324 (1979). (Editors) **81m:01079** 01A70
- Todorov, K. Über die inversen Unterhalbgruppen der endlichen symmetrischen Halbgruppe. *Arch. Math. (Basel)* **33** (1979/80), no. 1, 23-28. (Heinrich Seidel) **81h:20097** 20M20
- On the orders of the subsemigroups of the symmetrical semigroup \mathcal{S}_n . *Semigroup Forum* **21** (1980), no. 4, 329-335. (Fred W. Roush) **81m:20086** 20M10 (05A05, 20M20)
- Todorov, Pavel G. New explicit formulas for the coefficients of p -symmetric functions. *Proc. Amer. Math. Soc.* **77** (1979), no. 1, 81-86. (Ved Parkash Gupta) **81g:30021** 30C45
- Limite de convexité d'une classe de Nevanlinna de fonctions analytiques. *Arch. Math. (Basel)* **34** (1980), no. 2, 127-131. (Evelyn M. Silvia) **81h:30017** 30C45
- Todorov, V. (with Hadzivanov, Nikolai G.) Generalization of a theorem of Mazurkiewicz. (Russian) *C. R. Acad. Bulgare Sci.* **32** (1979), no. 8, 1007-1010. (Y. Kodama) **81h:54037** 54F45
- Toews, Alden L. Approximate variance formulas for the elasticities of substitution obtained from translog production functions. *Econom. Lett.* **5** (1980), no. 2, 155-160. (Author's summary) **81j:90022** 90A11 (62P20)
- Šerban-Tofan, Doina See Șerban-Tofan, Doina
- Tofan, I. Remarques sur les foncteurs d'intérieur et sur les idéaux dans une catégorie. *An. Științ. Univ. "Al. I. Cuza" Iași Sect. I a Mat. (N.S.)* **25** (1979), no. 1, 37-39. (J. Sonner) **81h:18001** 18A20
- Sur quelques structures algébriques dans les catégories. *An. Științ. Univ. "Al. I. Cuza" Iași Sect. I a Mat. (N.S.)* **26** (1980), no. 1, 15-18. (Temple H. Fay) **81h:18009** 18D35
- Toffoli, Tommaso Reversible computing. *Automata, languages and programming (Proc. Seventh Internat. Colloq., Noordwijkerhout, 1980)*, pp. 632-644, *Lecture Notes in Comput. Sci.*, 85, Springer, Berlin, 1980. (Author's summary) **81h:68059** 68C30 (68A05, 68C40)
- Toft, Bjørn (with Abbott, H. L.; Liu, Andy C. F.) The enumeration problem for color critical linear hypergraphs. *J. Combin. Theory Ser. B* **29** (1980), no. 1, 106-115. (Jean-Claude Fournier) **81h:05047** 05C15 (05C65)
- (with Krusenstjerna-Haström, Uffe) Special subdivisions of K_4 and 4-chromatic graphs. *Monatsh. Math.* **89** (1980), no. 2, 101-109. (F. Harary) **81h:05058** 05C15
- Tofte, H. (with Frodesen, A. G.; Skjeggstad, O.) ★Probability and statistics in particle physics. *Universitetsforlaget, Bergen*, 1979. xvii + 501 pp. ISBN 82-00-01906-3 (B. S. Nahapietian) **81h:81001** 81-01 (62-01, 81G99)
- Tognetti, Keith (with Winley, Graham) Stochastic growth models with logistic mean population. *J. Theoret. Biol.* **82** (1980), no. 1, 167-169. (T. G. Hallam) **81h:92033** 92A17 (92A15)
- (with Winley, Graham) The growth of a column of age and position dependent cells. *Math. Biosci.* **50** (1980), no. 1-2, 59-74. (Authors' summary) **81h:92017** 92A15
- Tognoli, Alberto (with Benedetti, Riccardo) On real algebraic vector bundles. (French summary) *Bull. Sci. Math. (2)* **104** (1980), no. 1, 89-112. (Henry C. King) **81h:14009** 14F05 (32B99, 57R15)
- Une remarque sur les fibrés vectoriels analytiques et de Nash. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **290** (1980), no. 7, A321-A323. (J. Bochnak) **81h:32010** 32C05 (32L05)
- Togă, Ștefan Weakly ascending subalgebras of Lie algebras. *Hiroshima Math. J.* **10** (1980), no. 1, 175-184. (Ralph K. Amayo) **81h:17011** 17B65 (17B05)
- Tohms, Yoshihiro (with Wakimura, Yoshiaki) Structural calculation of Boolean differences. *Systems-Comput.-Controls* **9** (1978), no. 2, 58-67. (Authors' summary) **81h:94037** 94C10
- (with Kwek, Kuan Hong) Signal reliability evaluation of self-checking networks. *FTCS-10 (Tenth Internat. Symp. Fault-Tolerant Comput., Kyoto, 1980)*, pp. 257-262, IEEE, New York, 1980. (See **81m:94002**) 94C15
- Toigo, F. (with Fiorenza, A.; Stella, A. L.) On a new criterion for the determination of parameters in position space renormalization transformations. *Phys. Lett. A* **69** (1978/79), no. 2, 127-129. (Authors' summary) **81h:82020** 82A25 (82-04, 82A67)
- Toint, Ph. L. On the superlinear convergence of an algorithm for solving a sparse minimization problem. *SIAM J. Numer. Anal.* **16** (1979), no. 6, 1036-1045. (S. P. Bingulac) **81h:65046** 65K05 (65F30)
- Sparsity exploiting quasi-Newton methods for unconstrained optimization. *Nonlinear optimization (Proc. Internat. Summer School, Univ. Bergamo, Bergamo, 1979)*, pp. 65-90, Birkhäuser, Boston, Mass., 1980. (Sven-Åke Gustafson) **81h:65109** 65K10
- Tokad, Yılmaz (with Şen, A. Eref) Shorted terminal matrices. (Turkish summary) *İstanbul Tek. Üniv. Bül.* **32** (1979), no. 1, 39-48. (Authors' summary) **81h:94032** 94C05
- (with Şen, A. Eref) The existence and the determination of terminal equations for hybrid connected n-ports. *Internat. J. Circuit Theory Appl.* **8** (1980), no. 3, 205-217. (Authors' summary) **81h:94033** 94C05
- Tokar, Ja. I. Existence and uniqueness of the solution of a coagulation equation. (Russian)

- Theoretical and applied problems of mathematics and mechanics (Russian)*, pp. 214-220, 246, "Nauka" Kazakh. SSR, Alma-Ata, 1979. (Author's summary) **81a:80007** 80A20 (45K05)
- (with Lušnikov, A. A.) Transient conditions of coagulation in systems with steady external sources of particles. (Russian) *Dokl. Akad. Nauk SSSR* **252** (1980), no. 1, 136-139. (I. R. Juhnova'ski) **81m:82048** 82A70
- Tokarenko, A. I.** Axiomatizability of the group-theoretic property Σ . (Russian) *Lato. Mat. Ežegodnik* No. 23 (1979), 155-157, 275. (O. V. Belegradsk) **81c:20022** 20F19 (03C20, 03C60)
- Tokarev, E. V.** (with Novikov, S. Ja.; Semenov, E. M.) The structure of subspaces of the spaces $\Lambda_p(\eta)$. (Russian) *Dokl. Akad. Nauk SSSR* **247** (1979), no. 3, 552-554. (Aleksandr Mekler) **81f:46042** 46E30
- Tokarev, V. F.** (with Krasnikov, N. V.; Rubakov, V. A.) Fermion-number nonconservation and instantons. *Jadernaja Fiz.* **29** (1979), no. 4, 1127-1134 (Russian); translated as *Soviet J. Nuclear Phys.* **29** (1979), no. 4, 581-584. (Authors' summary) **81d:81079** 81E99 (81G25)
- (with Krasnikov, N. V.; Matveev, V. A.; Rubakov, V. A.; Tavhelidze, A. N.) Double- θ vacuum structure and the functional integral in the Schwinger model. *Phys. Lett. B* **97** (1980), no. 1, 103-106. (Authors' summary) **81f:81049** 81E99 (81C35)
- Tokareva, O. N.** Use of quadratic programming problems for conditions of optimization. (Russian) *Theory of optimal decisions (Russian)*, pp. 54-63, 110. *Akad. Nauk Ukrain. SSR, Inst. Kibernet.*, Kiev, 1979. (Author's summary) **81f:90165** 90C20 (90C30)
- Toki, Yasuori** (with Takahashi, Takao) On normal contact metric structures on $SL(2, \mathbb{R})$. *I. Ser. Rep. Hiroaki Univ.* **26** (1979), no. 1, 7-10. (V. Oproiu) **81a:53039** 53C15 (53C25)
- Tokita, Takemi** Initial-boundary value problems of fourth order hyperbolic equations. *J. Math. Kyoto Univ.* **19** (1979), no. 3, 541-551. (Howard A. Levine) **81c:35000** 35L30
- Tokumaru, Hidekatsu** (with Shima, Masasuke; Kawakami, Masaaki) Theory of invariance and its applications. I. Invariance for nonlinear systems with controls appearing linearly. (Japanese. English summary) *Systems and Control* **23** (1979), no. 10, 594-601. (Authors' summary) **81a:93029** 93B99 (34H05)
- Tokumaga, Masayoshi** On the three-dimensional impeller with loxodromic curved blade. *Bull. JSME* **23** (1980), no. 177, 368-375. (Author's summary) **81f:76012** 76B99 (53A07, 53B20)
- Tokuoka, T.** Prandtl-Reuss plastic material with scalar and tensor internal variables. (Polish and Russian summaries) *Arch. Mech. (Arch. Mech. Stas.)* **30** (1978), no. 6, 801-826. (J. P. Boehler) **81b:73013** 73E05 (73Mxx)
- Thermodynamical deduction of constitutive equations of a plastic material with combined work-hardening. (German summary) *Acta Mech.* **37** (1980), no. 3-4, 191-198. (Author's summary) **81g:73048** 73E99 (73B30)
- Tokura, N.** (with Kasami, T.; Iwadare, Yoshiro; Inagaki, Yasuyoshi) ★Теория кодирования. (Russian) [Theory of coding] Translated from the Japanese by A. V. Kuznecov [Alexander V. Kuznecov]. "Mir", Moscow, distributed by Imported Publications, Chicago, Ill., 1978. 576 pp. (V. A. Zinov'ev) **81a:94036** 94B10 (94B15)
- Tokuyama, Michio** On the theory of fluctuations around nonequilibrium steady states. A generalized time-convolutionless projector formalism. *Phys. A* **102** (1980), no. 3, 399-430. (Author's summary) **81f:82029** 82A35 (76E15, 92A09)
- Toland, John F.** On the existence of a wave of greatest height and Stokes's conjecture. *Proc. Roy. Soc. London Ser. A* **363** (1978), no. 1715, 469-485. (Author's summary) **81d:76017** 76B15
- On subdifferential calculus and duality in nonconvex optimization. Analyse non convexe (Proc. Colloq. Pau, 1977). *Bull. Soc. Math. France Mém.* No. 60 (1979), 177-183. (D. E. Catlin) **81m:49013** 49A55 (46G99, 90C48)
- (with Stuart, C. A.) A variational method for boundary value problems with discontinuous nonlinearities. *J. London Math. Soc.* (2) **21** (1980), no. 2, 319-328. (Gianfranco Bottaro) **81f:35055** 35J25 (35J20)
- (with Stuart, C. A.) A property of solutions of elliptic differential equations with discontinuous nonlinearities. *J. London Math. Soc.* (2) **21** (1980), no. 2, 329-335. (A. Džuraev) **81f:35051** 35J20
- Toldalagi, Pal** (with Mitter, Sanjoy K.) Variable metric methods and filtering theory. *Recent developments in variable structure systems, economics and biology (Proc. US-Italy Sem., Taormina, 1977)*, pp. 214-221. *Lecture Notes in Econom. and Math. Systems*, 162, Springer, Berlin, 1978. (Authors' introduction) **81c:90084** 90C15 (65K05, 93E11)
- Toledoano, F.** (with Fontana, B.) On queueing systems controlled by constant time-outs. *Proceedings of the First World Conference on Mathematics at the Service of Man (Barcelona, 1977)*, Vol. II, pp. 330-350. *Univ. Politec., Barcelona*, 1980. (See **81m:9003b**) 60K25
- Toledo, Domingo** Harmonic maps from surfaces to certain Kaehler manifolds. *Math. Scand.* **45** (1979), no. 1, 13-26. (Samuel I. Goldberg) **81d:58030** 58E20 (32H30, 53C55)
- de Toledo Piza, A. F. R.** (with de Passos, E. J. V.) Properties of Griffin-Hill-Wheeler spaces. II. One-parameter and two-conjugate-parameter families of generator states. *Phys. Rev. C* (3) **21** (1980), no. 1, 425-438. (Authors' summary) **81h:81178** 81Hxx
- Tolen, Josephine** Problème de Cauchy sur deux hypersurfaces caractéristiques sécantes. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **291** (1980), no. 1, A49-A52. (Author's summary) **81f:58018** 58D25 (35L75, 83C20)
- Tollkas, D.** (with Latinopoulos, P.) Propagation of acoustic waves in ducts with varying cross sections and viscous mean flow. *Comput. Methods Appl. Mech. Engrg.* **23** (1980), no. 2, 215-224. (Authors' summary) **81f:76036** 76Q05 (76N15)
- Tollmieri, R.** Heisenberg manifolds and theta functions. *Trans. Amer. Math. Soc.* **239** (1978), 293-319. (Y. Lehrer-Ilamed) **81d:22012** 22E25 (14K25, 33A75, 43A85)
- (with Auslander, Louis) Is computing with the finite Fourier transform pure or applied mathematics? *Bull. Amer. Math. Soc. (N.S.)* **1** (1979), no. 6, 847-897. (L. Artiga) **81e:42020** 42A38 (22E25, 68C25, 94A11)
- Tolkačev, E. A.** (with Kruglov, S. I.; Stražev, V. I.; Škol'nikov, P. L.) Internal symmetry of the theory of a neutral vector field of general type. (Russian. English summary) *Vesci Akad. Nauk BSSR Ser. Fiz.-Mat. Nauk* **1979**, no. 6, 53-56, 141. (J. Niederle) **81d:81080** 81E99 (81G20)
- (with Berezin, A. V.; Fedorov, F. I.) The Lorentz transformations and the equations for spinorial quaternions. (Russian. English summary) *Dokl. Akad. Nauk*
- BSSR* **24** (1980), no. 4, 308-310, 380. (J. D. Zund) **81f:81031** 81D25 (22E43, 81G10, 83A05)
- Tolkačev, V. M.** (with Popov, G. Ja.) Problem of contact between rigid bodies and thin-walled elements. *Izv. Akad. Nauk SSSR Meh. Toerd. Tela* **15** (1980), no. 4, 192-206 (Russian); translated as *Mech. Solids* **15** (1980), no. 4, 156-171. (From the introduction) **81m:73078** 73T05
- Tölke, Jürgen** Affine Trochoidenbewegungen. *Contributions to geometry (Proc. Geom. Sympos., Siegen, 1978)*, pp. 351-362. *Birkhäuser, Basel*, 1979. (H. Brauner) **81c:51023** 51N10 (53A17)
- Eine affine Verallgemeinerung eines globalen Satzes von J. Steiner. *Abh. Braunschweig. Wiss. Ges.* **30** (1979), 19-23. (O. Bottema) **81c:51030** 51N05 (53A17)
- Eine Bemerkung zu den Projektivbewegungen mit nur ebenen Bahnkurven. *Arch. Math. (Basel)* **33** (1979/80), no. 3, 279-282. (O. Bottema) **81c:53017** 53A20 (51N5, 53A17)
- Parabeln mit gemeinsamem isotropem Krümmungskreis. *Elem. Math.* **35** (1980), no. 1, 14-15. (Hellmuth Stachel) **81c:51031** 51N10
- See also *Contributions to geometry*, **81b:52002**
- Toll, Peter** (with Grandell, Jan; Hamrud, Mats) A remark on the correspondence between the maximum entropy method and the autoregressive model. *IEEE Trans. Inform. Theory* **26** (1980), no. 6, 750-751. (Authors' summary) **81k:94016** 94A17 (62M10)
- Tollefson, Jeffrey L.** (with Heil, Wolfgang) Deforming homotopy involutions of 3-manifolds to involutions. *Topology* **17** (1978), no. 4, 349-365. (Klaus Johannson) **81f:57044** 57S30
- (with Kim, Paik Kee) Splitting the PL involutions of nonprime 3-manifolds. *Michigan Math. J.* **27** (1980), no. 3, 259-274. (K. W. Kwun) **81m:57007** 57N10 (57S17)
- Toller, M.** (with Lanzinger, S.) A new approach to correspondence and indeterminacy. *Lett. Nuovo Cimento* (2) **27** (1980), no. 16, 519-522. (From the text) **81d:81003** 81B05
- Tolley, H. Dennis** (with Norman, James E.) Time on trial estimates with bivariate risks. *Biometrika* **66** (1979), no. 2, 285-291. (Ibrahim A. Ahmad) **81f:62148** 62N05
- Tolley, Michael D.** Application de la méthode des grands éléments finis singuliers à la résolution de l'équation biharmonique avec conditions aux limites discontinues. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **287** (1978), no. 13, A875-A878. (Stephen W. Brady) **81c:65061** 65N30
- (with Janssens, P.) On the deformation of elastic plates. (French summary) *Z. Angew. Math. Phys.* **30** (1979), no. 2, 234-242. (Hwa-Shan Ho) **81f:73035** 73K25 (65N30, 73K10)
- Tolmáč, I. M.** (with Sipliviy, B. N.) Computation of two-dimensional electromagnetic fields in inductive MHD machine channels having an open magnetic conductor at finite Re_m numbers. I. *Magnit. Gidrodinamika* No. 4 (1979), 81-88 (Russian); translated as *Magnetohydrodynamics* **15** (1979), no. 4, 427-434 (1980). (L. Debnath) **81h:76064** 76W05 (45K05)
- Tolpygo, A. K.** Two-dimensional cohomology and the spectral sequence in the nonabelian theory. (Russian) *Problems of group theory and homological algebra*, No. 1 (Russian), pp. 156-197. *Jaroslavl. Gos. Univ., Jaroslavl*, 1977. (M. L. Láplaza) **81m:14018** 14F20 (18F10)
- Cohomology of nilpotent Lie algebras and its generating functions. (Russian) *Uspehi Mat. Nauk* **34** (1979), no. 1(205), 245-246. (E. M. Luks) **81d:17007** 17B30 (17B20, 17B55)
- Tol'skaja, T. S.** See *Faith, Carl C.*, **81a:16001**
- Tolstov, V. N.** (with Ašerova, R. M.; Smirnov, Ju. F.) Description of a certain class of projection operators for complex semisimple Lie algebras. (Russian) *Mat. Zametki* **26** (1979), no. 1, 15-25, 156. (H. de Vries) **81h:17009** 17B10 (81C40)
- Tolstomogov, A. A.** (with Linke, Ju. E.) Properties of spaces of sublinear operators. (Russian) *Sibirsk. Mat. Ž.* **20** (1979), no. 4, 792-806, 926. (A. D. Ioffe) **81a:46051** 46G99 (46A99, 47H99)
- Tolstoy, I.** Coherent acoustic scatter at a rough interface between two fluids. *J. Acoust. Soc. Amer.* **68** (1980), no. 1, 258-268. (From the summary) **81d:76087** 76Q05
- Tolstyh, O. D.** Extensions of rectangular Toeplitz matrices. (Russian) *Functional analysis*, No. 13 (Russian), pp. 144-155. *Ul'janovsk. Gos. Ped. Inst., Ul'janovsk*, 1979. (K. Veselić) **81k:15026** 15A57 (47B35)
- (with Iohvidov, I. S.) On the (r, k, l) -characteristics of rectangular Toeplitz matrices. (Russian) *Ukrain. Mat. Ž.* **32** (1980), no. 4, 477-482. (D. P. Rašković) **81f:15020** 15A57 (47B35)
- Tolwinski, B.** A method for computing Nash equilibria for non-zero-sum differential games. *Optimization techniques (Proc. 8th IFIP Conf., Würzburg, 1977)*, Part 1, pp. 272-281. *Lecture Notes in Control and Information Sci.*, 6, Springer, Berlin, 1978. (Author's introduction) **81g:90108** 90D25
- Toma, Ileana** Necessary conditions on the values of the stoichiometric factor allowing the appearance of the solitary travelling wave solution in a model concerning the Belousov-Zhabotinskii chemical reaction. *Proceedings of the International Symposium on Applications of Mathematics in System Theory (Univ. Braşov, Braşov, 1978)*, I, pp. 199-205. *Univ. Braşov, Braşov*, 1979. (From the text) **81m:90016** 80A30 (35K55, 92A09)
- Tomaru, Tadashi** (with Takijima, Kunio) Quotient analytic spaces. *J. Saitama Univ. Fac. Ed. Math. Natur. Sci.* **27** (1978), 1-4 (1979). (Alan T. Huckleberry) **81f:32030** 32G99 (32M05)
- Tomás, Francisco** Reconstruction of finite groups from the normal closures of their Sylow subgroups and their mutual actions. (Spanish) *An. Inst. Mat. Univ. Nac. Autónoma México* **18** (1978), no. 1, 29-49 (1979). (G. Zappa) **81e:20037** 20E22 (20D99)
- The absolute consistency of the geometry of the ruler and transporter of segments. (Spanish) *An. Inst. Mat. Univ. Nac. Autónoma México* **19** (1979), no. 1, 41-107. (E. Mendelson) **81i:03089** 03F25 (51M05)
- Tomas, Peter A.** Restriction theorems for the Fourier transform. *Harmonic analysis in Euclidean spaces (Proc. Sympos. Pure Math., Williams Coll., Williamstown, Mass., 1978)*, Part 1, pp. 111-114. *Proc. Sympos. Pure Math., XXXV, Part 1, Amer. Math. Soc., Providence, R.I.*, 1979. (A. L. Brodskii) **81d:42029** 42B10
- (with Kenig, Carlos E.) On conjectures of Riviere and Strichartz. *Bull. Amer. Math. Soc. (N.S.)* **1** (1979), no. 4, 694-697. (Richard Bagby) **81g:42019** 42B15

- A note on restriction. *Indiana Univ. Math. J.* **29** (1980), no. 2, 287-292. (A. Figli-Talamanca) **81f:42018** 42B15 (46E30)
- Tomash, Erwin The start of an ERA: Engineering Research Associates, Inc., 1946-1955. *A history of computing in the twentieth century*, pp. 485-495. Academic Press, New York, 1980. (See **81f:68002**) 68-03 (01A65)
- Tomassini, Giuseppe (with Gherardelli, Francesco; Rosati, Luigi Antonio) ★Lezioni di geometria. Vol. primo. (Italian) [Lectures in geometry. Vol. I] Casa Editrice Dott. Antonio Milani (CEDAM), Padua, 1978. vii+276 pp. (William F. Orr) **81e:51001** 51-01
- Geometry and complex analysis. (Italian) *Boll. Un. Mat. Ital. A* (5) **17** (1980), no. 2, 226-246. (Claudio Rea) **81j:32001** 32-02 (30-02)
- Tomasso, A. (with Federico, A.; Tabacco, A.) Effectiveness and error of digital estimates in Monte Carlo simulation of continuous systems. *Simulation of systems '79* (Proc. Ninth IMACS Congress, Sorrento, 1979), pp. 39-49, North-Holland, Amsterdam, 1980. (Authors' summary) **81m:65011** 65C05
- Tomash, M. O. Calculation of a one-symbol context in CF-grammars. (Russian) *Trudy Vysht. Centra Tartu. Gos. Univ.* No. 43 (1980), 105-111. (Josef Dalik) **81i:68118** 68F05 (68F25)
- Tomberlin, T. J. (with Holt, D.; Smith, T. M. F.) A model-based approach to estimation for small subgroups of a population. *J. Amer. Statist. Assoc.* **74** (1979), no. 366, part 1, 405-410. (J. Sedransk) **81f:62016** 62D05
- Tombs, P. (with de Pasquale, F.) The decay of an unstable equilibrium state near a "critical point". *Phys. Lett. A* **72** (1979), no. 1, 7-9. (Authors' summary) **81i:82028** 82A35 (58E15)
- Tombs, E. Renormalizability and asymptotic freedom in quantum gravity. *Phys. Lett. B* **97** (1980), no. 1, 77-80. (Author's summary) **81j:83023** 83C45 (81E15, 83E99)
- Tombrillo, Joseph F. (with Young, John H.) A discussion of the pseudo-Weyl-type metrics. *Gen. Relativity Gravitation* **12** (1980), no. 1, 43-49. (S. M. Christensen) **81f:83015** 83C20 (53B30)
- Tomczak-Jaegermann, Nicole (with Figiel, T.) Projections onto Hilbertian subspaces of Banach spaces. *Israel J. Math.* **33** (1979), no. 2, 155-171. (Yehoram Gordon) **81f:46024** 46B20
- Finite-dimensional subspaces of uniformly convex and uniformly smooth Banach lattices and trace classes S_p . *Studia Math.* **66** (1979/80), no. 3, 261-281. (Gilles Pisier) **81j:46026** 46B20 (47D30)
- (with Lewis, D. R.) Hilbertian and complemented finite-dimensional subspaces of Banach lattices and unitary ideals. *J. Funct. Anal.* **35** (1980), no. 2, 165-190. (Marianne Freundlich Smith) **81a:46023** 46B30
- (with König, Hermann; Retherford, James R.) On the eigenvalues of $(p, 2)$ -summing operators and constants associated with normed spaces. *J. Funct. Anal.* **37** (1980), no. 1, 88-126. (Bernard Rosenberg) **81m:47033** 47B10 (46B20)
- Tom Dieck, Tammo See tom Dieck, Tammo
- Tomčič, M. I. (with Hudý, M. I.) An algorithm for solving certain matrix equations. (Russian) *Vestnik L'vov. Politehn. Inst. No. 141 Differentsial'nye Uravneniya i ih Prilozhen.* (1980), 88-90, 125. (Authors' summary) **81i:65034** 65F30 (15A24)
- Tomescu, Ioan Sur les cycles élémentaires dans les graphes et hypergraphes k-chromatiques. (English summary) *Calcolo* **15** (1978), no. 1, 1-15. (J. A. Bondy) **81g:05074** 05C38 (05C15)
- Le nombre maximal de colorings des arêtes d'un graphe. *Rev. Roumaine Math. Pures Appl.* **24** (1979), no. 5, 811-816. (Jean-Claude Fournier) **81e:05072** 05C15
- Some properties of irreducible coverings by cliques of complete multipartite graphs. *J. Combin. Theory Ser. B* **28** (1980), no. 2, 127-141. (N. Hadživanov) **81i:05106** 05C70 (68E10, 94C15)
- Tomescu, Rodica On a decision mode in the case of Δ discrete memoryless channel. (Romanian. English summary) *Bul. Inst. Politehn. București Ser. Electrotehn.* **41** (1979), no. 3, 3-7. (Andrea Sgarro) **81f:94017** 94A40
- Tom, Friedrich (with Tromba, Anthony J.) On the structure of the set of curves bounding minimal surfaces of prescribed degeneracy. *J. Reine Angew. Math.* **316** (1980), 31-43. (F. J. Almgren, Jr.) **81i:58028** 58E12
- Tomšić, Miloš A generalized logarithmic summation method and saturation classes in the spaces C and L_p . (Russian. Serbo-Croatian summary) *Akad. Nauka Umjet. Bosne Hercegov. Rad. Odjel. Prirod. Mat. Nauka* **61** (1978), no. 17, 107-126. (V. Veselinov) **81i:41056** 41A40 (40C05, 42A24)
- Saturation classes for a logarithmic mean method of Fourier series summation. (Russian. Serbo-Croatian summary) *Akad. Nauka Umjet. Bosne Hercegov. Rad. Odjel. Prirod. Mat. Nauka* **61** (1978), no. 17, 127-136. (T. I. Ahobadze) **81a:41037** 41A40 (42A24)
- Approximation of a wedge of 2π -periodic functions by singular integrals. (Russian) *Publ. Inst. Math. (Beograd) (N.S.)* **26**(40) (1979), 297-305. (N. K. Karapetjan) **81i:42017** 42B20 (47A50)
- Investigation of a class $S_p^*(B(R^*))$ of functions of Besov type. (Russian. English summary) *Vestnik Moskov. Univ. Ser. I Mat. Meh.* **1979**, no. 5, 26-31, 87. (J. Peetre) **81b:46050** 46E35
- Best approximation of a function and approximation by certain singular integrals. (Russian. English and Serbo-Croatian summaries) *Glas. Mat. Ser. III* **15**(35) (1980), no. 1, 71-78. (Luciana Lupas) **81j:41036** 41A35 (41A50)
- Tomšić, Miroslav (with Marić, Vojislav) Asymptotics of solutions of a generalized Thomas-Fermi equation. *J. Differential Equations* **35** (1980), no. 1, 36-44. (T. G. Hallam) **81j:34100** 34E05
- Tomimatsu, Akira On the solution solutions of stationary, axis-symmetric gravitational fields. *Progr. Theoret. Phys.* **63** (1980), no. 3, 1054-1057. (Author's summary) **81b:83001** 83C15 (53B50)
- (with Kadonaga, Takashi) Dynamical accumulation of an infinitely conducting plasma towards the neutral line of a magnetic field. *Progr. Theoret. Phys.* **63** (1980), no. 4, 1202-1212. (Authors' summary) **81d:76119** 76X05 (76W05)
- Tomizaga, Hisao (with Hirano, Yasuyuki; Ikehata, Shūichi) Commutativity theorems of Outcall-Yaqub type. *Math. J. Okayama Univ.* **21** (1979), no. 1, 21-24. (Hal G. Moore) **81h:16057** 16A70
- (with Abu-Khuzam, Hajar; Yaqub, Adil) Equational definability of addition in rings satisfying polynomial identities. *Math. J. Okayama Univ.* **22** (1980), no. 1, 55-57. (B. Felzenszwalb) **81i:16018** 16A38 (16A32)
- See also Proceedings: Symposium on Ring Theory, **81m:16004**
- Tomitsaki, Matsuyo Superposition of diffusion processes. *J. Math. Soc. Japan* **32** (1980), no. 4, 671-696. (Michèle Mastrangelo-Dehen) **81m:60142** 60J35 (35J99)
- Tomitadama, Yasuo (with Ozaki, Jiro) Monte Carlo solution of Schrödinger's equation for the hydrogen atom in a magnetic field. *J. Comput. Phys.* **33** (1979), no. 3, 382-396. (A. A. Arsen'ev) **81i:81026** 81C05 (65C05)
- Tomita, Kazuhisa (with Kai, Tohru) Stroboscopic phase portrait and strange attractors. *Phys. Lett. A* **66** (1978), no. 2, 91-93. (Authors' summary) **81i:58049** 58F13 (28D15, 70K30)
- Tomita, Kenji On inhomogeneous cosmological models containing space-like and time-like singularities alternately. *Progr. Theoret. Phys.* **59** (1978), no. 4, 1150-1169. (P. A. Goodinson) **81f:85006** 85A40
- Tomita, Yukio (with Mochimaru, Yoshihiro) A numerical method for the solution of nonlinear equations with a number of variations. *Bull. JSME* **23** (1980), no. 184, 1676-1681. (Authors' summary) **81j:65118** 65N20 (76A05, 76B10, 76D05)
- Tomitsuka, Takeshi Convenient tables of the Pythagoras numbers, and some others. (Japanese) *Res. Bull. Meisei Univ.* No. 16 (1980), 67-79. (S. Hitotumatu) **81c:65005** 65A05
- Tomuk, B. J. Arens regularity and the algebra of double multipliers. *Proc. Amer. Math. Soc.* **81** (1981), no. 2, 293-298. (Pak-Ken Wong) **81m:46065** 46H20
- Tomiyama, Jun Some aspects of the commutation theorem for tensor products of operator algebras. (French summary) *Algèbres d'opérateurs et leurs applications en physique mathématique* (Proc. Colloq., Marseille, 1977), pp. 417-435. *Colloques Internat. CNRS*, 274, CNRS, Paris, 1979. (G. K. Pedersen) **81e:46045** 46L05 (46M05)
- Inner derivations in the tensor products of operator algebras. *Tohoku Math. J. (2)* **32** (1980), no. 1, 91-97. (Takateru Okayasu) **81m:46082** 46L05 (46M05)
- Tomkinson, M. J. On the commutator subgroup of a periodic FC-group. *Arch. Math. (Basel)* **31** (1978/79), no. 2, 123-125. (D. I. Zaicev) **81i:20046** 20F24 (20F50)
- (with Stothers, W. W.) On infinite families of sets. *Bull. London Math. Soc.* **11** (1979), no. 1, 23-26. (N. H. Williams) **81i:04005** 04A20
- Hypercentral injectors in infinite soluble groups. *Proc. Edinburgh Math. Soc. (2)* **22** (1979), no. 3, 191-194. (J. R. J. Groves) **81c:20021** 20F16
- A class of infinite soluble groups with an A-group condition. *Glasgow Math. J.* **21** (1980), no. 1, 81-84. (J. R. J. Groves) **81g:20072** 20F16
- (with Dixon, M. R.) The local conjugacy of some Sylow bases in a class of locally finite groups. *J. London Math. Soc. (2)* **21** (1980), no. 2, 225-228. (R. M. Bryant) **81j:20055** 20F50 (20E25)
- Tomková, Mária Graph isomorphisms of modular multilattices. (Russian summary) *Math. Slovaca* **30** (1980), no. 1, 95-100. (Ann Miller Millman) **81i:06015** 06B99 (06D99)
- On a local property of the unoriented graph of a modular multilattice. (Russian summary) *Math. Slovaca* **30** (1980), no. 3, 289-298. (B. Zelindka) **81i:06005** 06A10 (05C99)
- Tomlin, G. R. (with Banerjee, P. K.; Butterfield, R.) Boundary element methods for two-dimensional problems of transient ground water flow. *Internat. J. Numer. Anal. Methods Geomech.* **5** (1981), no. 1, 15-31. (Authors' summary) **81m:76043** 76S05
- Tomoda, Toshiaki (with Marumori, Toshio; Hayashi, Akihisa; Kuriyama, Atsushi; Maskawa, Toshihide) Concept of a collective subspace associated with the invariance principle of the Schrödinger equation. A microscopic theory of the large amplitude collective motion of soft nuclei. *Progr. Theoret. Phys.* **63** (1980), no. 5, 1576-1598. (Authors' summary) **81d:81117** 81G35
- Tomonaga, Yasuō On Einstein's field equations. *Bull. Fac. Ed. Utsunomiya Univ. Sect. 2* **29** (1979), 1-6. (Author's summary) **81c:83007** 83C05
- Tompa, Frank W. A practical example of the specification of abstract data types. *Acta Inform.* **13** (1980), no. 3, 205-224. (Author's summary) **81a:68027** 68B15
- Tompa, H. (with Richard, J.-F.) On the evaluation of poly- t density functions. *J. Econometrics* **12** (1980), no. 3, 335-351. (John E. Hewett) **81e:62060** 62H10 (62-04, 65D30)
- Tompa, Martin Time-space tradeoffs for computing functions, using connectivity properties of their circuits. *Conference Record of the Tenth Annual ACM Symposium on Theory of Computing* (San Diego, Calif., 1978), pp. 196-204. ACM, New York, 1978. (Author's summary) **81i:68069** 68C25
- Two familiar transitive closure algorithms which admit no polynomial time, sublinear space implementations. *Conference Proceedings of the Twelfth Annual ACM Symposium on Theory of Computing* (Los Angeles, Calif., 1980), pp. 333-338. ACM, New York, 1980. (See **81j:68006**) 68C25
- Time-space tradeoffs for computing functions, using connectivity properties of their circuits. ACM-SIGACT Symposium on the Theory of Computing (San Diego, Calif., 1978). *J. Comput. System Sci.* **20** (1980), no. 2, 118-132. (Kenneth B. Salomon) **81h:68032** 68C25
- Toms, David J. Symmetry breaking and mass generation by space-time topology. *Phys. Rev. D* (3) **21** (1980), no. 10, 2805-2817. (M. I. Monastyrskii) **81g:81073** 81E99 (81M05)
- Tomšič, G. V. Quasidynamical games. (Russian) *Some questions of differential and integral equations and their applications*, No. 2 (Russian), pp. 99-131, 190. *Yakutsk. Gos. Univ., Yakutsk*, 1977. (Author's summary) **81c:90110** 90D42 (49C20)
- Antagonistic games in Kalman dynamical systems. (Russian) *Some questions of differential and integral equations and their applications*, No. 2 (Russian), pp. 132-152, 190. *Yakutsk. Gos. Univ., Yakutsk*, 1977. (Author's summary) **81c:90111** 90D42 (90D20)
- See also Questions of differential and integral equations and their applications, **81b:34082**
- Tomtejak, A. A. (with Koroljuk, V. S.; Turbin, A. F.) Sojourn time of a semi-Markov process in a decomposing set of states. (Russian) *Analytical methods of probability theory* (Russian), pp. 69-79, 152. "Naukova Dumka", Kiev, 1979. (Ștefan P. Niculescu) **81f:60123** 60K15 (60F99)
- Tom, Bui An On the initial value problem for compressible fluid flows with vanishing viscosity. *Kodai Math. J.* **3** (1980), no. 1, 96-113. (J. F. Heyda) **81e:35107** 35Q10 (76N10)
- Tomčev, V. D. (with Denev, Jordan D.) On the number of equivalence classes of Boolean

- functions under a transformation group. *C. R. Acad. Bulgare Sci.* 32 (1979), no. 12, 1609-1610. (F. J. MacWilliams) **81g:94058** 94C10 (06E99, 94B15)
- Designs with repeated blocks derived from rank 3 graphs. *C. R. Acad. Bulgare Sci.* 32 (1979), no. 12, 1611-1614. (L. D. Baumert) **81g:05031** 05B05
- (with Denev, Jordan D.) On the number of equivalence classes of Boolean functions under a transformation group. *IEEE Trans. Inform. Theory* 26 (1980), no. 5, 625-626. (Authors' summary) **81i:94033** 94C10
- Tondeur, Philippe** (with Kamber, Franz W.) Feuilletages harmoniques. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 291 (1980), no. 6, A409-A411. (Authors' summary) **81j:58038** 58E20 (57R30, 58E15)
- Tondi, Adriana** (with Barbieri, Francesco) The Steiner inequality for infinite series and convergence in area. (Italian) *Atti Sem. Mat. Fis. Univ. Modena* 27 (1978), no. 2, 315-330 (1979). (U. D'Ambrosio) **81j:28006** 28A75 (52A40)
- Tome, Kaoru** On optimal pattern flows. *Survey of mathematical programming (Proc. Ninth Internat. Math. Programming Sympos., Budapest, 1976)*, Vol. 2, pp. 301-318, North-Holland, Amsterdam, 1979. (Tomas Gal) **81j:90125** 90C35
- Tomer, Toma V.** The algebra of bounded hyperanalytic functions on the big disc has no corona. *Analytic functions, Kozubnik 1979 (Proc. Seventh Conf., Kozubnik, 1979)*, pp. 435-438, *Lecture Notes in Math.*, 798, Springer, Berlin, 1980. (R. Arens) **81h:46058** 46J15 (30H05)
- (with Grigorian, S. A.) A characterization of the algebra of generalized analytic functions. (Russian) *C. R. Acad. Bulgare Sci.* 33 (1980), no. 1, 25-26. (Jaroslav Zemánek) **81j:46080** 46J10
- Tong, C. H.** (with Brayton, Robert K.) Constructive stability and asymptotic stability of dynamical systems. *IEEE Trans. Circuits and Systems* 27 (1980), no. 11, 1121-1130. (Authors' summary) **81j:93044** 93D20 (34D20)
- Tong, Fu** (with Wu, Lian Ba; Wang, Chang Bin) Recurrence relations of the inclination function. *Chinese Astronom. J.* 4 (1980), no. 1, 17-24. (Ram Krishan Sharma) **81h:70017** 70M05 (70F15)
- Tong, H.** On a threshold model. *Pattern recognition and signal processing (Proc. NATO Adv. Study Inst., Paris, 1978)*, pp. 575-586, *NATO Adv. Study Inst. Ser. E: Appl. Sci.*, 29, Sijthoff & Noordhoff, Alphen aan den Rijn, 1978. (See **80j:68076**) 94A99
- (with Pemberton, J.) On stability and limit cycles of nonlinear autoregression in discrete time. *Cahiers Centre Études Rech. Opér.* 22 (1980), no. 2, 137-147. (Authors' summary) **81j:58059** 58F13 (93E15)
- Tong, Po** (with Mykkelveit, Johannes J.; Siu, Man Keung) On the cycle structure of some nonlinear shift regular sequences. *Inform. and Control* 43 (1979), no. 2, 202-215. (B. Hazeltine) **81a:94037** 94B15
- (with Siu, Man Keung) Generation of some de Bruijn sequences. *Discrete Math.* 31 (1980), no. 1, 97-100. (J. R. Griggs) **81j:05041** 05B30 (05A99)
- Tong, Richard M.** The construction and evaluation of fuzzy models. *Advances in fuzzy set theory and applications*, pp. 559-576, North-Holland, Amsterdam, 1979. (Author's introduction) **81a:68115** 68J10 (03E72, 94D05)
- (with Bonissone, Piero P.) A linguistic approach to decision making with fuzzy sets. *IEEE Trans. Systems Man Cybernet.* 10 (1980), no. 11, 716-723. (Authors' summary) **81m:90008** 90A05
- Tong, S. Y.** (with Li, C. H.; Mills, D. L.) Large-angle inelastic electron scattering from adsorbate vibrations: basic theory. *Phys. Rev. B* 21 (1980), no. 8, 3057-3073. (From the summary) **81a:82043** 82A60 (81F99)
- Tong, Wen Ting** The spectrum of the tensor product of matrices. (Chinese) *Acta Math. Sinica* 23 (1980), no. 1, 128-134. (Ky Fan) **81f:15016** 15A18 (15A42)
- Tong, Y. L.** Some new properties of the Bechhofer-Kiefer-Sobel stopping rule. *Ann. Inst. Statist. Math.* 31 (1979), no. 3, 423-433. (Joseph A. Yahav) **81g:62047** 62F07 (62E20, 62L10)
- (with Wetzell, David E.) On the behaviour of the probability function for selecting the best normal population. *Biometrika* 66 (1979), no. 1, 174-176. (E. J. Dudewicz) **81a:62022** 62F07
- Tonga, Marcel** (with Ingleby, Michael) Operator-valued Daniell spaces and observables. *Afrika Mat.* 1, no. 1, 69-94 (1978). (Ivan Dobrakov) **81j:28019** 28C05 (46G10, 81B10)
- Tonge, Andrew** La presque-périodicité et les coalgèbres injectives. (English summary) *Studia Math.* 67 (1980), no. 2, 103-118. (Alan L. T. Paterson) **81j:46075** 46H05 (43A60)
- (with Mantero, Anna Maria) The Schur multiplication in tensor algebras. *Studia Math.* 68 (1980), no. 1, 1-24. (A. Pietsch) **81k:46074** 46M05 (46J35)
- Tong, Han, Sareyken** Éléments héréditairement non nilpotents et analyse spectrale. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 289 (1979), no. 3, A157-A159. (B. Yood) **81g:46064** 46J05
- Tong Van Sach** On modified BCH codes. (Russian summary) *Problems Control Inform. Theory/Problemy Upravlen. Teor. Inform.* 8 (1979), no. 1, 55-66. (Hermann J. Helgert) **81g:94034** 94B20
- nguyen To Nhu** See Nguyen To Nhu
- Tonelli, A.** (with Bonivento, C.; Fronza, G.; Spirito, A.) The use of stochastic models in air pollution prediction and control: problems and numerical results. *Numerical techniques for stochastic systems (Conf., Gargnano, 1979)*, pp. 161-186, North-Holland, Amsterdam, 1980. (See **81f:93067**) 93E10 (86A35)
- Tomkinson, Ivar** The convention T is not applicable to natural languages. *Logique et Anal. (N.S.)* 21 (1978), no. 84, 483-487. (John Bacon) **81e:03001** 03A05
- Tomkov, E. L.** Some questions of the control of periodic motions. (Russian) *Dynamics of control systems (Third All-Union Četaev Conf., Irkutsk, 1977)* (Russian), pp. 286-293, 343, "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. (J. M. Skowronski) **81f:49020** 49B10 (90D25)
- A criterion of uniform controllability and stabilization of a linear recurrent system. (Russian) *Differentsial'nye Uravneniya* 15 (1979), no. 10, 1804-1813, 1918. (P. Brunovský) **81f:93022** 93B05
- Tonnelat, Marie Antoinette** Einstein, mythe et réalité. With an Italian translation by S. Tsvetris and an English translation by I. McGilvray. *Scientia (Milano)* 114 (1979), no. 5-8, 297-369. (H. Tredor) **81m:01060** 01A70 (83-03)
- Tononjan, G. P.** Division of vertices of an n -dimensional unit cube into chains and decoding of monotone Boolean functions. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 19 (1979), no. 6,
- 1532-1542, 1630. (Author's summary) **81h:94074** 94C10
- Ton-That, T.** See Tuong Ton That
- Tontl, E.** The reason of the analogies in physics. *Problem analysis in science and engineering (Conf., Univ. Waterloo, Waterloo, Ont., 1975)*, pp. 463-514, Academic Press, New York, 1977. (See **80b:00004**) 49H05
- Too, J. J. M.** (with Cheng, S. Y.; Hsu, T. R.) An integrated load increment method for finite elastoplastic stress analysis. *Internat. J. Numer. Methods Engrg.* 15 (1980), no. 6, 833-842. (Authors' summary) **81e:73061** 73K25 (73E99)
- Toof, D. I.** (with Lev, B.) The role of internal storage capacity in fixed cycle production systems. *Naval Res. Logist. Quart.* 27 (1980), no. 3, 477-487. (Authors' summary) **81i:90100** 90B30
- Topală, A.** (with Stanomir, D.) Conservation laws for hyperbolic systems. An operator approach. (French and German summaries) *Rev. Roumaine Sci. Tech. Sér. Électrotech. Énerg.* 25 (1980), no. 2, 267-276, viii, x. (Alan Jeffrey) **81j:35110** 35L65
- Topală, O. I.** (with Soltan, V. P.) Metric analogues of star-shaped sets. (Russian) *Contemporary questions of applied mathematics and programming (Russian)*, pp. 122-128, 171, "Štiinca", Kishinev, 1979. (Z. Nădenik) **81k:52015** 52A30 (52A01)
- (with Soltan, V. P.) Star sets in the Cartesian product of metric spaces. (Russian) *Contemporary questions of applied mathematics and programming (Russian)*, pp. 128-135, 171-172, "Štiinca", Kishinev, 1979. (Z. Nădenik) **81k:52016** 52A30 (52A01)
- Local d -convexity and d -starlike sets. (Russian) *Topological spaces and algebraic systems, Mat. Issled.* No. 53 (1979), 126-135, 225. (Fulga Pop) **81d:52004** 52A30
- Topol'skii, L. G.** Reliability of a redundant system with dependent failures of elements. (Bulgarian. Russian and English summaries) *Godišnik Vis. Učebn. Zaved. Plovdiv Mat.* 14 (1978), no. 4, 109-114 (1979). (From the summary) **81j:60121** 60K10
- Application of regenerative processes in studying a redundant system with dependent failures of elements. (Bulgarian. Russian and English summaries) *Godišnik Vis. Učebn. Zaved. Plovdiv Mat.* 14 (1978), no. 4, 115-124 (1979). (From the summary) **81j:60122** 60K10
- Topol'zov, Vladimir V.** Quelques exemples de (n) -catégories. (Bulgarian and Russian summaries) *Godišnik Vis. Učebn. Zaved. Plovdiv Mat.* 13 (1977), no. 1, 103-114 (1978). (From the text) **81j:18002** 18A05
- Sur les (n) -catégories. (Romanian summary) *Bul. Inst. Politehn. Iași Sect. I* 24(26) (1978), no. 3-4, 13-18. (From the text) **81j:18003** 18A05 (20N15)
- (with Arnaudov, Ja. N.; Peeva, Ketty G.) Representation of stochastic automata. (Bulgarian. Russian and English summaries) *Godišnik Vis. Učebn. Zaved. Plovdiv Mat.* 14 (1978), no. 1, 43-56. (Authors' summary) **81h:68041** 68D25 (18B20)
- (with Peeva, Ketty G.) Algebraic theory of stochastic automata—a categorical approach. *Serdica* 4 (1978), no. 4, 277-288. (E. M. Kublanova) **81e:68047** 68D30 (18B20, 68D25)
- Un exemple-type de (n) -catégorie. *C. R. Acad. Bulgare Sci.* 32 (1979), no. 12, 1623-1625. (From the text) **81j:18004** 18A05
- (with Arnaudov, Y. N.) Recouvrement des (n) -catégories. *Algebra Universalis* 11 (1980), no. 2, 244-254. (From the text) **81j:18005** 18A05
- Toppan, D. R.** The disposition of gas-oil mixtures trapped under ice. (French summary) *Canad. J. Phys.* 58 (1980), no. 8, 1183-1190. (Author's summary) **81g:86003** 86A05 (76T05)
- Topli'skii, S. V.** (with Pochuev, A. V.) Investigation of complicated dynamic systems by the method of local statistical nodes. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* 1979, no. 2, 190-198, 223 (Russian); translated as *Engr. Cybernetics* 17 (1979), no. 2, 118-127 (1980). (Authors' summary) **81b:93019** 93C10 (93E99)
- Topkis, Donald M.** Equilibrium points in nonzero-sum n -person submodular games. *SIAM J. Control Optim.* 17 (1979), no. 6, 773-787. (J. Moulen) **81b:90166** 90D10
- Topol, Richard** An approximate theoretical calculation of the spin-lattice relaxation times in fluids near—but above—the critical point. *Molecular Phys.* 40 (1980), no. 1, 161-178. (From the summary) **81d:82067** 82A67
- Topol'skii, N. G.** Description and machine decomposition synthesis of digital automata with a large number of states. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* 1979, no. 3, 136-147, 222 (Russian); translated as *Engr. Cybernetics* 17 (1979), no. 3, 95-105 (1980). (Author's summary) **81g:68079** 68D05 (94C15)
- Toppli, Sakari** On the value distribution of meromorphic functions with a deficient value. *Ann. Acad. Sci. Fenn. Ser. A I Math.* 5 (1980), no. 1, 179-184. (N. V. Rao) **81k:30039** 30D35
- Topsee, Flemming** On construction of measures. *Proceedings of the Conference on Topology and Measure, I (Zinnowitz, 1974), Part 2*, pp. 343-381, Ernst-Moritz-Arndt Univ., Greifswald, 1978. (Z. Lipceki) **81h:28003** 28A12 (28C15)
- Approximating pavings and construction of measures. *Colloq. Math.* 42 (1979), 377-385. (Jan Pachl) **81h:28002** 28A12
- Thin trees and geometrical criteria for Lebesgue nullsets. *Measure theory, Oberwolfach 1979 (Proc. Conf., Oberwolfach, 1979)*, pp. 57-78, *Lecture Notes in Math.* 794, Springer, Berlin, 1980. (D. Preiss) **81g:28004** 28A15 (26B15)
- Topuzu, P.** (with Megan, M.) On the space of infinite-dimensional linear controllable systems. *Systems theory (Proc. Nat. Conf., Univ. Braşov, Braşov, 1977)* (Romanian), pp. 65-70, Univ. Braşov, Braşov, 1978. (G. Anichini) **81g:93021** 93B05 (93C05)
- Toraldo di Francia, G.** (with Bertero, M.; Viano, G. A.; Pasqualetti, F.; Ronchi, L.) The inverse scattering problem in the Born approximation and the number of degrees of freedom. *Optica Acta* 27 (1980), no. 8, 1011-1024. (Authors' summary) **81g:78021** 78A45 (35P25, 68G10)
- Torbasa, V. P.** On the question of analysis of elementary algebraic two-level systems. (Russian) *Mathematical methods of optimization and structuring of systems* (Russian), pp. 35-45, 182, Kaliningrad. Gos. Univ., Kaliningrad, 1979. (Author's summary) **81k:93003** 93A13
- Torchinsky, Alberto** (with Strömberg, Jan Olov) Weights, sharp maximal functions and Hardy spaces. *Bull. Amer. Math. Soc. (N.S.)* 3 (1980), no. 3, 1053-1056. (José García-Cuerva) **81i:42021** 42B30 (42B25)
- Torelli, Alessandro** (with Friedman, Avner) Correction to the paper: "A free boundary problem connected with nonsteady filtration in porous media" [*Nonlinear Anal.* 1 (1976/77), no. 5, 503-545; MR 58 #29277]. *Nonlinear Anal.* 2 (1978), no. 4, 513-518. (From the text) **81m:76047** 76S05

- Some regularity results for a family of variational inequalities. *Ann. Scuola Norm. Sup. Pisa Cl. Sci.* (4) **6** (1979), no. 3, 497-510. (Gianfranco Bottaro) **81d:35027** 35335 (35D10, 49A29)
- (with Comincioli, V.) A new numerical approach to a nonsteady filtration problem. *Calcolo* **16** (1979), no. 1, 93-124. (Harald E. Krogstad) **81b:76058** 76S05 (65N30)
- Torelli, M. (with Pennacchioni, M.) Some structural properties of Petri nets. (Italian. English summary) *Riv. Mat. Sci. Econom. Social.* **3** (1980), no. 2, 83-100. (Authors' summary) **81m:68047** 68D90
- Torii, Yukihiko (with McDonald, Roderick P.; Nishisato, Shizuhiko) Some results on proper eigenvalues and eigenvectors with applications to scaling. *Psychometrika* **44** (1979), no. 2, 211-227. (C. Hayashi) **81b:62078** 62H99 (62-07)
- Toriwaki, Junichiro (with Kato, Naoya; Fukumura, Teruo) Parallel local operations for a new distance transformation of a line pattern and their applications. *IEEE Trans. Systems Man Cybernet.* **9** (1979), no. 10, 628-643. (From the summary) **81a:68106** 68G10 (92A09)
- Torington, John A. (with Gordon, Manfred) Enumeration of coloured plane trees with a given type partition. *Discrete Appl. Math.* **2** (1980), no. 3, 207-223. (J. W. Moon) **81j:05070** 05C30 (05C05, 82A42)
- Torshave, Hans Hilbert's problems. (Danish. English summary) *Normat* **28** (1980), no. 1, 2-7, 40. (Author's summary) **81m:01042** 01A65 (00A05)
- Töster, Günter Angeordnete Körper. *Math.-Phys. Semesterber.* **27** (1980), no. 1, 69-93. (Witold Węśław) **81j:12024** 12J15 (12-01)
- Töring, Willi *Numerische Mathematik für Ingenieure und Physiker. Band 1. (German) [Numerical mathematics for engineers and physicists. Vol. 1] Numerische Methoden der Algebra. [Numerical methods in Algebra] Springer-Verlag, Berlin-New York, 1979. xvi + 272 pp. ISBN 3-540-09260-9 (Ulrich Eckhardt) **81b:65024** 65Fxx (65-01)
- Monoton einschließende konvergente Iterationsprozesse vom Gauß-Seidel-Typ zur Lösung nichtlinearer Gleichungssysteme im \mathbb{R}^n und Anwendungen. (English summary) *Math. Methods Appl. Sci.* **2** (1980), no. 4, 489-503. (H. R. Schwarz) **81m:65079** 65H10 (65N20)
- Toró, T. On the possible relation between self-interaction of $\gamma(x)$ -fields and the nonlocal neutrino-gravitational interaction. (French summary) *Rev. Roumaine Phys.* **25** (1980), no. 3, 283-287. (Author's summary) **81b:83023** 83C45 (81G99)
- Török, T. L. Interleaved memory systems with Markovian requests. *Performance of computer systems (Proc. Fourth Internat. Sympos. Modelling Performance Evaluation Comput. Systems, Vienna, 1979)*, pp. 421-428. North-Holland, Amsterdam, 1979. (Author's summary) **81d:68011** 68A05 (68J10)
- Torondadze, T. A. (with Čitašvili, R. Ja.) Stochastic differential equations with unit diffusion coefficient. Theorems on the existence and uniqueness of strong solutions. (Russian. Georgian and English summaries) *Sobšč. Akad. Nauk Gruz. SSR* **98** (1980), no. 3, 537-539. (Authors' summary) **81m:60110** 60H10
- (with Čitašvili, R. Ja.) The structure of the integral funnel of all solutions of stochastic differential equations with a unit diffusion coefficient. (Russian. Georgian and English summaries) *Sobšč. Akad. Nauk Gruz. SSR* **99** (1980), no. 1, 21-24. (Authors' summary) **81m:60111** 60H10
- (with Čitašvili, R. Ja.) Local existence and uniqueness theorems and theorems on the continuation of strong solutions of stochastic equations with a unit diffusion coefficient. (Russian. Georgian and English summaries) *Sobšč. Akad. Nauk Gruz. SSR* **99** (1980), no. 2, 285-288. (Authors' summary) **81m:60102** 60H10
- Torresan, B. E. Combinatorial properties of some classes of threshold functions. (Russian. Armenian summary) *Akad. Nauk Armjan. SSR Dokl.* **68** (1979), no. 1, 17-23. (From the text) **81i:94040** 94C10
- (with Bozozjan, S. E.) Investigation of functions of the algebra of logic in terms of the activity of a set of variables. (Russian. Armenian and English summaries) *Izv. Akad. Nauk Armjan. SSR Ser. Mat.* **14** (1979), no. 2, 124-141, 156. (Authors' summary) **81b:94063** 94C10 (03G05)
- Torquati, Franco (with Monti Bragadin, Giacomo) An application of invariant currents to compact Lie groups. (Italian. English summary) *Ann. Univ. Ferrara Sez. VII (N.S.)* **25** (1979), 1-8. (Adrian C. Albu) **81d:58007** 58A25
- Tor, D. G. (with Young, E. R.; Richards, P. G.) A flux preserving method of coupling first and second order equations to simulate the flow of plasma between the protonosphere and the ionosphere. *J. Comput. Phys.* **38** (1980), no. 2, 141-156. (Authors' summary) **81j:96003** 86A35
- Torresón, Ricardo (with Reich, Simeon) Zeros of accretive operators. *Comment. Math. Univ. Carolin.* **21** (1980), no. 3, 619-625. (Dan Tibá) **81k:47075** 47H06 (47H09, 47H10)
- Torriani, Hugo H. On the structure of the fundamental group of the Klein bottle. *Proceedings of the Eleventh Brazilian Mathematical Colloquium (Poços de Caldas, 1977)*, Vol. II (Portuguese), pp. 681-688. Inst. Mat. Pura Apl., Rio de Janeiro, 1978. (See **80c:80010b**) 57N05 (57M05)
- Torrie, G. M. (with Gaunt, D. S.; Martin, J. L.; Ord, G.; Whittington, S. G.) Restricted valence site animals on the simple cubic lattice. *J. Phys. A* **13** (1980), no. 5, 1791-1797. (C. A. Hurst) **81g:82073** 82A67
- Torral, Mariano (with Valenti, Antonino) On a class of semiregular generalized precessions of a heavy rigid body. (Italian. English summary) *Rend. Sem. Mat. Univ. Padova* **61** (1979), 319-324 (1980). (Sergio Levoni) **81e:70006** 70E15
- Madame-Tort, Monique See Madame-Tort, Monique
- Torturici, M. (with Cusimano, M.; Genco, A.) Automated construction of Runge-Kutta algorithms of various orders. (Italian) *Atti Accad. Sci. Lett. Arti Palermo Parte I* (4) **36** (1976/77), 117-147 (1978). (H. A. Antosiewicz) **81e:65035** 65L05 (68C05)
- Tort Pinilla, Manuel On the Köthe duality in intersections of l^p spaces. (Spanish) *Proceedings of the First Spanish-Portuguese Mathematical Conference (Madrid, 1973)* (Spanish), pp. 236-244. Consejo Sup. Inv. Cient., Madrid, 1977. (R. D. McWilliams) **81m:46020** 46A45
- Torral, Albert Lois indefinidamente divisibles et théorèmes de Itô-Nisio et Yuriskii. (English summary) *Ann. Inst. H. Poincaré Sect. B (N.S.)* **15** (1979), no. 1, 85-92. (Balram S. Rajput) **81h:60012** 60B11
- Tory, Elmer M. (with Tanemura, Masaharu; Pickard, David K.; Hori, Motoo) Some comments on a paper by H. J. Weiner: "Sequential random packing in the plane" [*J. Appl. Probab.* **15** (1978), no. 4, 803-814; MR **80a:60015**]. With an answer by Howard Weiner. *J. Appl. Probab.* **16** (1979), no. 3, 697-707. (Adrian Baddeley) **81b:60013** 60D05
- (with Pickard, David K.) Experimental implications of a Markov model for sedimentation. *J. Math. Anal. Appl.* **72** (1979), no. 1, 150-176. (George Marsaglia) **81c:76045** 76T05 (58G32, 60J70)
- Toscani, Giuseppe (with Bertoluzza, Carlo) Characterization of the composition law of an experiment for an idempotent information measure. (Italian. English summary) *Istit. Lombardo Accad. Sci. Lett. Rend. A* **112** (1978), no. 1, 99-109 (1979). (Authors' summary) **81m:94013** 94A17
- Toscano, G. (with Borghese, F.; Denti, P.; Sindoni, O. I.) An addition theorem for vector Helmholtz harmonics. *J. Math. Phys.* **21** (1980), no. 12, 2754-2755. (Authors' summary) **81m:33004** 33A45
- Toscano, Letterio Sur la somme d'une série de fonctions de Bessel. (English summary) *J. Combin. Inform. System Sci.* **4** (1979), no. 4, 296-302. (N. Hayek Calil) **81i:33007** 33A40
- Recurring sequences and Bernoulli-Euler polynomials. *J. Combin. Inform. System Sci.* **4** (1979), no. 4, 303-308. (S. P. Goyal) **81i:10010** 10A35 (10A40)
- Toscato, Raffaele (with Maceri, Aldo) A problem of contact through membranes. (Italian. French summary) *Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur.* (8) **65** (1978), no. 1-2, 69-77 (1979). (P. Villaggio) **81k:73045** 73K15 (49A29, 53C45, 73T05)
- (with Maceri, Aldo) Preliminary results on the problem of the plate on unilateral elastic boundary support. *Simulation of systems '79 (Proc. Ninth IMACS Congress, Sorrento, 1979)*, pp. 1149-1153. North-Holland, Amsterdam, 1980. (See **81j:68009**) 49A29 (73C40)
- (with Maceri, Aldo) Preliminary results on the elastic stability of beams under unilateral constraints. *Simulation of systems '79 (Proc. Ninth IMACS Congress, Sorrento, 1979)*, pp. 1155-1157. North-Holland, Amsterdam, 1980. (See **81j:68009**) 49A29 (35J20, 73C40)
- (with Maceri, Aldo) Preliminary results on the problem of the elastic plate on one-sided foundation. *Simulation of systems '79 (Proc. Ninth IMACS Congress, Sorrento, 1979)*, pp. 1159-1162. North-Holland, Amsterdam, 1980. (See **81j:68009**) 73C05 (49A29)
- (with Maceri, Aldo) On the problem of a beam on a unilateral elastic base. (Italian. English summary) *Boll. Un. Mat. Ital. B* (5) **17** (1980), no. 1, 352-372. (B. A. Boley) **81i:73052** 73K05
- Tosch, Thomas J. (with Holmes, Paul T.) A bivariate failure model. *J. Amer. Statist. Assoc.* **75** (1980), no. 370, 415-417. (H. K. Hsieh) **81g:62037** 62E15 (62N05)
- Tost, M. P. (with Senatore, G.) Theory of the surface dipole layer and of surface tension in liquids of charged particles. (Italian summary) *Nuovo Cimento B* (11) **56** (1980), no. 1, 169-186. (Authors' summary) **81e:82047** 82A50
- Tost, P. Normal derivability and first-order arithmetic. *Notre Dame J. Formal Logic* **21** (1980), no. 2, 449-466. (A. Kino) **81g:03067** 03F05 (03F55)
- Totić, B. S. (with Vlahov, A.; Zakula, R. B.) A new method for solving the one-dimensional Schrödinger equation. *Phys. A* **100** (1980), no. 1, 196-204. (B. Hellwig) **81c:81010** 81C05 (34B25)
- (with Kapor, D. V.) Low-temperature properties of the Ising model in the transverse field and the influence of kinematical effects. *Phys. A* **103** (1980), no. 3, 609-620. (Authors' summary) **81j:82028** 82A67
- Totić, Dobroslav ★Uvod u numeričku analizu. (Serbo-Croatian) [Introduction to numerical analysis] Naučna Knjiga, Beograd, 1978. vii + 287 pp. (Editors) **81b:65001** 65-01
- A modification of the Birkhoff-Young quadrature formula for analytical functions. *Univ. Beograd. Publ. Elektrotehn. Fak. Ser. Mat. Fiz.* No. 602-633 (1978), 73-77 (1979). (R. A. Lorenz) **81j:41047** 41A55 (30E10, 65D32)
- Totić, Ratko Some properties of monotone Boolean functions over finite Boolean algebras. (Serbo-Croatian. English summary) *Univ. u Novom Sadu Zb. Rad. Prirod.-Mat. Fak.* **8** (1978), 63-68. (Author's summary) **81a:06017** 06E99
- An optimal search procedure. (Serbo-Croatian summary) *Univ. u Novom Sadu Zb. Rad. Prirod.-Mat. Fak.* **8** (1978), 91-94. (E. Rodney Canfield) **81e:68119** 68H05 (05C05, 68E05, 90B40)
- Tolov, N. Letter to the editors: "Asymptotic normality of Z_n -characteristics of the excess of a stationary Gaussian process" [*Izv. Akad. Nauk UzSSR Ser. Fiz.-Mat. Nauk* **1978**, no. 2, 27-31; MR **58** #7818]. (Russian) *Izv. Akad. Nauk UzSSR Ser. Fiz.-Mat. Nauk* **1978**, no. 4, 86. (S. A. Book) **81a:60052** 60G15
- Tosser, A. J. (with Lotfi, Z. M.) Inhibited expressions of Boolean differences. *Internat. J. Electron.* **48** (1980), no. 1, 57-64. (Authors' summary) **81c:94048** 94C10
- Totafurno, John (with Lumsden, Charles J.; Trainor, Lynn E. H.) Structure and function in biological hierarchies: an Ising model approach. *J. Theoret. Biol.* **85** (1980), no. 2, 171-198. (Authors' summary) **81g:92001** 92A05 (82A67)
- Totaro, Carmelo Questions on the dynamics of the rigid body. (Italian) *Rend. Sem. Mat. Univ. Padova* **61** (1979), 49-60 (1980). (P. Hagedorn) **81c:70005** 70E15
- On particular movements of an artificial satellite. (Italian. English summary) *Ric. Mat. Univ. Parma* (4) **5** (1979), part 2, 693-700 (1980). (Author's summary) **81g:70032** 70M05 (70E15)
- Totaro, Silvia Approximation of evolution problems in Banach spaces. *Ric. Mat. Univ. Parma* (4) **5** (1979), part 1, 147-164 (1980). (James V. Herod) **81k:34062** 34G99 (47D05)
- santa-Tóth, Edit See Santa-Tóth, Edit
- Tóth, F. (with Csetényi, A.) On the Lotka-Volterra type models of cyclical crisis. *Selected papers on mathematics*, pp. 51-59. DM **80**, 1, Karl Marx Univ. Econom., Budapest, 1980. (Edwin H. Neave) **81i:90044** 90A16 (34A34, 93C15)
- Tóth, Gábor On the global triangularizability of planar differentiable dynamical systems. *Studia Sci. Math. Hungar.* **11** (1976), no. 1-2, 211-227 (1978). (U. D'Ambrosio) **81a:34042** 34C35 (58F99)
- Extension of a theorem of A. Lichnerowicz. *Proc. Fac. Sci. Tokai Univ.* **15** (1980), 29-32. (J. Eells) **81h:58030** 58E20 (58R10)
- Toth, Paolo (with Christofides, Nicos; Mingozi, Aristide) Contributions to the quadratic assignment problem. *European J. Oper. Res.* **4** (1980), no. 4, 243-247. (Authors' summary) **81a:90133** 90C30 (90B05)
- (with Martello, Silvano) Optimal and canonical solutions of the change making

- problem. *European J. Oper. Res.* 4 (1980), no. 5, 322-329. (Authors' summary) **81i:90148** 90C10 (05A05)
- (with Carpaneto, Giorgio) Some new branching and bounding criteria for the asymmetric travelling salesman problem. *Management Sci.* 26 (1980), no. 7, 736-743. (Authors' summary) **81i:90193** 90C35 (90B10, 90B35)
- (with Christofides, Nicos; Mingozi, Aristide) Dynamic loading and unloading of liquids into tanks. *Oper. Res.* 28 (1980), no. 3, part 2, 633-649. (Authors' summary) **81d:90074** 90C10 (90B35, 90C39)
- (with Martello, Silvano) A note on the Ingargiola-Korsh algorithm for one-dimensional knapsack problems: "A general algorithm for one-dimensional knapsack problems" [Operations Res. 25 (1977), no. 5, 752-759; MR 58 #15140] by G. P. Ingargiola and J. F. Korsh. *Oper. Res.* 28 (1980), no. 5, 1226-1227. (Editors) **81i:90149** 90C10
- Totik, V.** On structural properties of functions arising from strong approximation of Fourier series. *Acta Sci. Math. (Szeged)* 41 (1979), no. 1-2, 227-251. (Paul Nevai) **81a:42011** 42A20 (42A24)
- On the very strong and mixed approximations. *Acta Sci. Math. (Szeged)* 41 (1979), no. 3-4, 419-428. (L. Leindler) **81i:42076** 42C05
- Totkov, G. A.** Approximation by spline functions in Orlicz spaces. (Russian) *C. R. Acad. Bulgare Sci.* 32 (1979), no. 8, 1033-1036. (Yury Girshovich) **81b:41026** 41A15 (41A65)
- (with Bazilev, M. S.) Optimal polynomial interpolation of functions of two variables. (Russian) *C. R. Acad. Bulgare Sci.* 33 (1980), no. 5, 603-605. (J. Szabados) **81i:41007** 41A05 (41A10)
- Toueg, Sam** (with Ullman, Jeffrey D.) Deadlock-free packet switching networks. *Conference Record of the Eleventh Annual ACM Symposium on Theory of Computing* (Atlanta, Ga., 1979), pp. 89-98, ACM, New York, 1979. (Frank K. Hwang) **81f:94049** 94C15 (68E10)
- Deadlock- and livelock-free packet switching networks. *Conference Proceedings of the Twelfth Annual ACM Symposium on Theory of Computing* (Los Angeles, Calif., 1980), pp. 94-99, ACM, New York, 1980. (See **81j:68006**) 68A05
- Tougeron, Jean-Claude** Sur les fonctions C^∞ et les distributions qui appartiennent à la classe de Bernstein. (English summary) *Ann. Inst. Fourier (Grenoble)* 29 (1979), no. 3, x, 125-161. (S. Łojasiewicz) **81h:32017** 32C40 (46F20)
- Fonctions composées différentiables: cas algébrique. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 4, A171-A173. (J. G. Timourian) **81d:32015** 32B99 (58C25)
- Touguet, Hirohumi** Stability of turbulent roll-waves in an inclined open channel. *J. Phys. Soc. Japan* 48 (1980), no. 3, 1018-1023. (Author's summary) **81b:76035** 76E99 (76Fxx)
- Toumaoui, D.** (with Emptoz, H.) Utilisation des pseudoquestionnaires dans une approche métrique des problèmes de reconnaissance de formes. (English summary) *Information theory (Proc. Internat. CNRS Colloq., Cachan, 1977)* (French), pp. 363-371, Colloques Internat. CNRS, 276, CNRS, Paris, 1978. (Pl. Kannappan) **81j:94016** 94A50 (68G10)
- le Tourneux, J.** See **Le Tourneux, J.**
- Toumalat, Doug** (with Einhorn, Martin B.; Stein, D. L.) Are grand unified theories compatible with standard cosmology? *Phys. Rev. D* (3) 21 (1980), no. 12, 3295-3298. (Authors' summary) **81i:81132** 81G20 (83E99, 83F05)
- Toumalat, Godfried T.** (with Akl, Selim G.) Efficient convex hull algorithms for pattern recognition applications. *Proceedings of the Fourth International Joint Conference on Pattern Recognition* (Kyoto, 1978), pp. 483-487, IEEE, New York, 1979. (Authors' summary) **81d:68122** 68G10 (68C25)
- Comment: "Algorithms for computing relative neighbourhood graph" [Electron. Lett. 16 (1980), no. 14, 556-557; MR 81g:68098] by R. B. Urquhart. With a reply by Urquhart. *Electron. Lett.* 16 (1980), no. 22, 860-861. (Author's summary) **81m:68055** 68E10 (68C25)
- Toutenburg, H.** (with Roeder, B.) Minimax-linear and Theil estimator for restrained regression coefficients. (German and Russian summaries) *Math. Operationsforsch. Statist. Ser. Statist.* 9 (1978), no. 4, 499-505. (Prem K. Goel) **81d:62065** 62J05 (62C20)
- On the combination of equality and inequality restrictions on regression coefficients. (German summary) *Biometrical J.* 22 (1980), no. 3, 271-274. (Arthur Cohen) **81i:62070** 62G05 (62J05)
- Tovar, Raul** (with Nowosad, Pedro) The Carleman-Smithies theory of integral operators for reflexive Orlicz spaces. *Integral Equations Operator Theory* 2 (1979), no. 3, 388-406. (P. M. Anselone) **81e:45002** 45B05 (45P05, 47G05)
- (with Nowosad, Pedro) Spectral inequalities and G-functions. *Linear Algebra Appl.* 31 (1980), 179-197. (M. Lotkin) **81g:15021** 15A42 (15A60, 45L05)
- Tovarek, Leoš** (with Horák, Peter) On Hamiltonian cycles of complete n -partite graphs. (Russian summary) *Math. Slovaca* 29 (1979), no. 1, 43-47. (Ivan Rival) **81f:05118** 05C45 (05C35)
- Tórnai, L.** (with Spircu, Tiberiu; Taşnadi, Al.) Economic system structure hierarchization. (French and Russian summaries) *Econom. Comput. Econom. Cybernet. Stud. Res.* 1978, no. 1, 45-61. (Authors' summary) **81e:90030** 90A17 (05C99, 15A21, 90A15)
- Tovskai, L. M.** (with Koleev, A. I.; Belopolskii, A. L.; Bondarev, A. S.; Ivanov, S. A.) Convergence of certain iteration processes for a nonlinear boundary value problem. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1979, no. 10, 47-56. (E. G. D'jakonov) **81b:35034** 35J65 (65N10)
- Tovmasjan, N. E.** Investigation of boundary value problems and properties of solutions for some systems of differential equations with two independent variables. (Russian) *Kompleks Analysis und ihre Anwendung auf partielle Differentialgleichungen* (Tagung Martin-Luther-Universität, Halle, 1976). *Wiss. Beitr. Martin-Luther-Univ. Halle-Wittenberg M 27* (1977), 63-65. (From the text) **81h:35015** 35J25 (35M05)
- Removable singular points of elliptic systems of second-order differential equations in the plane. (Russian) *Mat. Sb. (N.S.)* 108(150) (1979), no. 1, 22-31, 143. (G. Wildenhain) **81i:35059** 35J45
- Integral representations of holomorphic functions by holomorphic densities and their applications. *Analytic functions, Kozubnik 1979* (Proc. Seventh Conf., Kozubnik, 1979), pp. 439-445, *Lecture Notes in Math.*, 796, Springer, Berlin, 1980. (Thomas McCoy) **81g:30054** 30E20 (45E99)
- Tovstik, P. E.** (with Bergman, R. M.; Sidorin, S. A.) Construction of solutions of the equations for free vibration of a cylindrical shell of variable thickness along the directrix. *Izv. Akad. Nauk SSSR Meh. Toerd. Tela* 14 (1979), no. 4, 146-154. (Russian); translated as *Mech. Solids* 14 (1979), no. 4, 127-134. (Authors' summary) **81c:73045** 73L20
- Towers, David** On complemented Lie algebras. *J. London Math. Soc. (2)* 22 (1980), no. 1, 63-65. (M. L. Tomber) **81i:17006** 17B05
- Lie algebras all of whose proper subalgebras are nilpotent. *Linear Algebra Appl.* 32 (1980), 61-73. (Ernest Stitzinger) **81f:17003** 17B05
- Towle, Ross A.** (with Banerjee, Utpal; Chen, Shyh Ching; Kuck, David J.) Time and parallel processor bounds for Fortran-like loops. *IEEE Trans. Comput.* 28 (1979), no. 9, 660-670. (Authors' summary) **81a:68034** 68B99
- Towley, Judy A.** A pragmatic approach to resolution-based theorem proving. *Internat. J. Comput. Inform. Sci.* 9 (1980), no. 2, 93-116. (Author's summary) **81d:68129** 68G15 (03B35)
- Townsend, P. K.** Covariant quantization of antisymmetric tensor gauge fields. *Phys. Lett. B* 88 (1979), no. 1-2, 97-101. (Charles L. Hammer) **81c:81062** 81G05
- (with Aurilia, A.; Nicolai, H.) Hidden constants: the θ parameter of QCD and the cosmological constant of $N=8$ supergravity. *Nuclear Phys. B* 176 (1980), no. 2, 509-522. (Authors' summary) **81k:83044** 83E99 (81G05)
- Townsend, Robert M.** Intermediation with costly bilateral exchange. *Rev. Econom. Stud.* 45 (1978), no. 3, 417-425. (Ryuzo Sato) **81b:90035** 90A14 (90D45)
- Towse, Don** Queuing network models with state-dependent routing. *J. Assoc. Comput. Mach.* 27 (1980), no. 2, 323-337. (G. G. Iazolla) **81g:68054** 68C15 (90B35)
- Toyoda, Tadashi** A wavepacket representation of equilibrium states of boson fields. *Phys. Lett. A* 71 (1979), no. 5-6, 399-401. (Author's summary) **81h:81181** 81Hxx (81D05, 82A35)
- Toyoda, Toshihisa** (with Wallace, T. Dudley) Pre-testing on part of the data. *J. Econometrics* 10 (1979), no. 1, 119-123. (Chien-Pai Han) **81f:62112** 62J05
- (with Ohtani, Kazuhiro) Estimation of regression coefficients after a preliminary test for homoscedasticity. *J. Econometrics* 12 (1980), no. 2, 150-159. (V. K. Srivastava) **81g:62123** 62J05
- Toyozumi, Masao** Formulae for the Riemann zeta function at half integers. *Tokyo J. Math.* 3 (1980), no. 1, 177-186. (K. Thanigasalam) **81j:10060** 10H05
- Tozaki, Yoshiharu** (with Taniguchi, Kazuo) A hyperbolic equation with double characteristics which has a solution with branching singularities. *Math. Japon.* 25 (1980), no. 3, 279-300. (Alan Jeffrey) **81k:35097** 35L30
- Trabb Pardo, Luis** (with Knuth, Donald E.) The early development of programming languages. *A history of computing in the twentieth century*, pp. 197-273, Academic Press, New York, 1980. (See **81i:68002**) 68-03 (01A65, 68B99)
- Trace, Bruce** A class of 4-manifolds which have 2-spines. *Proc. Amer. Math. Soc.* 79 (1980), no. 1, 155-156. (Martin Scharlemann) **81d:57017** 57Q99 (57Q15)
- Tracey, Dennis M.** (with Freese, Colin E.) Developments in elastic-plastic finite element analysis. *Transactions of the Twenty-Fifth Conference of Army Mathematicians* (Johns Hopkins Univ., Baltimore, Md., 1979), pp. 467-482, ARO Rep. 80, 1, U. S. Army Res. Office, Research Triangle Park, N.C., 1980. (Authors' summary) **81h:73038** 73K25
- Trachtenberg, E. A.** (with Karpovsky, Mark) Fourier transform over finite groups for error detection and error correction in computation channels. *Inform. and Control* 40 (1979), no. 3, 335-358. (J. J. Stiffler) **81f:94020** 94B05 (94A24)
- Trachtenbrot, B. A.** See **Trachtenbrot, B. A.**
- Tracy, Derrick S.** (with Dwyer, Paul S.; Mikhail, N. N.) A concise proof of a theorem on products of power sums. (French summary) *Canad. J. Statist.* 6 (1978), no. 1, 11-17. (B. C. Gupta) **81a:62019** 62E30 (62D05, 62F10)
- Expectations in sampling from a multicharacterized finite population. *Proceedings of the 3rd National Symposium on Probability and Statistics* (Inst. Mat. Estatist., Univ. São Paulo, São Paulo, 1978) (Portuguese), pp. 93-95, Univ. São Paulo, São Paulo, 1979. (Author's summary) **81i:62014** 62D05
- (with Srivenkataratnam, T.) An alternative to ratio method in sample surveys. *Ann. Inst. Statist. Math.* 32 (1980), no. 1, 111-120. (Mankal N. Murthy) **81h:62022** 62D05
- (with Dwyer, Paul S.) Expectation and estimation of product moments in sampling from a finite population. *J. Amer. Statist. Assoc.* 75 (1980), no. 370, 431-437. (B. Thomsen) **81j:62026** 62D05
- Tracy, Peter** Stress intensity factors for multiple edge cracks in rotating hollow discs. (French summary) *Internat. J. Fracture* 16 (1980), no. 1, 85-93. (Author's summary) **81d:73087** 73M05
- Traczyk, Tadeusz** (with Konikowska, Beata) Query language of stochastic information systems. *Fund. Inform.* (4) 2 (1978/79), no. 3, 351-363. (Witold Lipski) **81h:68095** 68H05 (68F20)
- (with Męczyński, M. J.; Muszyński, J.; Żakowski, Wojciech) ★ *Matematyka: podręcznik podstawowy dla WST. Tom I* (Polish) [Mathematics: textbook for students in polytechnics. Vol. I] *Matematyka dla Politechnik*. [Mathematics for Engineering Colleges] Państwowe Wydawnictwo Naukowe (PWN), Warsaw, 1979. 371 pp. (loose errata). ISBN 83-01-00075-9. (B. Choczewski) **81g:00003** 00A06 (15-01, 26-01)
- On the variety of bounded commutative BCK-algebras. *Math. Japon.* 24 (1979/80), no. 3, 283-292. (Terence P. Speed) **81a:06015** 06D05 (03G25, 06D30)
- Traczyk, Tomasz** When a cyclic and acyclic family of sets can be nonlinear? *Comment. Math. Univ. St. Paul.* 28 (1980), no. 2, 141-146. (Alan Tucker) **81g:05064** 05C20
- Trad, Ahmed** Ondes thermo-acoustiques visqueuses et ondes entropiques dans un tube poreux. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 291 (1980), no. 11, B267-B270. (Author's summary) **81m:76033** 76N99 (35B32)
- Trachtenbrot, B. A.** Bemerkungen zur Komplexiertheit der Berechnungen auf stochastischen Automaten. *Algebraische Modelle, Kategorien und Gruppoide*, pp. 165-178, *Studien zur Algebra und ihre Anwendungen*, 7, Akademie-Verlag, Berlin, 1979. (H. Jürgensten) **81i:68070** 68C25 (03D15)
- Completeness of algorithmic logic. *Kibernetika (Kiev)* 1979, no. 2, 6-11. (Russian); translated as *Cybernetics* 15 (1979), no. 2, 160-166. (From the introduction) **81g:68014** 68B05
- Trachtengerc, É. A.** (with Bronstein, I. I.; Geninson, B. A.) Rule of minimization of number of conflicts in multiprocessor computing systems. *Automat. i Telemekh.* 1979, no.

- 3, 143-149 (Russian. English summary); translated as *Automat. Remote Control* **40** (1979), no. 3, part 2, 442-447. (Authors' summary) **81a:68029** 68B20
- Trajner, I. L.** (with Blasgen, M. W.; Astrahan, M. M.; Chamberlin, D. D.; Gray, James N.; King, W. F.; Lindsay, B. G.; Lorie, R. A.; Mehl, J. W.; Price, T. G.; Putzolu, G. R.; Schkolnick, M.; Selinger, P. G.; Slutz, D. R.; Strong, H. R.; Wade, B. W.; Yost, R. A.) System R: an architectural overview. *IBM Systems J.* **20** (1981), no. 1, 41-62. (Authors' summary) **81b:68079** 68H05
- Trains, Charles R.** Trace polynomial for two-generator subgroups of $SL(2, C)$. *Proc. Amer. Math. Soc.* **79** (1980), no. 3, 369-372. (Troels Johrgensen) **81h:10043** 10D40
- Tralor, Lynn E. H.** (with Lumsden, Charles J.) A generalized canonical approach to the statistical mechanics of constrained systems. *Phys. Lett. A* **65** (1978), no. 5-6, 458-460. (Author's review (L.E.H.T.)) **81m:82009** 82A05 (70M99, 92A15)
- (with Wise, Mark B.) From physical concept to mathematical structure: an introduction to theoretical physics. Mathematical Expositions, 22. University of Toronto Press, Toronto, Ont.-Buffalo, N.Y.-London, 1979. xviii+399 pp. ISBN 0-8020-5432-3 (D. ter Haar) **81b:00011** 00A69
- (with Totafurno, John; Lumsden, Charles J.) Structure and function in biological hierarchies: an Ising model approach. *J. Theoret. Biol.* **85** (1980), no. 2, 171-198. (Authors' summary) **81g:92001** 92A05 (82A67)
- Trakhtenbrot, B. A.** See **Trakhtenbrot, B. A.**
- Trakhtengerts, E. A.** See **Trakhtengerts, E. A.**
- Tran, M. I.** On zeros of solutions of differential equations with retarded argument. (Russian. English summary) *Vestnik Moskov. Univ. Ser. I Mat. Meh.* **1979**, no. 4, 3-7, 99. (M. I. Kamenskii) **81k:34076** 34K15
- Tran, Lanh Tat** (with Puri, Madan Lal) Local maxima of the sample functions of the N -parameter Bessel process. *Stochastic Process. Appl.* **9** (1979), no. 2, 137-145. (S. J. Taylor) **81j:60037** 60G17
- (with Pham Dinh Tuan) Quelques résultats sur les modèles bilinéaires de séries chronologiques. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **290** (1980), no. 7, A335-A338. (Authors' summary) **81a:62092** 62M10
- Tranah, D.** (with Landsberg, Peter T.) Entropies need not be concave. *Phys. Lett. A* **78** (1980), no. 3, 219-220. (Authors' summary) **81m:82008** 82A05 (26A51, 94A17)
- Tran Cao Nguyen** A characterization of some weak semicontinuity of integral functionals. *Studia Math.* **66** (1979), no. 1, 81-92. (L. D. Berkovitz) **81f:49016** 49A50 (49A27)
- Tran Cong, T.** (with Steven, G. P.) Derivation of a two function expression for displacements in torsion-free axis-symmetric deformations, and its relations with other solutions. *Internat. J. Solids and Structures* **16** (1980), no. 5, 465-472. (R. D. Bhargava) **81g:73021** 73C99
- Trandafir, A.** (with Rendi, B.) Topologies for complete abelian groups. (Romanian. French and English summaries) *Bul. Stiint. Tehn. Inst. Politehn. "Traian Vuia" Timişoara* **33(7)** (1978), no. 2, 81-82 (1979). (Authors' summary) **81f:20069** 20K45
- Tran Duc Long** (with Triebel, Hans) Equivalent norms and Schauder bases in anisotropic Besov spaces. *Proc. Roy. Soc. Edinburgh Sect. A* **84** (1979), no. 3-4, 177-183. (A. Kufner) **81i:46041** 46E35
- Trin Huy Hoang** Sur le feuilletage défini par une équation de Pfaff algébrique sur $P_n C$. *Acta Math. Vietnam.* **3** (1978), no. 2, 83-97. (Antoinette Sec) **81f:58002** 58A17 (32L99, 58F18)
- Tran Kim Chi** (with Nguyen Van Dao) Construction of the solutions of nonlinear high order differential equations. *Acta Tech. CSAV* **25** (1980), no. 3, 358-368. (D. P. Gupta) **81h:34007** 34A34
- Tran Min Tien** Estimates for piecewise-linear Markov processes made with the aid of the trial function method. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* **1978**, no. 5, 102-106, 221 (Russian); translated as *Engng. Cybernetics* **16** (1978), no. 5, 73-77. (E. Çinlar) **81i:60096** 60K25 (60J35)
- Tran Van Nhung** Liapunov's exponent of a stochastic process and the stability of the system of linear differential equations with random matrices. *Bull. Math. Soc. Sci. Math. R. S. Roumanie (N.S.)* **23(71)** (1979), no. 3, 313-321. (Kunio Nishioka) **81c:60071** 60H10 (34F05, 93E03)
- Tran Van Trung** A characterization of the groups $D_4(2^n)$. *J. Algebra* **60** (1979), no. 2, 520-537. (David C. Hunt) **81a:20026** 20D25 (20Gxx)
- A general characterization of the simple group $D_4(2)$. *J. Algebra* **60** (1979), no. 2, 538-545. (David C. Hunt) **81a:20027** 20D25
- The nonexistence of certain type of finite simple group. *J. Algebra* **60** (1979), no. 2, 546-551. (David C. Hunt) **81a:20028** 20D25
- A characterization of the finite simple group ${}^2D_4(2)$. *J. Algebra* **60** (1979), no. 2, 552-558. (David C. Hunt) **81a:20029** 20D25
- On the "moonster" simple group. *J. Algebra* **60** (1979), no. 2, 559-562. (David C. Hunt) **81a:20030** 20D25
- A note on groups with "large extraspecial" subgroups of width 4. *J. Algebra* **60** (1979), no. 2, 563-566. (David C. Hunt) **81a:20031** 20D25
- Traré, Abou** (with Avannian, Vazgain) Extension des théorèmes de Hartogs et de Lindelöf aux fonctions polyanalytiques de plusieurs variables. *C. R. Acad. Sci. Paris Sér. A-B* **291** (1980), no. 4, A263-A265. (Authors' summary) **81j:32006** 32A15 (30D15)
- Trápote, Alberto** See **Gómez Trápote, Alberto**
- Trapp, George E.** (with Anderson, William N., Jr.) Matrix operations induced by network connections. II. *Bull. Calcutta Math. Soc.* **69** (1977), no. 6, 319-330. (N. K. Bose) **81f:15025** 15A30 (94C30)
- (with Anderson, William N., Jr.) Matrix operations induced by electrical network connections—a survey. *Constructive approaches to mathematical models (Proc. Conf. in honor of R. J. Duffin, Pittsburgh, Pa., 1978)*, pp. 53-73, Academic Press, New York, 1979. (Authors' summary) **81j:94034** 94C05
- (with Anderson, William N., Jr.; Morley, T. D.) Characterization of parallel subtraction. *Proc. Nat. Acad. Sci. U.S.A.* **76** (1979), no. 8, 3599-3601. (Authors' summary) **81a:94042** 94C05 (47A99)
- Trub, J. F.** (with Brent, Richard P.) On the complexity of composition and generalized composition of power series. *SIAM J. Comput.* **9** (1980), no. 1, 54-66. (Authors' summary) **81b:68042** 68C20
- Truber, Philip** (with Gaveau, Bernard) Opérateurs elliptiques et mesures invariants par le groupe de jauge sur l'espace des connexions. (English summary) *C. R. Acad. Sci. Paris (Sér. A-B)* **289** (1979), no. 12, A609-A612. (Authors' summary) **81g:58044** 58G32 (46G99)
- (with Gaveau, Bernard) L'intégrale stochastique comme opérateur de divergence dans l'espace de Fock. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **291** (1980), no. 4, A283-A286. (Authors' summary) **81j:60066** 60H05 (81C20)
- Trutman, Andrzej** (with Nowakowski, Jerzy) Natural connections on Siefel bundles are sourceless gauge fields. *J. Math. Phys.* **19** (1978), no. 5, 1100-1103. (C. S. Sharma) **81a:58020** 58D30 (53C05, 53C80, 81E10)
- On gauge transformations and symmetries. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Phys. Astronom.* **27(1)** (1979), no. 1, 7-13. (J. H. Rawnsley) **81a:81059** 81E10 (53C80, 58D30)
- Trutmann, D.** (with Hänggi, P.; Roesel, F.) Evaluation of infinite series by use of continued fraction expansions: a numerical study. *J. Comput. Phys.* **37** (1980), no. 2, 242-258. (Authors' summary) **81k:65006** 65B10
- Trutner, Rolf** (with Stadtmüller, Ulrich) Tauberian theorems for Laplace transforms. *J. Reine Angew. Math.* **311/312** (1979), 283-290. (Sonja Lyttkens) **81f:44006** 44A10 (40E10)
- Density properties of Mellin transforms. *Serdica* **5** (1979), no. 3, 292-299. (N. C. Jain) **81g:44007** 44A15
- (with Gawronski, Wolfgang; Siebert, H.) An inclusion relation for Abel, Borel, and Lambert summability. *Canad. J. Math.* **32** (1980), no. 3, 695-702. (John A. Fridy) **81i:40010** 40G10
- Travaglio, Giancarlo** (with Giulini, Saverio; Soardi, Paolo M.) A Cohen type inequality for compact Lie groups. *Proc. Amer. Math. Soc.* **77** (1979), no. 3, 359-364. (John F. Price) **81b:43009** 43A55 (22E30, 43A50)
- Travassos, R.** (with Kaufman, Howard) Parallel algorithms for solving nonlinear two-point boundary-value problems which arise in optimal control. *J. Optim. Theory Appl.* **30** (1980), no. 1, 53-71. (Authors' summary) **81a:65083** 65L10 (49D99)
- Traversa, C.** (with Greco, Silvio) On seminormal schemes. *Compositio Math.* **40** (1980), no. 3, 325-365. (S. L. Kleiman) **81j:14030** 14M05 (14B99)
- Traving, G.** Mesoturbulence. *Stellar turbulence (Proc. Colloq. Univ. Western Ontario, London, Ont., 1979)*, pp. 172-182, Lecture Notes in Phys., 114, Springer, Berlin, 1980. (See **81j:85001**) 76F99 (85A20)
- Travis, C. C.** (with Webb, G. F.) Second order differential equations in Banach space. *Nonlinear equations in abstract space (Proc. Internat. Sympos., Univ. Texas, Arlington, Tex., 1977)*, pp. 331-361, Academic Press, New York, 1978. (A. Corduneanu) **81j:34110** 34G10 (47A50)
- An abstract Volterra Stieltjes-integral equation. *Volterra equations (Proc. Helsinki Sympos. Integral Equations, Otaniemi, 1978)*, pp. 287-294, Lecture Notes in Math., 737, Springer, Berlin, 1979. (George Seifert) **81b:45003** 45D05 (45N05)
- (with Post, W. M.; DeAngelis, D. L.) Infectious disease in a spatially heterogeneous environment. *Differential equations (Proc. Eighth Fall Conf., Oklahoma State Univ., Stillwater, Okla., 1979)*, pp. 271-278, Academic Press, New York, 1980. (H. W. Hethcote) **81i:92022** 92A15 (34D99)
- (with Keener, Marvin) Sturmian theory for a class of nonselfadjoint differential systems. *Ann. Mat. Pura Appl.* (4) **123** (1980), 247-266. (K. Kreith) **81g:34035** 34C10
- Trávníček, Luděk** (with Nečas, Jindřich) Variational inequalities of elastoplasticity with internal state variables. *Theory of nonlinear operators (Proc. Fifth Internat. Summer School, Central Inst. Math. Mech. Acad. Sci. GDR, Berlin, 1977)*, pp. 195-204, Abh. Akad. Wiss. DDR, Abt. Math. Naturwiss. Tech., 1978, 6, Akademie-Verlag, Berlin, 1978. (B. A. Bondarenko) **81a:73022** 73E99 (49A29)
- (with Kratochvíl, J.) On the rate-independent limit of viscoplastic constitutive equations. (Polish and Russian summaries) *Arch. Mech. (Arch. Mech. Slov.)* **32** (1980), no. 1, 101-110. (Authors' summary) **81g:73049** 73E99
- Trebbi, Walter** (with Gasper, George) Multipliers and Parseval type formulas for Jacobi series. *Harmonic analysis in Euclidean spaces (Proc. Sympos. Pure Math., Williams Coll., Williamstown, Mass., 1978)*, Part 2, pp. 417-427, *Proc. Sympos. Pure Math.*, XXXV, Part 2, Amer. Math. Soc., Providence, R.I., 1979. (Satoru Igarashi) **81c:42016** 42A45 (33A65, 42C10)
- (with Gasper, George) Multiplier criteria of Hörmander type for Fourier series and applications to Jacobi series and Hankel transforms. *Math. Ann.* **242** (1979), no. 3, 225-240. (A. Schwartz) **81j:42046** 42C10 (42C20, 44A15)
- (with Gasper, George) A characterization of localized Bessel potential spaces and applications to Jacobi and Hankel multipliers. *Studia Math.* **65** (1979), no. 3, 243-278. (P. L. Butzer and C. Markett) **81k:46030** 46E35 (42B15)
- Treccani, Giulio** (with Resta, Giovanni) Convergence of a "steepest descent" technique for the solution of a minimax problem. (Italian. English summary) *Boll. Un. Mat. Ital.* **A** (5) **16** (1979), no. 3, 459-466. (B. T. Poljak) **81a:49017** 49D10 (65K05)
- Treder, Hans-Jürgen** Singularitäten in der Allgemeinen Relativitätstheorie. (English summary) *Astronom. Nachr.* **301** (1980), no. 1, 9-12. (Author's summary) **81d:83013** 83C05 (53B50)
- Die relativistische Vergrößerung des scheinbaren Sonnenradius. (English summary) *Astronom. Nachr.* **301** (1980), no. 1, 13-15. (Author's summary) **81c:83005** 83B05 (85A15)
- See also **Liescher, Dierck-Eckehard** **81i:83009**
- Trefethen, Lloyd N.** Numerical computation of the Schwarz-Christoffel transformation. *SIAM J. Sci. Statist. Comput.* **1** (1980), no. 1, 82-102. (N. Papamichael) **81g:30012a** 30C30 (65E05)
- Erratum: "Numerical computation of the Schwarz-Christoffel transformation". *SIAM J. Sci. Statist. Comput.* **1** (1980), no. 2, 302. (N. Papamichael) **81g:30012b** 30C30 (65E05)
- Treger, Robert** Reflexive modules. *J. Algebra* **54** (1978), no. 2, 444-466. (G. Horrocks) **81i:13005** 13C13 (14F05)
- Rational singularities in dimension ≥ 2 . *Algebraic geometry (Proc. Summer Meeting, Univ. Copenhagen, Copenhagen, 1978)*, pp. 592-604, Lecture Notes in Math., 732, Springer, Berlin, 1979. (Jonathan M. Wahl) **81d:14003** 14B05
- Tremayne, A. R.** (with Poskitt, D. S.) Testing the specification of a fitted autoregressive-moving average model. *Biometrika* **67** (1980), no. 2, 359-363. (L. G. Godfrey) **81j:62185** 62M10

- Tremblay, Richard** (with Srivastava, Hari M.; Lavoie, J.-L.) The Rodrigues type representations for a certain class of special functions. *Ann. Mat. Pura Appl.* (4) **119** (1979), 9–24. (V. L. Deshpande) **81b:33006** 33A30 (33A65)
- Trenčanský, Ivan** Chain in S_1 (Slovak and Russian summaries) *Acta Fac. Rerum Natur. Univ. Comenian. Math.* **34** (1979), 123–135. (Jörn Zeuge) **81j:51021** 51N15 (51A05)
- Trench, William F.** (with Greville, Thomas N. E.) Band matrices with Toeplitz inverses. *Linear Algebra Appl.* **27** (1979), 199–209. (A. Jaeger) **81e:15002** 15A09 (15A57)
- Interpolating functions associated with second-order differential equations. *Proc. Amer. Math. Soc.* **78** (1980), no. 2, 253–258. (L. Lorch) **81f:34040** 34C10 (33A40, 34B25)
- Trendafilov, G. St.** On some cubature formulas for singular integrals. (Bulgarian. Russian and English summaries) *Godišnik Vis. Učebn. Zaved. Priložna Mat.* **14** (1978), no. 4, 171–176 (1979). (M. I. Levin) **81j:41048** 41A55 (65D32)
- Trendafilov, I. D.** Integrally closed modules. (Bulgarian. Russian and English summaries) *Godišnik Vis. Učebn. Zaved. Priložna Mat.* **13** (1977), no. 2, 29–34 (1978). (Doru Ștefănescu) **81h:13016** 13N05
- Trenkler, G.** Generalized mean squared error comparisons of biased regression estimators. *Comm. Statist. A—Theory Methods* **9** (1980), no. 12, 1247–1259. (Pi-Erh Lin) **81j:62136** 62J07
- Trent, Tavan T.** $H^2(\mu)$ spaces and bounded point evaluations. *Pacific J. Math.* **80** (1979), no. 1, 279–292. (Knut Øyma) **81j:30054** 30D55 (30G99, 46J15)
- (with Wang, James Li Ming) Uniform approximation by rational modules on nowhere dense sets. *Proc. Amer. Math. Soc.* **81** (1981), no. 1, 62–64. (Anthony G. O'Farrell) **81j:30062** 30E10 (46E15)
- Treska, Anna** (with Mazur, Ryszard) On some classes of β -starlike and of quasi- β -starlike meromorphic k -symmetric functions. *Demonstratio Math.* **11** (1978), no. 3, 735–750. (K. S. Padmanabhan) **81a:30010** 30C45
- Treshov, S. A.** (with Karev, G. P.) The method of Ljapunov functions in stochastic models of the mathematical theory of populations. (Russian) *Problemy Kibernet.* **30** (1978), 139–178, 232. (From the introduction) **81e:92013** 92A15 (34D20, 60J99)
- Trester, C.** (with Couillet, P.; Arnéodo, A.) Transition to stochasticity for a class of forced oscillators. *Phys. Lett. A* **72** (1979), no. 4–5, 268–270. (P. J. Holmes) **81m:50057** 58F14 (58F13, 70K99)
- (with Couillet, P.; Arnéodo, A.) Topological horseshoe and numerically observed chaotic behaviour in the Hénon mapping. *J. Phys. A* **13** (1980), no. 5, L123–L127. (Zbigniew Nitecki) **81j:58058** 58F13 (70F99, 76F99)
- Tretjak, V. P.** (with Protasov, I. V.; Carin, V. S.) On the covering problem. (Russian. English summary) *Issled. Operacii i ASU* **14** (1979), 61–65, 134. (Authors' summary) **81d:90072** 90C08 (05A15, 90B05)
- Tretjakov, N. V.** (with Gol'tsman, E. G.) Weakly modified Lagrange functions and the duality theorems associated with them. (Russian) *Ekonom. i Mat. Metody* **15** (1979), no. 6, 1180–1193. (S. Zlobec) **81e:90079** 90C25
- Tretjakov, V. V.** (with Jagodkin, V. I.) Mathematical analysis of whirled turbulent flow through a pipe. *Int.-Flu. Z.* **37** (1979), no. 2, 254–259 (Russian); translated as *J. Engng. Phys.* **37** (1979), no. 2, 920–924 (1980). (Authors' summary) **81d:76065** 76F99 (76U05)
- Tretkoff, C.** (with Magnus, Wilhelm) Representations of automorphism groups of free groups. *Word problems, II (Conf. on Decision Problems in Algebra, Oxford, 1976)*, pp. 255–259. *Studies in Logic and Foundations of Math.*, **95**, North-Holland, Amsterdam, 1980. (Charles C. Edmunds) **81i:20048** 20F28 (20C32, 20E05)
- Tretkoff, Marvin D.** (with Baumslag, Benjamin) Residually finite HNN extensions. *Comm. Algebra* **6** (1978), no. 2, 179–194. (From the introduction) **81e:20031** 20E06
- (with Haimo, F.; Singer, M. F.) Remarks on analytic continuation. *Bull. London Math. Soc.* **12** (1980), no. 1, 9–12. (A. J. Lohwater) **81j:30069** 30B40 (33D40, 20F10)
- A topological approach to the theory of groups acting on trees. *J. Pure Appl. Algebra* **16** (1980), no. 3, 323–333. (J. S. Birman) **81b:20030** 20F32 (57M05, 57M10)
- Treter, Marietta J.** (with Walster, G. W.) Further comments on the computation of modified Bessel function ratios. *Math. Comp.* **35** (1980), no. 151, 937–939. (James M. Horner) **81d:33005** 33A40
- (with Walster, G. W.) Analytic subtraction applied to the incomplete gamma and beta functions. *SIAM J. Sci. Statist. Comput.* **1** (1980), no. 3, 321–326. (Anton Huf'a) **81m:65029** 65D20 (33A15)
- Tretjakov, V. V.** See Tretjakov, V. V.
- Trevina, David H.** The pioneer work of François Donny on the existence of tension in liquids. *Ann. of Sci. 37* (1980), no. 4, 379–386. (Author's summary) **81j:01027** 01A55 (82–03)
- Treves, A.** (with Morisetti, S.; Reina, C.) Petrov classification of vacuum axisymmetric space-times. *Gen. Relativity Gravitation* **12** (1980), no. 8, 619–632. (Alan Barnes) **81k:83018** 83C20
- Triantafyllou, Georgia Vinić** See Vinić-Triantafyllou, Georgia
- Trias, A.** (with Gambini, R.; Salamó, S.) Self-dual covariant Lagrangian formulation of electromagnetism with magnetic charges. *lett. Nuovo Cimento* (2) **27** (1980), no. 12, 385–388. (From the text) **81f:81097** 81L05
- (with Gambini, R.) Path-dependent formulation of gauge theories and the origin of field copies in the nonabelian case. *Phys. Rev. D* (3) **21** (1980), no. 12, 3413–3416. (Authors' summary) **81e:81069** 81E10
- Trias Palós, Joan** On p -distributivity in f -rings. (Spanish) *Contributions in probability and mathematical statistics, teaching of mathematics and analysis (Spanyish)*, pp. 61–66. *Grindley, Granada*, 1979. (From the text) **81j:06023** 06F25
- A contribution to the study of ordered rings and f -rings. (Spanish. English summary) *Stochastica* **3** (1979), no. 2, 45–69. (Melvin Henriksen) **81f:06023** 06F25
- A note on the p -distributivity in non-Archimedean f -rings. *Stochastica* **4** (1980), no. 2, 169–172. (Author's summary) **81m:06042** 06F25
- Tribus, Myron** Thirty years of information theory. *Maximum entropy formalism (Conf., Mass. Inst. Tech., Cambridge, Mass., 1978)*, pp. 1–14. MIT Press, Cambridge, Mass., 1979. (R. H. Atkin) **81a:01028** 01A60 (92–03, 94A15)
- Tricceri, Franco** Strongly integrable G -structures. (Italian. English summary) *Rend. Sem. Mat. Univ. Politec. Torino* **37** (1979), no. 1, 81–91. (V. Oproiu) **81a:53036** 53C10
- (with Vanhecke, Lieven) Conformal invariants on almost Hermitian manifolds. *Geometry and differential geometry (Proc. Conf., Univ. Haifa, Haifa, 1979)*, pp. 422–434. *Lecture Notes in Math.*, **792**, Springer, Berlin, 1980. (P. Stavre) **81m:53067** 53C55
- Trick, T. N.** (with Yang, Paul C.; Haji, I. N.) On equation ordering in the modified nodal approach. *Thirteenth Asilomar Conference on Circuits, Systems and Computers (Pacific Grove, Calif., 1979)*, pp. 112–116. IEEE, New York, 1980. (See **81m:93004**) **94C09**
- Tricom, Francesco Giacomo** Glance at the life and work of Carl Friedrich Gauss (1777–1855). (Italian) Proceedings of the Meeting to Commemorate the Second Centennial of the Birth of Carl Friedrich Gauss and the 150th Anniversary of the Death of Pierre Simone de Laplace, October 24, 1977 (Turin, 1977). *Atti Accad. Sci. Torino Cl. Sci. Fis. Mat. Natur.* **112** (1978), suppl., 7–13. (E. Neuenschwander) **81f:01019** 01A55 (01A70)
- Tricot, Claude, Jr.** Rarefaction indices. *Mathematika* **27** (1980), no. 1, 46–57. (J. Král) **81j:28005** 28A10 (28A75)
- Triebel, Hans** Spaces of distributions with weights. Multipliers in L_p -spaces with weights. *Math. Nachr.* **78** (1977), 339–355. (John Fournier) **81c:46022** 46E30 (46F05)
- On the Dirichlet problem for regular elliptic differential operators of second order in the Besov spaces $B_{p,q}^s$. The case $0 < p < \infty$. *Elliptische Differentialgleichungen (Meeting, Rostock, 1977)*, pp. 237–263. *Wilhelm-Pieck-Universität, Rostock*, 1978. (P. Szeptycki) **81c:35037** 35J25 (46E35)
- On Besov-Hardy-Sobolev spaces in domains and regular elliptic boundary value problems. The case $0 < p < \infty$. *Comm. Partial Differential Equations* **3** (1978), no. 12, 1083–1164. (A. Kufner) **81b:46051** 46E35 (35J40)
- (with Kufner, Alois) Generalizations of Hardy's inequality. *Confer. Sem. Mat. Univ. Bari* **156** (1978), 21 pp. (1979). (J. V. Ryff) **81a:26014** 26D15 (46E35)
- A multiplier in Besov spaces which is not a multiplier in Lebesgue spaces. *Approximation theory (Papers, Vth Semester, Stefan Banach Internat. Math. Cent., Warsaw, 1975)*, pp. 287–291. *Banach Center Publ.*, **4**, PWN, Warsaw, 1979. (Hans G. Feichtinger) **81d:46036** 46E35 (42B15)
- Mapping properties of regular and strongly degenerate elliptic differential operators in the Besov spaces $B_{p,q}^s(\Omega)$. The case $0 < p < \infty$. *Equadiff IV (Proc. Czechoslovak Conf. Differential Equations and their Applications, Prague, 1977)*, pp. 424–432. *Lecture Notes in Math.*, **703**, Springer, Berlin, 1979. (H. O. Cordes) **81c:35033** 35J40 (46E35)
- Strongly degenerate elliptic differential operators in Besov spaces: the case $0 < p < \infty$. *Beiträge Anal.* **13** (1979), 27–47. (Ja. A. Roitberg) **81j:46057** 46E35 (35J70, 47F05)
- (with Stöckert, Bernd) Decomposition methods for function spaces of $B_{p,q}^s$ type and $F_{p,q}^s$ type. *Math. Nachr.* **89** (1979), 247–267. (Alberto Torchinsky) **81c:46023** 46E35
- (with Tran Duc Long) Equivalent norms and Schauder bases in anisotropic Besov spaces. *Proc. Roy. Soc. Edinburgh Sect. A* **84** (1979), no. 3–4, 177–183. (A. Kufner) **81c:46041** 46E35
- On the spaces $F_{p,q}^s$ of Hardy-Sobolev type: equivalent quasinorms, multipliers, spaces on domains, regular elliptic boundary value problems. *Comm. Partial Differential Equations* **5** (1980), no. 3, 245–291. (A. Kufner) **81c:46039** 46E35 (35J40)
- On $L_p(\Omega)$ -spaces of entire analytic functions of exponential type: complex interpolation and Fourier multipliers. The case $0 < p < \infty$, $0 < q < \infty$. *J. Approx. Theory* **28** (1980), no. 4, 317–328. (Jöran Bergh) **81k:30035** 30D55 (30E05, 46E15)
- Trif, Damian** Sur l'existence des solutions des équations nonlinéaires. (Romanian summary) *Studia Univ. Babeş-Bolyai Math.* **25** (1980), no. 1, 49–53. (Rainald Schöneberg) **81k:47088** 47H15 (47H05, 90C25)
- Triffet, T.** (with Sherwood, J. Frank, III) Synaptic connectivity in a dynamical brain model. *Proceedings of the First International Conference on Mathematical Modeling (St. Louis, Mo., 1977)*, Vol. II, pp. 819–828. Univ. Missouri-Rolla, Rolla, Mo., 1977. (Authors' summary) **81m:92027** 92A09
- Trifonov, A. P.** Reception of discontinuous signals buried in white noise. *Radiotekhnika i Elektronika* **24** (1979), no. 11, 2226–2234 (Russian); translated as *Radio Engng. Electron. Phys.* **24** (1979), no. 11, 46–52 (1980). (Author's summary) **81j:94003** 94A12
- Trifonov, I. P.** Electromagnetic field of the hybrid waves in a circular two-layer screened waveguide. I. (Russian summary) *Bulgar. J. Phys.* **7** (1980), no. 1, 76–89. (Author's summary) **81m:78028** 78A50
- Trifonov, Ju. V.** Optimization methods for random access file organization. *Programirovanie* **1980**, no. 6, 77–82, 95 (Russian); translated as *Programming and Comput. Software* **6** (1980), no. 2, 111–114 (1981). (Author's summary) **81m:68025** 68B15
- Trigg, Charles W.** Integers closed under reversal-subtraction. *J. Recreational Math.* **12** (1979/80), no. 4, 263–266. (From the introduction) **81e:10006** 10A30
- Triggiani, Roberto** Boundary stabilizability for diffusion processes. *International Symposium on Systems Optimization and Analysis (Rocquencourt, 1978)*, pp. 304–313. *Lecture Notes in Control and Information Sci.*, **14**, Springer, Berlin, 1979. (Shizuo Kitamura) **81c:93070** 93D99 (47F05)
- Boundary stabilizability for diffusion processes. *Third Symposium on Operations Research (Univ. Mannheim, Mannheim, 1978)*, Section I, pp. 647–662. *Operations Research Verfahren*, **31**, Hain, Meisenheim, 1979. (A. D. Wentzell (Ventsel')) **81j:35040** 35K35 (60J60)
- Boundary feedback stabilizability of parabolic equations. *Appl. Math. Optim.* **6** (1980), no. 3, 201–220. (Marshall Slemdro) **81m:35020** 35B40 (35K99, 93D20)
- Well-posedness and regularity of boundary feedback parabolic systems. *J. Differential Equations* **36** (1980), no. 3, 347–362. (K. Hawlitschek) **81f:35052** 35K20
- Trigub, R. M.** Summability of Fourier series at Lebesgue points and a Banach algebra of functions. (Russian) *Metric questions of the theory of functions and mappings*, No. VI (Russian), pp. 125–135. "Naukova Dumka", Kiev, 1975. (See **80j:30003**) **42A24**
- Summability of multiple Fourier series. (Russian) *Studies in the theory of functions of several real variables*, No. 2 (Russian), pp. 196–214. *Jaroslavl. Gos. Univ., Jaroslavl*, 1978. (R. L. Cooke) **81c:42024** 42B05
- (with Zagorodnii, N. A.) A question of Salem. (Russian) *Theory of functions and mappings (Russian)*, pp. 97–101, 178. "Naukova Dumka", Kiev, 1979. (O. D. Gabisonja) **81g:42008** 42A10
- The comparison principle and some questions of the theory of approximation of functions. (Russian) *Theory of functions and mappings (Russian)*, pp. 149–171, 180. "Naukova Dumka", Kiev, 1979. (E. O. Zee) **81j:41004** 41A05 (41A30)
- Summability of multiple Fourier series. Growth of Lebesgue constants. (Russian summary) *Anal. Math.* **6** (1980), no. 3, 255–267. (R. L. Cooke) **81j:42031** 42B05

- (with Kuznetsov, O. I.) Two-sided estimations of the approximation of functions by Riesz and Marcinkiewicz means. (Russian) *Dokl. Akad. Nauk SSSR* 251 (1980), no. 1, 34-36. (S. Aljančić) **81c:42004** 42A10
- Trillas Ruiz, Enrique** (with Alsina, Claudi) On natural metrics. *Stochastica* 2, no. 3, 15-22 (1977). (Jan Chvalina) **81c:08001** 08A02 (54E40, 54H10)
- On a methodology for proofs of σ -measurability. (Spanish) *Contributions in probability and mathematical statistics, teaching of mathematics and analysis* (Spanish), pp. 67-74. Grindley, Granaia, 1979. (B. Rodríguez-Salinas) **81g:28003** 28A12
- (with Sanchis, C.) On entropies of fuzzy sets deduced from metrics. (Spanish. English summary) *Estadist. Española* No. 82-83 (1979), 17-25. (Elie Sanchez) **81g:94002** 94D05 (94A17)
- Negation functions in the theory of fuzzy sets. (Spanish) *Stochastica* 3 (1979), no. 1, 47-60. (Elie Sanchez) **81j:03085** 03E72
- (with Alsina, Claudi) Sur les mesures du degré de flou. *Stochastica* 3 (1979), no. 1, 81-84. (Authors' summary) **81c:94068** 94D05 (94A17)
- See also *Proceedings: World Conference on Mathematics at the Service of Man*, **81m:90003**
- Trisnawati, Carmine** Acceleration waves in thermoelastic materials with internal constraint of inextensibility. (Italian. English summary) *Atti Sem. Mat. Fis. Univ. Modena* 28 (1979), no. 2, 425-440 (1980). (Authors' summary) **81k:73066** 73U05
- Trimble, Selden Y.** (with Shah, Swarupchand M.) On the zeros of univalent functions with univalent derivatives. *Ann. Mat. Pura Appl.* (4) 121 (1979), 309-317. (Ved Parkash Gupta) **81c:30027** 30C55
- See also *Differential and integral equations*, **81j:34003**
- Trolo, L.** (with Marchioro, C.; Pellegrinotti, A.; Pulvirenti, M.) Erratum: "Velocity of a perturbation in infinite lattice systems" [*J. Statist. Phys.* 19 (1978), no. 5, 499-510; MR 80b:82053]. *J. Statist. Phys.* 22 (1980), no. 6, 743. (From the text) **81f:82042** 82A67
- Tripathi, L. M.** (with Singh, A. P.) On $(N, 1/(n+1))$ summability of the conjugate derived Fourier series. *Acta Sci. Indica* 5 (1979), no. 4, 177-181. (Prem Chandra) **81f:42006** 42A24 (40G05, 42A50)
- (with Singh, A. P.) On Nörlund summability of Fourier series and its conjugate series. *Indian J. Pure Appl. Math.* 11 (1980), no. 2, 198-207. (Anthony Holland) **81c:42014** 42A24 (42A50)
- Tripathi, Nand K.** (with Davison, Edward J.) The optimal decentralized control of a large power system: load and frequency control. *IEEE Trans. Automat. Control* 23 (1978), no. 2, 312-325. (Authors' summary) **81c:93007** 93A15
- Tripathi, Ram C.** (with Gurland, John) Test of hypotheses in some families of discrete distributions. *Bull. Soc. Math. Grèce (N.S.)* 19 (1978), no. 2, 217-239. (S. Kotz) **81f:62045** 62F03
- (with Bhalerao, Narayan R.; Gurland, John) A method of increasing power of a test for the negative binomial and Neyman type A distributions. *J. Amer. Statist. Assoc.* 75 (1980), no. 372, 934-938. (Authors' summary) **81c:62039** 62F05
- Tripathi, Satish K.** (with Agrawala, Ashok K.) Transient solution of the virtual waiting time of a single-server queue and its applications. *Inform. Sci.* 21 (1980), no. 2, 141-158. (O. J. Boxma) **81f:60124** 60K25
- Tripathy, D. N.** (with Bose, S. K.) Uniformly damped general coupled anharmonic oscillators and the coherent state representation. *Let. Math. Phys.* 4 (1980), no. 4, 265-273. (Authors' summary) **81k:81013** 81C05 (81C40)
- Triplett, Tilmann** Chisholm's foundationalism. *Philos. Stud.* 38 (1980), no. 2, 141-153. (David W. Miller) **81k:03011a** 03A05
- Tripathi, Angelo** The influence of projective geometry in Hilbert's concept of a formal system. (Italian) *Archimede* 30 (1978), no. 3, 142-152. (E. J. F. Primrose) **81k:01021** 01A55 (01A60, 51-03)
- Trifun, Ju. A.** (with Kinelovskii, S. A.) Symmetric collision of two-layer jets of an ideal incompressible fluid. (Russian) *Z. Prikl. Meh. i Tehn. Fiz.* 1980, no. 2, 42-52, 172. (M. Drăganu) **81k:76007** 76B10
- Trivedi, Kishor S.** (with Wagner, Robert A.; Sigmon, Timothy M.) Optimal selection of CPU speed, device capacities, and file assignments. *J. Assoc. Comput. Mach.* 27 (1980), no. 3, 457-473. (Authors' summary) **81f:68012** 68A05 (68B15)
- Trivedi, Madhusudan C.** (with Mudholkar, Govind S.) A normal approximation for the distribution of the likelihood ratio statistic in multivariate analysis of variance. *Biometrika* 67 (1980), no. 2, 485-488. (Authors' summary) **81k:62031** 62E15 (62J05)
- Trifun, L.** Exceptional and orthosymplectic graded Lie algebras. *Ann. Inst. H. Poincaré Sect. A (N.S.)* 29 (1978), no. 1, 111-122. (I. L. Kantor) **81c:17003** 17A70 (17B70, 18C99)
- The Jost solutions for Yukawa potentials. *J. Math. Phys.* 21 (1980), no. 7, 1724-1731. (Brian DeFazio) **81g:81061** 81F05 (47A40)
- Truková, Věra** See Šedivá-Truková, Věra
- Troellic, Jean-Pierre** Espaces fonctionnels et théorèmes de I. Namioka. (English summary) *Bull. Soc. Math. France* 107 (1979), no. 2, 127-137. (W. R. Utz) **81d:54035** 54H20 (54C35)
- Troczko, V. V.** (with Višencuk, I. M.; Švečk, B. I.) Analysis of transient processes in computational converters of integral signal parameters. (Russian) *Avtomat. i Vychisl. Tehn. (Riga)* 1978, no. 3, 37-44, 93. (Authors' summary) **81d:94003** 94A05
- Trockel, Walter** (with Dierker, Egbert; Dierker, Hildegard) Aggregation of demand in case of nonconvex preferences. *Game theory and related topics* (Proc. Sem., Bonn and Hagen, 1978), pp. 267-273. North-Holland, Amsterdam, 1979. (From the introduction) **81a:90019** 90A06
- (with Dierker, Egbert; Dierker, Hildegard) Continuous mean demand functions derived from nonconvex preferences. *J. Math. Econom.* 7 (1980), no. 1, 27-33. (G. Chichilnisky) **81f:90015** 90A10 (58E17)
- Trochstra, A. S.** (with van der Hoeven, G. F.) Projections of lawless sequences. II. *Logic Colloquium '78* (Mons, 1978), pp. 265-298. *Studies in Logic and Foundations of Math.*, 97, North-Holland, Amsterdam, 1979. (B. van Rootselaar) **81g:03070** 03F55
- Troesch, B. A.** (with Searcy, J. L.) Correction to: "A cyclic inequality and a related eigenvalue problem" [*Pacific J. Math.* 81 (1979), no. 1, 217-226; MR 80f:15019]. *Pacific J. Math.* 85 (1979), no. 2, 501. (Editors) **81f:15029** 15A39
- (with Anglesio, J. D.) High precision results for a two-point boundary value problem. *J. Comput. Appl. Math.* 6 (1980), no. 2, 99-103. (Authors' summary) **81g:65106** 65L10

- The shooting method applied to a cyclic inequality. *Math. Comp.* 34 (1980), no. 149, 175-184. (Duncan A. Buel) **81b:10022** 10E20
- Trofimov, V. M.** Upper bounds of moduli of smoothness on classes of differentiable functions in uniform and integral metrics. (Russian) *The theory of the approximation of functions* (Proc. Internat. Conf., Kaluga, 1975) (Russian), pp. 391, "Nauka", Moscow, 1977. (From the text) **81c:42022** 42A99
- (with Hariton, L. R.) On the error of uniform approximation of functions of two variables by a sum of functions of one variable. (Russian) *Uzb. Vysch. Uchebn. Zaved. Matematika* 1979, no. 8, 70-73. (B. Bojanov) **81c:41040** 41A29 (26B40)
- Trofimov, V. V.** Finite-dimensional representations of Lie algebras and completely integrable systems. (Russian) *Mat. Sb. (N.S.)* 111(153) (1980), no. 4, 610-621, 624. (A. Morimoto) **81k:58037** 58F07 (43A80)
- Trokhimov, V. S.** (with Schein, Boris M.) Compatible algebras of multiplace functions. (Russian) *Theory of semigroups and its applications*, No. 4 (Russian), pp. 89-98, 127, Saratov. Gos. Univ., Saratov, 1978. (From the text) **81k:08003** 08A99
- Troickaja, L. S.** Equations of the motion of three solid bodies in Ljapunov's variables and Euler's angles. (Russian. English summary) *Bull. Inst. Teoret. Astronom.* 14 (1979), no. 7(160), 433-439. (Đorđe Đukić) **81d:70008** 70F07
- Troickii, V. A.** (with Smirnov, A. B.) Optimization of natural vibrational frequencies of curvilinear thin elastic rods. *Izv. Akad. Nauk SSSR Meh. Teor. Tela* 14 (1979), no. 5, 162-168 (Russian); translated as *Mech. Solids* 14 (1979), no. 5, 140-145. (From the introduction) **81d:73028** 73D99 (73K05)
- Troickii, V. E.** (with Cirova, I. S.) Analytic functionals in the representation of phase shifts. (Russian. English summary) *Teoret. Mat. Fiz.* 43 (1980), no. 1, 138-141. (Authors' summary) **81i:81085** 81F05 (46F20)
- Troisi, M.** (with Infantino, R.; Matarasso, S.) Spectral properties for a class of elliptic operators. (Italian. English summary) *Ann. Mat. Pura Appl.* (4) 121 (1979), 109-129. (M. S. Agranovich) **81i:35076** 35J99 (35P05)
- Troitskii, V. A.** See Troickii, V. A.
- Trojan, Allan** (with Spiegel, Eugene) On the Schur index and the structure of finite groups. *J. Algebra* 65 (1980), no. 2, 416-420. (B. Fein) **81i:20013** 20C15
- Trojanowski, I. E.** (with Kuznetsov, G. B.; Matveenko, V. P.) Forced oscillations of a short viscoelastic cylinder. (Russian) *Problems in the theory of elasticity and viscoelasticity* (Russian), pp. 34-38, 121, Akad. Nauk SSSR, Ural. Nauch. Centr, Sverdlovsk, 1978. (W. Kecs) **81m:73031** 73D35
- Trojanowski, Anthony E.** Ranking and listing algorithms for k -ary trees. *SIAM J. Comput.* 7 (1978), no. 4, 492-509. (M. C. Golumbic) **81k:68048** 68E10
- Trojanowski, Witold** Generalization of the modular group and its application. *Demonstratio Math.* 12 (1979), no. 3, 607-614. (Troels Johrgensen) **81c:20057** 20H15 (10D07, 51M10)
- Trojanowski, S. L.** Locally uniformly convex norms. (Russian) *C. R. Acad. Bulgare Sci.* 32 (1979), no. 9, 1167-1169. (G. J. O. Jameson) **81b:46015** 46B05
- Equivalent norms that are uniformly convex and uniformly differentiable in every direction. (Russian) *C. R. Acad. Bulgare Sci.* 32 (1979), no. 11, 1461-1464. (M. I. Kadec) **81d:46016** 46B05 (46B20)
- Troitzsch, F.** A minimum principle and a generalized bang-bang principle for a distributed optimal control problem with constraints on control and state. *Z. Angew. Math. Mech.* 59 (1979), no. 12, 737-739. (S. E. Dreyfus) **81k:49015** 49B22 (93C20)
- Tromba, Anthony J.** (with Tomi, Friedrich) On the structure of the set of curves bounding minimal surfaces of prescribed degeneracy. *J. Reine Angew. Math.* 316 (1980), 31-43. (F. J. Almgren, Jr.) **81h:58028** 58E12
- (with Smoller, J.; Wasserman, A.) Nondegenerate solutions of boundary value problems. *Nonlinear Anal.* 4 (1980), no. 2, 207-216. (Tassilo Küpper) **81b:34009** 34B05 (58F14)
- Trombetta, Maurizio** Convergence structures for filters. (Italian) *Rend. Sem. Mat. Univ. Padova* 61 (1979), 91-114 (1980). (Jacob Kofner) **81d:54002** 54A20 (54B30)
- Trombi, P. C.** Asymptotic expansions of matrix coefficients: the real rank one case. *J. Funct. Anal.* 30 (1978), no. 1, 83-105. (From the introduction) **81h:22010** 22E45 (43A80)
- Asymptotics of functions satisfying the γ -weak inequality with applications to uniformly bounded representations. *J. Funct. Anal.* 36 (1980), no. 1, 33-52. (Mitsuo Sugura) **81j:22018** 22E45 (43A90)
- Trần Trọng Liễn** See Bui Trọng Liễn
- Trần Trọng Tuấn** See Vũ Trọng Tuấn
- Tromson, K. C. S.** (with Noye, B. J.) Finite difference techniques applied to the simulation of tides and currents in gulfs. *Numerical simulation of fluid motion* (Proc. Internat. Conf. Numerical Simulation of Fluid Dynamic Systems, Monash Univ., Melbourne, 1976), pp. 285-355. North-Holland, Amsterdam, 1978. (See **81a:76005**) 76B15 (65F05, 86A05)
- Troost, Walter** Magnetic monopoles in classical field theories. *Hadron structure and lepton-hadron interactions* (Proc. Cargèse Summer Inst., Cargèse, 1977), pp. 603-621, NATO Adv. Study Inst. Ser., Ser. B: Physics, 39, Plenum, New York, 1979. (From the introduction) **81g:81074** 81E99
- Tropp, Johannes** ★Geschichte der Elementarmathematik. Band I. (German) [History of elementary mathematics. Vol. I] Arithmetik und Algebra. [Arithmetic and Algebra] Fourth edition. Revised and with a foreword by Kurt Vogel, Karin Reich and Helmut Gericke. Walter de Gruyter, Berlin-New York, 1980. xiii+742 pp. ISBN 3-11-004893-0 (M. Folkerts) **81j:01004** 01A05
- Tropp, Henry S.** The Smithsonian computer history project and some personal recollections. *A history of computing in the twentieth century*, pp. 115-122, Academic Press, New York, 1980. (See **81f:68002**) 01A70 (68-03)
- Trošin, S. M.** (with Edneral, V. F.; Tjurin, N. E.) Expansion of scattering amplitude at large momentum transfer. (Russian. English summary) *Teoret. Mat. Fiz.* 44 (1980), no. 1, 138-143. (Authors' summary) **81f:81123** 81F20 (35B40, 41A60)
- Troškie, C. G.** (with Coutourides, D.) F and t tests for a general class of estimators. *South African Statist. J.* 13 (1979), no. 2, 113-119. (Pi-Erh Lin) **81j:62119** 62J05 (62F04)
- Trost, Robert P.** (with Lee, Lung Fei) Estimation of some limited dependent variable models with application to housing demand. *J. Econometrics* 8 (1978), no. 3, 357-382. (Authors' summary) **81c:62111** 62P20

- (with Lee, Lung Fei; Maddala, G. S.) Asymptotic covariance matrices of two-stage probit and two-stage tobit methods for simultaneous equations models with selectivity. *Econometrica* 48 (1980), no. 2, 491-503. (V. K. Srivastava) **81d:62114** 62P20
- von Trotha, Hartmut** A note on periodic solutions of differential-difference equations with applications to economics. *Game theory and related topics (Proc. Sem., Bonn and Hagen, 1978)*, pp. 247-251, North-Holland, Amsterdam, 1979. (From the introduction) **81b:90049** 90A16 (34K15, 65Q05)
- Trotman, David J. A.** Interprétations topologiques des conditions de Whitney. *Journées Singulières de Dijon (Univ. Dijon, Dijon, 1978)*, pp. 4, 233-248, *Astérisque*, 59-60, Soc. Math. France, Paris, 1978. (Leslie Lander) **81f:58005** 58A35 (32C42, 58C27)
- Geometric versions of Whitney regularity for smooth stratifications. *Ann. Sci. École Norm. Sup.* (4) 12 (1979), no. 4, 453-463. (Jean-Jacques Gervais) **81g:58002a** 58A35 (32B30, 58C27)
- (with Kambouchner, Anne) Whitney (a)-faults which are hard to detect. *Ann. Sci. École Norm. Sup.* (4) 12 (1979), no. 4, 465-471. (Jean-Jacques Gervais) **81g:58002b** 58A35 (32B30, 58C27)
- (with Brodersen, Hans) Whitney (b)-regularity is weaker than Kuo's ratio test for real algebraic stratifications. *Math. Scand.* 45 (1979), no. 1, 27-34. (Jean-Jacques Risler) **81i:58006** 58A35 (32B20, 32B30)
- Trottenberg, Ulrich** See Special topics of applied mathematics, **81j:46003**
- Trotter, H. F.** Knot module and Seifert matrices. *Knot theory (Proc. Sem., Plans-sur-Bex, 1977)*, pp. 291-299, *Lecture Notes in Math.*, 685, Springer, Berlin, 1978. (Louis H. Kauffman) **81e:57019** 57Q45
- Trotter, P. G.** Ideals in $\mathbb{Z}[x, y]$. *Acta Math. Acad. Sci. Hungar.* 32 (1978), no. 1-2, 63-73. (From the introduction) **81g:13006** 13B25 (10M05)
- Projectives in some categories of semigroups. *Semigroups (Proc. Conf., Monash Univ., Clayton, 1979)*, pp. 133-144, Academic Press, New York, 1980. (P. R. Jones) **81j:20101** 20M50 (18G05)
- Nonexistence of coreflections and coproducts in some subcategories of semigroups. *Proc. Amer. Math. Soc.* 80 (1980), no. 1, 10-14. (Václav Koubek) **81f:18004** 18A30 (18A40, 18B99, 20M50)
- Trotter, William T., Jr.** A characterization of Roberts' inequality for boxicity. *Discrete Math.* 28 (1979), no. 3, 303-313. (Jerald A. Kabell) **81a:05118** 05C99
- (with Harary, Frank) On double and multiple interval graphs. *J. Graph Theory* 3 (1979), no. 3, 205-211. (J. R. Griggs) **81c:05055** 05C35
- Trotter, Brent M.** Some results in periodic autoregression. *Biometrika* 66 (1979), no. 2, 219-228. (E. J. Hannan) **81d:62102** 62M10
- Truxell, Joseph R.** Suspension systems for small sample inspections. *Technometrics* 22 (1980), no. 4, 517-533. (Author's summary) **81k:62143** 62N10
- Troy, William C.** The existence of traveling wave front solutions of a model of the Belousov-Zhabotinski chemical reaction. *J. Differential Equations* 36 (1980), no. 1, 89-98. (Richard J. Field) **81f:35053** 35K20 (80A30, 92A09)
- Trypenovski, B.** (with Kržovaki, P.) On reduced λ -2-semigroups. (Macedonian. English summary) *Prirad.-Mat. Fak. Univ. Kiril Metodij Skopje Godišnj. Zb.* 28 (1977), 17-26. (Authors' summary) **81e:20075** 20M99
- Trux, D. R.** Dynamical symmetries of rotationally invariant, three-dimensional, Schrödinger equations. *J. Math. Phys.* 21 (1980), no. 4, 807-817. (Brian G. Wybourne) **81c:81154** 81G40 (22E70, 58F35)
- Trubin, V. A.** (with Ivanov, V. V.; Ljūdvičenko, V. A.; Mihaljevič, V. S.; Šor, N. Z.) Questions of increasing the effectiveness of algorithms for minimization of functions and mathematical programming. (Russian) *Akad. Nauk Ukrain. SSR Inst. Kibernet. Preprint No. 59* (1979), 55 pp. (E. G. Gol'shtein) **81i:90147** 90C10 (65K05, 90C05, 90C30)
- Trubowitz, Eugene** (with Deift, Percy; Lund, Fernando) Nonlinear wave equations and constrained harmonic motion. *Proc. Nat. Acad. Sci. U.S.A.* 77 (1980), no. 2, part 1, 716-719. (Mark J. Ablowitz) **81g:35107** 35Q20 (58F07, 70K99)
- Trudinger, Neil S.** Local estimates for subsolutions and supersolutions of general second order elliptic quasilinear equations. *Invent. Math.* 61 (1980), no. 1, 67-79. (Helmut Kaul) **81m:35058** 35J60 (53C45)
- True, Hans** (with Nielsen, Hans Bruun) Numerical investigation of the 3-dimensional stability of a convective flow in a slot. *Boundary and interior layers—computational and asymptotic methods (Proc. Conf., Trinity College, Dublin, 1980)*, pp. 381-386, Boole, Dun Laoghaire, 1980. (See **81j:76001**) **76E15**
- Trueman, D. C.** Direct products of cyclic semigroups. *Semigroups (Proc. Conf., Monash Univ., Clayton, 1979)*, pp. 103-110, Academic Press, New York, 1980. (D. B. McAlister) **81m:20067** 20M10
- Finite direct products of finite cyclic semigroups and their characterization. *Proc. Roy. Soc. Edinburgh Sect. A* 85 (1980), no. 3-4, 337-351. (H. D'Alarcao) **81h:20095** 20M14
- Truemper, K.** (with Soun, Y.) Minimal forbidden subgraphs of unimodular multimodality networks. *Math. Oper. Res.* 4 (1979), no. 4, 379-389. (L. E. Trotter, Jr.) **81g:90050** 90B10 (05B35, 68C25)
- On Whitney's 2-isomorphism theorem for graphs. *J. Graph Theory* 4 (1980), no. 1, 43-49. (Marianne Gardner) **81f:05113** 05C40
- Truesdell, Clifford Ambrose** ★A first course in rational continuum mechanics. Vol. 1. General concepts. Pure and Applied Mathematics. *Academic Press [Harcourt Brace Jovanovich, Publishers], New York-London, 1977. xxiii + 280 pp. ISBN 0-12-701301-6* (Editors) **81a:73001** 73-01 (01A50)
- (with Muncaster, R. G.) ★Fundamentals of Maxwell's kinetic theory of a simple monatomic gas. Treated as a branch of rational mechanics. Pure and Applied Mathematics, 83. *Academic Press [Harcourt Brace Jovanovich, Publishers], New York-London-Toronto, Ont., 1980. xxvii + 593 pp. ISBN 0-12-701350-4* (Ju. M. Suhov) **81f:80001** 80-02 (01A55, 35Q20, 45K05)
- Truffin, C.** (with Brout, R.; Englert, F.; Frère, J.-M.; Gunzig, E.; Nardone, P.; Spindel, Ph.) Cosmogony and the origin of the fundamental length scale. *Nuclear Phys. B* 170 (1980), no. 2, FS 1, 228-264. (Authors' summary) **81i:83054** 83F05 (85A40)
- Truhanovskii, N. N.** (with Kononenko, A. M.) A class of transport polytopes with maximal number of vertices. (Russian. English summary) *Vesci Akad. Nauk BSSR Ser. Fiz.-Mat. Nauk* 5 (1979), no. 5, 123-125, 143. (A. I. Šchiop) **81e:90057** 90C05 (90C50)
- Truhina, I. P.** A problem connected with the arithmetic of probability measures on spheres. (Russian. English summary) *Studies in mathematical statistics, 3. Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 87 (1979), 143-158, 209-210, 214-215. (I. V. Ostrovskii) **81b:60011** 60B15
- Arithmetic of spherically symmetric measures in Lobachevskii space. (Russian) *Teor. Funkcii Funkcional. Anal. i Prilozhen.* No. 34 (1980), 136-146, v. (V. M. Maksimov) **81b:60017** 60B15 (53C65)
- Trullinger, S. E.** Dynamic polarizability of the double-quadratic kink. *J. Math. Phys.* 21 (1980), no. 3, 592-598. (Author's summary) **81a:82040** 82A55 (81Hxx)
- (with Bishop, A. R.; Krumhansl, J. A.) Solitons in condensed matter: a paradigm. *Phys. D* 1 (1980), no. 1, 1-44. (J. S. Joel) **81g:82047** 82A45 (58A15, 82A67)
- (with Currie, J. F.; Krumhansl, J. A.; Bishop, A. R.) Statistical mechanics of one-dimensional solitary-wave-bearing scalar fields: exact results and ideal-gas phenomenology. *Phys. Rev. B* (3) 22 (1980), no. 2, 477-496. (Authors' summary) **81i:82004** 82A05
- (with DeLeonardis, R. M.) Analytic statistical mechanics for a two-component-kink system. *Phys. Rev. B* (3) 22 (1980), no. 11, 5522-5541. (Authors' summary) **81i:82047** 82A42 (82A67)
- (with Subbaswamy, K. R.) Instability of nontopological solitons of coupled scalar field theories in two dimensions. *Phys. Rev. D* (3) 22 (1980), no. 6, 1495-1496. (Authors' summary) **81h:81106** 81E99 (35Q99)
- ngô viêt Trung** See Ngô Việt Trung
- tran van Trung** See Tran Van Trung
- Truini, K. G.** (with Vardanian, D. M.) The Riemann function for Bragg diffraction of X-ray wave packets for a wedge-shaped crystal. (Russian. Armenian and English summaries) *Izv. Akad. Nauk Armjan. SSR Ser. Fiz.* 14 (1979), no. 6, 403-406, 453. (Andrzej Zardecki) **81g:78034** 78A45 (82A60)
- Trunov, N. V.** (with Šerstnev, A. N.) Conditional expectation in a scheme of noncommutative probability theory. (Russian) *Transactions of the Eighth Prague Conference on Information Theory, Statistical Decision Functions, Random Processes (Prague, 1978)*, Vol. B, pp. 287-299, Reidel, Dordrecht, 1978. (József Szűcs) **81m:46090** 46L50
- Trunov, V. G.** (with Pinsker, I. Š.) Comparison of criteria for efficiency of learning with reconstruction of dependence according to empirical data. (Russian) *Models. Algorithms. Decision making (Russian)*, pp. 90-100, 249, "Nauka", Moscow, 1979. (Authors' summary) **81d:62062** 62J05
- Truong, T. K.** (with Reed, I. S.; Miller, R. L.) A new algorithm for computing primitive elements in the field of Gaussian complex integers modulo a Mersenne prime. *IEEE Trans. Acoust. Speech Signal Process.* 27 (1979), no. 5, 561-563. (S. W. Golomb) **81b:10002** 10A10 (12C15, 68G99)
- Truk, N. N.** Some properties of multidimensional kernels. (Russian) *Vestnik Belorus. Gos. Univ. Ser. I* 1978, no. 3, 60-62, 88. (R. L. Cooke) **81c:42025** 42B05
- (with Zurbenko, I. G.) An estimate of the spectral densities of stationary processes. (Russian. Lithuanian and English summaries) *Litovsk. Mat. Sb.* 19 (1979), no. 1, 67-85, 230. (M. A. Mirzamedov) **81c:62107** 62M15
- Trushin, D. S.** (with Allen, H. P.) A generalized Frobenius structure for coalgebras with applications to character theory. *J. Algebra* 62 (1980), no. 2, 430-449. (E. J. Taft) **81b:16011** 16A24 (16A36)
- Truškin, A. V.** Bit number distribution upon quantization of a multivariate random variable. *Problemy Peredachi Informacii* 16 (1980), no. 1, 105-110 (Russian); translated as *Problems Inform. Transmission* 16 (1980), no. 1, 76-79. (Authors' summary) **81i:94016** 94A34
- Truskova, N. F.** Level intersecting in the quantum-mechanical two-center problem and representations of the $O(2, 2) \times O(2, 2)$ and $O(3, 1) \times O(3, 1)$ groups. *Jadernaja Fiz.* 30 (1979), no. 2, 568-587 (Russian); translated as *Soviet J. Nuclear Phys.* 30 (1979), no. 2, 292-301. (B. Geyer) **81h:81039** 81C40 (22E70)
- Truszczyński, Mirosław** Once more on storage for consecutive retrieval. *Inform. Process. Lett.* 10 (1980), no. 1, 21-24. (From the introduction) **81a:68110** 68H05
- Truten, V. I.** (with Zazunov, L. G.) The Callan-Symanzik equation and the scaling behavior of correlation functions in the second-order phase transition. (Russian. English summary) *Ukrain. Fiz. Ž.* 25 (1980), no. 3, 376-380, 518. (Authors' summary) **81b:82005** 82A25 (81E15)
- Trybus, Leszek** Two-level feedback control for interconnected distributed parameter systems of first order. *Kybernetika (Prague)* 15 (1979), no. 1, 51-64. (Author's summary) **81i:93017** 93C20
- Trych-Pohlmeier, Ewa B.** The stability properties of equilibrium states. A report on a common work with Rudolf Haag. *Algèbres d'opérateurs et leurs applications en physique mathématique (Proc. Colloq. Marseille, 1977)*, pp. 437-440, *Colloques Internat. CNRS*, 274, CNRS, Paris, 1979. (From the text) **81a:82008** 82A05
- Tryluk, Václav** (with Radochová, Drahoslava) Asymptotic and oscillation properties of third order linear differential equations. *Arch. Math. (Brno)* 16 (1980), no. 3, 167-173. (W. J. Kim) **81m:34046** 34C10
- Trzeciak, Jerzy** See Greenberg, Marvin Jay, **81e:58001**
- Trzeziar, A.** Some conditions for the commutativity of differential rings. *Zeszyty Nauk. Univ. Jagielloń. Prace Mat.* No. 21 (1979), 115-121. (Paul van Praag) **81b:16023** 16A70
- Trzciński, Andrzej** The size effect. I. Thermodynamical model. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Tech.* 27 (1979), no. 5-6, 499-506. (Author's summary) **81h:73004a** 73B30 (73U05)
- The size effect. II. Model of dynamics. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Tech.* 27 (1979), no. 5-6, 507-511. (Authors' summary) **81h:73004b** 73B30 (73U05)
- Tsagarakis, Marcos** (with Mehlhorn, Kurt) On the isomorphism of two algorithms: Hu/Tucker and Garsia/Wachs. *Les arbres en algèbre et en programmation (4ème Colloq., Lille, 1979)*, pp. 159-172, Univ. Lille I, Lille, 1979. (From the summary) **81d:68077** 68E05 (68C05)
- Tsagas, Gr.** A class of rectilinear congruences having some properties. *Tensor (N.S.)* 33 (1979), no. 1, 89-93. (George Stamou) **81g:53007** 53A25
- On the spectrum of the Laplace operator for the exterior 2-forms. *Tensor (N.S.)* 33 (1979), no. 1, 94-96. (R. S. Millman) **81g:58042** 58G25 (53C55)
- Some properties of closed 1-forms on a special Riemannian manifold. *Proc. Amer. Math. Soc.* 62 (1977), no. 1, 1-4. (From the introduction) **81d:58001** 58G25 (53C55)

- Math. Soc.* **81** (1981), no. 1, 104–106. (József Dodziuk) **81j:53045** 53C20
- Tsai, Chon Yin** (with Widnall, Sheila E.) Examination of group-velocity criterion for breakdown of vortex flow in a divergent duct. *Phys. Fluids* **23** (1980), no. 5, 864–870. (Authors' summary) **81g:76030** 76C05
- Tsai, Lung I.** Existence of solutions of nonlinear elliptic systems. *Bull. Inst. Math. Acad. Sinica* **8** (1980), no. 1, 111–127. (Milan Kucera) **81e:35052** 35J65 (35J25)
- Tsai, Morgan S.** Harmonic linearization method for high-intensity sound in two-dimensional lined ducts. *AIAA J.* **18** (1980), no. 10, 1180–1185. (Authors' summary) **81h:76046** 76Q05 (76N15)
- Tsai, Paul J.** (with Chen, Hubert J.) Optimal confidence interval for the largest mean in repeated measurements design. *Biometrika* **67** (1980), no. 1, 119–126. (Authors' summary) **81i:62058** 62F25 (62F07)
- Tsai, Wu Yang** (with Nearing, James) Transition-Čerenkov radiation in a slab. *Phys. Rev. D* (3) **21** (1980), no. 12, 3428–3436. (From the summary) **81e:78025** 78A40 (78A35)
- Tsai, Y. M.** Dynamic effects in the propagation of a ductile penny-shaped crack. *Internat. J. Solids and Structures* **16** (1980), no. 8, 673–682. (Authors' summary) **81d:73088** 73M05
- Tsamasyphos, G. J.** (with Theocaris, P. S.; Andrianopoulos, N.) The problem of the infinite wedge. (German summary) *Acta Mech.* **34** (1979), no. 1–2, 63–87. (R. Muki) **81c:73015** 73C99
- (with Theocaris, P. S.) Cubature formulas for the evaluation of surface singular integrals. *BIT* **19** (1979), no. 3, 368–377. (T. N. L. Patterson) **81a:65037** 65D32
- (with Theocaris, P. S.) On the solution of the sector problem. (French summary) *J. Elasticity* **9** (1979), no. 3, 271–281. (J. L. Nowinski) **81c:73006** 73C05 (44A15)
- Tamparila, Michael** Cosmological principle and torsion. *Phys. Lett. A* **75** (1979/80), no. 1–2, 27–28. (Authors' summary) **81h:83042** 83D05
- Tang, Kai Man** (with Liu, Ming Chit; Ng, Shu Ming) An improved estimate for certain Diophantine inequalities. *Proc. Amer. Math. Soc.* **78** (1980), no. 4, 457–463. (T. N. Shorey) **81i:10025** 10B45 (10F05)
- Tang, S. K.** (with Baxter, R. J.; Enting, I. G.) Hard-square lattice gas. *J. Statist. Phys.* **22** (1980), no. 4, 465–489. (C. A. Hurst) **81f:82037** 82A67
- Tao, H. S.** (with Hagiwara, T.; Pi, S.-Y.) Point splitting regularization in a supersymmetric gauge field theory. *Phys. Lett. B* **94** (1980), no. 2, 166–169. (Authors' summary) **81f:81058** 81E99 (81G25)
- Tay, Jai Feng** (with Huang, Ti Yuan) The treatment of ties in some linear rank tests when the underlying distribution is discrete. *Comm. Statist. A—Theory Methods* **7** (1978), no. 9, 813–827. (Malay Ghosh) **81c:62049** 62G20
- Tchervonenkis, A. J.** See Červonenkis, A. Ja.
- Tse, Edison** (with Johnson, C. Richard, Jr.) Adaptive input matching control of structurally varying plants. *Automatica—J. IFAC* **16** (1980), no. 3, 317–321. (From the summary) **81d:93038** 93C40
- (with Arbel, Ami) Aggregation and information structuring in large-scale dynamic systems. *IEEE Trans. Systems Man Cybernet.* **10** (1980), no. 11, 723–729. (Authors' summary) **81m:90005** 90A05
- Tchitin, G. E.** See Ceitin, G. E.
- Tchitin, A. A.** See Ceitin, A. A.
- Tchrekots, Panayotis C.** Ordered-subspaces of some Banach lattices. *J. London Math. Soc.* (2) **18** (1978), no. 2, 325–333. (N. De Grande-De Kimpe) **81c:46012** 46B30
- Tséng, Chün Hung** (with Miao, Lung Chi) On generalized Dedekind functions. *Chinese J. Math.* **7** (1979), no. 1, 15–21. (J. Lehner) **81e:10026** 10D99
- Tuerrens, S.** See Tounelat, Marie Antoinette, **81m:01080**
- Tueylin, A. A.** See Ceitin, A. A.
- Tueylin, G. E.** See Ceitin, G. E.
- Tueylin, M. Yu.** See Ceitin, M. Ju.
- Tulen, Min Ping** See Qian, Min Ping
- Tsukada, Constantine** Brouwerian semilattices determined by their endomorphism semigroups. *Houston J. Math.* **5** (1979), no. 3, 427–436. (W. Nemitz) **81b:06001** 06A12 (03G25)
- Tsukunikov, Bella** (with De Wilde, Marc) Barreledness and the supremum of two locally convex topologies. *Math. Ann.* **246** (1979/80), no. 3, 241–248. (N. T. Peck) **81d:46004** 46A05 (46A07)
- A note on locally convex metrizable spaces. *Simon Stevin* **53** (1979), no. 4, 297–300. (S. Swaminathan) **81b:46003** 46A05
- Subspaces with property (b) in locally convex spaces of quasibarrelled type. *Math. Proc. Cambridge Philos. Soc.* **88** (1980), no. 2, 331–337. (M. Valdivia) **81b:46004** 46A05 (46A07)
- Tutsishvili, G. Sh.** See Ciciashvili, G. Š.
- Tikhonova, F. G.** See Chadaja, F. G.
- Tukos, Chris P.** (with Rao, A. N. V.) Stability of McShane systems. *Applied nonlinear analysis (Proc. Third Internat. Conf., Univ. Texas, Arlington, Tex., 1978)*, pp. 325–333. Academic Press, New York, 1979. (Ludwig Arnold) **81d:93070** 93E15 (60H10)
- (with Schultz, George W.) Stochastic combat modeling—Lanchester's first law. *Decision information*, pp. 185–211. Academic Press, New York, 1979. (W. H. Ruckle) **81i:90121** 90B99 (60H10, 90D25)
- (with Rao, A. N. V.) Robustness studies for Bayesian developments in reliability. *Decision information*, pp. 239–258. Academic Press, New York, 1979. (Lai K. Chan) **81h:62177** 62N05
- (with Koutras, D. C.) Bayesian analysis of the alpha failure model. (French and Italian summaries) *Statistica (Bologna)* **39** (1979), no. 3, 399–412. (Prem K. Goel) **81g:62165** 62N05 (62F15)
- (with Jernigan, Robert W.) Simulation of a nonlinear stochastic ecology model. *Appl. Math. Comput.* **7** (1980), no. 1, 9–25. (Howard B. Stauffer) **81j:92046** 92A17 (58F13)
- (with Jernigan, Robert W.; Turner, John C.) Parameter and moment bounds for a nonlinear stochastic ecology model. *Appl. Math. Comput.* **7** (1980), no. 1, 27–53. (Howard B. Stauffer) **81j:92047** 92A17
- (with Jernigan, Robert W.; Turner, John C.) Spectral analysis of an aquatic ecosystem. *J. Interdisciplinary Modeling Simulation* **3** (1980), no. 2, 163–192. (Authors' summary) **81d:92021** 92A17 (62M15)
- See also *Decision information*, **81e:93001**
- Tseng, Y.** (with Sen, Pranab Kumar) On functional central limit theorems for certain continuous time parameter stochastic processes. *J. Multivariate Anal.* **10** (1980), no. 3, 371–378. (David J. Aldous) **81m:60052** 60F17 (60B10, 60G44)
- Tsou, Chen Lung** See Zou, Zhen Long
- Tsuboi, Takashi** (with Mizutani, Tadayoshi) Foliations without holonomy and foliated bundles. *Sci. Rep. Saitama Univ. Ser. A* **9** (1979), no. 2, 45–55. (Robert Roussarie) **81a:57027** 57R30
- Tsubouchi, Shiko** Category score and grouping score in the analysis by the theory of quantification (method of case 3). (Japanese. English summary) *J. Hokkaido Univ. Ed. Sect. II A* **29** (1978/79), no. 2, 11–16. (C. Hayashi) **81m:62117** 62H99
- Tsuchida, Ichiro** (with Kawakami, Takashi; Nakahara, Ichiro; Matsumoto, Hiroyuki) Stresse in a circular cylinder having an eccentric spherical cavity under tension. *Bull. JSME* **23** (1980), no. 179, 630–636. (From the summary) **81d:73006** 73C05
- (with Fujita, Teruaki; Nakahara, Ichiro) Stress concentration due to a hemiprolate spheroid: pit at a free surface of a semi-infinite body under all-around tension. *Bull. JSME* **23** (1980), no. 181, 1048–1054. (Authors' summary) **81g:73006** 73C05
- (with Nakahara, Ichiro; Kodama, Masao) On the asymmetric problem of elasticity theory for an infinite elastic solid containing two spherical inclusions. *Bull. JSME* **23** (1980), no. 181, 1072–1080. (Authors' summary) **81f:73014** 73C40
- Tsuchihashi, Hiroyasu** Compactifications of the moduli spaces of hyperelliptic surfaces. *Tôhoku Math. J. (2)* **31** (1979), no. 3, 319–347. (R. R. Simha) **81f:32039** 32J15 (14J25)
- Tsuchiya, Masaaki** On the stochastic differential equation for a two-dimensional Brownian motion with boundary condition. *J. Math. Soc. Japan* **32** (1980), no. 2, 233–249. (S. R. S. Varadhan) **81d:60079** 60J60 (60J65)
- Tsuchiya, Nobuo** Lower semicontinuity of growth of leaves. *J. Fac. Sci. Univ. Tokyo Sect. IA Math.* **26** (1979), no. 3, 465–471. (P. Ver Eecke) **81f:57027** 57R30 (34C40)
- Growth and depth of leaves. *J. Fac. Sci. Univ. Tokyo Sect. IA Math.* **26** (1979), no. 3, 473–500. (Robert Roussarie) **81f:57028** 57R30 (58F18)
- Leaves with nonexact polynomial growth. *Tôhoku Math. J. (2)* **32** (1980), no. 1, 71–77. (John Cantwell) **81e:57031** 57R30
- Tsuchiya, Takashi** Stable oscillating properties of interacting three-state cyclic enzyme systems. *J. Chem. Phys.* **73** (1980), no. 8, 3791–3796. (J. P. Kernevez) **81k:52018** 92A09 (34C15, 58F21, 82A42)
- Tsuchiya, Y.** (with Hsu, J. R. C.; Silvester, R.) Boundary-layer velocities and mass transport in short-crested waves. *J. Fluid Mech.* **99** (1980), no. 2, 321–342. (Authors' summary) **81g:76012** 76B15 (76D10)
- Tsuda, Osamu** (with Fujita, Tatsu; Mizuta, Atsuo) Unstable fracture criterion in a power-law hardening material. (French summary) *Internat. J. Fracture* **16** (1980), no. 3, 221–232. (Authors' summary) **81f:73092** 73M20 (73M15)
- Tsuda, Takeo** (with Nakazawa, Teiji) An extension of a problem concerning an ellipse. (Japanese) *Math. Rep. Kyushu Univ.* **9** (1973/74), no. 2, 29–34. (S. Hitotumatu) **81i:51014** 51M05 (51N10)
- (with Nakazawa, Teiji) Interrelation between two problems. *Math. Rep. Kyushu Univ.* **9** (1973/74), no. 2, 67–71. (S. Hitotumatu) **81k:12014** 12D05 (51M05)
- Tsuge, Shunichi** Separation of variables in the two-point BBGKY equations. *Phys. Lett. A* **70** (1979), no. 4, 266–268. (Authors' summary) **81h:82034** 82A40
- Tsui, Kam Wah** Multiparameter estimation of discrete exponential distributions. (French summary) *Canad. J. Statist.* **7** (1979), no. 2, 193–200 (1980). (A. L. Rukhin) **81e:62062a** 62H12 (62C15)
- Estimation of Poisson means under weighted squared error loss. (French summary) *Canad. J. Statist.* **7** (1979), no. 2, 201–204 (1980). (A. L. Rukhin) **81e:62062b** 62H12 (62C15)
- (with Weerahandi, Samaradasa; Zidek, James V.) Inadmissibility of the best fully equivariant estimator of the generalized residual variance. *Ann. Statist.* **8** (1980), no. 5, 1156–1159. (Steven Arnold) **81m:62015** 62C15 (62H12)
- Tsui, Sze Kai** (with Wright, Steve) The splitting of operator algebras. *Pacific J. Math.* **84** (1979), no. 1, 201–215. (John B. Conway) **81h:46082** 46L05 (46L10, 47C15)
- Tsuji, Kazuhiko** (with Fujita, Shohji; Fukao, Takeshi) Topological equivalence of state spaces in the interconnected power system in emergency control. *IEEE Trans. Automat. Control* **24** (1979), no. 3, 514–516. (B. D. Donevski) **81f:93000a** 93A15
- See also *Zaborsky, J.*; et al., **81f:93000b**
- Tsuji, Tadashi** On curvatures of homogeneous convex cones. *Proc. Japan Acad. Ser. A Math. Sci.* **56** (1980), no. 3, 119–121. (J. S. Joel) **81g:32027** 32M10 (53C30)
- Tsuji, Takumi** (with Kageyama, Sanpei) Characterization of equiplicated variance-balanced block designs. *Ann. Inst. Statist. Math.* **32** (1980), no. 2, 263–273. (M. L. Chandak) **81k:62105** 62K10
- Tsuji, Tatsuo** (with Tanaka, Kokichi) Tree-array composite structures and their addressing functions. *Systems-Comput.-Controls* **9** (1978), no. 3, 35–43 (1980). (Authors' summary) **81i:68035** 68B15
- Tsuji, Tetsu** (with Shima, A.) The behavior of bubbles in an Ellis fluid. *Rep. Inst. High Speed Mech. Tôhoku Univ.* **42** (1980), 25–41. (Authors' summary) **81k:76004** 76A05
- (with Shima, A.) The behavior of bubbles in a Carreau model fluid. *Rep. Inst. High Speed Mech. Tôhoku Univ.* **42** (1980), 43–58. (Authors' summary) **81k:76005** 76A05
- Tsujiishi, Toru** Conservation laws of free Klein Gordon fields. *Lett. Math. Phys.* **3** (1979), no. 5, 445–450. (A. M. Vinogradov) **81e:35118** 35Q20 (58G05, 58H10)
- Tsukada, Etsuo** Invariant sequences in Brown-Peterson homology and some applications. *Hiroshima Math. J.* **10** (1980), no. 2, 385–389. (Haynes R. Miller) **81f:55024** 55T15 (55N22)
- Tsukada, Kazumi** Eigenvalues of the Laplacian of warped product. *Tokyo J. Math.* **3** (1980), no. 1, 131–136. (Th. Friedrich) **81k:58069** 58G25 (53C20)
- Tsukamoto, Yachihiro** An approach to fuzzy reasoning method. *Advances in fuzzy set theory and applications*, pp. 137–149. North-Holland, Amsterdam, 1979. (W. Wechler) **81e:03021** 03B52 (03B50)
- Tsukiyama, Kouzou** Self-homotopy-equivalences of a space with two nonvanishing homotopy groups. *Proc. Amer. Math. Soc.* **79** (1980), no. 1, 134–138. (H. Wada) **81j:55012** 55Q05 (55P10)
- Tsumematsu, T.** (with Azumi, M.; Kurita, G.; Matsuura, T.; Takeda, T.; Tanaka, Yutaka) A fluid model numerical code system for tokamak fusion research. *Computing methods in applied sciences and engineering (Proc. Fourth Internat. Sympos., Versailles,*

- 1979, pp. 335-356, North-Holland, Amsterdam, 1980. (Authors' summary) **81k:76086** 76X05 (65N30, 76W05)
- Tsurumi, K.** The characterization theorem of Baire functions of class I over a non-Archimedean valued field. *Arch. Math. (Basel)* **33** (1979/80), no. 2, 165-169. (Daniel Barsky) **81k:12031** 12B40 (26E30, 54C50)
- Tsuruoka, Kunitoshi** (with Kaneko, Asao; Nishihara, Yoshiyuki; Hattori, Mitsuhiro) Logical clock synchronization method for duplicated database control. *NEC Res. Develop.* No. 58 (1980), 89-98. (Authors' summary) **81k:68029** 68B15 (90B35)
- Tsuchida, Ryuji** Hyperbolicity of quotients of bounded symmetric domains. *Proceedings of the International Symposium on Algebraic Geometry (Kyoto Univ., Kyoto, 1977)*, pp. 687-691, Kinokuniya Book Store, Tokyo, 1978. (G. van der Geer) **81m:32038** 32N05
- A formula for the dimension of spaces of Siegel cusp forms of degree three. *Proc. Japan Acad. Ser. A Math. Sci.* **55** (1979), no. 9, 359-363. (R. P. Langlands) **81k:10039** 10D20
- A formula for the dimension of spaces of Siegel cusp forms of degree three. *Amer. J. Math.* **102** (1980), no. 5, 937-977. (J. Spilker) **81m:10050** 10D20
- Tsuchida, Yukio** Some notes on the radical of a finite group ring. II. *Osaka J. Math.* **16** (1979), no. 1, 35-38. (P. Donovan) **81k:20010** 20C05
- Tsutsumi, Makoto** (with Kumagai, Nobuaki) Behavior of Bleustein-Gulyaev waves in a periodically corrugated piezoelectric crystal. *IEEE Trans. Microwave Theory Tech.* **28** (1980), no. 6, 627-632. (Authors' summary) **81k:73021** 73R05 (82A60)
- Tsutsumi, Masayoshi** (with Matabashi, Tomomi) Initial value problem for an abstract differential equation in a Hilbert space. *Bull. Sci. Engrg. Res. Lab. Waseda Univ.* No. 87 (1979), 64-69. (R. E. Showalter) **81k:34056** 34G20 (35K70)
- (with Matabashi, Tomomi) A certain class of singular nonlinear pseudoparabolic equations. *Funkcial. Ekvac.* **22** (1979), no. 3, 313-325. (William Rundell) **81k:34114** 34G20 (35K70)
- Tsuyumine, Shigeaki** Constructions of modular forms by means of transformation formulas for theta series. *Tsukuba J. Math.* **3** (1979), no. 2, 59-80. (H. Klingen) **81k:10023** 10D20
- Tsvetlik, A. M.** See **Cvetlik, A. M.**
- Tsybakov, B. S.** See **Cybakov, B. S.**
- Tsyphkin, Ya. Z.** See **Cyphkin, Ja. Z.**
- Tu, Gui Zhang** The Lie algebra of invariant group of the KdV, MKdV, or Burgers equation. *Lett. Math. Phys.* **3** (1979), no. 5, 387-393. (A. M. Vinogradov) **81k:58051** 58G35 (35A30, 35Q20)
- do-Tu, Hai** See **Do-Tu, Hai**
- Tuener, A. A.** Some physically nonlinear problems of two-dimensional elasticity theory. (Russian) *Studies in some questions of the constructive theory of functions and differential equations (Russian)*, pp. 195-198, Azerbaidzhan. Inst. Nefti i Himii, Baku, 1974. (See **80d:00021**) 73C99
- pham dinh Tuan** See **Pham Dinh Tuan**
- tu trung Tuan** See **Vu Trung Tuan**
- Tuan, P. D.** (with Anh, V. V.) On β -convexity of certain starlike univalent functions. *Rev. Roumaine Math. Pures Appl.* **24** (1979), no. 10, 1413-1424. (R. McLaughlin) **81k:30019** 30C45 (30C75, 30D50)
- (with Anh, V. V.) Radii of convexity of two classes of regular functions. *Bull. Austral. Math. Soc.* **21** (1980), no. 1, 29-41. (T. H. MacGregor) **81k:30022** 30C45
- (with Anh, V. V.) Extremal problems for functions of positive real part with a fixed coefficient and applications. With a loose Russian summary. *Czechoslovak Math. J.* **30(105)** (1980), no. 2, 302-312. (Albert E. Livingston) **81k:30015** 30C45 (30C75)
- (with Hamilton, D. H.) Radius of starlikeness of convex combinations of univalent starlike functions. *Proc. Amer. Math. Soc.* **78** (1980), no. 1, 56-58. (P. T. Mocanu) **81k:30007** 30C45
- Tubaro, Luciano** (with Da Prato, Giuseppe; Iannelli, Mimmo) Linear stochastic differential equations in Hilbert spaces. II. (Italian summary) *Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur.* (8) **65** (1978), no. 1-2, 5-10 (1979). (Ludwig Arnold) **81k:60070** 60H15
- Tubbs, Allan D.** Galactic spiral shocks: vertical structure, thermal phase effects, and self-gravity. *Astrophys. J.* **239** (1980), no. 3, part 1, 882-892. (Author's summary) **81k:85005** 85A05 (85A15)
- Tubbs, J. D.** The effect of serial correlation on confidence regions for the parameters of a multivariate normal population. *Comm. Statist. A—Theory Methods* **9** (1980), no. 13, 1341-1351. (I. Olkin) **81k:62165** 62M10 (62H12)
- Tucci, Maria** Continuous selection theorems for multivalued maps whose values are a union of a fixed number n of closed convex sets. (Italian. English summary) *Rend. Accad. Sci. Fis. Mat. Napoli* (4) **46** (1979), 547-561 (1980). (G. Magerl) **81k:54014** 54C60 (54C65, 90C25)
- Tuck, E. O.** Doubling strategies for backgammon-like games. *J. Austral. Math. Soc. Ser. B* **21** (1979/80), no. 4, 440-451. (S. Brent Morris) **81g:90099** 90D05 (90D42)
- A nonlinear unsteady one-dimensional theory for wings in extreme ground effect. *J. Fluid Mech.* **98** (1980), no. 1, 33-47. (Author's summary) **81d:76010** 76B05
- (with Mei, Chiang C.) Forward scattering by long thin bodies. *SIAM J. Appl. Math.* **39** (1980), no. 1, 178-191. (D. L. Colton) **81m:76006** 76B15 (35J05, 76Q05, 78A45)
- Simulation of bearing off and doubling in backgammon. *Math. Sci.* **6** (1981), no. 1, 43-61. (Author's summary) **81k:90112** 90D05
- Tucker, Alan C.** Berge's strong perfect graph conjecture. *Second International Conference on Combinatorial Mathematics (New York, 1978)*, pp. 530-535, New York Acad. Sci., 319, New York Acad. Sci., New York, 1979. (D. Ja. Keiselman) **81k:05041** 05C15
- An efficient test for circular-arc graphs. *SIAM J. Comput.* **9** (1980), no. 1, 1-24. (Author's summary) **81k:68074** 68E10 (05C99)
- Tucker, Albert W.** On Sperner's lemma and another combinatorial lemma. *Second International Conference on Combinatorial Mathematics (New York, 1978)*, pp. 536-539, New York Acad. Sci., 319, New York Acad. Sci., New York, 1979. (Daniel I. A. Cohen) **81k:05004** 05A05 (55M20)
- Tucker, Howard G.** (with Hudson, William N.) Asymptotic independence in the multivariate central limit theorem. *Ann. Probab.* **7** (1979), no. 4, 662-671. (Yutaka Kato)
- 81k:60021** 60F05 (60E07, 62E10)
- Tucker, Hugh A.** See *Methodology of Interaction*, **81k:68011**
- Tucker, Jerry H.** (with Tapia, Moiez A.) Complete solution of Boolean equations. *IEEE Trans. Comput.* **29** (1980), no. 7, 662-665. (Authors' summary) **81k:94036** 94C10
- Tucker, R. W.** (with Benn, I. M.; Dereli, T.) Gravitational monopoles with classical torsion. *J. Phys. A* **13** (1980), no. 10, L359-L363. (Authors' summary) **81h:83036** 83D05
- (with Benn, I. M.; Dereli, T.) Gauge field interactions in spaces with arbitrary torsion. *Phys. Lett. B* **96** (1980), no. 1-2, 100-104. (M. Carmeli) **81k:83029** 83C99 (53C05, 81E10)
- Tucker, Thomas W.** (with Gross, Jonathan L.) Local maxima in graded graphs of embeddings. *Second International Conference on Combinatorial Mathematics (New York, 1978)*, pp. 254-257, Ann. New York Acad. Sci., 319, New York Acad. Sci., New York, 1979. (Michael O. Albertson) **81k:05036** 05C10
- The number of groups of a given genus. *Trans. Amer. Math. Soc.* **258** (1980), no. 1, 167-179. (A. T. White) **81k:05040** 05C10 (05C25)
- Tudor, Constantin** (with Ciucu, George) ★Probabilități și procese stocastice. Vol. II. (Romanian) [Probabilities and stochastic processes. Vol. II] Editura Academiei Republicii Socialiste România, Bucharest, 1979. 319 pp. (Harry I. Cohn) **81k:60001** 60-01
- Some examples of Markov processes with two-dimensional time parameter. *An. Univ. București Mat.* **28** (1979), 111-118. (David Nualart Rodón) **81k:60082** 60J25 (60H10)
- On the existence and the uniqueness of solutions to stochastic integral equations with two-dimensional time parameter. *Rev. Roumaine Math. Pures Appl.* **24** (1979), no. 5, 817-827. (David Nualart Rodón) **81k:60070** 60H10 (60H20)
- Some remarks on stochastic integral equations in the plane. *Rev. Roumaine Math. Pures Appl.* **24** (1979), no. 8, 1271-1275. (David Nualart Rodón) **81k:60071** 60H10 (60H20)
- An invariance principle for Markov processes with two-dimensional time parameter. *Rev. Roumaine Math. Pures Appl.* **24** (1979), no. 10, 1513-1523. (Rashid Ahmad) **81k:60083** 60J25 (60F17, 60H10)
- lazo-Tueve, D.** See **Lazo-Tueve, D.**
- Tuganbayev, A. A.** The structure of modules that are nearly projective. (Russian) *Mat. Sb.* **106(148)** (1978), no. 4, 554-565. (L. A. Koifman) **81d:16005** 16A14 (16A50)
- Poorly projective modules. (Russian. English summary) *Vestnik Moskov. Univ. Ser. I Mat. Meh.* **1979**, no. 5, 43-47, 88. (J. Jirásko) **81g:16032** 16A50
- Quasiprojective modules. (Russian) *Sibirsk. Mat. Ž.* **21** (1980), no. 3, 177-183, 238. (J. Jirásko) **81h:16036** 16A50
- Rings whose quotient rings are all low-injective. (Russian) *Uspehi Mat. Nauk* **35** (1980), no. 2(212), 223-224. (L. Bican) **81f:16037** 16A52
- Rings over which every module is a direct sum of distributive modules. (Russian. English summary) *Vestnik Moskov. Univ. Ser. I Mat. Meh.* **1980**, no. 1, 61-64, 94. (Author's summary) **81k:16038** 16A53
- Distributive Noetherian rings. (Russian. English summary) *Vestnik Moskov. Univ. Ser. I Mat. Meh.* **1980**, no. 2, 30-34, 102. (Chr. U. Jensen) **81g:16005** 16A14
- Tugnait, Jitendra K.** Convergence analysis of partitioned adaptive estimators under continuous parameter uncertainty. *IEEE Trans. Automat. Control* **25** (1980), no. 3, 569-573. (Author's summary) **81g:93109** 93E10
- baciu-Tugulea, Aurora** See **Baciu-Tugulea, Aurora**
- Tuhtasimov, M.** A discriminated solution for four-person cooperative games. (Russian) *Dokl. Akad. Nauk UzSSR* **1980**, no. 7, 13-15. (Milan Mareš) **81k:90111** 90D12
- Tukalevska, N. I.** See *Processing of software and hardware for automatic control systems*, **81k:90007**
- Tukey, John W.** Study of robustness by simulation: particularly improvement by adjustment and combination. *Robustness in statistics (Proc. Workshop, Army Res. Office, Research Triangle Park, N.C., 1978)*, pp. xiii, 75-102, Academic Press, New York, 1979. (See **81k:62032**) 62F35
- Robust techniques for the user. *Robustness in statistics (Proc. Workshop, Army Res. Office, Research Triangle Park, N.C., 1978)*, pp. 103-106, Academic Press, New York, 1979. (See **81k:62032**) 62F35
- Styles of data analysis, and their implications for statistical computing. *Computat. 1980 (Proc. Fourth Sympos. Comput. Statist., Edinburgh, 1980)*, pp. 21-31, Physica, Vienna, 1980. (Author's summary) **81m:62006** 62-07 (62-04)
- See also **Parzen, Emanuel**, **81k:62053**
- Tukla, Pekka** Lipschitz approximation of homeomorphisms. *Ann. Acad. Sci. Fenn. Ser. A I Math.* **4** (1979), no. 1, 137-144. (David C. Wilson) **81d:57013** 57M99 (54C25, 57Q25)
- On torsionless subgroups of infinitely generated Fuchsian groups. *Ann. Acad. Sci. Fenn. Ser. A I Math.* **4** (1979), no. 2, 203-205. (C. MacLachlan) **81h:20059** 20H10 (30F35)
- Tulczyjew, Włodzisław M.** (with Kijowski, Jerzy) ★A symplectic framework for field theories. *Lecture Notes in Physics*, 107, Springer-Verlag, Berlin-New York, 1979. iv + 257 pp. ISBN 3-540-09538-1 (Ju. M. Zinov'ev) **81m:70001** 70-02 (70A05, 81E99)
- Geometry of gauge fields for extended objects. *Rep. Math. Phys.* **16** (1979), no. 2, 233-250. (Andrzej Trautman) **81g:81075** 81E99 (53C80)
- (with Benetti, Sergio) Geometry of static mechanical systems with constraints. *Ann. Mat. Pura Appl.* (4) **124** (1980), 139-160. (Takayuki Nōno) **81m:58031** 58F05 (70D10)
- Tulegenov, M. U.** (with Andasov, M. A.) Investigation of random oscillations of a bellows. (Russian. Kazakh summary) *Izv. Akad. Nauk Kazah. SSR Ser. Fiz.-Mat.* **1980**, no. 3, 55-60, 89. (Authors' summary) **81h:73019** 73D99 (70L05)
- Tullipani, S.** On solutions of algebraic equations whose coefficients are germs of continuous functions. (Italian summary) *Boll. Un. Mat. Ital. B* (5) **15** (1978), no. 3, 931-938. (I. Fenyo) **81k:39006** 39B70 (03H05, 14B12)
- Tulljaganova, M. I.** Distribution of values of additive functions on "rare" sets. (Russian) *Limit theorems, random processes and their applications (Russian)*, pp. 201-212, 235-236. "Fan", Tashkent, 1979. (B. Volkman) **81k:10086** 10K20
- Tuljupa, T. I.** Some special classes of complexes in a space of constant curvature. (Russian) *Differential geometry of homogeneous spaces (Russian)*, pp. 128-136, Irkutsk. Gos. Univ.

- Irkutsk**, 1979. (Vladislav Goldberg) **81m:53014** 53A25 (53A35)
- Takem, Henry** (with d'Aspremont, Claude) Commodity exchanges as gradient processes. *Econometrica* **48** (1980), no. 2, 387-399. (Maurice Sallés) **81d:90030** 90A16 (65K10, 90C30)
- Takii, J.** (with Åberg, T.) Statistical theory of electronic Raman resonance scattering by oriented atoms. *J. Phys. B* **13** (1980), no. 17, 3341-3360. (Authors' summary) **81h:81128** 81F20 (78A45, 81E10)
- Takumi, V.** (with Karade, T. M.) On spherical symmetry in general relativity. I. *Acta Cienc. Indica* **4** (1978), no. 2, 215-217. (J. D. Finley, III) **81d:83029** 83C40
(with Karade, T. M.) On spherical symmetry in general relativity. II. (Japanese summary) *RAAG Res. Notes* No. 95 (1979), 12 pp. (J. D. Finley, III) **81d:83029** 83C40
- Tam, Elias** (with Saez, Eduardo; Szanto, Ivan) On the instability of a nonlinear system. (Spanish. English summary) *Scientia (Valparaiso)* No. 152 (1979), 33-37. (Z. Vorel) **81j:34094** 34D20
- Tam, JH** (with Pudlak, Pavel) Every finite lattice can be embedded in a finite partition lattice. *Algebra Universalis* **10** (1980), no. 1, 74-95. (James W. Lea, Jr.) **81c:06013** 06B15 (05C99)
- Tamov, V. I.** (with Gorbunov, V. A.) On the structure of lattices of quasivarieties. (Russian) *Dokl. Akad. Nauk SSSR* **254** (1980), no. 2, 272-275. (Anna Romanowska) **81m:08016** 08C15
- Tamulev, G. G.** The development of mechanics in Kazan University. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* **1979**, no. 10, 14-23. (Peeter Müürsepp) **81f:01020** 01A55 (01A60, 01A74)
- Tamula, R. Lal** Pest management models. *Proceedings of the First International Conference on Mathematical Modeling (St. Louis, Mo., 1977)*, Vol. IV, pp. 2125-2135. Univ. Missouri-Rolla, Rolla, Mo., 1977. (See **81f:90005**) **92A17**
- Te Chung Tung** See **Le Chung Tung**
- Teng, Chia Chi** The first main theorem of value distribution on complex spaces. (Italian summary) With an introduction in Italian by Beniamino Segre, Giuseppe Scorza Dragoni and Enzo Maritelli. *Atti Accad. Naz. Lincei Mem. Cl. Sci. Fis. Mat. Natur. Ser. Ia* (8) **15** (1979), no. 4, 91-263. (Alexander A. Pankov) **81d:32036** 32H30
- Tenelsen, Pekka** (with Tweedie, Richard L.) The recurrence structure of general Markov processes. *Proc. London Math. Soc.* (3) **39** (1979), no. 3, 554-576. (Richard Isaac) **81a:60080** 60J25
- Teng Ha Duong** A finite element method for the double-layer potential solutions of the Neumann exterior problem. *Math. Methods Appl. Sci.* **2** (1980), no. 2, 191-208. (G. T. Symm) **81f:65094** 65R20 (65N30)
- Teng Ton That** (with Klink, W. H.) Holomorphic induction and the tensor product decomposition of irreducible representations of compact groups. I. *SU(n)* groups. *Ann. Inst. H. Poincaré Sect. A (N.S.)* **31** (1979/80), no. 2, 77-97. (A. U. Klimyk) **81d:22008** 22E45 (81C40)
(with Klink, W. H.) Orthogonal polynomial bases for holomorphically induced representations of the general linear groups. *Ann. Inst. H. Poincaré Sect. A (N.S.)* **31** (1979/80), no. 2, 99-113. (A. U. Klimyk) **81d:22009** 22E45 (81C40)
(with Klink, W. H.) Erratum: "Holomorphic induction and the tensor product decomposition of irreducible representations of compact groups. I. *SU(n)* groups". *Ann. Inst. H. Poincaré Sect. A (N.S.)* **32** (1980), no. 2, 203. (Editors) **81d:22008** 22E45 (81C40)
(with Klink, W. H.) Erratum: "Orthogonal polynomial bases for holomorphically induced representations of the general linear groups". *Ann. Inst. H. Poincaré Sect. A (N.S.)* **32** (1980), no. 2, 203. (Editors) **81d:22009** 22E45 (81C40)
- Tuplev, V. A.** (with Pazin, G. N.) Conditions on a discontinuity for generalized self-similar solutions of quasilinear systems. (Russian) *Mat. Zametki* **26** (1979), no. 1, 35-38, 156. (V. Ďuriković) **81c:35082** 35L65 (35L60)
- Tupčič, S. G.** (with Korsukov, V. M.; Čerepannikov, V. B.) Mappings of functions of physical time in a small time space. (Russian) *Asymptotic methods in systems theory*, No. 9 (Russian), pp. 217-224, 244. *Irkutsk. Gos. Univ., Irkutsk*, 1976. (C. Corduneanu) **81m:34011** 34A50 (34A45)
- Tur, A. V.** (with Moiseev, S. S.; Janovskii, V. V.) Interaction of a packet with random noise in Burgers' equation. *Izv. Vysš. Učebn. Zaved. Radiofizika* **23** (1980), no. 1, 68-78. (Russian. English summary); translated as *Radiophys. and Quantum Electronics* **23** (1980), no. 1, 54-61. (Authors' summary) **81f:76010** 76B15 (35Q20, 76F99)
- Tur, L. P.** An inventory control model with two alternative decisions. *Kibernetika (Kiev)* **1979**, no. 5, iii, 110-113, 155. (Russian. English summary); translated as *Cybernetics* **15** (1979), no. 5, 723-727 (1980). (Author's summary) **81d:90041** 90B05 (90B30)
- Turay, V. G.** Fundamental groups of manifolds and Poincaré complexes. (Russian) *Mat. Sb. (N.S.)* **110** (152) (1979), no. 2, 278-296, 320. (Neal W. Stoltzfus) **81d:55015** 55Q52 (57N10, 57P10)
- Turkulov, A.** Regularization of singular integral equations on closed Riemannian surfaces. (Russian) *Metric questions of the theory of functions and mappings, No. VII (Proc. Fourth Colloq. Quasiconformal Mappings and their Generalizations, Donetsk, 1974)* (Russian), pp. 188-202. "Naukova Dumka", Kiev, 1975. (See **80c:30023**) **45E99**
(with Rodin, Ju. L.) The Riemann boundary value problem for generalized analytic functions with singular coefficients on a compact Riemann surface. (Russian. Georgian and English summaries) *Sovbič. Akad. Nauk Gruzin. SSR* **96** (1979), no. 1, 21-24. (E. V. Tjurikov) **81g:30055** 30E25 (30F30, 30G20)
- Turán, Pál** (with Szalay, M.) On some problems of the statistical theory of partitions with application to characters of the symmetric group. III. *Acta Math. Acad. Sci. Hungar.* **32** (1978), no. 1-2, 129-155. (From the text) **81d:10063** 10J20 (20C30)
On a problem of E. Landau. *Acta Arith.* **36** (1980), no. 3, 297-313. (Jeffrey D. Vaaler) **81k:10071** 10H22 (10H05)
See also **Turán** memorial volume, **81j:41001**; **Szász, P.**, **81m:01077**; **Bibliography: Turán, Pál**, **81m:01089**; **Biography: Turán, Pál**, **81m:01093** and **Doctoral students of Pál Turán**, **81m:01096**
- Turbin, A. F.** (with Koroljuk, V. S.; Tomusjak, A. A.) Sojourn time of a semi-Markov process in a decomposing set of states. (Russian) *Analytical methods of probability theory (Russian)*, pp. 69-79, 152. "Naukova Dumka", Kiev, 1979. (Stefan P. Niculescu) **81f:60123** 60K15 (60F99)
(with Plotkin, Ja. D.) Decompositions of singularly perturbed analytic semigroups. (Russian) *Asymptotic methods in the theory of nonlinear oscillations (Proc. All-Union Conf. Asymptotic Methods in Nonlinear Mech., Katičeli, 1977)* (Russian), pp. 156-166, 276. "Naukova Dumka", Kiev, 1979. (J. Kisylski) **81h:47035** 47D05 (47A55)
Regular approximations to solutions of singularly perturbed differential equations in Banach spaces. (Russian) *Akad. Nauk Ukrain. SSR Inst. Mat. Preprint* No. 7 (1979), 40 pp. (D. Bařnov) **81i:34052** 34E15 (34G10)
- sz. Turčányi, Piroška** See **Sz. Turčányi, Piroška**
- Turchetti, Giorgio** (with Sagretti, C.) Stieltjes functions and approximate solutions of an inverse problem. *Applied inverse problems*, pp. 122-134. *Lecture Notes in Phys.*, **85**, Springer, Berlin, 1978. (Pierre C. Sabatier) **81j:34041** 34B25 (86A20)
(with Barnsley, Michael F.) New results on the nonlinear Boltzmann equation. *Bifurcation phenomena in mathematical physics and related topics (Proc. NATO Advanced Study Inst., Cargèse, 1979)*, pp. 351-370. *NATO Adv. Study Inst. Ser., Ser. C: Math. and Phys. Sci.*, **54**, Reidel, Dordrecht, 1980. (See **81f:00012**) **82A40**
Padé approximants and soliton solutions of the KdV equation. *Lett. Nuovo Cimento* (2) **27** (1980), no. 4, 107-110. (From the text) **81k:35153** 35Q20 (76B25)
Perturbative expansion and the initial value problem of the KdV equation. *Lett. Nuovo Cimento* (2) **27** (1980), no. 17, 571-574. (Editors) **81g:35110a** 35Q20 (81F99)
Erratum: "Perturbative expansion and the initial value problem of the KdV equation". *Lett. Nuovo Cimento* (2) **28** (1980), no. 8, 304. (Editors) **81g:35110b** 35Q20 (81F99)
(with Barillon, V.) Extremal solutions of inverse eigenvalue problems with finite spectral data. *Wave Motion* **2** (1980), no. 2, 139-148. (Paul L. Davis) **81f:70020** 70J99
- Turčin, V. F.** The use of metasystem transition in theorem proving and program optimization. *Automata, languages and programming (Proc. Seventh Internat. Colloq., Noordwijkerhout, 1980)*, pp. 645-657. *Lecture Notes in Comput. Sci.*, **85**, Springer, Berlin, 1980. (Author's summary) **81j:68113** 68G15
- Turčin, V. M.** Structure of the principal genus for second-order integral matrix rings. (Russian) *Akad. Nauk Ukrain. SSR Inst. Mat. Preprint* **1980**, no. 2, 16 pp. (Hubert Grassmann) **81m:16035** 16A64 (16A18, 16A42)
- Turco, Bertrand** Sur la réduction formelle, dans les cas non linéarisables, des jets de champs de vecteurs sur \mathbb{R}^n . (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **289** (1979), no. 8, A467-A470. (G. R. Belicq) **81d:58018** 58C27 (58F14)
- Turda, Erwin** (with Choczewski, Bogdan; Węgrzyk, Roman) On the stability of a linear functional equation. *Wyd. Szkoła Ped. Krakow. Rocznik Nauk.-Dydakt. Prace Mat.* No. 9 (1979), 15-21. (B. Crstici) **81h:39006** 39B10
- Turelli, Michael** (with Gillespie, John H.) Conditions for the existence of stationary densities for some two-dimensional diffusion processes with applications in population biology. *Theoret. Population Biol.* **17** (1980), no. 2, 167-189. (Edward Pollak) **81k:92043** 92A10 (60J70, 92A17)
- sánchez Turet, M.** See **Sánchez Turet, M.**
- Turgeon, Jean M.** (with Kotzig, Anton) Perfect systems of difference sets and additive sequences of permutations. *Proceedings of the Tenth Southeastern Conference on Combinatorics, Graph Theory and Computing (Florida Atlantic Univ., Boca Raton, Fla., 1979)*, pp. 629-636. *Congress. Numer.*, **XXIII-XXIV**, Utilitas Math., Winnipeg, Man., 1979. (Authors' summary) **81d:05012** 05B10
- Turiel, Francisco Javier** Modèles locaux de 3-formes fermées sur une variété de dimension 5; cas transitif. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **286** (1978), no. 11, A527-A529. (Author's summary) **81e:58002** 58A10
Modèles locaux de 3-formes fermées sur une variété de dimension 5. Cas transitif. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **286** (1978), no. 19, A827-A830. (Author's summary) **81e:58003** 58A10
- Turikov, V. A.** (with Karpman, V. I.; Lynov, J. P.; Michelsen, P.; Pécse, H. L.; Rasmussen, J. Juul) Modification of plasma solitons by resonant particles. *Phys. Fluids* **23** (1980), no. 9, 1782-1794. (D. ter Haar) **81f:76107** 76X05 (35Q20)
- Turincik, Mihal** (with Gheorghiu, N.) Équations intégrales dans les espaces localement convexes. *Rev. Roumaine Math. Pures Appl.* **23** (1978), no. 1, 33-40. (From the text) **81e:45001** 45B05 (45D05)
An asymptotic dosing problem for a system of functional differential equations. *An. Ştiinţ. Univ. "Al. I. Cuza" Iaşi Secţ. I a Mat. (N.S.)* **25** (1979), suppl., 43-47. (D. Bařnov) **81m:34090** 34K05 (54H25)
Noncompactness measures from an axiomatic point of view. *Math. Sem. Notes Kobe Univ.* **8** (1980), no. 1, 73-81. (Louis A. Talman) **81k:54027** 54D30
- Turjányi, S.** Note on maximal asymptotic nonbases of zero density. *Publ. Math. Debrecen* **26** (1979), no. 3-4, 229-236. (J. A. Haight) **81j:10068** 10L02
- Turk, Johannes Wilhelmus Maria** ★ Multiplicative properties of neighbouring integers. Dissertation, Rijksuniversiteit, Leiden, 1979. With a Dutch summary. *Rijksuniversiteit te Leiden, Leiden*, 1979. 63 pp. (T. N. Shorey) **81j:10012** 10A25 (10H15)
Prime divisors of polynomials at consecutive integers. *J. Reine Angew. Math.* **319** (1980), 142-152. (K. Ramachandra) **81j:10069** 10H25
- Turkel, Eli** On the practical use of high-order methods for hyperbolic systems. *J. Comput. Phys.* **35** (1980), no. 3, 319-340. (Rémi Vaillancourt) **81f:65074** 65N10 (35L67, 76L05)
- Turkington, Bruce** (with Friedman, Avner) Asymptotic estimates for an axisymmetric rotating fluid. *J. Funct. Anal.* **37** (1980), no. 2, 136-163. (M. N. L. Narasimhan) **81h:76058** 76U05 (41A60, 49H05, 76N10)
- Turko, L.** (with Redlich, K.) Phase transitions in the statistical bootstrap model with an internal symmetry. *Z. Phys. C* **5** (1980), no. 3, 201-204. (Authors' summary) **81f:81080** 81G05
- Turkes, I. B.** (with Lieberman, R. W.) A necessary condition for the elimination of crane interference. *Optimization techniques (Proc. Ninth IFIP Conf., Warsaw, 1979)*, Part 2, pp. 316-327. *Lecture Notes in Control and Information Sci.*, **23**, Springer, Berlin, 1980. (Authors' summary) **81m:90060** 90B35
- Turku, H.** An interpolation problem in the class H^p of functions in the half-plane. (Russian) *Mat. Vesnik* **2** (15) (30) (1978), no. 4, 409-420. (F. I. Ibragimov) **81h:30041** 30E05
- Turman, E. Gels** (with Teply, Mark L.; Quesada, Antonio) On semisimple semigroup rings. *Proc. Amer. Math. Soc.* **79** (1980), no. 2, 157-163. (J. K. Luodeman) **81j:20094** 20M25 (16A12)

- Turnbull, Bruce W. (with Barton, Russell R.) A survey of covariance models for censored life data with an application to recidivism analysis. Special issue on covariance. *Comm. Statist. A—Theory Methods* 8 (1979), no. 8, 723–750. (See 81c:62081) 62N05 (62J10)
Correction: "Multiple decision rules for comparing several populations with a fixed known standard" [*Comm. Statist. A—Theory Methods* 5 (1976), no. 13, 1225–1244; MR 57 #1741]. *Comm. Statist. A—Theory Methods* 9 (1980), no. 6, 673. (Editors) 81c:62025 62F07
- Turnbull, C. J. M. (with Lee, E. Stanley) Generalized deterministic left to right parsing. *Acta Inform.* 12 (1979), no. 3, 187–207. (Anton Nijholt) 81b:68105 68F25
- Turner, Barbara Sums of powers of integers via the binomial theorem. *Math. Mag.* 53 (1980), no. 2, 92–96. (Robert Meyer) 81j:05007 05A10
- Turner, E. F. (with Williams, H. T.) Geometrical optics of planar interfaces. *Virginia J. Sci.* 30 (1979), no. 3–4, 128–131. (Authors' summary) 81f:78001 78A05
- Turner, J. C. See Andrews, George E. 81b:01015
- Turner, J. R. The frictional unloading problem on an elastic half-space. *Free and mixed boundary value problems* (Proc. Conf., Oberwolfach, 1978), pp. 153–171, *Methoden u. Verfahren d. Math. Phys.*, 18, Lang, Frankfurt, 1979. (Author's summary) 81d:73098 73T05
The frictional unloading problem on a linear elastic half-space. *J. Inst. Math. Appl.* 24 (1979), no. 4, 439–469. (Maria Coninno) 81c:73092 73T05 (49H05)
Contact on a transversely isotropic half-space, or between two transversely isotropic bodies. *Internat. J. Solids and Structures* 16 (1980), no. 5, 409–419. (Author's summary) 81b:73054 73T05
(with Nicol, D. A. C.) The Signorini problem for a Cosserat plate. *J. Inst. Math. Appl.* 25 (1980), no. 2, 133–145. (Authors' summary) 81d:73056 73K10 (65N30, 73K25)
- Turner, J. W. (with Nicolis, G.) Effect of fluctuations on bifurcation phenomena. *Bifurcation theory and applications in scientific disciplines* (Papers, Conf., New York, 1977), pp. 251–262, *Ann. New York Acad. Sci.*, 316, New York Acad. Sci., New York, 1979. (Richard J. Field) 81f:80014 80A30 (58E07, 60K35, 92A40)
- Turner, John C. (with Jernigan, Robert W.; Tsokos, Chris P.) Parameter and moment bounds for a nonlinear stochastic ecology model. *Appl. Math. Comput.* 7 (1980), no. 1, 27–53. (Howard B. Stauffer) 81j:92047 92A17
(with Jernigan, Robert W.; Tsokos, Chris P.) Spectral analysis of an aquatic ecosystem. *J. Interdisciplinary Modeling Simulation* 3 (1980), no. 2, 163–192. (Authors' summary) 81d:92021 92A17 (62M15)
- Turner, Leaf Magnetoacoustic heating by ion Landau damping. *Phys. Fluids* 23 (1980), no. 7, 1415–1421. (Author's summary) 81d:76126 76X05
- Turner, P. R. (with Huntley, E.) Self-scaling variable metric methods in Hilbert space with applications to control problems. *Optimal Control Appl. Methods* 1 (1980), no. 2, 155–166. (R. F. Dennemeyer) 81h:49022 49D07 (65K05)
- Turner, R. E. Comments on eikonal and sudden approximations. *J. Phys. A* 13 (1980), no. 6, 2079–2100. (Author's summary) 81d:81086 81F05 (47A40)
- Turner, Robert H. (with Agee, William S.) Application of robust regression to trajectory data reduction. *Robustness in statistics* (Proc. Workshop, Army Res. Office, Research Triangle Park, N.C., 1978), pp. xiii–xiv, 107–126, *Academic Press, New York*, 1979. (See 81c:62032) 62J02
- Turner, Stuart Principal polarizations of abelian surfaces over finite fields. *Nagoya Math. J.* 77 (1980), 1–4. (M. A. Kenku) 81b:14022 14K10 (14G25)
- Turnovsky, Stephen J. (with Gray, Malcolm R.) Expectational consistency, informational lags, and the formulation of expectations in continuous time models. *Econometrica* 47 (1979), no. 6, 1457–1474. (Authors' summary) 81a:93002 93A05 (93A10)
- Turpea, H. A class of transformations of summability systems. (Russian. Estonian and English summaries) *Tartu Riikl. Ül. Toimetised* No. 448 (1978), 66–73. (O. A. Ziza) 81c:40011 40G99 (42C15)
- Turo, Jan Existence theory for a class of nonlinear random functional integral equations. *Ann. Mat. Pura Appl.* (4) 121 (1979), 145–155. (M. Z. Nashed) 81m:45022 45N05 (60H25)
- Tursumov, G. T. Some limit theorems for $M[G]$ with Markovian control of servicing. (Russian) *Random processes and mathematical statistics* (Kovskan), pp. 160–172, 190, "Fan", Tashkent, 1978. (M. A. Fainberg) 81g:60098 60K25
- Turuel, Adriana (with Brezuleanu, Al.; Cuculescu, I.; Popovici, Iulian) Computation of areas on earth-ellipsoid. *Proceedings of the International Symposium on Applications of Mathematics in System Theory* (Univ. Braşov, Braşov, 1978), II, pp. 231–238, *Univ. Braşov, Braşov*, 1979. (See 81j:93006b) 86A30 (65D30)
(with Popovici, Iulian) Sur les espaces bidimensionnels à connexion constante. I. *Bull. Math. Soc. Sci. Math. R. S. Roumanie (N.S.)* 23(71) (1979), no. 4, 373–389. (T. J. Willmore) 81d:53014 53B05
- Turumov, M. Pseudoanalytic functions of a discrete complex argument. II. (Russian) *Tskent. Gos. Univ. Naučn. Trudy No. 548 Voprosy Mat.* (1977), 91–99, 145. (From the text) 81j:30085 30G20
- Turzik, Daniel (with Poljak, Svatopluk) Some equivalent formulations of the intersection problem of finitely generated classes of graphs. *Acta Sci. Math. (Szeged)* 41 (1979), no. 3–4, 357–364. (P. Ungar) 81c:05035 05C10
- Tuschke, Hans-Peter A reduction of a problem about ω_1 -categoricity. *Bull. Acad. Polon. Sci. Sér. Sci. Math.* 27 (1979), no. 5, 333–335. (Daniel Lascar) 81d:03033 03C35 (05C99)
On the decidability of the theory of linear orderings with generalized quantifiers. *Fund. Math.* 107 (1980), no. 1, 21–32. (Wolfgang Thomas) 81m:03016 03B25 (03C80, 06A05)
An application of rank-forcing to ω_1 -categoricity. *Z. Math. Logik Grundlag. Math.* 26 (1980), no. 3, 237–250. (E. Kurepa) 81i:03041 03C25 (03C35)
- Tutkina, T. A. (with Sohranskaja, V. S.) Parallelization of computational processes with loops and branchings. (Russian) Numerical methods and questions in the organization of calculations. 3. *Zap. Načn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 90 (1979), 210–226, 301. (Authors' summary) 81c:68027 68B20 (68E10)
- Tusnady, Gábor (with Telegi, László; Czeizel, Endre) On the genetic laws of congenital malformations. (Hungarian. English summary) *Alkalmaz. Mat. Lapok* 4 (1978), no. 1–2, 1–25 (1979). (Authors' summary) 81b:92006 92A10 (62P10)
- Tusinov, V. S. (with Arakeljan, E. K.) Methods for solving problems of the choice of the optimal composition of aggregates and distributions of loads between them in conditions of uncertainty of initial information. (Russian) *Trudy Moskov. Orden. Len. Energet. Inst. No. 408* (1979), 27–34, 136. (Authors' summary) 81d:90053 90B30 (90A05)
- Tumshakov, M. D. Some theorems on separation of variables and the fundamental function in problems of dynamical stability of elastic systems. (Russian) *Izv. Akad. Nauk Kazak. SSR Ser. Fiz.-Mat. Nauk* 1980, no. 5, 49–56, 87. (Author's summary) 81k:73031 73H10 (58F14, 73K99)
- Tutaev, L. K. (with Bel'ko, I. V.; Vedernikov, V. I.; Vodnev, V. T.; Gusak, A. A.; Nahimovskaja, A. I.; Rjabuiko, A. P.; Fedenko, A. S.) ★Сборник задач по дифференциальной геометрии. (Russian) [A collection of problems in differential geometry] Second edition, revised. "Nauka", Moscow, 1979. 272 pp. (Editors) 81i:53001 53–01 (00A07)
- Tutschke, Wolfgang Komplexe Methoden bei nichtlinearen Differentialgleichungssystemen. Komplexe Analysis und ihre Anwendung auf partielle Differentialgleichungen (Tagung, Martin-Luther-Universität, Halle, 1976). *Wiss. Beitr. Martin-Luther-Univ. Halle-Wittenberg M* 27 (1977), 66–70. (From the text) 81b:35005 35F99 (30G20, 35J15)
Ein Optimalitätskriterium für Lösungen des Dirichletproblems bei elliptischen Systemen erster Ordnung mit Parameterfunktion. *Beiträge Anal.* No. 12 (1978), 19–27. (Author's introduction) 81k:49013 49B22 (35J55)
Vollständige Linearisierung instationärer Prozesse in der Ebene durch komplexe Methoden. *Math. Nachr.* 89 (1979), 269–284. (Manfred W. Kracht) 81g:35055 35K55 (35A20)
(with Kühnau, Reiner; Vogel, Wolfgang; Zielke, Gerhard; Krötenheerdt, Otto; Stammeler, Ludwig; Schleiff, Martin; Strehmel, Karl; Köhler, Jürgen) Mathematische Forschung für Theorie und Anwendung. *Wiss. Z. Martin-Luther-Univ. Halle-Wittenberg Math.-Natur. Reihe* 28 (1979), no. 3, 5–21. (Editors) 81m:01103 01A72 (00A05)
- Tutts, Friedemann Über die Entwicklung multiplikativer Funktionen nach Ramanujan-Summen. *Acta Arith.* 36 (1980), no. 3, 257–270. (Bruce C. Berndt) 81h:10057 10C05
- Tutte, William Thomas ★Selected papers of W. T. Tutte. Vol. I. Edited by D. McCarthy [David McCarthy] and Ralph G. Stanton. *Charles Babbage Research Centre, Winnipeg, Man.*, 1979. xvii + 438 pp. (1 plate). ISBN 0-9690778-1-5 (W. Moser) 81k:01058a 01A75 (05Bxx, 05Cxx)
★Selected papers of W. T. Tutte. Vol. II. Edited by D. McCarthy [David McCarthy] and Ralph G. Stanton. *Charles Babbage Research Centre, Winnipeg, Man.*, 1979. pp. 439–879. ISBN 0-9690778-2-3 (W. Moser) 81k:01058b 01A75 (05Bxx, 05Cxx)
All the king's horses. A guide to reconstruction. *Graph theory and related topics* (Proc. Conf., Univ. Waterloo, Waterloo, Ont., 1977), pp. 15–33, *Academic Press, New York*, 1979. (F. Harary) 81c:05096 05C60
On the spanning trees of self-dual maps. *Second International Conference on Combinatorial Mathematics* (New York, 1978), pp. 540–548, *Ann. New York Acad. Sci.*, 319, New York Acad. Sci., New York, 1979. (Ruth Bari) 81c:05031 05C05
Les facteurs des graphes. *Combinatorics 79* (Proc. Colloq., Univ. Montréal, Montréal, Qué., 1979), Part I. *Ann. Discrete Math.* 8 (1980), 1–5. (W. G. Brown) 81m:05113 05C70 (05B35)
1-factors and polynomials. *European J. Combin.* 1 (1980), no. 1, 77–87. (David P. Sumner) 81h:05067 05C15 (05C70)
On the enumeration of convex polyhedra. *J. Combin. Theory Ser. B* 28 (1980), no. 2, 105–126. (W. G. Brown) 81j:05073 05C30 (52A25)
Coloring problems. (Hungarian. Russian and English summaries) *Mat. Lapok* 28 (1980), no. 1–3, 207–214. (Editors) 81c:05056 05C20
- Tutukov, V. P. (with Kuricyn, Ju. G.) A linear estimate for the mathematical expectation of a random process with a convex correlation function. (Russian. English summary) *Teor. Veroyatnost. i Mat. Statist.* 22 (1980), 78–84, 164. (Andrej Pázmán) 81f:62135 62M09
- Tutz, Gerhard (with Hamerle, Alfred) Goodness-of-fit tests for probabilistic measurement models. *J. Math. Psych.* 21 (1980), no. 2, 153–167. (Byron J. T. Morgan) 81h:62182 62P15 (62G10, 92A27)
- huong Tuy See Hoàng Tuy
- nguyen xuan Tuyen See Nguyen Xuan Tuyen
- Tuza, Z. (with Gyárfás, A.; Szemerédi, Endre) Induced subtrees in graphs of large chromatic number. *Discrete Math.* 30 (1980), no. 3, 235–244. (Authors' summary) 81c:05060 05C05 (05C15)
(with Lehel, J.) Ensembles d'articulation d'un graphe γ -critique. (English summary) *Discrete Math.* 30 (1980), no. 3, 245–248. (H. Joseph Straight) 81f:05061 05C15 (05C70)
- Tuzik, A. I. Discrete equations of convolution type with coefficients of power growth. (Russian. English summary) *Dokl. Akad. Nauk BSSR* 23 (1979), no. 12, 1061–1064, 1148. (A. Haimovici) 81h:39003 39A10 (30E25, 45J05)
- Tveltred, Morten (with Palm, Enok) On coupled van der Pol equations. *Quart. J. Mech. Appl. Math.* 33 (1980), no. 3, 267–276. (W. O. Criminalle, Jr.) 81k:70016 70K10 (34C05, 58F13)
- Tverberg, Helge A separation property of plane convex sets. *Math. Scand.* 45 (1979), no. 2, 255–260. (Marilyn Breen) 81k:52022 52A35
A proof of the Jordan curve theorem. *Bull. London Math. Soc.* 12 (1980), no. 1, 34–38. (P. Lappan) 81c:30045 30C99 (30–01, 54F50, 57–01)
(with Rubel, Lee A.; Schinzel, A.) On difference polynomials and hereditarily irreducible polynomials. *J. Number Theory* 12 (1980), no. 2, 230–235. (Winfried Müller) 81i:12024 12D05 (12E10, 39A10)
- Tverdohlebov, V. A. Anti-isomorphism of semigroups of transformations and the calculation of the reactions of an automaton. (Russian) *Mathematical models of behavior*, No. 3 (Russian), pp. 43–47, 87, *Saratov. Gos. Univ., Saratov*, 1978. (G. E. Ceitlin) 81h:68046 68D30 (20M20, 20M35)
- Tversky, A. (with Lindley, Dennis V.; Brown, R. V.) On the reconciliation of probability assessments. With discussion. *J. Roy. Statist. Soc. Ser. A* 142 (1979), no. 2, 146–180.

- (James Berger) **81b:60003** 60A05 (62A15)
- Tsvetkov, S. D. (with Gordov, E. P.) Semicalssical method of representation in quantum electrodynamics. (Russian) *Izv. Vys. Uchebn. Zaved. Fizika* **1980**, no. 2, 77-98. (V. N. Sukko) **81b:81201** 81L05 (81K05)
- (with Gordov, E. P.) Quantum theory of a strong electromagnetic field: semiclassical representation. *Phys. Rev. D* (3) **22** (1980), no. 4, 908-918. (Authors' summary) **81b:81144** 81G10
- Tvrdý, Milan Fredholm-Stieltjes integral equations with linear constraints: duality theory and Green's function. (Czech summary) *Casopis Pěst. Mat.* **104** (1979), no. 4, 357-369, 412. (J. W. Neuberger) **81b:45002** 45B05
- (with Brown, R. C.) Generalized boundary value problems with abstract side conditions and their adjoints. I. *Czechoslovak Math. J.* **30(105)** (1980), no. 1, 7-27. (A. M. Krall) **81b:34051** 34G10
- Tweddle, L. (with Robertson, W. J.; Yeomans, F. E.) On the stability of barrelled topologies. III. *Bull. Austral. Math. Soc.* **22** (1980), no. 1, 99-112. (Authors' review (I.T.)) **81m:46006b** 46A07 (46A20)
- (with Yeomans, F. E.) On the stability of barrelled topologies. II. *Glasgow Math. J.* **21** (1980), no. 1, 91-95. (I. Tweddle) **81m:46006a** 46A07 (46A20)
- (with Saifu, H.) From B-completeness to countable codimensional subspaces via the closed graph theorem. *Proc. Roy. Soc. Edinburgh Sect. A* **86** (1980), no. 1-2, 107-114. (T. Husain) **81b:46003** 46A15 (46A30)
- Tweedie, Richard L. (with Schull, Hans-Jürgen) Parameter estimation using transform estimation in time-evolving models. *Math. Biosci.* **45** (1979), no. 1-2, 37-67. (M. P. Quine) **81d:62094** 62M09 (60K99, 92A05)
- (with Tuominen, Pekka) The recurrence structure of general Markov processes. *Proc. London Math. Soc.* (3) **39** (1979), no. 3, 554-576. (Richard Isaac) **81a:60080** 60J25
- Twilt, Frank (with Jongen, Hubertus Th.) On decomposition and structural stability in nonconvex optimization. *Numerische Methoden bei graphentheoretischen und kombinatorischen Problemen, Band 2 (Tagung, Math. Forschungsinst., Oberwolfach, 1978)*, pp. 162-183. *Internat. Ser. Numer. Math.*, **46**, Birkhäuser, Basel, 1979. (Kang Hoh Phua) **81c:58032** 58E15 (90C10)
- Tyagi, Vinod (with Dass, Bal Kishan) Bounds on blockwise burst error correcting linear codes. *Inform. Sci.* **20** (1980), no. 3, 157-164. (Authors' summary) **81a:94038** 94B20
- Tyan, S. G. (with Shaw, L.; Hsu, C. L.) Optimal replacement of parts having observable correlated stages of deterioration. *Naval Res. Logist. Quart.* **27** (1980), no. 3, 359-373. (Authors' summary) **81i:90096** 90B25 (62N05)
- Tyutshkin, A. I. See Tjutschkin, A. I.
- Tye, A. Basic properties of h -regular local Noetherian rings. *Fund. Math.* **105** (1979/80), no. 1, 1-15. (John W. Petro) **81c:13021a** 13H05 (16A33)
- On h -regular graded algebras of characteristic $p > 0$. *Fund. Math.* **105** (1979/80), no. 1, 17-28. (John W. Petro) **81c:13021b** 13H05 (16A33)
- Tye, Otto On generating stochastic operators in stochastic automata. (Czech. English and Russian summaries) *Kritické Odborné. Věd. Spisů Vysoké. Učeni. Tech. v Brně A* **12** (1976), 173-183 (1978). (Author's summary) **81b:68042** 68D25
- Tytnakaja, L. M. (with Eidel'man, S. D.) Construction of fundamental solutions for degenerate parabolic equations of arbitrary order. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* No. 11 (1979), 896-899, 974. (L. Cattabriga) **81f:35055** 35K25
- Tytkowski, Wojciech See Tazbir, Janusz. **81m:01019**
- Tymchatyn, E. D. (with Grispolakis, J.) Confliet images of rational continua. *Houston J. Math.* **5** (1979), no. 3, 331-337. (Edwin Duda) **81c:54052** 54F20
- (with Grispolakis, J.) Continua which are images of weakly confluent mappings only. I. *Houston J. Math.* **5** (1979), no. 4, 483-502. (M. M. McWaters) **81d:54008** 54C10 (54D30, 54F20)
- (with Martin, John R.) Fixed point sets of 1-dimensional Peano continua. *Pacific J. Math.* **89** (1980), no. 1, 147-149. (Krishna M. Das) **81m:54078** 54H25 (54F20)
- Tymkajski, N. T. (with Žukovskii, V. I.) Differential games with a nonzero sum (a cooperative variant). (Russian) *Mathematical analysis, Vol. 17 (Russian)*, pp. 3-112, 272. *Akad. Nauk SSSR, Vsesojuz. Inst. Nauch. i Tehn. Informacii, Moscow*, 1979. (J. M. Skowronski) **81g:90109** 90D25 (90D12)
- (with Sokol, V. A.) An approximate method for solving the linear time-optimal problem. (Russian) *Z. Vyčisl. Mat. i Mat. Fiz.* **20** (1980), no. 2, 277-288, 549. (Authors' summary) **81j:49018** 49D07 (49B36)
- Tynges Tyong See Nguyen Tyong
- Tytkiev, R. I. (with Černjak, A. A.) Unigraphs. I. (Russian. English summary) *Vesci Akad. Nauk BSSR Ser. Fiz.-Mat. Nauk* **1978**, no. 5, 5-11, 141. (W. Dörfler) **81g:05098a** 05C99
- (with Černjak, Ž. A.) A list of planar unigraphs. (Russian. English summary) *Dokl. Akad. Nauk BSSR Ser. Fiz.-Mat. Nauk* **1979**, no. 4, 307-310, 380. (H.-J. Voss) **81d:05070** 05C99 (05C10)
- (with Černjak, A. A.) Canonical decomposition of a graph determined by the degrees of its vertices. (Russian. English summary) *Vesci Akad. Nauk BSSR Ser. Fiz.-Mat. Nauk* **5** (1979), no. 5, 14-26, 138. (J. Bosák) **81f:05098** 05C30 (05C25)
- (with Černjak, A. A.) Unigraphs. II. (Russian. English summary) *Vesci Akad. Nauk BSSR Ser. Fiz.-Mat. Nauk* **1979**, no. 1, 5-12, 138. (W. Dörfler) **81g:05098b** 05C99
- (with Černjak, A. A.) Unigraphs. III. (Russian. English summary) *Vesci Akad. Nauk BSSR Ser. Fiz.-Mat. Nauk* **1979**, no. 2, 5-11, 138. (W. Dörfler) **81g:05098c** 05C99
- (with Iskander, Ali) Isomorphism of Cayley tournaments whose order is equal to the product of two primes. (Russian. English summary) *Vesci Akad. Nauk BSSR Ser. Fiz.-Mat. Nauk* **1979**, no. 6, 13-17, 138. (Authors' summary) **81d:20033** 20F32 (05C25)
- Canonical decomposition of a graph. (Russian. English summary) *Dokl. Akad. Nauk BSSR* **24** (1980), no. 8, 677-679, 763. (Authors' summary) **81j:05099** 05C75
- Tytkiev, V. A. Solvability criteria for the problem of accumulation of perturbations for a linear functional-differential equation. (Russian) *Problems of stability of motion, analytical mechanics and control of motion (Third All-Union Cetero Conf., Irkutsk, 1977)* (Russian), pp. 43-50, 320, "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. (M. M. Konstantinov) **81g:34099** 34K15 (34K20)
- Tytko, N. M. (with Petrojan, L. A.) Mathematical model for a tree-like hierarchical control structure. (Russian) *Some questions of differential and integral equations and their applications, No. 2 (Russian)*, pp. 160-171, 191. *Jakutsk. Gos. Univ., Yakutsk*, 1977. (Authors' summary) **81c:90023** 90A15
- Tyson, John J. Oscillations, bistability, and echo waves in models of the Belousov-Zhabotinskii reaction. *Bifurcation theory and applications in scientific dynamics (Papers, Conf., New York, 1977)*, pp. 279-295. *Am. New York Acad. Sci.*, **316**, New York Acad. Sci., New York, 1979. (P. C. Fife) **81c:80015** 80A30 (92A09)
- Tyugu, E. H. (with Tamm, B.) Introduction to data bases. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* **1979**, no. 2, 53-64, 221. (Russian); translated as *Engng. Cybernetics* **17** (1979), no. 2, 35-43 (1980). (Authors' summary) **81b:68022** 68B15
- Tyutskina, V. V. See Tjutschina, V. V.
- Tzafestas, S. G. Deadbeat time-optimal control of production-inventory systems. *Found. Control Engng.* **4** (1979), no. 4, 173-188. (Authors' summary) **81c:90034** 90B05 (49A36, 90B30)
- Monte Carlo simulation and filtering in distributed-parameter systems. *Simulation of distributed-parameter and large-scale systems (Proc. IMACS European Simulation Meeting, Univ. Patras, Patras, 1979)*, pp. 13-31. *North-Holland, Amsterdam*, 1980. (Authors' summary) **81f:93074** 93E11 (93C20)
- Application of an eigenvalue assignment technique to the control of multivariable production-inventory systems. *Simulation of distributed-parameter and large-scale systems (Proc. IMACS European Simulation Meeting, Univ. Patras, Patras, 1979)*, pp. 205-215. *North-Holland, Amsterdam*, 1980. (Authors' summary) **81c:90037** 90B05 (93C35)
- Mathematical programming approach to optimal distributed-parameter control. *Simulation of systems '79 (Proc. Ninth IMACS Congress, Sorrento, 1979)*, pp. 23-28. *North-Holland, Amsterdam*, 1980. (Authors' summary) **81m:49040** 49D37 (93C20)
- Optimization of system reliability: a survey of problems and techniques. *Internat. J. Systems Sci.* **11** (1980), no. 4, 455-486. (Editors) **81b:90084** 90B25
- (with Stavroulakis, P.) Matrix minimum principle for distributed parameter control systems. *Internat. J. Systems Sci.* **11** (1980), no. 7, 793-801. (Authors' summary) **81g:93131** 93E20
- Parameter adaptive control of stochastic distributed systems. *Internat. J. Systems Sci.* **11** (1980), no. 12, 1397-1433. (Authors' summary) **81m:93090** 93E20 (93E25)
- Distributed-parameter optimal control via mathematical programming. *J. Franklin Inst.* **309** (1980), no. 6, 399-438. (Edward J. Haug, Jr.) **81i:49025** 49D30 (65K05, 90C30, 93C20)
- (with Stavroulakis, P.) Distributed-parameter observer-based control implementation using finite spatial measurements. *Math. Comput. Simulation* **22** (1980), no. 4, 373-379. (Authors' summary) **81m:49011** 49A34 (93C20, 93E10)
- See also *Simulation of distributed-parameter and large-scale systems*, **81c:90084**
- Tzafirri, Lior Symmetric structures in some Banach lattices. *Séminaire sur la Géométrie des Espaces de Banach (1977-1978)*, Exp. No. 9, 14 pp., *École Polytech., Palaiseau*, 1978. (From the text) **81i:46027** 46B30
- (with Lindenstrauss, Joram) ★ Classical Banach spaces. II. Function spaces. *Ergebnisse der Mathematik und ihrer Grenzgebiete [Results in Mathematics and Related Areas]*, **97**, Springer-Verlag, Berlin-New York, 1979. x+243 pp. *ISBN 3-540-08888-1* (A. C. Zaanen) **81c:46001** 46-02 (46B30, 46E30, 46M05)
- On the type and cotype of Banach spaces. *Israel J. Math.* **32** (1979), no. 1, 32-38. (S. Ramaswamy) **81g:46022** 46B20
- Some directions of research in Banach space theory. *Functional analysis: surveys and recent results, II (Proc. Second Conf. Functional Anal., Univ. Paderborn, Paderborn, 1979)*, pp. 1-18. *North-Holland Math. Studies*, **38**, North-Holland, Amsterdam, 1980. (Zvi Altschuler) **81f:46018** 46Bxx
- Tze, H. C. (with Gürsey, Feza; Jafarizadeh, M. A.) Quaternionic multi S^2 -HP(1) gravitational and chiral instantons. *Phys. Lett. B* **88** (1979), no. 3-4, 282-286. (Authors' summary) **81c:83006** 83C05 (53C05, 57R99, 58G40)
- Tzelnick, P. (with Hofri, Micha) On the working set size for the Markov chain model of program behaviour. *Performance of computer systems (Proc. Fourth Internat. Sympos. Modelling Performance Evaluation Comput. Systems, Vienna, 1979)*, pp. 393-405. *North-Holland, Amsterdam*, 1979. (Authors' summary) **81d:68013** 68B05 (68J10)
- Tzeng, Chun-Hung See Tseng, Chün Hung
- Tzimbalario, Jean (with Holland, Anthony S. B.; Sahney, B. N.) A criterion for Taylor summability of Fourier series. *Canad. Math. Bull.* **22** (1979), no. 3, 345-350. (P. D. Kathal) **81b:42034** 42A24
- (with Lorch, Lee) Quasi-equivalence between Borel summability and convergence for Fourier-Laguerre series at the end-point. *Proc. Edinburgh Math. Soc.* (2) **22** (1979), no. 3, 217-226. (Tikam Singh) **81c:42037** 42C10
- Tzivandis, G. J. (with Kafousias, N. G.; Massalas, C. V.; Raptis, A. A.; Georgantopoulos, G. A.; Goudas, C. L.) Free convection effects on the hydromagnetic oscillatory flow in the Stokes problem past an infinite porous vertical limiting surface with constant suction. I. *Astrophys. and Space Sci.* **68** (1980), no. 1, 99-110. (A. K. Singh) **81c:76053** 76W05 (76R10)
- Ubar, R. R. Detection of suspected faults in combinational circuits by solving Boolean differential equations. *Automat. i Telemekh.* **1979**, no. 11, 170-183. (Russian. English summary); translated as *Automat. Remote Control* **40** (1979), no. 11, part 2, 1693-1703 (1980). (Authors' summary) **81c:94045** 94C10
- Überall, H. (with Gaunard, G.) R-matrix theory of sound scattering from fluid spheres via the Mittag-Leffler expansion. *J. Acoust. Soc. Amer.* **68** (1980), no. 6, 1850-1857. (Authors' summary) **81c:76057** 76C05 (81F99, 81G35)
- Uberman, V. I. (with Slepnikov, V. I.) ★ Исследование плотности аддитивных детектирующих числовых систем с помощью ЭИМ. (Russian) [Research on the density of additive detecting number systems by means of a computer] Preprint 10-78. *Akad. Nauk Ukrain. SSR, Fiz.-Tehn. Inst. Nizkikh Temperatur, Kharkov*, 1978. 60 pp. (Richard K. Guy) **81a:10067** 10L10
- Ubbaya, Vasant A. An $O(n)$ algorithm for discrete n -point convex approximation with applications to continuous case. *J. Math. Anal. Appl.* **72** (1979), no. 1, 338-354. (John Todd) **81d:41071** 41A50 (65D15)
- Nonlinear programming, approximation, and optimization on infinity

- differentiable functions. *J. Optim. Theory Appl.* 29 (1979), no. 2, 199–213. (Jean-Paul Penot) **81a:90145** 90C30 (41A50)
- Nonlinear programming and an optimization problem on infinitely differentiable functions. *J. Optim. Theory Appl.* 29 (1979), no. 3, 345–367. (Bruce D. Craven) **81d:90109** 90C48 (90C25, 90C30)
- Generalized isotone optimization with applications to starshaped functions. *J. Optim. Theory Appl.* 29 (1979), no. 4, 559–571. (M. A. Wolfe) **81d:65033** 65K10 (90C30)
- Uccella, G. (with Maggiolo-Schettini, Andrea) SOL: an exercise in defining a language. *Fund. Inform.* (4) 2 (1978/79), no. 3, 337–349. (Authors' summary) **81d:68041** 68B99
- Uchida, Fumichi Classification of real analytic $SL(n, \mathbb{R})$ actions on n -sphere. *Osaka J. Math.* 16 (1979), no. 3, 561–579. (Raymond Barre) **81c:57047** 57S20 (58F30)
- Uchida, Ken-ichi (with Shimemura, Etsujiro) On certainty equivalence in linear-quadratic control problems with nonlinear measurements. *Inform. and Control* 41 (1979), no. 2, 119–135. (Authors' summary) **81c:93095** 93E20
- (with Shimemura, Etsujiro) On a class of linear-quadratic stochastic team control problems. *Optimization techniques (Proc. Ninth IFIP Conf., Warsaw, 1979), Part 1*, pp. 184–192. *Lecture Notes in Control and Information Sci.*, 22, Springer, Berlin, 1980. (Tamer Başar) **81m:93091** 93E20 (90A99)
- On optimal control of the stochastic systems with delayed controls and delayed measurements. *J. Math. Anal. Appl.* 75 (1980), no. 2, 454–464. (H.-J. Engelbert) **81k:93084** 93E20
- Uchida, Koji Isomorphisms of Galois groups of solvably closed Galois extensions. *Tōhoku Math. J.* (2) 31 (1979), no. 3, 359–362. (Jack Sonn) **81a:12010** 12A55
- Separably Hilbertian fields. *Kodai Math. J.* 3 (1980), no. 1, 83–95. (Jack Sonn) **81j:12019** 12F10 (12A55, 12E05)
- Uchiyama, Akihito (with Latter, Robert H.) The atomic decomposition for parabolic H^p spaces. *Trans. Amer. Math. Soc.* 253 (1979), 391–398. (Charles Horowitz) **81d:30061** 30D55 (46J15)
- A remark on Carleson's characterization of BMO. *Proc. Amer. Math. Soc.* 79 (1980), no. 1, 35–41. (A. B. Aleksandrov) **81k:42021** 42B30 (46E99)
- A maximal function characterization of H^p on the space of homogeneous type. *Trans. Amer. Math. Soc.* 262 (1980), no. 2, 579–592. (Alberto Torchinsky) **81j:46085** 46J15 (46E30)
- Uchiyama, Kohel On the growth of solutions of semilinear diffusion equation with drift. *Osaka J. Math.* 17 (1980), no. 2, 281–301. (H. F. Weinberger) **81j:35064** 35K55
- Uchiyama, Saburo On a Diophantine equation. *Proc. Japan Acad. Ser. A Math. Sci.* 55 (1979), no. 9, 367–369. (R. Steiner) **81c:10016** 10B10
- Udayabaskaran, S. (with Srinivasan, S. K.) On a stochastic integral associated with a birth and death process. *J. Math. Phys.* 14 (1980), no. 2, 95–106. (Pierre-Louis Lions) **81m:60152** 60J80 (60H05)
- Udeschini Brinis, Elisa A third-order "potential" tensor of the Riemann tensor. II. (Italian. English summary) *Istit. Lombardo Accad. Sci. Lett. Rend. A* 112 (1978), no. 1, 110–122 (1979). (Elisa Udeschini-Brinis) **81a:53025** 53B21
- Udovitch, A. L. (with Gaidukov, A. M.; Ivanov, O. S.) Phase boundaries of state diagrams of q -component systems as discontinuity surfaces of all second derivatives of the Gibbs equilibrium thermodynamic potential. *Phys. Lett. A* 72 (1979), no. 1, 1–4. (Authors' summary) **81k:80083** 80A15
- Udrle, Constantin Directional derivatives of convex functions on Riemannian manifolds. *Rev. Roumaine Math. Pures Appl.* 24 (1979), no. 9, 1385–1388. (W. Wrona) **81g:53031** 53C20 (26A51)
- Ue, Masanori On F^* -manifolds and cell-like resolutions. *Proc. Japan Acad. Ser. A Math. Sci.* 56 (1980), no. 5, 235–237. (Frank Quinn) **81k:57012** 57N15
- Ueda, Tetsuo Pseudoconvex domains over Grassmann manifolds. *J. Math. Kyoto Univ.* 20 (1980), no. 2, 391–394. (A. Hirschowitz) **81j:32014** 32F15 (32E10)
- Ueda, Yoshinaka Steady motions exhibited by Duffing's equation: a picture book of regular and chaotic motions. *New approaches to nonlinear problems in dynamics (Proc. Conf., Pacific Grove, Calif., 1979)*, pp. 311–322. *SIAM, Philadelphia, Pa.*, 1980. (Joseph Ford) **81m:58055** 58F13 (34C39, 70K05)
- Uehara, Hiroshi (with Haas, Ronald Kirk) A note on Thom classes in general cohomology. *Nagoya Math. J.* 79 (1980), 69–78. (Edgar H. Brown, Jr.) **81k:55030** 55R40 (55N20)
- Uehara, Masayuki On the cancellation of the glueball pomeron singularity. *Progr. Theoret. Phys.* 63 (1980), no. 3, 943–955. (Authors' summary) **81g:11100** 81G05
- Uehara, Tsuyoshi On p -adic continuous functions determined by the Euler numbers. *Rep. Fac. Sci. Engrg. Saga Univ. Math. No. 8* (1980), 1–8. (Neal Koblitz) **81e:12020** 12B40
- Uekusa, N. B. A partial groupoid of transformations with fixed points. (Russian) *Semigroup varieties and semigroups of endomorphisms (Russian)*, pp. 149–153. *Leningrad. Gos. Ped. Inst., Leningrad*, 1979. (Jan Chvalina) **81f:20092** 20M20
- nguyen thuong Uem See Nguyen Thong Uem
- Ueno, Kazumichi Reducibility of differential equations and pseudo-isomorphism of automorphism pseudogroups. *J. Differential Geom.* 14 (1979), no. 1, 117–141 (1980). (P. Molino) **81g:58045** 58H05 (35A99)
- Ueno, Kenji On algebraic fibre spaces of abelian varieties. *Math. Ann.* 237 (1978), no. 1, 1–22. (Daniel Comenetz) **81d:14012** 14E05 (14D20, 14K10)
- Classification of algebraic manifolds. *Proceedings of the International Congress of Mathematicians (Helsinki, 1978)*, pp. 549–556. *Acad. Sci. Fennica, Helsinki*, 1980. (R. R. Simha) **81d:14011** 14D20 (32G13, 32J99)
- (with Bănică, Constantin) On the Hilbert-Samuel polynomial in complex analytic geometry. *J. Math. Kyoto Univ.* 20 (1980), no. 2, 381–389. (Takao Fujita) **81k:32011** 32C35 (14C17, 32J20)
- Ueno, Shunichi (with Kajitani, Yoji) On the rank of certain classes of cut-sets and tie-sets of a graph. *IEEE Trans. Circuits and Systems* 26 (1979), no. 8, 666–668. (G. Berman) **81b:05064** 05C35 (94C15)
- Ueno, Tadashi A class of general boundary conditions for multidimensional diffusion equation. *Proc. Japan Acad. Ser. A Math. Sci.* 55 (1979), no. 10, 390–394. (Jean-Michel Bismut) **81f:60109** 60J60
- Uerner, D.E. See Werner, John
- Uesaka, Hiroshi The total energy decay of solutions for the wave equation with a dissipative term. *J. Math. Kyoto Univ.* 20 (1980), no. 1, 57–65. (R. Glassey) **81f:35071** 35L20 (35B40)
- Uesu, Kagumi Scalar curvatures of left-invariant metrics on some Lie groups. *Hiroshima Math. J.* 10 (1980), no. 2, 323–327. (James R. Watson) **81g:53032** 53C20
- Uesu, Tadashi A complete system of grammars for plane graphs. *Tsukuba J. Math.* 3 (1979), no. 1, 129–160. (From the introduction) **81d:68110** 68F05 (05C10)
- Ueyama, Hiroshi The stochastic Boltzmann equation and hydrodynamic fluctuations. *J. Statist. Phys.* 22 (1980), no. 1, 1–26. (Steven M. Moore) **81d:82031** 82A40 (82A45)
- Ufland, Ja. S. Solution of some mixed problems on the torsion of elastic bodies, using a finite transformation of the Mehler-Fock type. *Izv. Akad. Nauk SSSR Meh. Teor. Tekh.* 14 (1979), no. 2, 53–61. (Russian); translated as *Mech. Solids* 14 (1979), no. 2, 54–62. (Author's summary) **81d:73009** 73C35
- Ufnaravskii, V. A. Poincaré series of graded algebras. (Russian) *Mat. Zametki* 27 (1980), no. 1, 21–32, 157. (P. M. Cohn) **81k:16003** 16A03 (17B35)
- Ugbelur, Olabisi O. Uniform variation results for Brownian motion. *Z. Wahrsch. Verw. Gebiete* 51 (1980), no. 1, 39–48. (S. J. Taylor) **81b:60061** 60J65 (60G17)
- Ugli, Maura Existence theorems for boundary value problems of the fourth and fifth type for a linear parabolic equation. (Italian) *Riv. Mat. Univ. Parma* (4) 5 (1979), part 2, 591–606 (1980). (Enrico Obrecht) **81k:35073** 35K20
- Uglanov, A. V. Some properties of subspaces of L_p spaces. (Russian) *Izv. Vysš. Učeb. Zaved. Matematika* 1980, no. 7, 65–70. (J. Peetre) **81m:46050** 46E30
- Uglor, A. A. (with Mažukin, V. I.; Četveruškin, B. N.) Numerical investigation of the problem of a laser discharge in a dense gas. (Russian) *Ž. Vyšisl. Mat. i Mat. Fiz.* 20 (1980), no. 2, 451–460, 551. (W. Rozmus) **81j:76110** 76X05
- Ugowski, Henryk On weak solutions of random linear parabolic equations. *Demonstratio Math.* 13 (1980), no. 1, 103–146. (Kazuaki Taira) **81m:35066** 35K20 (35R60)
- Ugulava, D. K. On the saturation problem in the space $L_p(\mathbb{R}^n)$, $1 < p < 2$. (Russian) *Trudy Vyšisl. Centra Akad. Nauk Gruzii. SSR* 19 (1979), no. 1 *Vyšisl. Mat. i Programirovanie*, 55–76. (M. Tomić) **81b:41057** 41A40 (42B10)
- Uhan'ska, D. V. An algorithm for the completion of a one-row matrix to an invertible one over the ring $C[x]$ of polynomials. (Russian) *Vestnik L'vov. Politehn. Inst. No. 141* *Differencial'nye Uravnenija i ih Priłożen.* (1980), 92–93, 125. (Author's summary) **81i:15018** 15A33
- Uhl, J. J., Jr. Pettis mean convergence of vector-valued asymptotic martingales. *Z. Wahrsch. Verw. Gebiete* 37 (1976/77), no. 4, 291–295. (Author's review (Zbl 338:60029)) **81k:60057** 60G48
- Uhlenbrock, D. A. Path space ideas and minimal unitary dilations. *Rep. Math. Phys.* 15 (1979), no. 2, 253–265. (Author's summary) **81a:81073** 81E99 (47A20)
- Spectral distribution of Laplacians and Kato's inequality. *Geometry of the Laplace operator (Proc. Sympos. Pure Math., Univ. Hawaii, Honolulu, Hawaii, 1979)*, pp. 293–299. *Proc. Sympos. Pure Math., XXXVI, Amer. Math. Soc., Providence, R.I.*, 1980. (L. A. Takhtajan (Tahtadžjan)) **81g:58043** 58G25 (47A40, 81D25)
- Uhlir, Dietmar Boolean functions with linear combinational complexity. *Diskrete Matematik und ihre Anwendungen in der Mathematischen Kybernetik* (10. Arbeitssymposium. Gebiet Diskrete Math., Wilhelm-Pieck-Univ., Rostock, 1978). *Rostock. Math. Kolloq. No. 10* (1978), 103–107. (From the text) **81d:94045** 94C10
- Uhlmann, A. (with Alberti, P. M.) The order structure of states in C^* and W^* -algebras. *Proceedings of the International Conference on Operator Algebras, Ideals, and their Applications in Theoretical Physics (Leipzig, 1977)*, pp. 126–135. *Teubner, Leipzig*, 1978. (Ola Bratteli) **81k:46075** 46L10
- Uhlmann, G. A. Parametrics for operators with multiple involutive characteristics. *Comm. Partial Differential Equations* 4 (1979), no. 7, 739–767. (Vesselin M. Petkov) **81g:35036** 58G15 (35S05)
- (with Melrose, Richard B.) Lagrangian intersection and the Cauchy problem. *Comm. Pure Appl. Math.* 32 (1979), no. 4, 483–519. (Bent E. Petersen) **81d:58052** 58G17 (35S05, 47G05)
- (with Melrose, Richard B.) Microlocal structure of involutive conical refraction. *Duke Math. J.* 46 (1979), no. 3, 571–582. (A. Hirschowitz) **81b:58044** 58G16 (35G05, 35S05)
- Uhm, Han S. (with Davidson, Ronald C.) Kinetic description of coupled transverse oscillations in an intense relativistic electron beam-plasma system. *Phys. Fluids* 23 (1980), no. 4, 813–821. (Magdi M. Shourai) **81b:76076** 76X05 (82A45)
- (with Davidson, Ronald C.) Low-frequency flute instabilities in intense nonneutral electron and ion beams. *Phys. Fluids* 23 (1980), no. 8, 1586–1595. (Authors' summary) **81g:76127** 76X05
- (with Davidson, Ronald C.) Self-consistent Vlasov description of the free electron laser instability. *Phys. Fluids* 23 (1980), no. 10, 2076–2084. (From the summary) **81j:76102** 76X05
- Uhrin, B. (with Dancs, S.) On a class of integral inequalities and their measure-theoretic consequences. *J. Math. Anal. Appl.* 74 (1980), no. 2, 388–400. (K. J. Falconer) **81g:26009** 26D15 (28A25, 52A40, 53C65)
- Some useful estimations in the geometry of numbers. *Period. Math. Hungar.* 11 (1980), no. 2, 95–103. (R. P. Bambah) **81h:10046** 10E10
- Uhry, Jean-Pierre (with Boulala, Mouloud) Polytope des indépendants d'un graphe série-parallèle. (English summary) *Discrete Math.* 27 (1979), no. 3, 225–243. (A. K. Dewdney) **81f:05134** 05C99 (68E10)
- (with Bieche, I.; Maynard, R.; Rammal, R.) On the ground states of the frustration model of a spin glass by a matching method of graph theory. *J. Phys. A* 13 (1980), no. 8, 2553–2576. (Authors' summary) **81g:82037** 82A42
- Uji, Masataka (with Makar, Malak; Nishihara, Katsunobu; Mima, Kunio) Parametric instabilities in two-electron temperature plasma by laser. *Tech. Rep. Osaka Univ.* 30 (1980), no. 1517–1550, 129–136. (Authors' summary) **81f:76054** 76X05
- Ukai, Hiroyuki (with Kando, Hisashi; Iwazumi, Tetsuo) Synthesis of the singularly perturbed tracking problems with two small parameters. (Japanese. English summary) *Bull. Nagoya Inst. Tech.* 30 (1978), 257–263 (1979). (Authors' summary) **81m:49014** 49A99
- (with Sakawa, Yoshiyuki) Optimal shape of an elastic structure. *Optimal Control Appl. Methods* 1 (1980), no. 4, 373–385. (I. Tadjbakhsh) **81k:73053** 73K40 (49B10, 49D15, 49G10)
- Ukai, Seiji (with Point, Nelly; Ghidouche, Hamid) Sur la solution globale du problème mixte de l'équation de Boltzmann nonlinéaire. *J. Math. Pures Appl.* (9) 57 (1978), no. 3, 203–229. (From the introduction) **81k:45018** 45K05 (47D05, 76P05)

- (with Okabe, Takayoshi) On classical solutions in the large in time of two-dimensional Vlasov's equation. *Osaka J. Math.* 15 (1978), no. 2, 245-261. (V. Lakshmikantham) **81:35007** 35A07 (35K45, 45K05, 82A45)
- (with Asano, Kiyoshi) On the initial-boundary value problem of the linearized Boltzmann equation in an exterior domain. *Proc. Japan Acad. Ser. A Math. Sci.* 56 (1980), no. 1, 12-17. (Hans Kaper) **81:82019** 82A40
- Ukagawa, Takasaburo On the unique maximal idempotent ideals of nonidempotent multiplication rings. *Proc. Japan Acad. Ser. A Math. Sci.* 55 (1979), no. 4, 132-135. (W. S. Martindale, III) **81:16019** 16A66
- Left Noetherian multiplication rings. *Osaka J. Math.* 17 (1980), no. 2, 449-453. (William D. Blair) **81m:16017** 16A33
- Ukaguchi, Nobuhiko (with Sakata, Hiroshi; Adachi, Takeshi) On the numerical analysis of compressible flow problems by the "modified FLIC method". Special issue: computational methods in nonlinear fluid mechanics. *Comput. & Fluids* 8 (1980), no. 2, 251-263. (Authors' summary) **81d:76066** 76H05 (65N30)
- Ukonen, Esko (with Soisalon-Soininen, Eljas) A method for transforming grammars into LL(k) form. *Acta Inform.* 12 (1979), no. 4, 339-369. (I. M. Havel) **81:68115** 68F05
- An analysis of the effect of rounding errors on the flow of control in numerical processes. *BIT* 19 (1979), no. 1, 116-133. (From the summary) **81a:65048** 65G05
- (with Riihiä, Kari-Jouko) On the optimal assignment of attributes to passes in multipass attribute evaluators. *Automata, languages and programming (Proc. Seventh Internat. Colloq., Noordwijkerhout, 1980)*, pp. 500-511, *Lecture Notes in Comput. Sci.*, 85, Springer, Berlin, 1980. (Authors' summary) **81j:68102** 68F25
- A decision method for the equivalence of some non-real-time deterministic pushdown automata. *Conference Proceedings of the Twelfth Annual ACM Symposium on Theory of Computing (Los Angeles, Calif., 1980)*, pp. 29-38, ACM, New York, 1980. (See **81j:68006**) 68D35 (03D05, 68C30)
- Uksov, A. T. (with Tyutkin, V. V.; Fedorjuk, M. V.) Active quenching of electromagnetic waves. *Radiotekhn. i Elektron.* 24 (1979), no. 10, 1982-1988 (Russian); translated as *Radio Engng. Electron. Phys.* 24 (1979), no. 10, 27-32 (1980). (Authors' summary) **81j:78020** 78A40 (78A50)
- Ukrivch, Walter (with Marzollo, Angelo) An introduction to some basic concepts and techniques in the theory of computable functions. *Topics in artificial intelligence*, pp. 11-45, *CISM Courses and Lectures*, 256, Springer, Vienna, 1978. (See **80a:68102**) 03Dxx
- Ulam, S. M. Von Neumann: the interaction of mathematics and computing. *A history of computing in the twentieth century*, pp. 93-99, Academic Press, New York, 1980. (See **81i:68002**) 01A70 (01A65, 68-03)
- Ulanicki, Bogumil (with Brdys, Mieczyslaw) On the completely decentralized control with local feedback in large scale systems. (Polish. Russian summary) *Arch. Automat. Telemekh.* 23 (1978), no. 1-2, 21-36. (Authors' summary) **81h:93003** 93A15
- Ulamov, A. G. (with Subladze, A. M.; Braslavskii, A. D.) Certain continuous identification techniques for linear dynamic plants. *Identification and system parameter estimation (Proc. Fourth IFAC Symp., Tbilisi, 1976)*, Part 2, pp. 1021-1031, North-Holland, Amsterdam, 1978. (See **80d:93010b**) 93B30
- Ulrich, K.-H. An abstract version of the Hattori-Villamayor-Zelinsky sequences. *Sci. Papers College Gen. Ed. Univ. Tokyo* 29 (1979), no. 2, 125-137. (Manuel Ojanguren) **81e:13014** 13D03 (18G99)
- Ullha, Ivan (with Hášová, D.; Hořejší, J.) On the eigenvalue problem for the Schrödinger operator with a confining potential. *Czechoslovak J. Phys.* 29 (1979), no. 12, 1351-1357. (M. M. Skraganov) **81a:34023** 34B25 (81C05)
- (with Havlíček, Miroslav) New method for computation of discrete spectrum. (Czech summary) With a loose Russian summary. *Apl. Mat.* 25 (1980), no. 5, 358-372. (G. Fonte) **81k:81021** 81C05 (34B25, 65L15)
- Ullha, J. A complete analysis of von Neumann's Hackendort. *Internat. J. Game Theory* 9 (1980), no. 2, 107-113. (Author's summary) **81e:90113** 90D05 (05C05)
- Ullry, Dana L. (with Khalil, Hatem M.) A semirunoff difference algorithm. *Symbolic and algebraic computation (EUROSAM '79, Internat. Symp., Marseille, 1979)*, pp. 177-188, *Lecture Notes in Comput. Sci.*, 72, Springer, Berlin, 1979. (Ian Gladwell) **81f:65072** 65N05
- Ullrey, Jan Basic tasks in decentralized control of complex systems. *Third Formator Symposium on Mathematical Methods for the Analysis of Large-Scale Systems*, pp. 241-254, Academia, Prague, 1979. (See **81j:93007**) 93A13
- (with Dráb, Ladislav) Activity of centre of control in decentralized system with hierarchical structure. *Third Formator Symposium on Mathematical Methods for the Analysis of Large-Scale Systems*, pp. 255-268, Academia, Prague, 1979. (See **81j:93007**) 90B05
- Uljumov, P. L. Fourier coefficients. (Russian) *Mat. Sb. (N.S.)* 110(153) (1979), no. 1, 13-34, 159. (F. Móricz) **81b:42088** 42C10 (42C15)
- (with Dolženko, E. P.) Some questions of the theory of functions. (Russian) *Vestnik Moskov. Univ. Ser. I Mat. Meh.* 1980, no. 1, 3-13. (R. L. Cooke) **81i:26002** 26-03 (01A60, 30E10, 41-03, 41A21)
- Uljumov, V. M. (with Malyhin, V. I.) Spaces with a single point of extremal disconnectedness. (Russian. English summary) *Fund. Math.* 107 (1980), no. 2, 91-98. (Aleksander Błaszczyk) **81k:54067** 54G05 (54G15)
- Ullah, Aman (with Raj, Baldev; Srivastava, Virender Kumar) Generalized two-stage least squares estimators for a structural equation with both fixed and random coefficients. *Internat. Econom. Rev.* 21 (1980), no. 1, 171-183. (R. W. Farebrother) **81i:62197** 62P20
- Ullah, Nazakat The correct form of the single-eigenvalue distribution for the nonzero mean-matrix ensembles. *J. Phys. A* 13 (1980), no. 5, L129-L131. (I. Olkin) **81k:62074** 62H10 (15A52)
- Ullman, J. L. Orthogonal polynomials associated with an infinite interval. *Michigan Math. J.* 27 (1980), no. 3, 353-363. (T. S. Chihara) **81j:42943** 42C05 (26C10)
- Ullman, Jeffrey D. (with Toueg, Sam) Deadlock-free packet switching networks. *Conference Record of the Eleventh Annual ACM Symposium on Theory of Computing (Atlanta, Ga., 1979)*, pp. 89-98, ACM, New York, 1979. (Frank K. Hwang) **81f:94049** 94C15 (68E10)
- (with Beeri, Catriel; Mendelzon, Alberto O.; Sagiv, Yehoshua) Equivalence of relational database schemes. *Conference Record of the Eleventh Annual ACM Symposium on Theory of Computing (Atlanta, Ga., 1979)*, pp. 319-329, ACM, New York, 1979. (Authors' summary) **81f:68027** 68B15
- (with Aho, Alfred V.) Universality of data retrieval languages. *Conference Record of the Sixth Annual ACM Symposium on Principles of Programming Languages (San Antonio, Tex., 1979)*, pp. 110-120, ACM, New York, 1979. (Authors' summary) **81j:68027** 68B15
- Ullman, Stephen V. Upper bounds for p -divisibility of sets of Bernoulli numbers. *J. Number Theory* 12 (1980), no. 2, 197-200. (R. J. Evans) **81h:10019** 10A40 (12A35)
- Ullrich, Ch. Iterative methods in the spaces of rounded computations. *Fundamentals of numerical computation (computer-oriented numerical analysis) (Proc. Conf., Tech. Univ. Berlin, Berlin, 1979)*, pp. 197-209, *Comput. Suppl.*, 2, Springer, Vienna, 1980. (G. J. Miel) **81m:65066** 65G05 (65F10)
- Ullrich, David Divided differences and systems of nonharmonic Fourier series. *Proc. Amer. Math. Soc.* 80 (1980), no. 1, 47-57. (R. P. Boas, Jr.) **81i:42034** 42C30 (46B15)
- Ulmer, W. On a rigorously classical approach to the sine-Gordon theory. *Lett. Nuovo Cimento* (2) 25 (1979), no. 16, 501-504. (T. F. Morris) **81g:81037** 81C99 (35Q20)
- Ulph, Allstair (with Folie, G. M.) Computing equilibria in an industry producing an exhaustible resource. *Optimization techniques (Proc. Ninth IFIP Conf., Warsaw, 1979)*, Part 2, pp. 423-431, *Lecture Notes in Control and Information Sci.*, 23, Springer, Berlin, 1980. (See **81j:4901b**) 90A14
- (with Folie, G. M.) Models of cartel behaviour in an industry extracting a nonrenewable resource. *Appl. Math. Modelling* 4 (1980), no. 3, 199-204. (From the introduction) **81g:90036** 90A30
- Ulrich, Dolph Semantics for S4.1.2. *Notre Dame J. Formal Logic* 19 (1978), no. 3, 461-464. (From the text) **81e:03017** 03B45
- Ultrivanov, I. P. Boundary control of a string of plasma with distributed flow. (Russian) *Dynamics of control systems (Third All-Union Ctrav Conf., Irkutsk, 1977) (Russian)*, pp. 294-300, 343, "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. (Author's summary) **81e:93073** 93D99 (76X05, 82A45)
- Ulucay, Cengiz Characterizations of Riemann surfaces. (Turkish summary) *J. Fac. Sci. Karadeniz Tech. Univ.* 1 (1977), 1-5. (Charles M. Stanton) **81c:30086** 30F99
- Umalatov, S. D. (with Koval'uk, V. E.) The property of being a multiple basis for the system of eigenfunctions of a fourth-order differential operator. (Russian) *Izv. Severo-Kavkaz. Nauch. Centra Vysš. Školy Ser. Estestv. Nauk.* 1979, no. 4, 18-22, 109. (M. Otelbaev) **81j:34035** 34B25 (35P05)
- Umanaheswaram, S. $\lambda(n, k)$ -convex functions. *Rocky Mountain J. Math.* 8 (1978), no. 4, 759-764. (Jacques Dubois) **81h:26006** 26A51 (34B10)
- Umanak, Ja. L. (with Medvedev, V. S.) Decomposition of n -dimensional manifolds into simple manifolds. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1979, no. 1, 46-50. (W. Kuperberg) **81h:57012** 57N15
- Umarov, H. G. The Riemann method for some hyperbolic equations with operator coefficients. (Russian) *Qualitative and approximate methods for the investigation of operator equations*, No. 4 (Russian), pp. 152-170, Yaroslavl. Gos. Univ., Yaroslavl, 1979. (K. A. Jagdzin) **81m:35082** 35L10 (35R20)
- Umemura, Hiroshi Moduli spaces of the stable vector bundles over abelian surfaces. *Nagoya Math. J.* 77 (1980), 47-60. (P. E. Newstead) **81e:14008** 14F05 (14D22)
- Sur les sous-groupes algébriques primitifs du groupe de Cremona à trois variables. *Nagoya Math. J.* 79 (1980), 47-67. (M. H. Gizatullin) **81e:14011** 14E05 (14M20, 57S25)
- Umemura, Kaoru Herapath's theory of matter. (Japanese. English summary) *Bull. Fukuoka Univ. Ed. III* 29 (1979), 73-79. (Author's summary) **81m:01040** 01A55 (82-03)
- Umezawa, H. (with Matsumoto, Hideki; Semenoff, G.; Tachiki, M.) Quantum electrodynamics in solids. *Fortschr. Phys.* 28 (1980), no. 2, 67-98. (Authors' summary) **81d:81136** 81L05 (78A25, 82A55)
- (with Semenoff, G.; Matsumoto, Hideki) Renormalization and quantum correction of soliton solutions. *Progr. Theoret. Phys.* 63 (1980), no. 4, 1393-1412. (Authors' summary) **81d:81062** 81E15
- Umezawa, Toshio Cut elimination in intuitionistic and some intermediate predicate logics. *Rep. Fac. Sci. Shizuoka Univ.* 14 (1979), 1-12 (1980). (G. E. Mine) **81k:03108** 03F05 (03F50)
- Unarokov, A. A. Generalized solution of differential equations. Qualitative study of the stability of motion. (Russian) *Trudy Moskov. Orden. Lenin. Energet. Inst.* No. 402 (1979), 27-34, 118. (J. W. Macki) **81a:34047** 34D20
- Unbehauen, H. See Methods and applications in adaptive control, **81k:93038**
- Underwood, P. G. (with Park, K. C.) A variable-step central difference method for structural dynamics analysis. I. Theoretical aspects. *Comput. Methods Appl. Mech. Engrg.* 22 (1980), no. 2, 241-258. (Authors' summary) **81d:73065** 73K30 (65D30)
- Unell, Philip Myles Selfadjointness of certain second order differential operators on Riemannian manifolds. *J. Math. Anal. Appl.* 73 (1980), no. 2, 351-365. (James S. Howland) **81g:35021** 35J15 (35P25, 47F05, 58C40, 58G10)
- Unger, Šime The van Kampen theorem for fundamental pro-groups. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math.* 27 (1979), no. 2, 171-181. (Maria Moszyńska) **81h:55010** 55Q07 (54B30, 55P55)
- On local homotopy and homology pro-groups. (Serbo-Croatian summary) *Glas. Mat. Ser. III* 14(34) (1979), no. 1, 151-158. (Maria Moszyńska) **81h:55069** 55Q07 (54F35, 55P55)
- Unger, Thomas (with Sternberg, Shlomo) Classical and prequantized mechanics without Lagrangians or Hamiltonians. *Hadronic J.* 1 (1978), no. 1, 33-76. (Tudor S. Ratiu) **81e:70014** 70G99 (58F06, 81E99)
- Unger, Gerhard (with Schiebel, Wolfgang; Terno, Johannes) Ein Beitrag zur Klassifizierung von Rundreiseproblemen. (English and Russian summaries) *Math. Operationsforsch. Statist. Ser. Optim.* 10 (1979), no. 4, 523-528. (Authors' summary) **81m:90079** 90C10
- Unger, Siegfried See Vapnik, V. N.; et al., **81j:62114**
- Ungureanu-David, Elena (with Ene, Horia I.) On certain problems of electroconvection in porous media. (Romanian. English summary) *Stud. Cerc. Mat.* 32 (1980), no. 3, 309-320. (Authors' summary) **81g:76053** 76E25 (76S05, 76W05)
- Unkelbach, Hans Dieter Convergence to equilibrium in a traffic model with restricted passing. *J. Appl. Probab.* 16 (1979), no. 4, 881-889. (Author's summary) **81a:90090** 90B20

- The statistical analysis of the differential blood count. (German summary)
Biometrical J. 22 (1980), no. 6, 545-552. (Dan Anbar) **81k:62146** 62P10 (92A07)
- Unli, Feval Unconstrained probabilistic goal programming by the least square adjustment to finite convolution. *Proceedings of the International Symposium on Applications of Mathematics in System Theory* (Univ. Brasov, Brasov, 1978), II, pp. 189-195, Univ. Brasov, Brasov, 1979. (See **81j:93006a**) 90C15
- On CCP with duple potent convolution. *Proceedings of the International Symposium on Applications of Mathematics in System Theory* (Univ. Brasov, Brasov, 1978), II, pp. 197-207, Univ. Brasov, Brasov, 1979. (See **81j:93006b**) 90C99
- Unli, K. R. (with Puttamadaiah, C.) On numerical ranges and spectrum of linear operators on s.i.p. spaces. *Math. Rep. Toyama Univ.* 3 (1980), 7-17. (Adolf Rhodius) **81k:47006** 47A12 (47A25)
- Uno, Minoru (with Kise, Hiroshi; Kabata, Masahisa) Approximation algorithms for identical parallel-machine scheduling problems with ready times and precedence constraints. *Mem. Kyoto Tech. Univ. Sci. Tech.* 28 (1979), 64-72. (Peter Brucker) **81j:90054** 90B35 (68C15)
- Unruh, W. G. Quantum nondemolition. *Gravitational radiation, collapsed objects and exact solutions* (Proc. Einstein Centenary Summer School, Perth, 1979), pp. 385-426, *Lecture Notes in Phys.*, 124, Springer, Berlin, 1980. (From the text) **81k:83008** 83B05 (83C35)
- Unsworth, K. (with Chiam, T. C.) Heat transfer from nonisothermal surfaces in the stagnation-point flow of a micropolar fluid. (German summary) *Rheol. Acta* 19 (1980), no. 3, 356-364. (From the introduction) **81f:76002** 76A05 (76R05)
- (with Chiam, T. C.) A numerical solution for the heat transfer from a wedge with nonisothermal surfaces. (French summary) *Z. Angew. Math. Phys.* 31 (1980), no. 4, 494-501. (N. D. Sengupta) **81k:80002** 80A20 (65N20)
- Unterberger, André Sur la continuité sur L^2 des opérateurs pseudo-différentiels. *Séminaire Paul Krée, 46 année: 1977-1978. Equations aux dérivées partielles en dimension infinie, Exp. No. 4, 12 pp.*, Secrétariat Math., Paris, 1979. (S. G. Gindikin) **81b:47063** 47G05 (35S05, 58G15)
- Oscillateur harmonique et opérateurs pseudo-différentiels. (English summary) *Ann. Inst. Fourier (Grenoble)* 29 (1979), no. 3, xi, 201-221. (M. S. Agranović) **81m:58077** 58G15 (47G05, 81C99)
- Unterberger, Julianne Une caractérisation des symboles des endomorphismes de \mathbb{S} ou de \mathbb{S}' . (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 22, A1053-A1055. (Author's summary) **81f:47053** 47G05
- Urwil, S. D. Quantised spin-1 field in flat Clifford-Klein space-times. *J. Phys. A* 13 (1980), no. 1, 313-323. (Hubert Golek) **81f:81100** 81M05 (83C50)
- (with Kennedy, Gerard) Casimir cancellations in half an Einstein universe. *J. Phys. A* 13 (1980), no. 7, L253-L258. (Authors' summary) **81e:83041** 83C99
- (with Critchley, Raymond) Atomic ground state energy in multiply connected universes. *Proc. Roy. Soc. London Ser. A* 372 (1980), no. 1749, 297-306. (S. M. Christensen) **81k:81052** 81D99 (81C12)
- (with Davies, P. C. W.) Quantum vacuum energy and the masslessness of the photon. *Phys. Lett. B* 98 (1981), no. 4, 274-276. (Derek Raine) **81m:83037** 83C99 (81G10)
- Uols, T. R. See Walsh, T. R. S.
- Uonemi, U. Mjurrei See Womham, W. Murray
- Uonaki, Katsuji Estimation of the parameters of the autoregressive time series using stochastic approximation. (Russian summary) *Systems Sci.* 5 (1979), no. 2, 173-185 (1980). (Author's summary) **81g:93110** 93E10
- Sequential estimation of parameters of autoregressive time series. *Tech. Rep. Osaka Univ.* 29 (1979), no. 1492-1516, 309-317. (L. Billard) **81m:62157** 62L20 (62M10, 93E10)
- Upadhyay, M. D. (with Gupta, V. C.) On a structure defined by a (1,1) tensor field F satisfying $F^k - \lambda^2 F^{k-2} = 0$ ($F \neq 0$, $\lambda \neq 0$). *Demonstratio Math.* 12 (1979), no. 3, 689-698. (V. Mihova-Nehmer) **81d:53026** 53C15
- (with Agarwal, A. K.) On a quasnormal $(\psi, g, u, v, e, \lambda)$ -structure. *Indian J. Pure Appl. Math.* 11 (1980), no. 5, 633-639. (C. S. Houh) **81m:53049** 53C15 (53C40)
- Upadhyay, P. C. (with Stokes, Vijay K.) A comparison of rate sensitive constitutive equations under plane stress conditions. (German summary) *Acta Mech.* 36 (1980), no. 3-4, 231-246. (Authors' summary) **81f:73038** 73E99
- Upadhyay, B. R. (with Sorenson, H. W.) Bayesian discriminant approach to input signal selection in parameter estimation problems. *Inform. Sci.* 12 (1977), no. 1, 61-91. (Arunabha Bagchi) **81e:93082** 93E10 (62F15, 94A12)
- Upadhyay, R. D. Real inversion theorem for third iterate of Laplace transform of generalized functions. *Bull. Calcutta Math. Soc.* 68 (1976), no. 4, 293-300. (Author's introduction) **81f:44007** 44A10
- Upadhyay, Sushama (with Raj, Baldev; Srivastava, Virender Kumar) The efficiency of estimating a random coefficient model. *J. Econometrics* 12 (1980), no. 3, 285-299. (H. T. Amundsen) **81h:62123** 62J05
- Upham, Mary H. Two remarks on duality. *Houston J. Math.* 5 (1979), no. 3, 437-443. (J. Lambek) **81e:16003** 16A08 (16A90, 18A99)
- Uppmeyer, Harald Derivation algebras of JB-algebras. *Manuscripta Math.* 30 (1979/80), no. 2, 199-214. (E. Stormer) **81f:17014** 17C65 (46K05)
- Erratum: "Derivation algebras of JB-algebras" [Manuscripta Math. 30 (1979), no. 2, 199-214; MR 81f:17014]. *Manuscripta Math.* 32 (1980), no. 1-2, 211. (From the text) **81j:17016** 17C65 (46L35)
- Derivations of Jordan C^* -algebras. *Math. Scand.* 46 (1980), no. 2, 251-264. (Pierre de la Harpe) **81m:17024** 17C65 (46L99)
- Uppman, Are Deux applications des semi-martingales exponentielles aux équations différentielles stochastiques. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 14, A661-A664. (Author's summary) **81d:60061** 60H10 (60G44)
- Upton, Graham J. G. (with Lawal, H. Bayo) An approximation to the distribution of the X^2 goodness-of-fit statistic for use with small expectations. *Biometrika* 67 (1980), no. 2, 447-453. (Authors' summary) **81g:62032** 62E15
- Urahe, Hironobu (with Yang, Chung Chun) On a characteristic property of periodic entire functions. *Kodai Math. J.* 3 (1980), no. 2, 253-286. (I. N. Baker) **81k:30034** 30D15 (30D30)
- Urakawa, Hajime On the least positive eigenvalue of the Laplacian for the compact quotient of a certain Riemannian symmetric space. *Nagoya Math. J.* 78 (1980), 137-152. (Harold Donnelly) **81d:58056** 58G25 (35P15, 43A90, 53C35)
- (with Mutō, Hideo) On the least positive eigenvalue of Laplacian for compact homogeneous spaces. *Osaka J. Math.* 17 (1980), no. 2, 471-484. (R. S. Millman) **81m:58083** 58G25 (53C30)
- Ural'ceva, N. N. Capillarity problems. (Russian) *Proceedings of an All-Union Conference on Partial Differential Equations* (Moscow State Univ., Moscow, 1976) (Russian), p. 227, Moskov. Gos. Univ., Meh.-Mat. Fakul'tet, Moscow, 1978. (See **80i:35002**) 35Q30 (49F99)
- (with Ladyženskaja, O. A.) Estimate of the Hölder norm of solutions of second-order elliptic equations of general form. (Russian) Boundary value problems of mathematical physics and related questions in the theory of functions, 12. *Zap. Nauch. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 96 (1980), 161-168, 309. (Ja. A. Roitberg) **81k:35061** 35J65
- Urlegaddi, Basappa Amrutappa (with Sarangi, Sangappa Mallappa) Functions whose real parts are greater than a . *J. Karnataka Univ. Sci.* 22 (1977), 37-43. (Carl P. McCarty) **81a:30011** 30C45
- (with Sarangi, Sangappa Mallappa) The radius of convexity and starlikeness for certain classes of analytic functions with negative coefficients. I. *Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur.* (8) 65 (1978), no. 1-2, 38-42 (1979). (Herb Silverman) **81d:30019** 30C45 (30C55)
- Urata, Toshio Holomorphic mappings into taut complex analytic spaces. *Tōhoku Math. J.* (2) 31 (1979), no. 3, 349-353. (R. R. Simha) **81d:32034** 32H20 (32J99)
- Urban, János (with Ruzsa, Imre) In memoriam Rózsa Péter. (Hungarian) *Mat. Lapok* 26 (1975), no. 3-4, 125-137 (1978). (Editors) **81k:01045** 01A70
- Urban, Paul See Facts and prospects of gauge theories, **81b:81001**
- Urbanek, Friedrich J. (with Proding, Helmut) Infinite 0-1 sequences without long adjacent identical blocks. *Discrete Math.* 28 (1979), no. 3, 277-289. (R. C. Entringer) **81k:05032** 05B99 (10L10)
- Urbanik, K. Geometric decomposability properties of probability measures. *Probability theory (Papers, VIIth Semester, Stefan Banach Internat. Math. Center, Warsaw, 1976)*, pp. 249-254, Banach Center Publ., 5, PWN, Warsaw, 1979. (David J. Aldous) **81b:60009** 60B11
- (with Mincer, B.) Completely stable measures on Hilbert spaces. *Colloq. Math.* 42 (1979), 301-307. (A. Badrikian) **81g:60008** 60B11 (28C20, 60E07)
- Urbano, Francisco (with Barros, Manuel) CR-submanifolds of generalized complex space forms. *An. Ştiinţ. Univ. "Al. I. Cuza" Iaşi Sect. I a Mat. (N.S.)* 25 (1979), no. 2, 355-363. (Bang-yen Chen) **81c:53049** 53C40 (53B25)
- (with Barros, Manuel) Totally real submanifolds of quaternion Kaehlerian manifolds. *Soochow J. Math.* 5 (1979), 63-78. (Bang-yen Chen) **81d:53035** 53C40 (53B25, 53B35)
- Urbanović, M. M. Reduction of a pair of square matrices to triangular form. (Russian) *Vestnik L'vov. Politehn. Inst. No. 141 Differencial'nye Uravnenija i ih Prilozhen.* (1980), 90-91, 125. (Author's summary) **81i:15009** 15A21
- Urbanški, R. (with Hudzik, Henryk; Musielak, Julian) Interpolation of compact sublinear operators in generalized Orlicz spaces of nonsymmetric type. *Topology (Proc. Fourth Colloq., Budapest, 1978)*, Vol. I, pp. 625-638, *Colloq. Math. Soc. János Bolyai*, 23, North-Holland, Amsterdam, 1980. (M. Z. Berkolaiko) **81k:46040** 46E40 (46M35, 47H99)
- Urbanke, H. On rotating plane-fronted waves and their Poincaré-invariant differential geometry. *J. Math. Phys.* 20 (1979), no. 9, 1851-1860. (George Debnay) **81e:83004** 83A05 (53A40, 81E10)
- Urev, M. V. On the axially symmetric Cauchy problem for the Laplace equation. (Russian) *Z. Vyčisl. Mat. i Mat. Fiz.* 20 (1980), no. 4, 939-947, 1085. (V. D. Glushenkov) **81k:65139** 65P05
- Urjupin, M. A. Optimal control of linear stochastic systems with unknown measurer parameters. (Russian. English summary) *Vestnik Moskov. Univ. Ser. I Mat. Meh.* 1990, no. 3, 84-87, 110. (Author's summary) **81g:93132** 93E20 (93E11)
- Urli, Luigi The singularities imposed by a projective algebraic variety on the hypersurface that pass through it. (Italian. English summary) *Istit. Lombardo Accad. Sci. Lett. Rend. A* 112 (1978), no. 1, 205-212 (1979). (O.-H. Keller) **81k:14029** 14J17
- Uroga, Carmencita On the independences of equational classes of universal algebras. (Romanian. German summary) *Bul. Ştiinţ. Tehn. Inst. Politehn. "Traian Vuia" Timişoara* 23(37) (1978), no. 2, 77-80 (1979). (Author's summary) **81g:08013** 08B05
- Urpil, V. A. (with Dolginov, A. Z.) Thermomagnetic instability of a nonuniform plasma. *Z. Éksp. Teoret. Fiz.* 77 (1979), no. 5, 1921-1932 (Russian); translated as *Soviet Phys. JETP* 50 (1979), no. 5, 912-917. (Authors' summary) **81b:76070** 76W05 (82A45)
- Urquhart, R. B. Algorithms for computation of relative neighbourhood graph. *Electron. Lett.* 16 (1980), no. 14, 556-557. (Author's summary) **81g:68096** 68E10
- See also Toussaint, Godfried T., **81m:68055**
- Urrutia, Luis F. (with Milton, Kimball A.; Finkelstein, Robert J.) Constructive approach to supergravity. *Gen. Relativity Gravitation* 12 (1980), no. 1, 67-81. (Authors' summary) **81d:83042** 83C99 (81G25)
- Urrutia-Urruty, Jean-Baptiste See Hiriart-Urruty, Jean-Baptiste
- Ursell, F. On the exterior problems of acoustics. II. *Math. Proc. Cambridge Philos. Soc.* 84 (1978), no. 3, 545-548. (Author's summary) **81f:76092** 76Q05 (45B05)
- Integrals with a large parameter: a double complex integral with four nearly coincident saddle-points. *Math. Proc. Cambridge Philos. Soc.* 87 (1980), no. 2, 249-273. (F. I. Ibragimov) **81j:41050** 41A60 (30E15)
- Ursini, Aldo Two remarks on models in modal logics. (Italian summary) *Boll. Un. Mat. Ital. A* (5) 16 (1979), no. 1, 124-127. (J. Michael Dunn) **81b:03025** 03B45
- A modal calculus analogous to K4W, based on intuitionistic propositional logic. I. *Studia Logica* 38 (1979), no. 3, 297-311. (Mieczysław Omyla) **81d:03022** 03B45
- From rational numbers to hyperreal numbers. (Italian. English summary) *Boll. Un. Mat. Ital. B* (5) 17 (1980), no. 1, 340-351. (Sauro Tulipani) **81h:03125** 03H05
- Ursprung, Heinrich W. (with Gärtner, Manfred) A structural model of price and exchange rate dynamics in a small open economy. *Z. Nationalökonom.* 40 (1980), no. 3-4, 321-342. (From the introduction) **81m:90031** 90A16
- Ursul, A. D. Successes and limits of mathematization. (Russian. English summary) *Voprosy Filoz.* 1979, no. 2, 110-121, 188. (Roman Murawski) **81c:00009** 00A25 (03A05)

- Usui, M. I. (with Arnautov, V. I.) Uniqueness of a linearly compact topology in rings. (Russian) Topological spaces and algebraic systems. *Mat. Issled.* No. 53 (1979), 6-14, 221. (S. Warner) **81i:16053** 16A80
- The relations between the concepts of compactness, linear compactness and hereditarily linear compactness in topological rings. (Russian) Topological spaces and algebraic systems. *Mat. Issled.* No. 53 (1979), 136-147, 226. (Witold Włóśław) **81g:16044** 16A80
- The product of hereditarily linear-compact rings. (Russian) International Topology Conference (Moscow State Univ., Moscow, 1979). *Uspehi Mat. Nauk* **35** (1980), no. 3(213), 230-233. (Witold Włóśław) **81h:16065** 16A80 (54B10, 54H13)
- Urumov, I. O. (with Kipsidze, Z. S.; Klimiashvili, M. A.; Kobalvili, T. V.) Arithmetic cyclic nonbinary codes. (Russian) *Trudy Vysht. Centra Akad. Nauk Gruzii. SSR* **19** (1979), no. 2 *Mat. i Tehn. Kibernet.*, 8-11. (Editors) **81h:94049** 94B40 (94B15)
- Urski, Marceli Synthesis of lossless filters with multiple inputs and multiple outputs with complex impedances. (Polish, English, French, German and Russian summaries) *Rozprawy Elektrotech.* **26** (1980), no. 2, 493-510. (Author's summary) **81k:94047** 94C05 (93E11)
- Urusov, A. I. (with Šokin, Ju. I.) Difference schemes in spaces of generalized functions and their differential representations. (Russian) *Dokl. Akad. Nauk SSSR* **248** (1979), no. 4, 810-813. (Authors' introduction) **81a:65089** 65M05
- Urusovskii, I. A. Supplement: "Harmonic" solutions of Einstein's equations" [Izv. Vysht. Učebn. Zaved. Fizika **1976**, no. 11, 82-87; MR **58** #32744]. (Russian) *Izv. Vysht. Učebn. Zaved. Fizika* **1979**, no. 9, 95-96. (From the introduction) **81e:83016** 83C20
- Urvin, Kathleen M. Note on a class of orthogonal bipolynomials. (Romanian summary) *Bul. Inst. Politehn. Iași Sect. 7* **25**(29) (1979), no. 1-2, 21-26. (F. M. Arscott) **81a:33020** 33A65 (42C05)
- Ury, Hans K. (with Wiggins, Alvin D.) Distribution-free confidence bounds for $\Pr\{Y < X\}$ when $F(x)$ and $G(y) = F(x - \theta)$ are continuous and symmetric. *Comm. Statist. A—Theory Methods* **8** (1979), no. 12, 1247-1253. (Z. Govindarajulu) **81k:62065** 62G15
- Ūry, L. (with Gergely, T.) Nondeterministic programming within the frame of first-order classical logic. I. II. *Acta Cybernet.* **4**, no. 4, 333-354, 355-375 (1980). (Stephen L. Bloom) **81m:68018** 68B10
- Uryu, Hitoshi The Cauchy problem for hyperbolic systems with variable multiple characteristics. *Publ. Res. Inst. Math. Sci.* **15** (1979), no. 3, 719-739. (Philip Brenner) **81k:35099** 35L45
- Uryū, Norihiro (with Iwashita, Takashi) The Curie temperature of a spin-one Heisenberg ferromagnet with biquadratic exchange and uniaxial anisotropy. *Phys. Lett. A* **70** (1979), no. 5-6, 464-466. (Authors' summary) **81h:82021** 82A25
- Us, G. F. Functions of operators that act with respect to different variables. (Russian) *Operators of mathematical physics and infinite-dimensional analysis* (Russian), pp. 121-138, 144. *Akad. Nauk Ukrain. SSR, Inst. Mat., Kiev*, 1979. (D. Ja. Petrina) **81m:47026** 47A60 (46M05, 47B99)
- Ušakov, A. I. (with Pavlov, I. V.) The asymptotic distribution of the time until a semi-Markov process gets out of a kernel. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* **1978**, no. 5, 97-101, 121 (Russian); translated as *Engng. Cybernetics* **16** (1978), no. 5, 68-72. (O. A. Voina) **81g:60089** 60K15
- Ušakov, V. G. A single-line servicing system with relative priority. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* **1978**, no. 1, 76-80, 220 (Russian); translated as *Engng. Cybernetics* **16** (1978), no. 1, 59-63. (Asha Seth Kapadia) **81h:60104** 60K25
- Ušakov, V. I. Stabilization of solutions of the third mixed problem for a second-order parabolic equation in a noncylindrical domain. (Russian) *Mat. Sb. (N.S.)* **111**(153) (1980), no. 1, 95-115, 159. (P. A. Mišnaevskii) **81f:35054** 35K20
- Ušakov, V. N. A minimax differential game of approach and evasion and local conditions for solvability of the problem of approach and evasion. (Russian) *Trudy Inst. Mat. i Meh. Ural. Nauch. Centr Akad. Nauk SSSR No. 26* *Differencial. Sistemy Upravlen.* (1979), 87-93, 96. (Author's summary) **81j:90150** 90D26
- Usmanov, A. U. Našir ad-Din al-Tūsī's astronomical tract "Muṣniya". (Russian) *Mathematics in the East in the Middle Ages* (Russian), pp. 113-126, 195, "Fan", Tashkent, 1978. (E. S. Kennedy) **81c:01009** 01A30
- Ušan, Janex Orthogonal systems of n -ary operations and codes. *Mat. Vesnik* **2**(15)(30) (1978), no. 1, 91-93. (From the text) **81a:94041** 94B99
- (with Stojaković, Zoran) Orthogonal systems of partial operations. (Serbo-Croatian summary) *Univ. u Novom Sadu Zb. Rad. Prirod.-Mat. Fak.* **8** (1978), 47-51. (Petr Němec) **81f:20107** 20N99 (94B25)
- ★Kvazigrupe. (Serbo-Croatian) [Quasigroups] With an English summary. *Institut za Matematiku, Novi Sad*, 1979. iii+92 pp. (V. D. Belousov) **81g:20133** 20N05
- (with Stojaković, Zoran) On π -groupoids. *Publ. Inst. Mat. (Beograd) (N.S.)* **26**(40) (1979), 283-288. (M. Stefañescu) **81f:20104** 20N15
- Usanetašvili, M. A. A problem with an oblique fractional derivative for an equation of mixed type. (Russian, Georgian and English summaries) *Sakharit. SSR Meen. Akad. Moambe* **90** (1978), no. 3, 557-560. (D. K. Gvazava) **81k:35115** 35M05
- Ušumlić, Momčilo Mathematical theory of communication. (Serbo-Croatian) *Matematika* (Belgrade) **5** (1976), no. 1, 41-50. (J. S. Joel) **81a:94022** 94A15 (94-01)
- Ušumlić, Š. M. Investigation of some algorithms for the analysis and synthesis of automata. (Russian) *Dokl. Akad. Nauk SSSR* **247** (1979), no. 3, 561-565. (V. N. Agafonov) **81h:68073** 68D45
- Ushakov, I. A. See Ušakov, I. A.
- Ushakov, V. G. See Ušakov, V. G.
- Usher, J. R. Mathematical derivation of optimal uniform treatment schedules for the fractionated irradiation of human tumors. *Math. Biosci.* **49** (1980), no. 3-4, 157-184. (Author's summary) **81h:92005** 92A07
- Usher, Michael B. Markovian approaches to ecological succession. *J. Animal Ecology* **48** (1979), no. 2, 413-426. (Author's summary) **81e:92057** 92A17
- Ushijima, Teruo Error estimates for the lumped mass approximation of the heat equation. *Mem. Numer. Math.* No. 6 (1979), 65-82. (Richard E. Ewing) **81a:65106** 65N30 (65J05)
- Usigli, Piergiorgio L. E. An introduction to some mathematical techniques for nonlinear problems. *Nonlinear electromagnetics*, pp. 1-33. Academic Press, New York, 1980. (L. G. Chambers) **81m:00016** 00A69 (34C05, 35Q20, 70K05)
- (with Alexopoulos, N. G.; Tadler, G. A.) Scattering from spheroidal composite objects. *J. Franklin Inst.* **309** (1980), no. 3, 147-162. (Authors' summary) **81e:78007** 78A45
- See also Nonlinear electromagnetics, **81j:78001**
- Usmani, Riaz A. (with Marsden, Martin J.) Convergence of a numerical procedure for the solution of a fourth order boundary value problem. *Proc. Indian Acad. Sci. Sect. A Math. Sci.* **88** (1979), no. 1, 21-30. (Authors' summary) **81j:65093** 65L10
- (with Taylor, P. J.) Convergence of numerical approximations to a fourth order boundary value problem. *Internat. J. Comput. Math.* **8** (1980), no. 3, 265-270. (William B. Day) **81h:65086** 65L10
- Spline solutions for nonlinear two-point boundary value problems. *Internat. J. Math. Math. Sci.* **3** (1980), no. 1, 151-167. (David R. Hill) **81g:65113** 65L10
- Smooth spline approximations for the solution of a boundary value problem with engineering applications. *J. Comput. Appl. Math.* **6** (1980), no. 2, 93-98. (Author's summary) **81e:65051** 65L10
- Usmanov, H. H. Limit theorems in function spaces for linear forms of additive functions defined on sparse sets. (Russian. Tajiki summary) *Dokl. Akad. Nauk Tadzhik. SSR* **22** (1979), no. 5, 292-295. (J. Galambos) **81d:10045** 10K20 (60F17)
- Limit theorems in function spaces for additive functions on sparse sets. (Russian. Tajiki summary) *Izv. Akad. Nauk Tadzhik. SSR Otdel. Fiz.-Mat. i Geolog.-Him. Nauk* **1979**, no. 2(72), 14-21. (Karl-Heinz Indlekofer) **81d:10046** 10K20 (60F17)
- Usmanov, Z. D. (with Hakimov, A. H.) A singular case of the generalized Christoffel problem. (Russian. Tajiki summary) *Dokl. Akad. Nauk Tadzhik. SSR* **21** (1978), no. 9, 6-9. (Leo Boček) **81j:53001** 53A05
- Usol'cev, L. P. Distribution of signs in part of the period of an infinite purely periodic fraction. (Russian) *Kulbykovo. Gos. Ped. Inst. Naučn. Trudy* **215** (1978), *Issled. po Additivnoi Teor. Čisl.*, 77-82. (R. W. K. Odoni) **81h:10013** 10A30 (10G10)
- Usón, Juan M. (with Rañada, Antonio F.) Localized solutions of a charged nonlinear spinor field in a Coulomb-like potential. *J. Math. Phys.* **21** (1980), no. 5, 1205-1209. (Authors' summary) **81e:81158** 81G45
- Usov, V. V. Conformal mappings of manifolds of bounded curvature. (Russian) *Dokl. Akad. Nauk SSSR* **248** (1979), no. 4, 796-798. (Alan West) **81d:53006** 53A30 (53C45)
- Conformal mappings of manifolds of bounded curvature. (Russian) *Sibirsk. Mat. Ž.* **21** (1980), no. 2, 175-182, 239. (I. Vaisman) **81e:53059** 53C45
- Uspenskii, W. A. See Uspenskii, V. A.
- Uspenskii, S. V. (with Zálnin, V. G.) Reconstruction of functions specified by integrals over a family of second-order surfaces. (Russian) *Theory of cubature formulas and the application of functional analysis to problems of mathematical physics* (Russian), pp. 32-40, 165. *Trudy Sem. S. L. Soboleva*, No. 1, 1976. *Akad. Nauk SSSR Sibirsk. Otdel. Inst. Mat., Novosibirsk*, 1976. (V. G. Romanov) **81i:53053** 53C65
- (with Čistjakov, B. N.) Convergence to a polynomial of the solutions of a class of pseudodifferential equations as $|x| \rightarrow \infty$. (Russian) *Theory of cubature formulas and the application of functional analysis to problems of mathematical physics* (Proc. Sem. S. L. Sobolev, No. 1, 1979) (Russian), pp. 119-135, 155. *Trudy Sem. S. L. Soboleva*, No. 1, 1979. *Akad. Nauk SSSR Sibirsk. Otdel. Inst. Mat., Novosibirsk*, 1979. (David S. Tartakoff) **81i:35168** 35S05 (47G05)
- See also Partial differential equations, **81a:35002**; Theory of cubature formulas and the application of functional analysis to problems of mathematical physics, **81a:65009**; Theory of cubature formulas and the application of functional analysis to problems of mathematical physics, **81a:65010**; Partial differential equations, **81f:35005** and Theory of cubature formulas and the application of functional analysis to problems of mathematical physics, **81f:35006**
- Uspenskii, V. A. (with Dynkin, E. B.) ★Mathematische Unterhaltungen. (German) [Mathematical conversations] Aufgaben über das Mehrfarbenproblem, aus der Zahlentheorie und der Wahrscheinlichkeitsrechnung. [Exercises on the many-color problem, in number theory and in probability theory]. Translated from the Russian by Peter Friedel. *Aulis Verlag Deubner & Co. KG, Cologne*, 1979. 272 pp. ISBN 3-7614-0417-4 (Editors) **81f:00001** 00A05 (05-01, 10-01, 60-01)
- See also Davis, Martin, **81e:60064**
- Ustinov, V. I. (with Ostrovskii, V. N.) The Fermi problem for the rotor. The two-dimensional case. (Russian. English summary) *Vestnik Leningrad. Univ. Fiz. Him.* **1980**, vyp. 1, 38-47, 124. (M. Demuth) **81h:81006** 81F10 (47A40)
- Ustinov, G. M. Convergence of positive operators. (Russian) *Mat. Zametki* **26** (1979), no. 2, 201-216, 316. (L. G. Laksner) **81j:41039** 41A36 (46A55)
- Linear operators in spaces of vector-valued affine functions. (Russian) *Trudy Inst. Mat. i Meh. Ural. Nauch. Centr Akad. Nauk SSSR No. 31* *Obobšč. Funkcii i Vektor. Mery* (1979), 33-49, 91. (S. V. Kisiljakov) **81a:46039** 46E40 (46G10, 47B05)
- Absolutely summing operators in spaces of vector-valued continuous functions. (Russian) *Trudy Inst. Mat. i Meh. Ural. Nauch. Centr Akad. Nauk SSSR No. 31* *Obobšč. Funkcii i Vektor. Mery* (1979), 50-60, 91. (S. V. Kisiljakov) **81a:47025** 47B10 (46E40, 47B38)
- Ustinov, Ju. I. Continuous mappings of one-dimensional solenoids. (Russian) International Topology Conference (Moscow State Univ., Moscow, 1979). *Uspehi Mat. Nauk* **35** (1980), no. 3(213), 233-237. (R. G. Gurevich) **81d:54020** 54F20 (54H20, 58F15)
- Ustinov, S. M. (with Rakitskii, Ju. V.; Černoruckii, I. G.) ★Численные методы решения жестких систем. (Russian) [Numerical methods for solving stiff systems] "Nauka", Moscow, 1979. 208 pp. (H. Shintani) **81e:65034** 65L05
- Ustinov, V. V. Boundary conditions for kinetic equations and equations of motion of conductivity electron magnetization in a metal with surface paramagnetic impurities. (Russian. English summary) *Teoret. Mat. Fiz.* **44** (1980), no. 3, 387-399. (Author's summary) **81k:82052** 82A65
- Ustjužaninov, V. G. Random search of an optimal system of features. (Russian) *Vysht. Sistemy* No. 77 (1978), 42-52, 115. (Author's summary) **81h:68111** 68G10
- Certain properties of binary table coverings. *Kibernetika (Kiev)* **1979**, no. 4, 7-15 (Russian); translated as *Cybernetics* **15** (1979), no. 4, 445-455 (1980). (Guy Jumarie) **81i:05053** 05B40 (05A10)
- Effectiveness of random search. *Avtomat. i Vysht. Tehn. (Riga)* **1980**, no. 3, 70-72, 98 (Russian); translated as *Automat. Control Comput. Sci.* **14** (1980), no. 3, 65-67.

- (Author's summary) **81m:90065** 90B40
Search for the maximum of a function with Lipschitz constraint. (Russian)
Problemy Shchita. Poiska No. 8 Voprosy Strukturnoi Adaptatsii (1980), 135-148, 333.
(Gerhard Telachow) **81g:65090** 65K10 (90C30)
- Umi, Samuel** Local Torelli theorem for some nonsingular weighted complete intersections.
Proceedings of the International Symposium on Algebraic Geometry (Kyoto Univ., Kyoto, 1977), pp. 723-734, Kinokuniya Book Store, Tokyo, 1978. (C. A. M. Peters) **81m:14026** 14J15 (14D05, 32G20)
- Deformation and local Torelli theorem for certain surfaces of general type.
Algebraic geometry (Proc. Summer Meeting, Univ. Copenhagen, Copenhagen, 1978), pp. 605-629, *Lecture Notes in Math.*, 732, Springer, Berlin, 1979. (C. A. M. Peters) **81b:32007** 32G13 (14J15, 14J25)
- Utenov, K.** An approximation of a boundary value problem for nonevolutionary differential equations of the two-phase filtration type. (Russian) *Izv. Akad. Nauk Kazakh. SSR Ser. Fiz.-Mat.* 1979, no. 3, 78-82, 92. (E. Ungureanu-David) **81b:76062** 76S05 (35Q99, 76T05)
- The solvability of a model problem of filtration of a two-phase incompressible fluid. (Russian) *Kazakh summary Vestnik Akad. Nauk Kazakh. SSR* 1980, no. 1, 59-64. (A. D. Ljalko) **81m:76049** 76S05
- Utemisken, Gerdä** See Leibniz, Gottfried Wilhelm. **81f:01048**
- Utiyama, Ryōyū** ★ Теория относительности. (Russian) [Theory of relativity] Translated from the Japanese by I. I. Ivančika. "Atomizdat", Moscow, 1979. 205 pp. (Michael P. Ryan, Jr.) **81d:83002** 83-01
- Utkin, V. I.** (with Grišin, S. A.) On extending the definition of discontinuous systems. (Russian) *Differentsial'nye Uravneniya* 16 (1980), no. 2, 227-235, 380. (M. M. Konstantinov) **81g:34014** 34A34
- Utreras D., F.** Cross-validation techniques for smoothing spline functions in one or two dimensions. *Smoothing techniques for curve estimation (Proc. Workshop, Heidelberg, 1979)*, pp. 196-232, *Lecture Notes in Math.*, 757, Springer, Berlin, 1979. (H. P. Dikshit) **81k:65017** 65D07 (41A15, 65D10)
- Utsumi, Satoshi** (with Yoshino, Toshio) Three-dimensional analysis of a finite hollow cylinder subjected to axisymmetric deformations. *Bull. JSME* 23 (1980), no. 184, 1596-1603. (Authors' summary) **81j:73017** 73C05
- Uttersrud, Ulf** On M -ideals and the Alfsen-Effros structure topology. *Math. Scand.* 43 (1978), no. 2, 369-381 (1979). (A. J. Lazar) **81g:46026** 46B25 (46E15)
- Utz, W. R.** Existence of solutions of a generalized Blasius equation. *J. Math. Anal. Appl.* 66 (1978), no. 1, 55-59. (From the introduction) **81g:34030** 34B30
- Uvarov, V. B.** (with Nikiforov, A. F.) ★ Специальные функции математической физики. (Russian) [Special functions of mathematical physics] "Nauka", Moscow, 1978. 319 pp. (A. G. Gibbs) **81b:33001** 33-02 (34E20, 41A60, 81C99)
- nguyen xuan Uy** See Nguyen Xuan Uy
- Uy, Zensha E. S.** Monopole harmonics for a special gauge. *Internat. J. Math. Math. Sci.* 1 (1978), no. 4, 509-517. (Author's summary) **81f:81042** 81C99
- uang van Uyen** See Dang Van Uyen
- Uyenyama, Masry K.** (with Bengtsson, Bengt Olle) Towards a genetic theory for the evolution of the sex ratio. *Genetics* 93 (1979), no. 3, 721-736. (Authors' summary) **81k:92044** 92A10
- (with Feldman, Marcus W.) Theories of kin and group selection: a population genetics perspective. *Theoret. Population Biol.* 17 (1980), no. 3, 380-414. (A. Rapoport) **81f:92013** 92A10
- Uzalec, K.** (with Julien, R.; Pfeuty, P.) One-dimensional transverse-field Ising model in a complex longitudinal field from a real-space renormalization-group method at $T=0$. *Phys. Rev. B* (3) 22 (1980), no. 1, 436-444. (Authors' summary) **81e:82066** 82A67
- (with Julien, R.; Penson, K. A.; Pfeuty, P.) Renormalization-group study of a two-dimensional frustrated-like quantum spin system. *Phys. Rev. Lett.* 44 (1980), no. 23, 1551-1558. (Authors' summary) **81e:82008** 82A15 (82A25)
- Vaalder, Jeffrey D.** A geometric inequality with applications to linear forms. *Pacific J. Math.* 83 (1979), no. 2, 543-553. (W. J. Firey) **81d:52007** 52A40 (10E15)
- Väinänen, Jounko** Remarks on free quantifier variables. *Essays on mathematical and philosophical logic (Proc. Fourth Scandinavian Logic Symposium and First Societ-Finnish Logic Conf., Jyväskylä, 1976)*, pp. 267-272, *Synthese Library*, 122, Reidel, Dordrecht, 1979. (J. A. Makowsky) **81b:03042** 03C80 (03C95)
- Abstract logic and set theory. I. Definability. *Logic Colloquium '78 (Mons, 1978)*, pp. 391-421, *Studies in Logic and Foundations of Math.*, 97, North-Holland, Amsterdam, 1979. (From the introduction) **81b:03058** 03C95 (03E75)
- Boolean-valued models and generalized quantifiers. *Ann. Math. Logic* 18 (1980), no. 3, 193-225. (L. Bukovsky) **81m:03049** 03C80 (03C90, 03E40)
- The Hanf number of $L_{\omega_1\omega_1}$. *Proc. Amer. Math. Soc.* 79 (1980), no. 2, 294-297. (J. M. Henle) **81f:03061** 03E35 (03C75)
- A quantifier for isomorphisms. *Z. Math. Logik Grundlag. Math.* 26 (1980), no. 2, 123-130. (Matt Kaufmann) **81f:03058** 03C80 (03C95)
- Vaantman, V.** Minimax estimation of random vectors. (Russian summary) *Eesti NSV Tead. Akad. Toimetised Füüs.-Mat.* 28 (1979), no. 4, 365-367, 380. (Arthur Cohen) **81b:62056** 62G05 (62C20)
- Vahitev, P. N.** The uniqueness of some exterior inverse problems of metaharmonic potential. (Russian) *Dokl. Akad. Nauk SSSR* 245 (1979), no. 5, 1033-1036. (G. Wildenhain) **81c:31011** 31B20
- (with Degtiarev, L. M.) A method of solving a problem with free boundaries for elliptic equations and systems. (Russian) *Dokl. Akad. Nauk SSSR* 247 (1979), no. 6, 1342-1346. (B. P. Panejah) **81c:35114** 35R35 (35J67)
- Numerical solution of the Cauchy problem for elliptic equations and systems. (Russian) *Vestnik Mosk. Univ. Ser. XV Vychisl. Mat. Kibernet.* 1979, no. 3, 3-10, 72. (Garry J. Tee) **81k:65096** 65M30
- (with Gabov, S. A.) Angular potential for the solution of an elliptic equation with variable coefficients. (Russian) *Ž. Vychisl. Mat. i Mat. Fiz.* 19 (1979), no. 3, 652-664, 797. (E. M. Saak) **81a:31001** 31A15
- (with Glasko, V. B.; Kriksin, Ju. A.) Solution of a problem of Hadamard by an algorithm that is regularizing in the sense of A. N. Tikhonov. (Russian) *Ž. Vychisl. Mat. i Mat. Fiz.* 19 (1979), no. 6, 1462-1470, 1628. (E. Schechter) **81j:65105** 65M30
- (with Degtiarev, L. M.; Drozdov, V. V.) Orthogonal flux coordinates in problems of MHD equilibrium. (Russian. English summary) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 5* (1980), 38 pp. (Authors' summary) **81a:76050** 76W05 (65P05)
- (with Degtiarev, L. M.) Boundary value problems of the theory of MHD equilibrium. (Russian. English summary) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 10* (1980), 19 pp. (Authors' summary) **81a:76051** 76W05 (35Q99)
- (with Degtiarev, L. M.; Pošehonov, Ju. Ju.) Numerical solution of direct and inverse problem of MHD-equilibrium with surface current. (Russian) *Ž. Vychisl. Mat. i Mat. Fiz.* 20 (1980), no. 2, 491-500, 552. (Jaroslav Jelen) **81j:76099** 76W05
- Vacca, G.** (with Napolitano, Michele; Rubini, F.) A fourth-order-accurate direct and inverse Cauchy integral solver. *Comput. & Fluids* 8 (1980), no. 4, 435-441. (C. Dagnino) **81j:65046** 65D30
- Vacca, Jacopo** (with Moroni, Paola) On an ordinary differential equation deriving from a boundary layer problem, in the presence of a magnetic field. (Italian. English summary) *Rend. Sem. Mat. Univ. Politec. Torino* 37 (1979), no. 3, 89-103 (1980). (Authors' summary) **81j:76096** 76W05 (65L10)
- Vachtsevanos, G. J.** (with Paraskevopoulos, P. N.) On the transfer function matrix identification of two-dimensional systems. *Simulation of distributed-parameter and large-scale systems (Proc. IMACS European Simulation Meeting, Univ. Patras, Patras, 1979)*, pp. 67-72, North-Holland, Amsterdam, 1980. (Authors' summary) **81f:93029** 93B30
- Vachvik, J.** (with Appert, K.) Instability of coupled Langmuir and ion-acoustic solitons. *Phys. Lett. A* 67 (1978), no. 1, 39-41. (Authors' summary) **81m:82029** 82A45
- (with Appert, K.) Adiabatic interaction of coherent waves with weak turbulence in plasmas. *Phys. Fluids* 23 (1980), no. 9, 1801-1806. (Authors' summary) **81g:82053** 82A45
- Vačov, D.** (with Sirmanov, C.) History of physics calendar for 1979. (Bulgarian) *Fiz.-Mat. Spis. B' Igar. Akad. Nauk.* 22(55) (1979), no. 2, 158-161. (Editors) **81k:01048** 01A70
- See also Born, Max. **81d:01020**
- Vaeth, Michael** (with Schou, Geert) A small sample study of occurrence/exposure rates for rare events. *Scand. Actuar. J.* 1980, no. 4, 209-225. (Authors' summary) **81m:62181** 62N05 (62P10)
- Vagabov, A. I.** Multiple summability in eigen- and associated functions for nonregular differential bundles. (Russian) *Dokl. Akad. Nauk SSSR* 252 (1980), no. 6, 1300-1303. (R. C. Gilbert) **81m:34027** 34B25 (47E05)
- On the equiconvergence of expansions in trigonometric Fourier series and in principal functions of ordinary differential operators. (Russian) *Dokl. Akad. Nauk SSSR* 254 (1980), no. 6, 1294-1297. (Frederick A. Howes) **81m:34028** 34B25 (42A20, 47E05)
- Vagabov, N. G.** Sectorial operator pencils in a Banach space. (Russian. Azerbaijani and English summaries) *Izv. Akad. Nauk Azerbaidžan. SSR Ser. Fiz.-Tehn. Mat. Nauk* 1979, no. 2, 16-20. (E. R. Cekanovskii) **81k:47020** 47A70
- Vágl, S.** (with Ogden, R. D.) Harmonic analysis of a nilpotent group and function theory of Siegel domains of type II. *Adv. in Math.* 33 (1979), no. 1, 31-92. (A. Koranyi) **81f:22016** 22E30 (22E45, 32M10, 43A80, 81D05)
- Vagner, E. A.** (with Demin, V. G.; Konkina, L. I.) Averaging methods in solid body dynamics. (Russian) *Problems of stability of motion, analytical mechanics and control of motion (Third All-Union Cetaev Conf., Irkutsk, 1977)* (Russian), pp. 153-162, 324. "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. (Authors' summary) **81g:70005** 70E15 (34C29)
- Vagner, V. V.** On the theory of generalized rings, modules and linear algebras. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1979, no. 3, 12-27. (M. Stefănescu) **81j:08006** 08A55 (08C10)
- Vahani, N. N.** The correspondence between the concepts of a Gaussian measure and a Gaussian process. (Russian) *Mat. Zametki* 26 (1979), no. 2, 293-297, 319. (Hiroshi Sato) **81c:60053** 60G15 (60B11)
- Vahitov, G. G.** (with Maksimov, M. M.; Tetelbaum, Ja. I.) A parallel microprocessor system design for simulation of multiphase flow problems. *Simulation of systems '79 (Proc. Ninth IMACS Congress, Sorrento, 1979)*, pp. 189-198, North-Holland, Amsterdam, 1980. (See **81j:68009**) 68C05 (65P05)
- Vahutskii, I. Ja.** A process of the iterative aggregation for the solution of the problem of convex, partially separable programming. (Russian) *Dokl. Akad. Nauk SSSR* 248 (1979), no. 6, 1292-1295. (W. W. Breckner) **81f:90084** 90C25
- Valda, Dragon** Speeding up the convergence in inverting matrices. *Proceedings of the International Symposium on Applications of Mathematics in System Theory (Univ. Braşov, Braşov, 1978)*, 11, pp. 259-266, Univ. Braşov, Braşov, 1979. (See **81j:93006**) 65F10
- Váldes, Dan** On a Markovian inventory model. (French and Russian summaries) *Econom. Comput. Econom. Cybernet. Stud. Res.* 1978, no. 1, 77-84. (Author's summary) **81c:90035** 90B05
- Vaidya, A. M.** Comment on: "History of perfect numbers" [Gaṇita Bhāratī 1 (1979), no. 1-2, 7-8; MR 81h:10009a] by M. L. Nankar. *Gaṇita Bhāratī* 1 (1979), no. 3-4, 22. (Editors) **81h:10009b** 10A25 (01A60)
- Vaihanen, I. A.** (with Litvak, M. L.; Meerov, M. V.) The problem of optimal control for multiply connected systems with distributed parameters. *Izv. Akad. Nauk SSSR Teh. Kibernet.* 1978, no. 5, 158-166, 223 (Russian); translated as *Engng. Cybernetics* 16 (1978), no. 5, 122-130. (Authors' summary) **81m:49022** 49B22 (93C20)
- Vaillant, J.** Systèmes hyperboliques à multiplicité constante. *Séminaire Goulaouic-Schwartz* (1978/1979), Exp. No. 11, 17 pp., *École Polytech., Palaiseau*, 1979. (Maria Cinquini-Cibrario) **81i:35101** 35L40
- Vaina, Rimus** (with Borsuk, Karol) On covering of bounded sets by sets with the twice less diameter. *Colloq. Math.* 42 (1979), 33-37. (Marilyn Green) **81f:52019** 52A45 (04A20, 52A40)
- Vainberg, B. R.** (with Maz'ja, V. G.) A characteristic Cauchy problem for a hyperbolic equation. (Russian) *Uspehi Mat. Nauk* 35 (1980), no. 1(211), 193-194. (Ju. V. Egorov) **81c:35067** 35L30
- Vainov, M. N.** (with Dimentman, A. M.) An associative memory structure with extended functional possibilities. (Russian) *Mathematical models of mechanisms of pathological processes. Voprosy Kibernet. (Moscow) No. 49* (1979), 120-126. (See **81f:92007**) 92A07
- Vainer, V. G.** (with Zaicev, I. D.; Salyga, V. I.) A problem of the theory of communication

- networks. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A No. 12* (1979), 1035-1039, 1070. (Authors' summary) **81e:94051** 94C15
- Vainerman, Ju. R. Approximation of functions of class H_{α}^2 by trigonometric interpolation polynomials with equidistant nodes. (Russian) *Mat. Zametki* **27** (1980), no. 6, 913-926, 989. (J. Szabados) **81h:42008** 42A15
- Vainerman, L. I. A degenerate elliptic equation with a variable operator coefficient. (Russian) *Ukrain. Mat. Ž.* **31** (1979), no. 3, 247-255, 334. (I. Aganović) **81a:34054** 34G10 (35J99)
- Vainshteyn, Israel The degrees of certain strata of the dual variety. *Compositio Math.* **38** (1979), no. 2, 241-252. (José M. Aroca) **81g:14024** 14N10 (14C05)
- Vainshtein, A. I. See Vainstein, A. I.
- Vainshtein, B. K. See Vainstein, B. K.
- Vainstein, S. I. See Vainstein, S. I.
- Vainstein, A. D. Construction of chains with an extremal property. (Russian) *Moskov. Inst. Inž. Železnodor. Transporta Trudy No. 640 Prikl. Mat. i Zadachi Železnodor. Transporta* (1979), 121-125, 158. (J. Bosák) **81m:05090** 05C38 (94C15)
- (with Šapiro, B. Z.) Structure of a set of δ -representable numbers. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* **1980**, no. 5, 8-11. (D. Preiss) **81h:28001** 28A05 (54H05)
- Vainstein, A. I. (with Šifman, M. A.; Zaharov, V. I.) Can confinement ensure natural CP invariance of strong interactions? *Nuclear Phys. B* **166** (1980), no. 3, 493-506. (Jorge André Swieca) **81g:81097** 81G05 (81E10)
- Vainstein, B. K. (with Hačaturjan, A. G.; Semenovskaja, S. V.) Statistical-thermodynamic approach to determination of structure amplitude phases. *Kristallografiya* **24** (1979), no. 5, 905-916 (Russian); translated as *Soviet Phys. Cryst.* **24** (1979), no. 5, 519-524 (1980). (M. Dutta) **81g:82063** 82A60 (82A30, 82A40)
- Vainstein, S. I. Plasma polarization in a magnetic field. *Ž. Eksp. Teoret. Fiz.* **77** (1979), no. 6, 2276-2288 (Russian); translated as *Soviet Phys. JETP* **50** (1979), no. 6, 1095-1101 (1980). (Magdi M. Shourci) **81e:76092** 76X05 (82A45)
- Valapoulos, Demetrios A. Lagrangian and Hamiltonian for the motion of charged particles up to the fourth-order terms. *Astrophys. and Space Sci.* **71** (1980), no. 1, 239-247. (Author's summary) **81f:78009** 78A35
- Vallée, Jussé Piecewise linear approximation of lipemorphisms. *Ann. Acad. Sci. Fenn. Ser. A I Math.* **3** (1977), no. 2, 377-383. (David C. Wilson) **81g:57009** 57N12 (57N35)
- (with Gauld, David B.) Lipschitz and quasiconformal flattening of spheres and cells. *Ann. Acad. Sci. Fenn. Ser. A I Math.* **4** (1979), no. 2, 371-382. (T. B. Rushing) **81f:57012** 57N45 (30C60)
- The Hilbert cube. (Finnish. English summary) *Arkhimedes* **31** (1979), no. 2, 76-80. (Author's summary) **81a:57015** 57N20
- Dimension and measure. *Proc. Amer. Math. Soc.* **76** (1979), no. 1, 167-168. (A. R. Pears) **81e:54056** 54F45 (28A75, 54C25)
- An axiomatic approach to the theory of manifolds. *Rev. Roumaine Math. Pures Appl.* **24** (1979), no. 3, 489-503. (R. M. Vogt) **81d:18021** 18F15
- A survey of quasispherical maps in R^n . *Proceedings of the International Congress of Mathematicians (Helsinki, 1978)*, pp. 685-691, Acad. Sci. Fennica, Helsinki, 1980. (Jukka Sarvas) **81g:30032** 30C60
- Lipschitz homeomorphisms of the Hilbert cube. *Topology Appl.* **11** (1980), no. 1, 103-110. (Grattan P. Murphy) **81d:54024** 54E40
- Vaish, Sateendra Kumar Geometric means of an entire function of order zero. *Jñānabha* **7** (1977), 65-70. (S. M. Shah) **81e:30053** 30D20
- (with Srivastava, Girja S.) A note on the logarithmic proximate orders. (French summary) *Rend. Mat. (6)* **11** (1978), no. 1, 57-63. (A. Peyerimhoff) **81h:30009** 30B50
- Maximum term and the rank of an entire Dirichlet series. *Math. Ed. (Siwan)* **13** (1979), no. 3, A35-A41. (R. S. L. Srivastava) **81a:30018** 30D15 (30B50)
- Generalized logarithmic means of an entire Dirichlet series. *I. Arch. Math. (Brno)* **16** (1980), no. 4, 231-238. (R. P. Boas, Jr.) **81j:30011** 30B50 (30D10)
- (with Srivastava, Girja S.) On the maximum term and its rank of an entire function of slow growth. *I. Rev. Roumaine Math. Pures Appl.* **25** (1980), no. 2, 277-282. (S. M. Shah) **81j:30043a** 30D15 (30D20)
- (with Srivastava, Girja S.) On the maximum term and its rank of an entire function of slow growth. *II. Rev. Roumaine Math. Pures Appl.* **25** (1980), no. 3, 473-479. (S. M. Shah) **81j:30043b** 30D15 (30D20)
- Vaishnavi, V. K. (with Kriegl, H. P.; Wood, Derick) Optimum multiway search trees. *Acta Inform.* **14** (1980), no. 2, 119-133. (Authors' summary) **81g:68088** 68E05 (68C25)
- Vaisman, A. M. Self-similar vortex flow in a porous half-space. *Izv. Akad. Nauk SSSR Meh. Židk. Gaza* **1980**, no. 1, 171-174 (Russian); translated as *Fluid Dynamics* **15** (1980), no. 1, 140-143. (From the text) **81f:76045** 76S05
- Vaisman, Izru Locally conformal Kähler manifolds with parallel Lee form. (French summary) *Rend. Mat. (6)* **12** (1979), no. 2, 263-284. (Christiane Barbance) **81e:53053** 53C55
- Conformal changes of almost contact metric structures. *Geometry and differential geometry (Proc. Conf., Univ. Haifa, Haifa, 1979)*, pp. 435-443, *Lecture Notes in Math.*, **792**, Springer, Berlin, 1980. (David Blair) **81k:53035** 53C15 (53C25)
- (with Goldberg, Samuel Irving) On compact locally conformal Kähler manifolds with nonnegative sectional curvature. (French summary) *Ann. Fac. Sci. Toulouse Math.* (5) **2** (1980), no. 2, 117-123. (Akira Mizuhara) **81m:53066** 53C55
- Remarkable operators and commutation formulas on locally conformal Kähler manifolds. *Compositio Math.* **40** (1980), no. 3, 287-299. (J. R. Vanstone) **81j:53063** 53C55
- Some curvature properties of locally conformal Kähler manifolds. *Trans. Amer. Math. Soc.* **259** (1980), no. 2, 439-447. (J. Ferrand) **81d:53044** 53C55
- On locally and globally conformal Kähler manifolds. *Trans. Amer. Math. Soc.* **262** (1980), no. 2, 533-542. (Takeshi Sasaki) **81j:53064** 53C55 (53B35)
- See also *Geometry and differential geometry*, **81i:53003**
- Vaithilingam, M. C. (with Subbayan, R.; Sarma, V. V. S.) An approach for sensitivity-reduced design of linear regulators. *Internat. J. Systems Sci.* **9** (1978), no. 1, 65-74. (Authors' summary) **81e:93031** 93B35
- Vajzović, Filaret See Vajzović, Filaret
- Vájs, Gabriela Minimization algorithms for sequential machines. (Romanian. English summary) *Bul. Univ. Braşov Ser. C* **29** (1978), 157-161. (Author's summary) **81f:68063** 68D15
- Vajda, Igor (with Györfi, L.; Györfi, Z.) A strong law of large numbers and some applications. *Studia Sci. Math. Hungar.* **12** (1977), no. 1-2, 233-244 (1980). (J. R. Blum) **81g:60028** 60F15 (62F03, 62C05)
- (with Györfi, L.; Györfi, Z.) Bayesian decision with rejection. *Problems Control Inform. Theory / Problemy Upravlen. Teor. Inform.* **8** (1979), no. 5-6, 445-452. (V. Dupac) **81k:62117** 62L20 (62C10)
- (with Eckschlager, Karel) Analysis of a measurement information. *Kybernetika (Prague)* **16** (1980), no. 2, 120-144. (Authors' summary) **81d:94015** 94A17
- (with Györfi, L.) Upper bound on the error probability of detection in non-Gaussian noise. (Russian summary) *Problems Control Inform. Theory / Problemy Upravlen. Teor. Inform.* **9** (1980), no. 3, 215-224. (Authors' summary) **81f:94002** 94A05
- Vajda, Steven See *Handbook: Applicable mathematics*, **81m:00004**
- Vajda, T. (with Nagy, Éva V.) Ein Algorithmus zur approximativen Lösung von Systemen gewöhnlicher, homogener, nichtlinearer Differentialgleichungen zweiter Ordnung in der chemischen Verfahrenstechnik. *Z. Angew. Math. Mech.* **60** (1980), no. 2, 109-111. (W. S. Loud) **81h:65087** 65L10
- Vajzović, Filaret S^{*p} inclusion of summability methods. (Russian. Serbo-Croatian summary) *Akad. Nauka Unj. Bosne Hercegov. Rad. Odjeli. Prirod. Mat. Nauka* **61** (1978), no. 17, 137-145. (E. Reimers) **81f:40005** 40D25
- (with Maravić, Manojlo; Perić, Veselin) Life and work of Academician Mahmud Bajraktarević. (Serbo-Croatian) *Akad. Nauka Unj. Bosne Hercegov. Rad. Odjeli. Prirod. Mat. Nauka* No. 19 (1980), 5-17. (Editors) **81i:01013** 01A70
- Vakarelov, D. I. Simple examples of incomplete logics. *C. R. Acad. Bulgare Sci.* **33** (1980), no. 5, 587-589. (Author's introduction) **81j:03036** 03B45
- Vakhitov, G. G. See Vakhitov, G. G.
- Vakiev, J. S. (with Drenska, S. B.; Ivanov, M. I.; Nikolov, A. V.) Field equation for arbitrary hadrons and parity operators. *C. R. Acad. Bulgare Sci.* **32** (1979), no. 8, 1057-1059. (L. Streit) **81a:81040** 81D25
- Vakulenko, S. A. The solutions of nonlinear equations concentrated near curves on a plane. (Russian. English summary) *Mathematical questions in the theory of wave propagation*, 10. *Zap. Nauch. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* **89** (1979), 84-90, 292. (M. M. Skraganov) **81h:35032** 35J60 (35C20)
- The effect of perturbation on solutions of some nonlinear equations. (Russian. English summary) *Mathematical questions in the theory of wave propagation*, 10. *Zap. Nauch. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* **89** (1979), 91-96, 292-293. (A. S. Aleksiev) **81h:35088** 35Q20 (35B20, 76B25)
- du Val, Patrick See Du Val, Patrick
- Vala, Klaus (with Astala, Kari) On the measurability of vector-valued functions. *Ann. Acad. Sci. Fenn. Ser. A I Math.* **5** (1980), no. 1, 121-124. (J. Diestel) **81m:28013** 28C05
- Valabrega, Paolo Errata: "P-morphisms and prolongation of sheaves" [Rend. Sem. Mat. Univ. Politec. Torino **36** (1977/78), 313-330 (1979); MR 80k:14002]. (Italian) *Rend. Sem. Mat. Univ. Politec. Torino* **37** (1979), no. 3, 163 (1980). (Editors) **81i:14002** 14A05 (14F10)
- Valabrega-Gibellato, Elda A hypothesis on the origin of Euclid's geometric algebra. (Italian. English summary) *Boll. Un. Mat. Ital. A (5)* **16** (1979), no. 1, 190-200. (J. Dieudonné) **81e:01005** 01A20
- Valadier, Michel Closedness in the weak topology of the dual pair L^1, C . *J. Math. Anal. Appl.* **69** (1979), no. 1, 17-34. (M. B. Suryanarayana) **81j:28018** 28B20 (46E30)
- Valakienė, Julė (with Sapagovas, Mifodijus; Sapagovienė, Danguė) The nonlinear relaxation method for solving ordinary differential equations. (Russian. Lithuanian and English summaries) *Diferencial'nye Uravnenija i Primenenija—Trudy Sem. Processy Optimal. Upravlenija i Sekcija No. 25* (1979), 9-40, 57. (E. G. Djakonov) **81j:65094** 65L10
- Valanis, K. C. (with Komkov, Vadim) Irreversible thermodynamics from the point of view of internal variable theory (a Lagrangian formulation). (Polish and Russian summaries) *Arch. Mech. (Arch. Mech. Sios.)* **32** (1980), no. 1, 33-58. (M. Dutta) **81d:82030** 82A35 (49H05, 80A35)
- Valček, Ja. Imbedding theorems and inequalities of various metrics for best approximations with respect to the Haar system. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* **1980**, no. 4, 11-15. (B. S. Rubin) **81k:41016** 41A50 (46E30)
- Valarani, Lena S. (with Narendra, Kumpati S.) Direct and indirect model reference adaptive control. *Automatica—J. IFAC* **15** (1979), no. 6, 653-664. (Authors' summary) **81a:93050** 93C40
- (with Narendra, Kumpati S.) A comparison of Lyapunov and hyperstability approaches to adaptive control of continuous systems. *IEEE Trans. Automat. Control* **25** (1980), no. 2, 243-247. (V. M. Popov) **81h:93067** 93D05 (93C40)
- Valdes, Jacobo (with Tarjan, Robert Endre; Lawler, Eugene L.) The recognition of series parallel digraphs. *Conference Record of the Eleventh Annual ACM Symposium on Theory of Computing (Atlanta, Ga., 1979)*, pp. 1-12, ACM, New York, 1979. (Authors' summary) **81d:68088** 68E10 (68C05)
- Váldez, Pedro (with Caballero, Carlos; Ferrer, Cristina) A procedure for the calculation of the eigenvalues and eigenvectors of a Hermitian matrix. (Spanish) *Investigación Oper.* **27** (1979), 25-29. (G. N. de Oliveira) **81m:65056** 65F15 (15A18, 15A57)
- Valdivia, Mamel A characterization of echelon Köthe-Schwartz spaces. *Approximation theory and functional analysis (Proc. Internat. Sympos. Approximation Theory, Univ. Estadual de Campinas, Campinas, 1977)*, pp. 409-419, North-Holland Math. Studies, **35**, North-Holland, Amsterdam, 1979. (E. Dubinsky) **81d:46009** 46A14 (46A07, 46A09)
- On certain barrelled normed spaces. (French summary) *Ann. Inst. Fourier (Grenoble)* **29** (1979), no. 3, v, 39-56. (E. Dubinsky) **81d:46006** 46A07 (46A12)
- On Baire-hyperplane spaces. *Proc. Edinburgh Math. Soc. (2)* **22** (1979), no. 3, 247-255. (N. J. Kalton) **81m:46004** 46A05
- On subseries convergent sequences. *Proc. Edinburgh Math. Soc. (2)* **22** (1979), no. 3, 257-262. (I. Tiedtke) **81a:46008** 46A07 (46A09)
- Valedinskii, V. D. Numerical solution of a problem of the theory of elasticity on the

- contact of compressible and incompressible media. (Russian) *Vestnik Moskov. Univ. Ser. XV Vyisl. Mat. Kibernet.* 1980, no. 2, 3-12, 72. (L. Berg) **81j:73019** 73C35 (65N10)
- Valeev, K. G.** (with Likova, O. B.) Ljapunov functions and the criterion of exponential dichotomy of reducible systems of linear differential equations. (Russian) *Asymptotic methods in the theory of nonlinear oscillations (Proc. All-Union Conf. Asymptotic Methods in Nonlinear Mech., Katsiveli, 1977)* (Russian), pp. 26-34, 272-273, "Naukova Dumka", Kiev, 1979. (A. I. Kir'jani) **81j:34095** 34D20
- (with Pervak, V. D.) Foundation and application of Hill's method to parabolic equations. (Russian) *Physics and mechanics of nonlinear phenomena* (Russian), pp. 5-15, 204, "Naukova Dumka", Kiev, 1979. (T. Stýs) **81d:35010** 35C10 (35K20)
- (with Stepanov, A. I.) Some particular solutions of a dynamical three-dimensional problem of elasticity theory. (Russian) *Meh. Toerd. Tela No. 11* (1979), 109-115, 120. (Kazimierz Sobczyk) **81g:73036** 73D99
- (with Flain, G. S.) Construction of an integral manifold of corresponding solutions of a system of differential equations and the synthesis of an optimal regulator. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A No. 3* (1980), 6-10, 89. (Rolf Klötzler) **81j:49013** 49C05
- Valencia, J. M. E.** (with Harris, C. J.) Nyquist criterion for input/output stability of multivariable systems. *Internat. J. Control* 31 (1980), no. 5, 917-935. (Authors' summary) **81c:93065** 93D25 (93C35)
- Valencia, M. R.** (with Fox, L.) Some experiments with interval methods for two-point boundary value problems in ordinary differential equations. *BIT* 20 (1980), no. 1, 67-82. (E. R. Hansen) **81f:65059** 65L10 (65G10)
- Valendjak, A.** Direct decompositions in Dedekind lattices. (Russian) *Comment. Math. Prace Mat.* 21 (1980), no. 1, 257-270. (E. Gedeonová) **81j:06009** 06C05
- Valent, Tullio** Observations on the linearization of a differential operator. (Italian. English summary) *Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur.* (8) **65** (1978), no. 1-2, 27-37 (1979). (M. Birosi) **81j:47053** 47H15 (47F05)
- Existence and uniqueness theorems in finite elastostatics. (Italian. English summary) *Rend. Sem. Mat. Univ. Padova* 60 (1978), 165-181 (1979). (Giovanni P. Galdi) **81c:73032** 73G05 (35J20)
- Valenti, Antonino** (with Torrisi, Mariano) On a class of semiregular generalized precessions of a heavy rigid body. (Italian. English summary) *Rend. Sem. Mat. Univ. Padova* 61 (1979), 319-324 (1980). (Sergio Levoni) **81c:70086** 70E15
- Valenti, Santi** (with Cannizzo, Aurelio) A criterion of convergence related to complex special functions. (Italian summary) *Istit. Lombardo Accad. Sci. Lett. Rend. A* 111 (1977), no. 2, 459-465 (1978). (M. Nassif) **81h:30005** 30B50
- Valentine, J. E.** Banach-Euclidean four-point properties. *Fund. Math.* 106 (1980), no. 3, 227-230. (J. H. M. Whitfield) **81i:52002** 52A01 (46C99)
- (with Waymont, S. G.) The Ceva property characterizes real, strictly convex Banach spaces. *Proc. Amer. Math. Soc.* 78 (1980), no. 4, 559-567. (Robert E. Jamison) **81c:51022** 51F99 (46B20, 52A01)
- Valentine, T. J.** Hypothesis tests and confidence intervals for mean elasticities calculated from linear regression equations. *Econom. Lett.* 4 (1979/80), no. 4, 363-367. (Author's summary) **81h:62189** 62P20
- Valentini, Robert C.** (with Madan, Manohar L.) Weierstrass points in characteristic p . *Math. Ann.* 247 (1980), no. 2, 123-132. (R. F. Lax) **81j:14015** 14H05 (14F07)
- Valentini, S.** (with Sambin, Giovanni) A modal sequent calculus for a fragment of arithmetic. *Studia Logica* 39 (1980), no. 2-3, 245-256. (C. Smoryński) **81m:03025** 03B45 (03F05, 03F30)
- (with Sambin, Giovanni) Post completeness and free algebras. *Z. Math. Logik Grundlag. Math.* 26 (1980), no. 4, 343-347. (David Makinson) **81h:03042** 03B45
- Valenza, Robert J.** Dimension subgroups of semidirect products. *J. Pure Appl. Algebra* 18 (1980), no. 2, 225-229. (Donald S. Passman) **81j:20013** 20C05
- Valer, F.** (with Becerril, J. L.; Bondia, J.; Casajuan, R.) Grammar characterization of flowgraphs. *IBM J. Res. Develop.* 24 (1980), no. 6, 756-763. (Authors' summary) **81j:68086** 68F05 (68B10)
- Valette, G.** (with Blind, Roswitha; Zamfirescu, Tudor) Rectangular convexity. *Geom. Dedicata* 9 (1980), no. 3, 317-327. (Gerald Beer) **81k:52001** 52A01 (52A30)
- Valette, Jacques** (with Goursaud, Jean-Marie) Sur les anneaux de groupe héréditaires. *Séminaire d'Algèbre Paul Dubreil 31ème année (Paris, 1977-1978)*, pp. 432-443, *Lecture Notes in Math.*, 740, Springer, Berlin, 1979. (Mauricio Gutiérrez) **81m:20011** 20C07 (16A27, 16A50)
- (with Goursaud, Jean-Marie; Osterburg, James; Pascaud, Jean-Louis) Points fixes des anneaux réguliers auto-injectifs. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 21, A985-A987. (Authors' summary) **81g:16016** 16A30 (16A38, 16A52)
- Valette, R.** Analysis of Petri nets by stepwise refinements. *J. Comput. System Sci.* 18 (1979), no. 1, 35-46. (Author's summary) **81g:68015** 68B05 (68D90)
- Val'fis, Anna** Über die simultane Darstellung zweier ganzer Zahlen durch quadratische und lineare Formen. *Acta Arith.* 35 (1979), no. 3, 289-301. (K. Szymiczek) **81h:10025** 10B35
- Valiani, L. G.** Negation can be exponentially powerful. *Conference Record of the Eleventh Annual ACM Symposium on Theory of Computing (Atlanta, Ga., 1979)*, pp. 189-196, ACM, New York, 1979. (Claus-Peter Schnorr) **81f:68059** 68C25
- Negative results on counting. *Theoretical computer science (Fourth GI Conf., Aachen, 1979)*, pp. 38-46, *Lecture Notes in Comput. Sci.*, 67, Springer, Berlin, 1979. (From the introduction) **81j:68056** 68C25 (03D35, 05A15)
- Computing multivariate polynomials in parallel. *Inform. Process. Lett.* 11 (1980), no. 1, 44-45. (From the text) **81k:68038** 68C25 (12-04, 68B20)
- Valid, Roger** Le critère de stabilité structurelle pour les principes mixtes. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 13, B265-B268. (W. Kecs) **81f:73025** 73H99 (49H05)
- Valier, M. K.** Decision complexity of variants of propositional dynamic logic. *Mathematical foundations of computer science, 1980 (Proc. Ninth Symp., Rydzyna, 1980)*, pp. 656-664, *Lecture Notes in Comput. Sci.*, 88, Springer, Berlin, 1980. (See **81k:68003**) **81c:03B60** 81C25 (03B60)
- Valik, Rüdiger** On the computational power of extended Petri nets. *Mathematical foundations of computer science, 1978 (Proc. Seventh Symp., Zakopane, 1978)*, pp. 526-536, *Lecture Notes in Comput. Sci.*, 64, Springer, Berlin, 1978. (From the introduction) **81j:68042** 68B20 (68B05, 94C99)
- (with Jantzen, Matthias) Formal properties of place/transition nets. *Net theory and applications (Proc. Adv. Course General Net Theory Processes Systems, Hamburg, 1979)*, pp. 165-212, *Lecture Notes in Comput. Sci.*, 84, Springer, Berlin, 1980. (Authors' summary) **81m:68045** 68D90 (68C25)
- Val'kovskaja, V. I.** Quasistatic oscillations of a circular plate in a stochastic temperature field. (Russian) *Mat. Fiz. No. 27* (1980), 84-89, 122. (M. Sokolowski) **81m:73019** 73C25 (73U05)
- Val'kovskii, V. A.** Computations with prediction. *Kibernetika (Kiev)* 1979, no. 1, 38-45. (Russian); translated as *Cybernetics* 15 (1979), no. 1, 43-51. (From the text) **81c:68033** 68B20 (68J10)
- Parallel operator schemata over variable arrays and the maximal parallelism problem. *Kibernetika (Kiev)* 1979, no. 5, ii, 52-63, 154. (Russian. English summary; translated as *Cybernetics* 15 (1979), no. 5, 661-673 (1980). (From the introduction) **81f:68040** 68B20
- Valla, Giuseppe** (with Robbiano, Lorenzo) On the equations defining tangent cones. *Math. Proc. Cambridge Philos. Soc.* 88 (1980), no. 2, 281-297. (Jonathan M. Wahl) **81i:14004** 14B05 (13H10)
- Valle, J. W. F.** Hilbert superspaces and Grassmann numbers. *Internat. J. Theoret. Phys.* 18 (1979), no. 12, 923-934 (1980). (Author's summary) **81c:81053** 81C99 (17A70)
- Vallee, G.** (with Provost, J. P.) Riemannian structure on manifolds of quantum states. *Comm. Math. Phys.* 76 (1980), no. 3, 289-301. (Evangelos Ifantia) **81k:81039** 81C99 (58B20, 58F06)
- sales Vallés, Francisco de A.** See Sales Vallés, Francisco de A.
- escuder Vallés, Roberto** See Escuder Vallés, Roberto
- Valli, Alberto** (with Beirão da Veiga, Hugo) Existence of C^∞ solutions of the Euler equations for nonhomogeneous fluids. *Comm. Partial Differential Equations* 5 (1980), no. 2, 95-107. (L. N. Tao) **81c:35109** 35Q20 (76C05)
- Vallières, Michel** (with Klein, Abraham) New method for studying the microscopic foundations of the interacting boson model. *Phys. Lett. B* 98 (1981), no. 1-2, 5-10. (Authors' summary) **81k:81106** 81G30
- Valuri, Sree Ram** (with Bharti, Prakash) An analytical proof for the generation of higher harmonics due to the interaction of plane electromagnetic waves. (French summary) *Canad. J. Phys.* 58 (1980), no. 1, 116-122. (Authors' summary) **81h:78017** 78A40 (81L05)
- Valone, Steven M.** Consequences of extending 1 matrix energy functionals from pure-state representative to all ensemble representative 1 matrices. *J. Chem. Phys.* 73 (1980), no. 3, 1344-1349. (From the summary) **81f:81093** 81G55
- Valqui Vidal, René Victor** (with Silver, Edward A.; de Werra, Dominique) A tutorial on heuristic methods. *European J. Oper. Res.* 5 (1980), no. 3, 153-162. (K. G. Murty) **81h:90109** 90C50
- Valton, Michel** (with Guillaume, Jean-Louis; Hoffmann, Patrick; Roger, Claudine) Une solution formelle de la hiérarchie B.B.G.K.Y. (Bogolioubov, Born, Green, Kirkwood, Yvon). (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 291 (1980), no. 5, B137-B140. (Authors' summary) **81k:82027** 82A40 (58G35, 82A70)
- Valuskii, V. N.** (with Gorozin, A. D.; Romankevich, A. M.) Simplification of fault-detection circuitry by increasing the checking time in control automata. *Avtomat. i Vyisl. Tehn. (Riga)* 12 (1978), no. 5, 18-22. (Russian); translated as *Automat. Control Comput. Sci.* 12 (1978), no. 5, 15-19. (Authors' summary) **81c:94042** 94C10
- (with Romankevich, A. M.) A τ -decomposition method for monitoring a control automaton with time redundancy. *Kibernetika (Kiev)* 1979, no. 5, i, 28-33, 153. (Russian. English summary); translated as *Cybernetics* 15 (1979), no. 5, 634-640 (1980). (Author's summary) **81d:94042** 94C10
- Valusescu, Ilie** (with Suciu, Ion) A linear filtering problem in complete correlated actions. *J. Multivariate Anal.* 9 (1979), no. 4, 599-613. (Tata Subba Rao) **81h:60059** 60G35 (47A20)
- The maximal function of a contraction. *Acta Sci. Math. (Szeged)* 42 (1980), no. 1-2, 183-188. (J. P. Williams) **81g:47004** 47A20 (47A45)
- Valverde, Lorenc** Sur les informations conditionnelles sans F -composabilité. (English summary) *Stochastica* 4 (1980), no. 1, 81-88. (L. L. Campbell) **81k:94017** 94A17
- Valz Gris, F.** (with Casati, Giulio; Guarnieri, I.) On the connection between quantization of nonintegrable systems and statistical theory of spectra. *Let. Nuovo Cimento* (2) **28** (1980), no. 8, 279-282. (From the text) **81m:81029** 81C99 (58F05, 58F13)
- Vannanumrthy, M. K.** (with Anderson, Glen D.) An extremal displacement mapping in n -space. *Complex analysis Joensuu 1978 (Proc. Colloq., Univ. Joensuu, Joensuu, 1978)*, pp. 1-9, *Lecture Notes in Math.*, 747, Springer, Berlin, 1979. (Matti Vuorinen) **81k:30030** 30C60
- (with Reilly, Ivan) Compactness and finiteness. *Topology (Proc. Fourth Colloq., Budapest, 1978)*, Vol. II, pp. 1033-1041, *Colloq. Math. Soc. János Bolyai*, 23, North-Holland, Amsterdam, 1980. (Z. Balogh) **81m:54045** 54D99
- (with Reilly, Ivan) Some topological anti-properties. *Illinois J. Math.* 24 (1980), no. 3, 382-389. (Paul Bankston) **81j:54029** 54D10 (54D20)
- (with Calvert, Bruce) Local and global extrema for functions of several variables. *J. Austral. Math. Soc. Ser. A* 29 (1980), no. 3, 362-368. (Felice Ronga) **81c:26012** 26B99 (26C99, 58C25)
- Vamam, Elena** Quasiconnections on manifolds with almost product structure. (Romanian summary) *Bul. Inst. Politehn. Iași Sec. I* 25(29) (1979), no. 1-2, 51-54. (Y. Tashiro) **81f:53025** 53C15
- Vámos, Peter** Sheaf-theoretical methods in the solution of Kaplansky's problem. *Applications of sheaves (Proc. Res. Sympos. Appl. Sheaf Theory to Logic, Algebra and Anal., Univ. Durham, Durham, 1977)*, pp. 732-738, *Lecture Notes in Math.*, 753, Springer, Berlin, 1979. (R. A. Wiegand) **81h:13008** 13C05 (13F05)
- (with Jensen, Christian U.) On the axiomatizability of certain classes of modules. *Math. Z.* 167 (1979), no. 3, 227-237. (Alan Mekler) **81h:03073** 03C60 (13C11, 16A64)
- Van dyk Van** See Can Dyk Van
- nguyen thanh Van** See Nguyen Thanh Van
- quach thi cam Van** See Quach thi Cam Van
- Vanagas, V. V.** The microscopic nuclear theory within the framework of the restricted

- dynamics. (Russian. English summary) *Fiz. Élementar. Častic i Atom. Jadra* 11 (1980), no. 2, 454-514. (K. Kumar) **81i:81151** 81G35 (81Hxx)
- Van Asche, F. See van Asche, F.
- Van Beelen, H. See van Beelen, H.
- Van Beijeren, H. See van Beijeren, H.
- Van Bendegem, Jean Paul Letter. *Math. Intelligencer* 2 (1979/80), no. 2, 65-66. (E. Mendelson) **81i:03009** 03A05 (00A25, 01A80)
- Van Benthem, J. F. A. K. See van Benthem, J. F. A. K.
- Van Bokhoven, W. M. G. See van Bokhoven, W. M. G.
- dao Van Ca See Dao Van Ca
- Van Campen, D. H. See van Campen, D. H.
- Van Campenhout, Jan M. See van Campenhout, Jan M.
- Van Casteren, Jan A. See van Casteren, Jan A.
- phan Van Chu'ong See Phan Van Chu'ong
- Vanzura, Zdeněk Adjunktionsfähige zweidimensionale Kugel- und Linienmannigfaltigkeiten im dreidimensionalen euklidischen Raum. (Czech summary) With a loose Russian summary. *Časopis Pěst. Mat.* 105 (1980), no. 2, 120-132, 208. (Hans Sachs) **81j:53015** 53A30 (53A25)
- Van Cutsem, Th. (with Howard, J. L.; Ribbens-Pavella, M.) Hierarchical state estimator: a new way for large power systems estimations. *Simulation of distributed-parameter and large-scale systems* (Proc. IMACS European Simulation Meeting, Univ. Patras, Patras, 1979), pp. 173-180, North-Holland, Amsterdam, 1980. (Authors' summary) **81i:93005** 93A13 (93A15, 93E10)
- Van Daalen, Diederik Ton See van Daalen, Diederik Ton
- Van Daele, J. See van Daele, J.
- Van Dales, Dirk See van Dales, Dirk
- Van Dam, H. See van Dam, H.
- Van Dan'-chi See Wang, Tan Chih
- nguyen Van Dao See Nguyen Van Dao
- Vandellinde, V. David Robust techniques in communication. *Robustness in statistics* (Proc. Workshop, Army Res. Office, Research Triangle Park, N.C., 1978), pp. xv, 177-199, Academic Press, New York, 1979. (See **81e:62032**) 94A05 (62F35)
- (with El-Sawy, A. H.) Robust sequential detection of signals in noise. *IEEE Trans. Inform. Theory* 25 (1979), no. 3, 346-353. (Authors' summary) **81i:94006** 94A12
- (with Price, Edward L.) Robust estimation using the Robbins-Monro stochastic approximation algorithm. *IEEE Trans. Inform. Theory* 25 (1979), no. 6, 698-704. (Madanlal T. Wasan) **81g:62142** 62L20
- Van de Lune, J. See van de Lune, J.
- Van den Berg, M. See van den Berg, M.
- Van den Bergh, N. Paradoxes in extragalactic observations? *Simon Stevin* 53 (1979), no. 4, 263-279. (George Kontopoulos) **81i:85007** 85A40
- Vanden Berghie, G. (with De Meyer, H. E.) A set of commuting operators and $R(3)$ scalars for the complete classification of quadrupole phonon-states. *J. Math. Phys.* 21 (1980), no. 3, 486-492. (Authors' summary) **81a:81035** 81C40 (81G30)
- (with De Meyer, H. E.) Shift-operator techniques for the classification of multiple-phonon states. I. Properties of shift operators in the $R(5)$ group. *J. Math. Phys.* 21 (1980), no. 7, 1902-1905. (Nigel B. Backhouse) **81k:81036** 81C40 (22E70, 81G30)
- (with De Meyer, H. E.) Shift-operator techniques for the classification of multiple-phonon states. II. Eigenvalues of the quadrupole shift operator O_0^0 . *J. Math. Phys.* 21 (1980), no. 7, 1906-1912. (Nigel B. Backhouse) **81k:81036** 81C40 (22E70, 81G30)
- (with De Meyer, H. E.) Shift operator techniques for the classification of multiple-phonon states. III. The quadrupole-phonon eigenstates of O_0^0 . *J. Math. Phys.* 21 (1980), no. 7, 1913-1917. (Nigel B. Backhouse) **81k:81036** 81C40 (22E70, 81G30)
- Van den Bosch, P. P. J. See van den Bosch, P. P. J.
- Van den Broeck, C. See van den Broeck, C.
- Vanden-Broeck, Jean-Marc (with Schwartz, Leonard W.) Numerical solution of the exact equations for capillary-gravity waves. *J. Fluid Mech.* 95 (1979), no. 1, 119-139. (David F. Griffiths) **81b:76012** 76B15
- (with Schwartz, Leonard W.) A one-parameter family of sequence transformations. *SIAM J. Math. Anal.* 10 (1979), no. 3, 658-666. (A. Magnus) **81i:41013** 41A20 (41A29)
- Advances in the numerical computation of capillary-gravity waves. *Nonlinear partial differential equations in engineering and applied science* (Proc. Conf., Univ. Rhode Island, Kingston, R.I., 1979), pp. 299-310, *Lecture Notes in Pure and Appl. Math.*, 54, Dekker, New York, 1980. (V. Girault) **81g:76018** 76B15 (45K05)
- (with Keller, Joseph B.) Bubble or drop distortion in a straining flow in two dimensions. *Phys. Fluids* 23 (1980), no. 8, 1491-1495. (A. Pozzi) **81k:76008** 76B10 (45K05)
- Nonlinear gravity-capillary stern waves. *Phys. Fluids* 23 (1980), no. 10, 1949-1953. (Alan Jeffrey) **81m:76007** 76B20
- Van den Broek, Julien See van den Broek, Julien
- Van den Broek, P. M. See van den Broek, P. M.
- Van den Dries, Lou See van den Dries, Lou
- Van den Driessche, P. See van den Driessche, P.
- Vanden Eynde, Charles Proofs that $\Sigma 1/p$ diverges. *Amer. Math. Monthly* 87 (1980), no. 5, 394-397. (Calvin T. Long) **81g:10013** 10A25
- (with Crittenden, Richard) Completing partial Latin squares. *J. Combin. Theory Ser. A* 28 (1980), no. 2, 125-129. (Charles C. Lindner) **81j:05031** 05B15
- Van den Muyzenberg, C. L. (with Astolfi, M.; Contini, S.; Volta, G.) Fault tree analysis by list-processing techniques. *Synthesis and analysis methods for safety and reliability studies* (Proc. NATO Adv. Study Inst., Urbino, 1978), pp. 5-32, Plenum, New York, 1980. (See **81j:93008**) 94C15
- Van der Aa, Els See van der Aa, Els
- Vanderbaanwede, A. L. An abstract setting for the study of the Hopf bifurcation. *Nonlinear Anal.* 4 (1980), no. 3, 547-566. (Norman Dancer) **81j:58033** 58E07 (47H15)
- Van der Bellen, Alexander (with Sertel, Murat R.) Synopses in the theory of choice. *Econometrica* 47 (1979), no. 6, 1367-1389. (Dennis J. Packard) **81e:90033** 90A99 (90A08)
- (with Sertel, Murat R.) Computations in choice groupoids. *Aequationes Math.* 20 (1980), no. 2-3, 129-132. (R. D. Luce) **81g:90010** 90A06 (04A05, 20L99)
- Van der Burgh, A. H. P. See van der Burgh, A. H. P.
- Van der Duyn Schouten, Frank A. See van der Duyn Schouten, Frank A.
- Van der Eerden, J. P. See van der Eerden, J. P.
- Van der Heijden, A. M. A. See van der Heijden, A. M. A.
- Van der Heyden, L. (with Shubik, M.) Logrolling and budget allocation games. *Internat. J. Game Theory* 7 (1978), no. 3-4, 151-162. (Authors' summary) **81h:90015** 90A08 (90D30)
- Van der Hoek, G. See van der Hoek, G.
- Van der Hoeven, G. F. See van der Hoeven, G. F.
- Van der Houwen, P. J. See van der Houwen, P. J.
- Van der Kallen, Wilberd See van der Kallen, Wilberd
- Van der Laan, Gerard See van der Laan, Gerard
- Van der Laan, P. See van der Laan, P.
- Van der Lubbe, Jan C. A. See van der Lubbe, Jan C. A.
- Van der Mee, C. V. M. See van der Mee, C. V. M.
- Van der Meer, H. A. See van der Meer, H. A.
- Van der Merwe, A. J. See van der Merwe, A. J.
- Van der Merwe, P. du T. See van der Merwe, P. du T.
- Van der Poorten, Alfred J. The polynomial $x^3 + x^2 + x - 1$ and elliptic curves of conductor 11. *Séminaire Delange-Pisot-Poitou, 18e année: 1976/77, Théorie des nombres, Fasc. 2*, Exp. No. 17, 7 pp., Secrétariat Math., Paris, 1977. (Kenneth Kramer) **81e:10021** 10B10 (14G25, 14K07)
- (with Loxton, John H.) Arithmetic properties of certain functions in several variables. III. *Bull. Austral. Math. Soc.* 16 (1977), no. 1, 15-47. (Authors' summary) **81g:10046** 10F35
- (with Inkeri, K.) Some remarks on Fermat's conjecture. *Acta Arith.* 36 (1980), no. 2, 107-111. (S. V. Kotov) **81j:10022** 10B15
- (with Rotkiewicz, A.) On strong pseudoprimes in arithmetic progressions. *J. Austral. Math. Soc. Ser. A* 29 (1980), no. 3, 316-321. (B. Garrison) **81k:10010** 10A25 (10A15)
- (with Agrawal, M. K.; Coates, John; Hunt, D. C.) Elliptic curves of conductor 11. *Math. Comp.* 35 (1980), no. 151, 991-1002. (M. A. Kenku) **81e:10022** 10D12 (10B10, 14K07)
- See also Lenstra, Hendrik W., Jr. **81m:12001**
- Van der Put, M. See van der Put, M.
- Van der Putten, Niek See van der Putten, Niek
- Van der Pyl, Thierry Propriétés de l'information d'ordre α et de type β . (English summary) *Information theory* (Proc. Internat. CNRS Colloq., Cachan, 1977) (French), pp. 161-171, *Colloques Internat. CNRS*, 276, CNRS, Paris, 1978. (Author's summary) **81g:94014** 94A17
- (with Sallantin, Jean) Entropies, dimensions et représentation d'observations. *Kybernetika* (Prague) 15 (1979), no. 4, 299-315. (Authors' summary) **81e:94010** 94A15
- (with Sallantin, Jean) Analyse des processus inductifs bayésiens. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 8, A389-A392. (Authors' summary) **81g:68122** 68G10 (94A17)
- Van der Sluis, A. See van der Sluis, A.
- Van der Veen, Henk See van der Veen, Henk
- Van der Vlist, H. See van der Vlist, H.
- Van der Waal, Robert W. See van der Waal, Robert W.
- Van der Waerden, Bartel Leendert See van der Waerden, Bartel Leendert
- Van der Wal, J. See van der Wal, J.
- Vander Weide, James (with Obel, Borge) On the decentralized capital budgeting problem under uncertainty. *Management Sci.* 25 (1979), no. 9, 873-883 (1980). (Authors' summary) **81a:90063** 90A15
- Van der Weiden, Antonius J. J. See van der Weiden, Antonius J. J.
- Van der Werff, T. J. See van der Werff, T. J.
- Van der Woude, Jaap See van der Woude, Jaap
- Van Deuren, J.-P. See van Deuren, J.-P.
- Van de Vegte, J. (with Argoun, M. Bahey) Output feedback decoupling in the frequency domain. *Internat. J. Control* 31 (1980), no. 4, 665-675. (Authors' summary) **81d:93039** 93C45
- Van de Vel, Marcel See van de Vel, Marcel
- Vandewalle, Joos (with Chua, Leon O.) Symmetry in nonlinear resistive multiports and networks. *Proceedings of the Fourth International Symposium on Network Theory* (Ljubljana, 1979), pp. 51-56, Georgi, St.-Saphorin, 1979. (See **81b:94003**) 94C05
- (with Chua, Leon O.) A unified theory of symmetry for nonlinear resistive networks. *J. Franklin Inst.* 308 (1979), no. 6, 533-577. (Authors' summary) **81b:94001** 94C99
- (with Chua, Leon O.) The colored branch theorem and its applications in circuit theory. *IEEE Trans. Circuits and Systems* 27 (1980), no. 9, 816-825. (Authors' summary) **81m:94038** 94C15
- (with van Daele, J.) On the computation of the inverse of a rational matrix expansion. *Internat. J. Control* 31 (1980), no. 1, 95-107. (Bradley W. Dickinson) **81d:15002** 15A09 (30B10, 65F05, 93B40)
- Van de Wiele, J. P. (with Schnorr, C.-P.) On the additive complexity of polynomials. *Theoret. Comput. Sci.* 10 (1980), no. 1, 1-18. (Authors' summary) **81k:68037** 68C25 (12-04)
- Van Dijk, Herman K. See van Dijk, Herman K.
- Van Doorn, P. (with Verghese, George; Kailath, Thomas) Properties of the system matrix of a generalized state-space system. *Proceedings of the 1978 IEEE Conference on Decision and Control including the 17th Symposium on Adaptive Processes* (San Diego, Calif., 1979), pp. 173-175, IEEE, New York, 1979. (S. P. Bhattacharyya) **81e:93061** 93C99
- See also Verghese, George. **81f:93009**
- Van Doorn, A. J. See van Doorn, A. J.

- Van Doorn, Erik A. See van Doorn, Erik A.
 Van Douwen, Eric K. See van Douwen, Eric K.
 Van Dyke, Milton See Annual review of fluid mechanics, 81a:76001
 Vaněček, Antonín Maximally stable identification and control, and self-adjusting regulators. *Identification and system parameter estimation (Proc. Fourth IFAC Symp., Tbilisi, 1976), Part 3*, pp. 1835-1844, North-Holland, Amsterdam, 1978. (See 80d:93010c) 93B30
 Van Egmond, Warren The earliest vernacular treatment of algebra: the "Libro di ragioni" of Paolo Gerardi (1328). (Italian summary) *Phys.—Rio. Internaz. Storia Sci.* 20 (1978), no. 1-4, 155-189 (1979). (M. Folkerts) 81i:01007 01A35 (10-03)
 Van Eldik, P. See van Eldik, P.
 Van Emde Boas, P. See van Emde Boas, P.
 Van Enter, A. C. D. See van Enter, A. C. D.
 Van Est, W. T. See van Est, W. T.
 Van Fraassen, Bas C. See van Fraassen, Bas C.
 Van Geel, Jan See van Geel, Jan
 Vangeldere, J. Propriété de l'intersection en dimension quelconque. (English summary) *Bull. Soc. Roy. Sci. Liège* 48 (1979), no. 11-12, 444-460. (G. Coquet) 81k:52005 52A05
 (with Bragard, L.) Adjonction ou suppression d'objectifs en programmation à objectifs linéaires multiples. *Canad. Math. Bull.* 23 (1980), no. 2, 143-153. (I. Maruşciac) 81i:90180 90C31 (90C06)
 Van Geldrop, J. H. See van Geldrop, J. H.
 Van Goethem, P. See van Goethem, P.
 Van Groesen, E. W. C. See van Groesen, E. W. C.
 Van Haeringen, H. See van Haeringen, H.
 Van Hamme, L. See van Hamme, L.
 Van Harten, Aart See van Harten, Aart
 Vanhecke, Lieven Some almost Hermitian manifolds with constant holomorphic sectional curvature. *J. Differential Geom.* 12 (1977), no. 4, 461-471 (1978). (Author's introduction) 81i:53036 53C15
 Quelques propriétés concernant des systèmes de droites dans un espace de Minkowski M^4 . *Rend. Circ. Mat. Palermo (2)* 27 (1978), no. 2, 130-152. (R. Roşca) 81c:53019 53A40 (83A05)
 The volume of tubes and Riemannian geometry. *Proceedings of the IV International Colloquium on Differential Geometry (Univ. Santiago de Compostela, Santiago de Compostela, 1978), pp. 271-274, Cursos Congr. Univ. Santiago de Compostela, 15, Univ. Santiago de Compostela, Santiago de Compostela, 1979. (Fulgua Pop) 81h:53045 53C22
 (with Gray, Alfred) Riemannian geometry as determined by the volumes of small geodesic balls. *Acta Math.* 142 (1979), no. 3-4, 157-198. (J. L. Kazdan) 81i:53038 53C20 (53A55, 53B20)
 (with Tricerri, Franco) Conformal invariants on almost Hermitian manifolds. *Geometry and differential geometry (Proc. Conf., Univ. Haifa, Haifa, 1979), pp. 422-434, Lecture Notes in Math., 792, Springer, Berlin, 1980. (P. Stavre) 81m:53067 53C55
 (with Chen, Bang-yen) Geodesic spheres and locally symmetric spaces. *C. R. Math. Rep. Acad. Sci. Canada* 2 (1980), no. 2, 63-66. (Authors' introduction) 81e:53026 53C20 (53B20)
 (with Chen, Bang-yen) The spectrum of the Laplacian of Kähler manifolds. *Proc. Amer. Math. Soc.* 79 (1980), no. 1, 82-86. (Shūkichi Tanno) 81b:53042 53C55 (58G25)
 Van Hee, Kees M. See van Hee, Kees M.
 Van Heijenoort, Jean See van Heijenoort, Jean
 Van Hemmen, J. Leo See van Hemmen, J. Leo
 Vanheuverzwijn, Paul Metastable states in the infinite Ising model. *J. Math. Phys.* 20 (1979), no. 12, 2665-2670. (Author's summary) 81d:82012 82A05 (82A67)
 (with Demeo, Bart; Verbeure, A.) Completely positive quasifree maps of the CCR-algebra. *Rep. Math. Phys.* 15 (1979), no. 1, 27-39. (Derek W. Robinson) 81b:46080 46L55
 Van Holten, J. W. See van Holten, J. W.
 Vanhooacker, Patrick Differential and difference sensitivities of natural frequencies and mode shapes of mechanical structures. *AIAA J.* 18 (1980), no. 12, 1511-1514. (Author's summary) 81j:73063 73K12
 Van Homstede, W. See van Homstede, W.
 Van Hove, Léon See van Hove, Léon
 Van Hulzen, J. A. See van Hulzen, J. A.
 Van Huijnen, Jo. See van Huijnen, Jo.
 Dinh Van Huynh See Dinh Van Huynh
 Van Kampen, N. G. See van Kampen, N. G.
 Nguyen Van Khang See Nguyen Van Khang
 Van Klinken, J. See van Klinken, J.
 Van Kramendonk, J. (with Fiutak, J.) The effect of collisions on resonance fluorescence and Rayleigh scattering at high intensities. *J. Phys. B* 13 (1980), no. 15, 2869-2884. (Authors' summary) 81h:81190 81K05 (81G45)
 Nguyen Van Lam See Nguyen Van Lam
 Van Lamsweerde-Gallez, D. See van Lamsweerde-Gallez, D.
 Van Leeuwen, Jan See van Leeuwen, Jan
 Van Leeuwen, L. C. A. See van Leeuwen, L. C. A.
 Van Lint, J. H. See van Lint, J. H.
 Van Loan, C. (with Golub, Gene H.; Nash, Stephen G.) A Hessenberg-Schur method for the problem $AX + XB = C$. *IEEE Trans. Automat. Control* 24 (1979), no. 6, 909-913. (Authors' summary) 81a:65046 65F30 (93C05)
 ngo Van Long See Ngo Van Long
 dao Van Luong See Dao Van Luong
 Van Maarseveen, Martin See van Maarseveen, Martin
 Van Megen, W. J. See van Megen, W. J.
 Van Mill, Jan See van Mill, Jan
 Van Moerbeke, Pierre See van Moerbeke, Pierre
 Vannelli, Antonio (with Moylan, Peter J.; Vidyasagar, Mathukumalli) On the stability and well-posedness of interconnected nonlinear dynamical systems. *IEEE Trans. Circuits and Systems* 27 (1980), no. 11, 1097-1101. (From the conclusion) 81j:93040 93D05 (93D25)
 tran Van Nhung See Tran Van Nhung
 Van Nieuwenhuizen, P. See van Nieuwenhuizen, P.
 Van Nostrand, R. Craig (with Draper, Norman R.) Ridge regression and James-Stein estimation: review and comments. *Technometrics* 21 (1979), no. 4, 451-466. (Khurshid Alam) 81h:62067 62H12 (62J07)
 See also Smith, Gary; et al., 81m:62131
 Vannucci, Luigi A generalization of an inequality on binomial coefficients. (Italian summary) *Riv. Mat. Sci. Econom. Social.* 2 (1979), no. 2, 113-126. (T. C. Brown) 81f:05009 05A10
 Van Nuffelen, Cyriel On the rank of the adjacency matrix. (French summary) *Problèmes combinatoires et théorie des graphes (Colloq. Internat. CNRS, Univ. Orsay, Orsay, 1976), pp. 321-322, Colloques Internat. CNRS, 260, CNRS, Paris, 1978. (See 80e:05005) 05C50
 Enumeration techniques in directed hypergraphs. *Optimization techniques (Proc. Ninth IFIP Conf., Warsaw, 1979), Part 2, pp. 330-333, Lecture Notes in Control and Information Sci., 23, Springer, Berlin, 1980. (Author's summary) 81m:05106 05C65
 Van Nunen, J. A. E. See van Nunen, J. A. E.
 Van Oeffelen, M. P. J. See van Oeffelen, M. P. J.
 Van Oystaeyen, F. See van Oystaeyen, F.
 Van Proeyen, A. See van Proeyen, A.
 Van Rees, G. H. J. See Proceedings: Manitoba Conference on Numerical Mathematics and Computing, 81j:65011
 Van Rooij, A. C. M. See van Rooij, A. C. M.
 Van Rossum, H. See van Rossum, H.
 Van Roy, Tony J. (with Gelders, Ludo F.) Solving a distribution problem with side constraints. *European J. Oper. Res.* 6 (1981), no. 1, 61-66. (Authors' summary) 81j:90046 90B05
 Van Ryzin, John (with Susarla, V.) Empirical Bayes estimation of a distribution (survival) function from right-censored observations. *Ann. Statist.* 6 (1978), no. 4, 740-754. (Authors' summary) 81h:62016 62C12 (62G05)
 (with Susarla, V.) Large sample theory for survival curve estimators under variable censoring. *Optimizing methods in statistics (Proc. Internat. Conf., Indian Inst. Tech., Bombay, 1977), pp. 475-501, Academic Press, New York, 1979. (Bruce W. Turnbull) 81a:62032 62G05 (62E20)
 (with Johnson, Richard A.; Susarla, V.) Bayesian nonparametric estimation for age-dependent branching processes. *Stochastic Process. Appl.* 9 (1979), no. 3, 307-318. (Niels Keiding) 81g:62146 62M05 (60J80, 62G05)
 (with Phadia, E. G.) A note on convergence rates for the product limit estimator. *Ann. Statist.* 8 (1980), no. 3, 673-678. (F. T. Wright) 81e:62042 62G05 (60F99)
 (with Susarla, V.) Addendum to: "Large sample theory for a Bayesian nonparametric survival curve estimator based on censored data" [Ann. Statist. 6 (1978), no. 4, 755-768; MR 58 #3155]. *Ann. Statist.* 8 (1980), no. 3, 693. (Editors) 81e:62020 62E20 (62F15, 62G05)
 (with Kim, B. K.) Estimation of the derivative of a density and related functions. *Comm. Statist. A—Theory Methods* 9 (1980), no. 7, 697-709. (E. F. Schuster) 81e:62044 62G05
 tong Van Sach See Tong Van Sach
 Van Schagen, F. See van Schagen, F.
 Van Schuppen, J. H. Stochastic filtering theory: a discussion of concepts, methods, and results. *Stochastic control theory and stochastic differential systems (Proc. Workshop, Deutsch. Forschungsgemeinschaft., Univ. Bonn, Bad Honnef, 1979), pp. 209-226, Lecture Notes in Control and Information Sci., 16, Springer, Berlin, 1979. (J. Szepietowski) 81i:60046 60G35 (93E11)
 Van Scoy, Frances L. The parallel recognition of classes of graphs. *IEEE Trans. Comput.* 29 (1980), no. 7, 563-570. (Author's summary) 81f:68078 68E10 (05C50)
 Van Sinderen, Alfred W. The printed papers of Charles Babbage. *Ann. Hist. Comput.* 2 (1980), no. 2, 169-185. (I. Grattan-Guinness) 81m:01105 01A75 (01A70, 01A99)
 Vansteenkiste, G. C. See Simulation of systems '79, 81j:60009
 Van Stigt, W. P. See van Stigt, W. P.
 Vanstone, J. R. (with Blair, David E.) A generalization of the heliocid. *Minimal submanifolds and geodesics (Proc. Japan-United States Sem., Tokyo, 1977), pp. 13-16, North-Holland, Amsterdam, 1979. (Katsuei Kenmotsu) 81k:53047 53C40 (53C42, 57R30)
 Some new identities in mixed exterior algebra. *C. R. Math. Rep. Acad. Sci. Canada* 2 (1980), no. 5, 269-271. (From the introduction) 81h:15019 15A75 (58A10)
 Vanstone, S. A. (with Mullin, Ronald C.) Embedding the pseudocomplement of a quadrilateral in a finite projective plane. *Second International Conference on Combinatorial Mathematics (New York, 1979), pp. 405-412, Ann. New York Acad. Sci., 319, New York Acad. Sci., New York, 1979. (Jim Trotter) 81f:05037 05B25 (51A45)
 (with Stanton, Ralph G.) Some theorems on DK-designs. *Ars Combin.* 8 (1979), 117-129. (Stephen H. Y. Hung) 81j:05028 05B05
 A note on a class of maximal equidistant permutation arrays. *Utilitas Math.* 16 (1979), 217-221. (P. J. Lorimer) 81f:05061 05B99
 (with Mullin, Ronald C.; Schellenberg, P. J.; Stinson, Douglas) Some results on the existence of squares. *Combinatorial mathematics, optimal designs and their applications (Proc. Sympos. Combin. Math. and Optimal Design, Colorado State Univ., Fort Collins, Colo., 1978). Ann. Discrete Math.* 6 (1980), 257-274. (Helen Skala) 81m:05036 05B15
 Doubly resolvable designs. *Discrete Math.* 29 (1980), no. 1, 77-86. (Bhagwandas) 81f:05030 05B05
 (with Mathon, R.) On the existence of doubly resolvable Kirkman systems and equidistant permutation arrays. *Discrete Math.* 30 (1980), no. 2, 157-172. (L. D. Baumert) 81h:05025 05B05 (05B30)
 (with Deza, M.) Some maximal equidistant permutation arrays. *J. Korean Math. Soc.* 17 (1980/81), no. 1, 45-51. (R. C. Mullin) 81m:05052 05B30
 Van Strien, Sebastian J. See van Strien, Sebastian J.
 vo Van Tan See Vo Van Tan
 Nguyen Van Thoi See Nguyen Van Thoi********

- nguyen Van Thu See Nguyen Van Thu
- Van Tilborg, H. C. A. See van Tilborg, H. C. A.
- Van Tits, Martien See van Tits, Martien
- tran Van Trung See Tran Van Trung
- duong Van Uyen See Duang Van Uyen
- van Vark, Gerrit N. See van Vark, Gerrit N.
- Van Veldhuizen, M. See van Veldhuizen, M.
- Van Velsen, J. F. C. See van Velsen, J. F. C.
- nguyen Van Vi See Nguyen Van Vi
- Van Vleck, F. S. (with Himmelberg, C. J.) On the topological triviality of solution sets. *Rocky Mountain J. Math.* 10 (1980), no. 1, 247-252. (W. R. Utz) **81g:34006** 34A10 (34A60, 34C30)
- Van Wassenhove, Luc N. See van Wassenhove, Luc N.
- Van Wesp, Robert A. Separation principles and the axiom of determinateness. *J. Symbolic Logic* 43 (1978), no. 1, 77-81. (From the introduction) **81e:03050** 03E15 (03D55, 03E60)
- Van Wijngaarden, L. See van Wijngaarden, L.
- Van Wouwe, J. M. See van Wouwe, J. M.
- Van Wyk, D. J. See van Wyk, D. J.
- Van Wyk, J. W. J. See van Wyk, J. W. J.
- Vanzani, Vittorio Relationships between different formulations of N -body scattering and origin of spurious solutions. *Few body systems and nuclear forces (Proc. Eighth Internat. Conf., Graz, 1978)*, I, pp. 360-364, *Lecture Notes in Phys.*, 82, Springer, Berlin, 1978. (From the text) **81b:81027** 81F10
- van Van Zung See Can Van Zung
- Vanzur, Jifi See Ewing, John; et al., **81b:01021**
- Vasilura, Jifi (with Bureš, Jarolím) A Nijenhuis-type tensor on the quotient of a distribution. *Comment. Math. Univ. Carolin.* 21 (1980), no. 2, 201-208. (Josiane Lehmann-Lejeune) **81i:58007** 58A30
- See also Ewing, John; et al., **81j:01034**
- Van Zwet, W. R. See van Zwet, W. R.
- Vaynskiy, V. N. (with Stefanjuk, A. R.) Nonparametric methods for reconstructing probability densities. *Automat. i Telemekh.* 1978, no. 8, 38-52 (Russian); translated as *Automat. Remote Control* 39 (1978), no. 8, part 1, 1127-1140 (1979). (Authors' summary) **81i:62071** 62G05
- (with Červonenkis, A. Ja.) ★Theorie der Zeichenerkennung. (German) [Theory of pattern recognition] Translated from the Russian by Klaus-Günter Stöckel and Barbara Schneider. Translation edited by Siegfried Unger and Klaus Fritzsche. Elektronisches Rechnen und Regeln, Sonderband [Electronic Computing and Control, Special Issue], 28. Akademie-Verlag, Berlin, 1979. xvi + 343 pp. (Editors) **81j:62114** 62H30 (68G10)
- ★Восстановление зависимости по эмпирическим данным. (Russian) [Reconstruction of functions from empirical data] "Nauka", Moscow, 1979. 448 pp. (László Györfi) **81m:62050** 62F10 (62H30, 65D10, 68G10)
- Varadan, V. K. (with Peterson, Bo Å.; Varadan, V. V.) Scattering of acoustic waves by layered elastic and viscoelastic obstacles in water. *J. Acoust. Soc. Amer.* 68 (1980), no. 2, 673-685. (Authors' summary) **81e:76061** 76Q05
- Varadan, V. V. (with Peterson, Bo Å.; Varadan, V. K.) Scattering of acoustic waves by layered elastic and viscoelastic obstacles in water. *J. Acoust. Soc. Amer.* 68 (1980), no. 2, 673-685. (Authors' summary) **81e:76061** 76Q05
- Varadhan, K. (with Mislin, Guido) The finiteness obstructions for nilpotent spaces lie in $D(\mathbb{Z})$. *Invent. Math.* 53 (1979), no. 2, 185-191. (Harvey Margolis) **81e:55011** 55P15 (18F25)
- Modules with supplements. *Pacific J. Math.* 82 (1979), no. 2, 559-564. (M. Orzech) **81e:16017** 16A51
- Study of certain pre-radicals. *Comm. Algebra* 8 (1980), no. 2, 185-209. (R. Wiegandt) **81e:16006** 16A21 (16A63)
- (with Gupta, A. K.) Modules over endomorphism rings. *Comm. Algebra* 8 (1980), no. 14, 1291-1333. (L. Bican) **81j:16037** 16A65
- Varadhan, S. R. Srinivasa (with Stroock, Daniel W.) ★Multidimensional diffusion processes. *Grundlehren der Mathematischen Wissenschaften [Fundamental Principles of Mathematical Sciences]*, 233. Springer-Verlag, Berlin-New York, 1979. xii + 338 pp. ISBN 3-540-90353-4 (A. D. Wentzell (Ventcel')) **81f:60108** 60J60
- (with Donker, M. D.) On the number of distinct sites visited by a random walk. *Comm. Pure Appl. Math.* 32 (1979), no. 6, 721-747. (W. E. Pruitt) **81j:60000** 60J15 (60F10)
- Some problems of large deviations. *Proceedings of the International Congress of Mathematicians (Helsinki, 1978)*, pp. 755-762, *Acad. Sci. Fennica, Helsinki*, 1980. (V. K. Rohatgi) **81e:60031** 60F10 (60J05, 60J55)
- (with Donker, M. D.) A law of the iterated logarithm for total occupation times of transient Brownian motion. *Comm. Pure Appl. Math.* 33 (1980), no. 3, 365-393. (S. J. Taylor) **81b:60000** 60J65 (60F15)
- Vardi, J. M. On the separation of two matrices. *SIAM J. Numer. Anal.* 16 (1979), no. 2, 216-222. (Author's summary) **81b:65038** 65F15
- Stability restrictions on second order, three level finite difference schemes for parabolic equations. *SIAM J. Numer. Anal.* 17 (1980), no. 2, 300-309. (Lieouwe Sytse de Jong) **81g:65121** 65M10
- Varaiya, Pravin (with Borkar, V.) Adaptive control of Markov chains. *International Symposium on Systems Optimization and Analysis (Rocquencourt, 1978)*, pp. 145-152, *Lecture Notes in Control and Information Sci.*, 14, Springer, Berlin, 1979. (Authors' summary) **81b:93062** 93E03
- (with Borkar, V.) Adaptive control of Markov chains. I. Finite parameter set. *IEEE Trans. Automat. Control* 24 (1979), no. 6, 953-957. (Authors' summary) **81a:93084** 93D03 (93C40)
- (with Walrand, Jean) A minimum principle for decentralized stochastic control problems. *Dynamic optimization and mathematical economics*, pp. 253-266, *Math. Concepts and Methods in Sci. and Engrg.*, 19, Plenum, New York, 1980. (M. Aoki) **81g:93133** 93E20 (90A17)
- (with Walrand, Jean) Sojourn times and the overtaking condition in Jacksonian networks. *Adv. in Appl. Probab.* 12 (1980), no. 4, 1000-1018. (Benjamin Melamed) **81h:60099** 60K25 (90B22)
- (with Ephremides, A.; Walrand, Jean) A simple dynamic routing problem. *IEEE Trans. Automat. Control* 25 (1980), no. 4, 690-693. (Authors' summary) **81e:90083** 90B22 (60K25)
- (with Sastry, Shankar) Hierarchical stability and alert state steering control of interconnected power systems. *IEEE Trans. Circuits and Systems* 27 (1980), no. 11, 1102-1112. (Authors' summary) **81j:93047** 93D20 (93A13)
- See also Laurin, Robert, **81e:90050** and Gaurit, M.; et al., **81g:93097**
- Varchenko, A. N. Hodge properties of the Gauss-Manin connection. (Russian) *Funktsional. Anal. i Prilozhen.* 14 (1980), no. 1, 46-47. (Helmut Hamm) **81j:32012** 32B30 (34A20, 58A14)
- Contact structures and isolated singularities. (Russian. English summary) *Vestnik Moskov. Univ. Ser. I Mat. Meh.* 1980, no. 2, 18-21, 101. (I. Vaisman) **81h:57015** 57R45 (32C40)
- Vardaan, D. M. (with Truni, K. G.) The Riemann function for Bragg diffraction of X-ray wave packets for a wedge-shaped crystal. (Russian. Armenian and English summaries) *Izv. Akad. Nauk Armjan. SSR Ser. Fiz.* 14 (1979), no. 6, 403-406, 453. (Andrzej Zardecki) **81g:78034** 78A45 (82A60)
- Vardeman, Stephen B. Bounds on the empirical Bayes and compound risks of truncated versions of Robbins's estimator of a binomial parameter. *J. Statist. Plann. Inference* 2 (1978), no. 3, 245-252. (R. S. Singh) **81h:62017** 62C12 (62F10)
- Vardi, M. (with Aharonov, Yakir) Meaning of an individual "Feynman path". *Phys. Rev. D* (3) 21 (1980), no. 8, 2235-2240. (G. R. Allcock) **81e:81044** 81C35
- Vardi, Yehuda On a stopping time of Starr and its use in estimating the number of transmission sources. *J. Appl. Probab.* 17 (1980), no. 1, 235-242. (Wolfgang Winkler) **81g:62140** 62L12
- Vardjilavili, A. B. See Research in mathematics and physics, **81i:00004**
- Vardja, Ju. (with Mels, T.) A new family of measures of statistical dependence and an application of it. (Russian) *Trudy Vysht. Centra Tartu. Gos. Univ.* No. 44 (1980), 24-35. (Jifi Andri) **81h:62105** 62H20
- Vardulakis, Antonis I. G. Zero placement and the "squaring down" problem: a polynomial matrix approach. *Internat. J. Control* 31 (1980), no. 5, 821-832. (Edward W. Kamen) **81f:93015** 93A99 (15A21)
- On infinite zeros. *Internat. J. Control* 32 (1980), no. 5, 849-866. (Author's summary) **81m:93037** 93B55 (93C35, 94C05)
- Varea, V. R. Weakly Hamiltonian envelopes in an algebra. (Spanish. English summary) *Publications of the García de Galdeano Mathematics Seminar*, 25 (Spanish), pp. 5-11, *Consejo Sup. Inv. Cient., Zaragoza*, 1977. (V. A. Artamonov) **81e:16009** 16A22
- Vareh, N. V. (with Ševčenko, V. M.) Investigation of oscillatory properties of solutions of first-order differential equations with deviating argument. (Russian) *Asymptotic methods in the theory of nonlinear oscillations (Proc. All-Union Conf. Asymptotic Methods in Nonlinear Mech., Katsiveli, 1977)* (Russian), pp. 247-262, 278, "Naukova Dumka", Kiev, 1979. (M. K. Grammatikopoulos) **81g:34096** 34K15
- Varela, F. (with Amores, A. M.) Generalization of the Liouville form. Applications. (Spanish) *Collect. Math.* 28 (1977), no. 3, 191-200. (A. Crumeyrolle (Zbl 397:58003)) **81i:58006** 58A15
- Varela Garcia, F. J. See Andrew, Alex M., **81e:00005**
- Varešev, I. I. (with Aliev, M. I.) Solvability of the Dirichlet problem for two-dimensional quasilinear elliptic equations. (Russian) *Azerbaidžan. Gos. Univ. Učen. Zap.* 1977, no. 4, 81-88. (Pavel Doktor) **81k:35049** 35J25
- Varga, A. Efficient algorithm for computation of supremal output nulling invariant and controllability subspaces. (French and German summaries) *Rev. Roumaine Sci. Tech. Sér. Électrotech. Énerg.* 25 (1980), no. 1, 73-80, viii, ix. (Author's summary) **81g:93031** 93B50 (93B05, 93C45)
- Varga, Gyula Factorization of real polynomials having double real roots. (Hungarian. English summary) *Alkalmaz. Mat. Lapok* 4 (1978), no. 3-4, 359-362 (1979). (Author's summary) **81b:65042** 65H05
- Pástor-Varga, Katalin See Pástor-Varga, Katalin
- Varga, Richard S. Recent results in linear algebra and their applications. (Russian) *Numerical methods in linear algebra (Proc. Third Sem. Methods of Numer. Appl. Math., Novosibirsk, 1978)* (Russian), pp. 5-15, *Akad. Nauk SSSR Sibsk. Otdel., Vychisl. Cent., Novosibirsk*, 1978. (E. L. Albasiny) **81m:65062** 65F99
- (with Saff, E. B.) Uniform approximation by incomplete polynomials. *Internat. J. Math. Math. Sci.* 1 (1978), no. 4, 407-420. (John A. Roulier) **81a:41016** 41A10 (41A30)
- (with Lachance, M.; Saff, E. B.) Bounds for incomplete polynomials vanishing at both endpoints of an interval. *Constructive approaches to mathematical models (Proc. Conf. in honor of R. J. Duffin, Pittsburgh, Pa., 1978)*, pp. 421-437, *Academic Press, New York*, 1979. (J. Prasad) **81f:41006** 41A10
- (with Anderson, Ned; Saff, E. B.) On the Eneström-Kakeya theorem and its sharpness. *Linear Algebra Appl.* 28 (1979), 5-16. (Joachim Bustos) **81b:26011** 26C10 (15A48)
- (with Saff, E. B.) The sharpness of Lorentz's theorem on incomplete polynomials. *Trans. Amer. Math. Soc.* 249 (1979), no. 1, 163-186. (Toshihiko Nishishiraho) **81b:41048** 41A25 (33A65, 41A60)
- (with Cavaretta, Alfred S., Jr.; Sharma, Ambikeshwar) Lacunary trigonometric interpolation on equidistant nodes. *Quantitative approximation (Proc. Internat. Sympos., Bonn, 1979)*, pp. 63-80, *Academic Press, New York*, 1980. (H. Burkili) **81k:42004** 42A15 (42A55, 65D10)
- (with Neumann, Michael) On the sharpness of some upper bounds for the spectral radii of S.O.R. iteration matrices. *Numer. Math.* 35 (1980), no. 1, 69-79. (Zdeněk Dostál) **81k:65037** 65F10
- (with Cavaretta, Alfred S., Jr.; Sharma, Ambikeshwar) Hermite-Birkhoff interpolation in the n th roots of unity. *Trans. Amer. Math. Soc.* 259 (1980), no. 2, 621-628. (Jean Trimbale) **81c:39064** 30E05
- Varga, Tünde Über Berwaldsche Räume. II. *Publ. Math. Debrecen* 26 (1979), no. 1-2, 41-50. (Makoto Matsumoto) **81i:53029** 53B40
- pérez de Vargas, Alberto See Pérez de Vargas, Alberto
- soto Vargas, C. W. See Soto Vargas, C. W.
- Vargas, J. A. Fixed points under the action of unipotent elements of SL_n in the flag variety. *Bol. Soc. Mat. Mexicana* (2) 24 (1979), no. 1, 1-14. (Wim H. Hesselink) **81h:14037** 14L30 (15A30)

- Vargas, João B. Some remarks about the uniform distribution. *Proceedings of the 3rd National Symposium on Probability and Statistics (Inst. Mat. Estatist., Univ. São Paulo, São Paulo, 1978) (Portuguese)*, pp. 103–108, Univ. São Paulo, São Paulo, 1979. (Author's introduction) **81k:62047** 62F99
- Vargas, Jorge A. A character formula for the discrete series of a semisimple Lie group. *Bull. Amer. Math. Soc. (N.S.)* **2** (1980), no. 3, 465–467. (Juan Tirao) **81f:22023** 22E46
- A symmetric space of noncompact type has no equivalent isometric immersions into the Euclidean space. *Proc. Amer. Math. Soc.* **81** (1981), no. 1, 149–150. (O. Kowalski) **81j:53054** 53C35 (53C40)
- Vargas, Luis G. A note on the eigenvalue consistency index. *Appl. Math. Comput.* **7** (1980), no. 3, 195–203. (Author's introduction and summary) **81j:90005** 90A05 (92A25)
- Vargas González, Luis (with Infante Macías, Rafael) Estimates of the resource requirements in network optimization problems. *Applied numerical modelling (Proc. Second Internat. Conf., Madrid Polytech. Univ., Madrid, 1978)*, pp. 601–610, Pentech, London, 1979. (Ștefan Țigan) **81g:90040** 90B05
- Varisco, Ada (with Spoletini Cherubini, Alessandra) Semigroups whose proper subsemigroups are t -Archimedean. (Italian. English summary) *Istit. Lombardo Accad. Sci. Lett. Rend. A* **112** (1978), no. 1, 91–98 (1979). (Franco Migliorini) **81k:20068** 20M10
- (with Spoletini Cherubini, Alessandra) Semigroups with simplifiable exponents. (Italian. English summary) *Atti Accad. Sci. Torino Cl. Sci. Fis. Mat. Natur.* **113** (1979), no. 1–2, 175–183. (Franco Migliorini) **81h:20089** 20M10
- (with Spoletini Cherubini, Alessandra) On Putcha's Q -semigroups. *Semigroup Forum* **18** (1979), no. 4, 313–317. (Bernard L. Madson) **81f:20061** 20M10 (20M14)
- (with Spoletini Cherubini, Alessandra) Power cancellative semigroups. *Semigroup Forum* **18** (1979), no. 4, 381–384. (Editors) **81d:20055** 20M10
- (with Spoletini Cherubini, Alessandra) Quasicommutative semigroups and σ -reflexive semigroups. *Semigroup Forum* **19** (1980), no. 4, 313–321. (Jerzy W. Grzymala-Busse) **81h:20088** 20M10
- On E - m semigroups which are bands of t -Archimedean semigroups. *Semigroup Forum* **20** (1980), no. 2, 145–149. (B. Pondělíček) **81h:20090** 20M10
- Varisov, A. K. On the problem of geometric definition of quasiconformality. (Russian) *Dokl. Akad. Nauk SSSR* **250** (1980), no. 4, 777–779. (F. W. Gehring) **81j:30033** 30C60
- van Vark, Gerrit N. (with Schaafsma, Willem) Classification and discrimination problems with applications. *Ila. Statist. Neerlandica* **33** (1979), no. 2, 91–126. (Authors' summary) **81m:62111** 62H30
- Varliaky, P. (with Raftman, N. S.) On subjective dispersion functions. *Transactions of the Eighth Prague Conference on Information Theory, Statistical Decision Functions, Random Processes (Prague, 1978)*, Vol. C, pp. 279–293, Reidel, Dordrecht, 1979. (Authors' summary) **81a:60006** 60A05 (93E03)
- Varlamov, A. A. (with Aslamazov, L. G.) Fluctuation sound absorption in layered superconductors. *Ž. Eksp. Teoret. Fiz.* **77** (1979), no. 6, 2410–2418 (Russian); translated as *Soviet Phys. JETP* **50** (1979), no. 6, 1164–1168 (1980). (Authors' summary) **81d:81129** 81J05
- Varlet, J. C. A strengthening of the notion of essential extension. (French summary) *Bull. Soc. Roy. Sci. Liège* **48** (1979), no. 11–12, 432–437. (George Hutchinson) **81g:08005** 08A30 (06B10)
- Varma, A. K. An analogue of some inequalities of P. Erdős and P. Turán concerning algebraic polynomials satisfying certain conditions. *Fourier analysis and approximation theory (Proc. Colloq., Budapest, 1976)*, Vol. II, pp. 877–890, Colloq. Math. Soc. János Bolyai, 19, North-Holland, Amsterdam, 1978. (R. Feinerman) **81g:41023** 41A17
- (with Prasad, Jagdish) A contribution to the problem of L. Fejér on Hermite-Fejér interpolation. *J. Approx. Theory* **28** (1980), no. 3, 185–196. (P. Vértési) **81e:41005** 41A05 (41A10)
- Varma, Badri N. (with Alspach, Brian; Heinrich, Katherine) Decompositions of complete symmetric digraphs into the oriented pentagons. *J. Austral. Math. Soc. Ser. A* **28** (1979), no. 3, 353–361. (F. Harary) **81g:05067** 05C70
- Varma, V. K. Solution of integral equations with hypergeometric functions as kernels. *J. Indian Acad. Math.* **1** (1979), no. 2, 30–32. (K. C. Gupta) **81c:45013** 45H05 (44A15, 45E99)
- Varegu, Erel (with Finn, W. D. Liam) Finite element solution of the Stefan problem. *Mathematics of finite elements and applications, III (Proc. Third MAFELAP Conf., Brunel Univ., Uxbridge, 1978)*, pp. 117–122, Academic Press, London, 1979. (H. R. Schwarz) **81h:65111** 65N30 (35R35, 49D10)
- (with Finn, W. D. Liam) Finite elements incorporating characteristics for one-dimensional diffusion-convection equation. *J. Comput. Phys.* **34** (1980), no. 3, 371–389. (Authors' summary) **81a:65107** 65N30 (76R99, 80A20)
- Varopoulos, Nicolas B.M.O. functions in complex analysis. *Harmonic analysis in Euclidean spaces (Proc. Sympos. Pure Math., Williams Coll., Williamstown, Mass., 1978)*, Part 2, pp. 43–61, *Proc. Sympos. Pure Math.*, XXXV, Part 2, Amer. Math. Soc., Providence, R.I., 1979. (G. M. Henkin) **81c:32018** 32A35 (32F15)
- See also Harmonic analysis, **81c:42001**
- Vargahovskii, F. L. See Kárteszi, Ferenc, **81f:05002**
- Varianov, R. R. (with Antonian, A. M.) A method for the synthesis of irreducible polynomials over finite fields. (Russian. Armenian summary) *Akad. Nauk Armjan. SSR Dokl.* **66** (1978), no. 4, 197–199. (Stefan Dodunekov) **81c:12021** 12C05
- Várna, C. Optimal bang-bang feedback for control stochastic systems with variable structure. *Rev. Roumaine Math. Phys. Appl.* **23** (1978), no. 9, 1429–1437. (H.-J. Engelbert) **81j:93066** 93E20
- Vartia, Yrjö O. Fisher's five-tined fork and other quantum theories of index numbers. *Theory and applications of economic indices (Proc. Internat. Sympos., Univ. Karlsruhe, Karlsruhe, 1976)*, pp. 271–295, Physica, Würzburg, 1978. (Editors) **81h:90029** 90A12
- Varuđjak, L. V. Interpolation of functions by continued fractions. (Russian) *Mathematical analysis and the theory of functions, No. 8 (Russian)*, pp. 133–140, *Moskov. Oblast. Ped. Inst., Moscow*, 1977. (See **81c:32001**) 65D05
- Vasakmadze, T. S. On applications of a variational-difference method to the solution of some shell theory problems. *Theory of shells (Proc. Third IUTAM Sympos., Tbilisi, 1978)*, pp. 575–581, North-Holland, Amsterdam, 1980. (R. D. Bhargava) **81h:73047** 73L99 (49D25)
- Vasavada, M. H. (with Mehta, R. D.) Wada's type result for a Banach function algebra. *Math. Japon.* **24** (1979/80), no. 1, 25–27. (I. Glicksberg) **81b:46073** 46J15
- Vaschenko, V. P. Representation of functions of the algebra of logic by compositions of partial functions. (Russian) *Trudy Moskov. Orden. Lenin. Energet. Inst. No. 357* (1978), 26–30. (Editors) **81j:03096** 03G05
- Vasconcelos, Aurea R. (with Luzzi, Roberto) Response function theory for far-from-equilibrium statistical systems. *J. Statist. Phys.* **23** (1980), no. 5, 539–559. (V. Protopopescu) **81m:82022** 82A35 (58F13)
- Vasconcelos, Wolmer V. The conormal bundle of an ideal. *Proceedings of the 5th School of Algebra (Rio de Janeiro, 1978)*, pp. 111–166, Soc. Brasil. Mat., Rio de Janeiro, 1978. (P. Schenzel) **81g:13011** 13D10 (14M10)
- Vasilev, A. M. (with Kuz'menko, A. V.) Functional integral for scattering amplitude in the presence of long-range forces. (Russian. English summary) *Teoret. Mat. Fiz.* **41** (1979), no. 1, 12–25. (Woodford W. Zachary) **81a:81077** 81F05 (47A40, 81C35)
- Vasenia, V. A. (with Velerstein, R. A.; Formal'skii, A. M.) Locomotion of anthropomorphic mechanisms in the presence of pulse actions. (Russian) *Dynamics of control systems (Third All-Union Cetaev Conf., Irkutsk, 1977)* (Russian), pp. 53–71, 338, "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. (Authors' summary) **81e:70003** 70B15
- Vasenin, V. V. On the equifine theory of the manifolds nX^{n-1} . (Russian) *Differential geometry of homogeneous spaces (Russian)*, pp. 10–13, Irkutsk. Gos. Univ., Irkutsk, 1979. (Josef Vala) **81k:53002** 53A15
- Vasertin, L. N. On systems of particles with finite-range and/or repulsive interactions. *Comm.-Math. Phys.* **69** (1979), no. 1, 31–56. (D. Newton) **81b:58028** 58F11 (28D99, 70F35)
- Vashakmadze, T. S. See Vasakmadze, T. S.
- Vasí, Petar M. (with Stanković, Ljubomir R.) Some inequalities for convex functions. *Math. Balkanica* **6** (1976), 281–288 (1978). (Paul R. Beesack) **81a:26015** 26D15 (26A51)
- (with Bertolino, Milorad) Professor Dragoslav S. Mitrović. *Univ. Beograd. Publ. Elektrotehn. Fak. Ser. Mat. Fiz.* No. 602–633 (1978), 3–7 (1979). (Editors) **81e:01023** 01A70
- (with Pečarić, Josip E.) On the Jensen inequality for monotone functions. *An. Univ. Timișoara Ser. Științ. Mat.* **17** (1979), no. 1, 95–104. (Paul R. Beesack) **81g:26014** 26D15 (26A48, 26A51)
- (with Raković, Branko D.) Some extremal properties of orthogonal polynomials. *Univ. Beograd. Publ. Elektrotehn. Fak. Ser. Mat. Fiz.* No. 634–677 (1979), 25–32 (1980). (Harold Exton) **81j:33014** 33A65 (94A11)
- (with Pečarić, Josip E.) On the Jensen inequality. *Univ. Beograd. Publ. Elektrotehn. Fak. Ser. Mat. Fiz.* No. 634–677 (1979), 50–54. (Paul R. Beesack) **81h:26016** 26D15 (26A51)
- Vasíček, Oldřich Alfonso A conditional law of large numbers. *Ann. Probab.* **8** (1980), no. 1, 142–147. (Hans-Otto Georgii) **81f:60044** 60F10 (60K35, 82A05)
- Vasíček, Sergiu Projective limits in the categories of heterogeneous algebras and abstract automata. *Rend. Circ. Mat. Palermo (2)* **27** (1978), no. 2, 210–228. (Jiří Adámek) **81e:08010** 08C05 (18B20, 68D30)
- Vasilakis, J. D. (with Wu, Julian J.) Dynamic stability of columns subjected to nonconservative forces. *Transactions of the Twenty-Fifth Conference of Army Mathematicians (Johns Hopkins Univ., Baltimore, Md., 1979)*, pp. 645–660, *ARO Rep.* **80**, 1, U. S. Army Res. Office, Research Triangle Park, N.C., 1980. (Authors' summary) **81a:73028** 73H10
- Vasil'chenko, G. P. (with Svetlakov, A. A.) A projective algorithm for solutions of linear algebraic equations of large dimension. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* **20** (1980), no. 1, 3–10, 259. (O. Pokorný) **81j:65060** 65F10
- Vasil'chenko, I. P. (with Peleh, B. L.) ★ Основы электромагнитного метода исследования напряжений в анизотропных средах. (Russian) [Foundations of the electromagnetic method of studying stresses in anisotropic media] "Naukova Dumka", Kiev, 1980. 114 pp. (Publisher's description) **81a:73009** 73C30 (73R05, 78A25)
- Vasil'cik, M. Ju. Asymptotic behavior of the minimal coefficients of quasiconformality for spatial domains. (Russian) *Dokl. Akad. Nauk SSSR* **249** (1979), no. 4, 777–780. (Matti Vuorinen) **81b:30040** 30C60
- Estimates of the order of proximity to unity of the distortion coefficient of domains infinitely close to the unit ball. (Russian) *Sibirsk. Mat. Ž.* **20** (1979), no. 5, 964–977, 1164. (V. G. Šereto) **81k:30027** 30C60
- Vasilenko, V. A. Approximate solution of the problem of continuation of functions by the finite element method. (Russian) *Variational-difference methods in mathematical physics (Proc. All-Union Conf., Novosibirsk, 1977)* (Russian), pp. 142–148, *Akad. Nauk SSSR Sibirsk. Otdel., Vyčisl. Centr., Novosibirsk*, 1978. (Hans-Jürgen Albrand) **81j:65040** 65D15 (65J05)
- Vasilescu, A. Some decomposition of the gd -automata. *Rev. Roumaine Math. Pures Appl.* **24** (1979), no. 4, 651–657. (From the introduction) **81d:68073** 68D37
- Vasilescu, F.-H. Analytic perturbations of the β -operator and integral representation formulas in Hilbert spaces. *J. Operator Theory* **1** (1979), no. 2, 187–205. (Jürgen Leiterer) **81d:32009** 32A25 (47A60)
- A uniqueness result in operator theory. *Rev. Roumaine Math. Pures Appl.* **24** (1979), no. 10, 1525–1541. (Henry R. Dowson) **81c:47036** 47B40
- Vasil'ev, A. A. (with Malozëmov, V. N.; Pevnyi, A. B.) Interpolation and approximation by spline functions of an arbitrary defect. (Russian. English summary) *Vestnik Leningrad. Univ. Mat. Meh. Astronom.* **1979**, vyp. 4, 23–30, 121. (S. D. Riemenschneider) **81g:41004b** 41A05 (41A15)
- Vasil'ev, A. I. Čebyšev sets and strict convexity of linear metric spaces. (Russian) *Mat. Zametki* **25** (1979), no. 5, 653–664, 798. (P. S. Kenderov) **81j:46007** 46A05 (41A50)
- Delta-compactness of the algebraic sum of sets. (Russian) *Mat. Zametki* **26** (1979), no. 5, 779–784, 815. (Z. Frolík) **81c:41052** 41A65 (41A50, 54E99)
- Vasil'ev, A. N. See Vase'ev, A. M.
- Vasil'ev, D. G. A formula for the frequency distribution function of a shell of revolution immersed in a liquid. (Russian) *Dokl. Akad. Nauk SSSR* **248** (1979), no. 2, 325–328. (V. T. Golovchan) **81a:73040** 73L20
- Vasil'ev, E. D. (with Blažević, B. I.; Semotjuk, V. N.) A rational form of representation of a mathematical model of a nonlinear circuit with linear elements. (Russian. English summary) *Teoret. Elektrotehn. No. 28* (1980), 119–128, 170. (Authors' summary)

- 81m:94025 94C05**
Vasil'ev, E. N. (with Kapustin, Ju. G.) Excitation of a cylindrical resonator with a dielectric body in it. (Russian) *Trudy Moskov. Orden. Lenin. Energet. Inst.* No. 433 (1979), 43-47, 94. (Authors' summary) **81d:78012 78A25 (45B05)**
- Vasil'ev, F. P.** A method of solving a time-optimal problem. (Russian) *Math. Balkanica* 6 (1976), 289-290 (1978). (A. B. Kuržanskiĭ) **81d:65034 65K99**
 Regularization of ill-posed extremal problems. (Russian) *Dokl. Akad. Nauk SSSR* 241 (1978), no. 5, 1001-1004. (Author's review (RŽMAT 1978:12 B977)) **81j:49020 49D30**
 Methods of searching for optimum time in dynamic games of pursuit-evasion with programmed control. (Russian) *Dokl. Akad. Nauk SSSR* 246 (1979), no. 4, 788-791. (From the text) **81a:90171 90D26**
 (with Kovács, Margit) On regularization of ill-posed extremal problems using penalty and barrier functions. (Russian) *Vestnik Moskov. Univ. Ser. XV Vyčisl. Mat. Kibernet.* 1980, no. 2, 29-35, 72. (Gerhard Telschow) **81g:65091 65K10 (49D30, 90C30)**
 Regularization of ill-posed problems of minimization on sets given approximately. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 20 (1980), no. 1, 38-50, 259. (Ulrich Eckhardt) **81h:65075 65K10 (90C30)**
- Vasil'ev, I. L.** (with Čumakov, F. V.) Integral equations of Abel type on a closed contour. (Russian) *Vestnik Beloruss. Gos. Univ. Ser. I* 1980, no. 2, 40-44, 63. (L. G. Mihaïlov) **81h:45066 45E05 (30D05)**
- Vasil'ev, Ju. L.** Massive classes of dense Boolean functions. I. (Russian) *Diskret. Analiz* No. 32 *Metody Diskret. Analiza v Sintez Upravl. Sistem* (1978), 21-33, 95. (Authors' summary) **81e:94046 94C10 (03G05, 68C05)**
- Vasil'ev, Ju. P.** Computer description of finite fields. *Kibernetika (Kiev)* 1979, no. 5, 133-135 (Russian. English summary); translated as *Cybernetics* 15 (1979), no. 5, 749-752 (1980). (D. H. Lehmer) **81i:12001 12-04**
- Vasil'ev, L. V.** (with Dem'janov, V. F.) A method of (ϵ, μ, τ) -generalized gradient descent in the presence of constraints. (Russian. English summary) *Vestnik Leningrad. Univ. Mat. Meh. Astronom.* 1979, vyp. 4, 19-23, 121. (Authors' summary) **81h:49016 49D07 (90C25)**
- Vasil'ev, O. V.** Optimality conditions in controllable dynamic processes of operator type. (Russian) *Problems of stability of motion, analytical mechanics and control of motion (Third All-Union Četaev Conf., Irkutsk, 1977)* (Russian), pp. 235-244, 326. "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. (Authors' summary) **81g:93060 93C20**
 Optimality of singular boundary controls in systems with distributed parameters. (Russian) *Upravljajemye Sistemy* No. 18 (1979), 4-13, 76. (M. A. Jagubov) **81g:49029 49C20 (49B34)**
 (with Aščepkov, L. T.; Kovalenok, I. L.) A strong optimality condition for singular controls in a Goursat-Darboux system. (Russian) *Differencial'nye Uravnenija* 16 (1980), no. 6, 1054-1059, 1147. (L. Longdon) **81h:49012 49B22 (35B37)**
- Vasil'ev, S. N.** (with Matrosov, V. M.; Divakov, O. G.; Tjajukin, A. I.) On technology of modelling and optimization of complex systems. *Modelling and optimization of complex systems (Proc. IFIP-TC 7 Working Conf., Novosibirsk, 1978)*, pp. 220-239, *Lecture Notes in Control and Information Sci.* 18, Springer, Berlin, 1979. (P. Bertrand) **81e:93011 93A10**
 Conservation of some dynamic properties under morphisms. (Russian) *Problems of stability of motion, analytical mechanics and control of motion (Third All-Union Četaev Conf., Irkutsk, 1977)* (Russian), pp. 111-119, 323. "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. (Authors' summary) **81h:93004 93A99**
- Vasil'ev, V. A.** Affineness of normal forms of the μ -const strata of germs of smooth functions. (Russian) *Funkcional. Anal. i Priložen.* 12 (1978), no. 3, 72-73. (G. N. Himiašvili) **81a:58014 58C27 (58C25)**
 Asymptotic behavior of exponential integrals in the complex domain. (Russian) *Funkcional. Anal. i Priložen.* 13 (1979), no. 4, 1-12, 96. (H. Tornehave) **81m:41035 41A60 (32C40, 58C27)**
 (with Romanovskii, Ju. M.; Jahno, V. G.) Autowave processes in distributed kinetic systems. *Uspehi Fiz. Nauk* 128 (1979), no. 4, 625-666 (Russian); translated as *Soviet Phys. Uspekhi* 22 (1979), no. 8, 615-639 (1980). (Authors' summary) **81j:82046 82A99 (93A09)**
- Vasil'ev, V. B.** (with Vavilin, V. A.) ★Математическое моделирование процессов биологической очистки сточных вод активным илом. (Russian) [Mathematical modeling of processes of biological treatment of sewage by activated sludge] "Nauka", Moscow, 1979. 120 pp. (Authors' summary) **81d:92063 92A05 (80A30, 90A30, 92A17, 93A13)**
- Vasil'ev, V. I.** (with Babe, G. D.; Kanibolotskii, M. A.; Timofeeva, T. S.) A difference method for solving the problem of non-steady-state isothermic gas filtration. (Russian) *Methods in continuum mechanics (Russian)*, pp. 50-58, 124, *Akad. Nauk SSSR Sibirsk. Otdel. Jakutsk. Filial, Yakutsk*, 1977. (Jaroslav Jelen) **81e:76068 76S05**
- Vasil'ev, V. P.** (with Žuk, K. D.) On the determination of controllability for one of the subclasses of logical-dynamical control systems. (Russian. English summary) *Kibernetika (Kiev)* 1978, no. 2, 78-82. **81g:93015 93B05**
- Vasil'ev, V. V.** (with Lobov, V. V.) Fundamental solutions of a system of linear homogeneous integro-differential equations. (Russian) *Differential and integral equations*, No. 4 (Russian), pp. 260-269, 321, *Irkutsk. Gos. Univ., Irkutsk*, 1976. (S. D. Miluieva) **81e:45019 45J05**
 (with Snjatinskaja, I. N.) Application of the Hilbert-Schmidt theory to the solution of linear integro-differential equations of a certain class. (Russian) *Application of the methods of functional analysis to problems of mathematical physics and numerical analysis (Russian)*, pp. 19-27, *Akad. Nauk SSSR Sibirsk. Otdel., Inst. Mat., Novosibirsk*, 1979. (M. Trvdý) **81m:45016 45J05**
 Optimal design of momentless reinforced shells of rotation. (Russian) *Studies in elasticity and plasticity*, No. 13 (Russian), pp. 7-13, 305, *Leningrad. Univ., Leningrad*, 1980. (See **81k:73002**) **73L99 (73K40)**
- Vasil'ev, Vasil S.** (with Sguerev, Vasil S.) Optimization of a closed dynamic transportation system with limited capacity. (Bulgarian. Russian and English summaries) *Problemi Tehn. Kibernet.* 10 (1980), 16-23. (Authors' summary) **81h:90082 90B35**
- Vasil'ev, Yu. P.** See **Vasil'ev, Ju. P.**
- Vasil'eva, A. B.** Singularly perturbed systems in critical cases. (Russian) *Asymptotic methods in the theory of nonlinear oscillations (Proc. All-Union Conf. Asymptotic Methods in Nonlinear Mech., Katsiveli, 1977)* (Russian), pp. 34-43, 273. "Naukova Dumka", Kiev, 1979. (A. M. Il'in) **81j:34104 34E15**
 (with Kuraev, N. M.) An internal transition layer in a one-sided stable singularly perturbed system. (Russian) *Differencial'nye Uravnenija* 15 (1979), no. 10, 1748-1753, 1916. (J. W. Macki) **81a:34049 34E15**
 (with Tihonov, A. N.; Sveĭnikov, A. G.) ★Дифференциальные уравнения. (Russian) [Differential equations] Курс Высшей Математики и Математической Физики [Course in Higher Mathematics and Mathematical Physics], 7. "Nauka", Moscow, 1980. 232 pp. (From the preface) **81f:34005 34-01**
 (with Dmitriev, M. G.) Determination of the structure of a generalized solution to a nonlinear problem of optimal control. (Russian) *Dokl. Akad. Nauk SSSR* 250 (1980), no. 3, 525-528. (From the text) **81b:49008 49A50**
 (with Hasanov, A. A.) Application of singular perturbation theory to the investigation of mathematical problems of mass transfer in multicomponent systems. (Russian) *Dokl. Akad. Nauk SSSR* 251 (1980), no. 3, 529-534. (N. A. Sidorov) **81h:34066 34E20 (34E05, 80A20)**
- Vasil'eva, E. M.** (with Levit, B. Ju.; Livšic, V. N.) The choice of optimal trajectory in the development of a main transportation network. (Russian) *Ėkonom. i Mat. Metody* 15 (1979), no. 4, 731-746. (I. V. Romanovskii) **81h:90075 90B10**
- Vasil'eva, M. V.** Structure of an n -dimensional Finler space. (Russian) *Geometry of imbedded manifolds (Russian)*, pp. 10-17, *Moskov. Gos. Ped. Inst., Moscow*, 1978. (M. C. Chaki) **81h:53030 53B40**
- Vasil'eva, V. N.** (with Luzgina, T. N.) On the question of the uniqueness of an inverse problem for the heat equation. (Russian) *Differential and integral equations*, No. 4 (Russian), pp. 10-13, 311, *Irkutsk. Gos. Univ., Irkutsk*, 1976. (See **80i:80004**) **35R30 (35K05)**
 Method of determining the coefficients or right-hand side of a linear differential equation. (Russian) *Questions in applied mathematics (Russian)*, pp. 94-101, *Sibirsk. Energet. Inst., Akad. Nauk SSSR Sibirsk. Otdel., Irkutsk*, 1977. (V. G. Romanov) **81g:35116 35R30 (65P05)**
 A problem of reconstructing a boundary condition for an equation of elliptic type. (Russian) *Numerical methods of optimization (applied mathematics) (Russian)*, pp. 110-117, *Akad. Nauk SSSR Sibirsk. Otdel., Energet. Inst., Irkutsk*, 1978. (V. G. Romanov) **81g:35117 35R30 (49B22)**
- Vasilevskii, A. B.** ★Обучение решению задач. (Russian) [Training in problem solving] "Vyš Škola", Minsk, 1979. 192 pp. (M. Stojaković) **81f:00004 00A07 (00A05)**
- Vasillauskas, Z.** The convergence in W_2^1 of the approximate variational-difference solution of the Signorini problem. (Russian. Lithuanian and English summaries) *Litovsk. Mat. Sb.* 18 (1978), no. 1, 45-57, 241. (W. Keca) **81g:49019 49A99 (35J35, 73C99)**
- Vasili'enko, L. B.** Interpolation on closed sets. (Russian) *The theory of the approximation of functions (Proc. Internat. Conf., Kaluga, 1975)* (Russian), pp. 77-79. "Nauka", Moscow, 1977. (E. O. Zeel) **81c:41010 41A05 (41A10)**
- Vasin, A. A.** Equilibrium situations in a hypergame with discounted payoffs. (Russian) *Questions in applied mathematics (Russian)*, pp. 5-19, *Sibirsk. Energet. Inst., Akad. Nauk SSSR Sibirsk. Otdel., Irkutsk*, 1977. (Authors' introduction) **81e:90101 90D20**
 (with Gurvič, V. A.) Reconcilable sets of coalitions. (Russian) *Questions in applied mathematics (Russian)*, pp. 20-30, *Sibirsk. Energet. Inst., Akad. Nauk SSSR Sibirsk. Otdel., Irkutsk*, 1977. (Authors' introduction) **81h:90172 90D12**
 (with Gurvič, V. A.) Reconcilable sets of coalitions for games in a normal form. (Russian) *Numerical methods of optimization (applied mathematics) (Russian)*, pp. 27-38, *Akad. Nauk SSSR Sibirsk. Otdel., Energet. Inst., Irkutsk*, 1978. (Authors' introduction) **81j:90147 90D12**
- Vaslu, Mircea** Sur l'équation de dispersion d'un modèle de plasma composé II. (Romanian summary) *Studia Univ. Babeş-Bolyai Ser. Phys.* 24 (1979), no. 2, 35-37. (Author's summary) **81h:76072 76X05**
- Vaskovjak, M. A.** Qualitative characteristics of the evolution of orbits in the restricted, circular doubly averaged three-body problem. (Russian. English summary) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint* No. 157 (1979), 31 pp. (Authors' summary) **81i:70010 70F07**
- Vaskovjak, S. N.** Representation of a shadow function in the form of a series in degrees of eccentricity of a satellite's orbit. (Russian. English summary) *Moskov. Gos. Univ. Soobš. Gos. Astronom. Inst. Sternberg* No. 208-209 (1979), 3-6. (J. F. Heyda) **81h:85065 85A10 (70M05)**
- Vasquez, A. T.** (with Keen, L.; Rauch, Harry E.) Moduli of punctured tori and the accessory parameter of Lamé's equation. *Trans. Amer. Math. Soc.* 255 (1979), 201-230. (Authors' summary) **81j:34074 30F10 (14H15)**
 (with Thomas, Emery) On the resolution of cusp singularities and the Shintani decomposition in totally real cubic number fields. *Math. Ann.* 247 (1980), no. 1, 1-20. (V. V. Šokurov) **81h:10037 10D21 (14G25, 14J17, 14J30)**
- Vassanji, Moyez** (with Klein, Abraham; Li, Ching Teh) Variational principles for particles and fields in Heisenberg matrix mechanics. *J. Math. Phys.* 21 (1980), no. 10, 2521-2527. (Y. Kato) **81j:81028 81C99 (81E99)**
- Vassner, Christian P. A.** (with Postaire, Jack G.) A convexity testing method for cluster analysis. *IEEE Trans. Systems Man Cybernet.* 10 (1980), no. 3, 145-149. (Authors' summary) **81h:68112 68G10**
- Vasseur, G.** (with Barthes, V.) An inverse problem for electromagnetic projection. *Applied inverse problems*, pp. 325-329, *Lecture Notes in Phys.* 85, Springer, Berlin, 1978. (Christiane Coudray) **81e:78009 78A25 (45L10, 86A20)**
- Vassiliou, Elestathios** Affine transformations of Banachable bundles of frames. *Math. Balkanica* 6 (1976), 291-295 (1978). (V. Cruceanu) **81h:58012 58B20 (53C05)**
 On the holonomy theorem. (Greek summary) *Prakt. Akad. Athinon* 51 (1976), 463-467 (1977). (V. Cruceanu) **81h:58011 58B20 (53C05)**
 (f, g, h)-related connections and Liapunov's theorem. *Rend. Circ. Mat. Palermo* (2) 27 (1978), no. 3, 337-346. (Mihai Anastasie) **81d:58013 58B20 (34G10, 53C05)**
- Vassiliou, F. P.** (with Vassiliou, P.-C. G.) On the limiting structure of an expanding Markovian system with given size. *Rev. Roumaine Math. Pures Appl.* 24 (1979), no. 7, 1129-1136. (M. V. Kartašov) **81d:93057 93E03 (60J20, 90A16)**
- Vassiliou, P.-C. G.** (with Vassiliou, F. P.) On the limiting structure of an expanding Markovian system with given size. *Rev. Roumaine Math. Pures Appl.* 24 (1979), no. 7,

- 1129-1136. (M. V. Kartalov) **81d:93057** 93E03 (60J20, 90A16)
 A note on stability in Gani-type models in manpower systems. *J. Oper. Res. Soc.* **31** (1980), no. 10, 953-954. (Author's summary) **81h:60096** 60J20 (92A20)
 On certain aspects of a simple random walk with one random and one nonrandom absorbing barrier. *Scand. Actuar. J.* **1980**, no. 3, 161-171. (Frederick Stern) **81k:60074** 60J15
- Vassilyev, S. N. See Vasil'ev, S. N.
- Vasudeva, Harkrishna Positive definite matrices and absolutely monotonic functions. *Indian J. Pure Appl. Math.* **10** (1979), no. 7, 854-858. (A. Meir) **81a:26007** 26A48
 (with Chattopadhyay, K. C.) On the lattice of f -proximities. *Proc. Amer. Math. Soc.* **80** (1980), no. 3, 521-525. (Ivan L. Reilly) **81h:54033** 54E05
- Vasudeva, R. Functional law of the iterated logarithm for i.i.d. random variables attracted to a completely asymmetric stable law. (Russian summary) *Teor. Veroyatnost. i Primenen.* **24** (1979), no. 4, 835-840. (R. A. Maller) **81d:60042** 60F17 (60F15)
- Vasudevan, R. (with Jagannathan, R.) A note on representation of para-Fermi algebra. *J. Math. Phys.* **19** (1978), no. 7, 1493-1494. (Authors' summary) **81g:81031** 81C40 (17B65)
 (with Jagannathan, R.) New representations of para-Fermi and para-Bose fields. *Proceedings of the Conference on Probability, Stochastic Processes and Statistical Mechanics (Mysore, 1979)*, pp. 1-11, Matscience Rep., 97, Inst. Math. Sci., Madras, 1979. (Authors' summary) **81m:81032** 81D05 (81Hxx)
 (with Vittal, P. R.; Vijayakumar, A.) On a class of two-barrier problems. *Proceedings of the Conference on Probability, Stochastic Processes and Statistical Mechanics (Mysore, 1979)*, pp. 135-163, Matscience Rep., 97, Inst. Math. Sci., Madras, 1979. (From the introduction) **81m:60140** 60J30
 (with Vittal, P. R.; Vijayakumar, A.) A level crossing problem. *Proceedings of the Conference on Mathematical Methods in Physics (Mysore, 1978)*, Part A, pp. 254-267c, Matscience Rep., 96, Inst. Math. Sci., Madras, 1979. (Authors' summary) **81g:60072** 60J30 (60K30)
 (with Goel, C. K.) Pairwise compactness in bitopological hyperspaces. (Serbo-Croatian summary) *Glas. Mat. Ser. III* **15**(35) (1980), no. 1, 157-162. (C. V. Riecke) **81h:54009** 54B20 (54E55)
- Văză, P. Convergence theorems of some numerical approximation schemes for the class of nonlinear integral equations. (Romanian and French summaries) *Bul. Univ. Galați Fac. II Mat. Fiz. Mec. Teoret.* **1** (1978), 25-33. (Baruch Cahlon) **81h:65135** 65R20 (45D05)
- Vatfel, I. A. Core in n -person game with personal and social criteria. *Automat. i Telemekh.* **1980**, no. 1, 91-96. (Russian. English summary); translated as *Automat. Remote Control* **41** (1980), no. 1, part 2, 73-77. (From the text) **81h:90148** 90D12 (90D30)
- Vatsala, A. S. (with Vaughn, Randy) Existence and comparison results for differential equations of Sobolev type. *Appl. Math. Comput.* **6** (1980), no. 2, 177-187. (V. Lakshmikantham) **81h:34006** 34A34 (45D05)
- Vatutin, V. A. A new limit theorem for a critical Bellman-Harris branching process. (Russian) *Mat. Sb. (N.S.)* **109**(151) (1979), no. 3, 440-452, 480. (E. Seneta) **81h:60085** 60J80
 The distance to the nearest common ancestor in Bellman-Harris branching processes. (Russian) *Mat. Zametki* **25** (1979), no. 5, 733-741, 799. (A. Spătaru) **81f:60079** 60G99 (60J80)
- Vaudine, Renée Stabilité géométrique et régularisation dans les espaces intégraux de type Orlicz à paramètre; critère de compacité de Kolmogorov-Riesz. *Travaux Sémin. Anal. Convexe* **8** (1978), no. 1, Exp. No. 6, 23 pp. (Diethard Pallaschke) **81d:46030** 46E30 (49A50, 90C25)
- Vaughan, J. E. Countably compact, locally countable T_2 -spaces. *Proc. Amer. Math. Soc.* **80** (1980), no. 1, 147-153. (S. A. Peregrinov) **81g:54017** 54D20 (54A25, 54D25, 54D30, 54G20)
- Vaughan, R. C. A survey of some important problems in additive number theory. *Journées Arithmétiques de Luminy (Colloq. Internat. CNRS, Centre Univ. Luminy, Luminy, 1978)*, pp. 213-222, *Astérisque*, 61, Soc. Math. France, Paris, 1979. (M. I. Israilov) **81i:10057** 10Jxx
 (with Montgomery, H. L.) Mean values of character sums. *Canad. J. Math.* **31** (1979), no. 3, 476-487. (H. G. Diamond) **81c:10043** 10G20
 Recent work in additive prime number theory. *Proceedings of the International Congress of Mathematicians (Helsinki, 1978)*, pp. 389-394, *Acad. Sci. Fennica, Helsinki*, 1980. (M. I. Israilov) **81j:10077** 10J15
- Vaughan, Theresa P. (with Byrd, Ken) A group of integral points in a matrix parallelepiped. *Linear Algebra Appl.* **30** (1980), 155-166. (J. D. Dixon) **81f:15027** 15A36 (20K05)
- Vaughan-Lee, M. R. Derived lengths of Burnside groups of exponent 4. *Quart. J. Math. Oxford Ser. (2)* **30** (1979), no. 120, 495-504. (J. E. Roseblade) **81i:20032** 20E10
 Laws in finite algebras. *Word problems, II (Conf. on Decision Problems in Algebra, Oxford, 1976)*, pp. 443-448, *Studies in Logic and Foundations of Math.*, 95, North-Holland, Amsterdam, 1980. (Stanley N. Burris) **81g:00014** 08B99
- Vaughn, Randy Criteria for the existence and comparison of solutions to nonlinear Volterra integral equations in Banach space. *Nonlinear equations in abstract spaces (Proc. Internat. Sympos. Univ. Texas, Arlington, Tex., 1977)*, pp. 463-468, Academic Press, New York, 1978. (Robert H. Martin, Jr.) **81h:45029** 45N05 (45D05)
 (with Lakshmikantham, V.) Parabolic differential inequalities in cones. *Applicable Anal.* **9** (1979), no. 4, 257-266. (V. Duriković) **81c:35064** 35K55 (35B05, 35B45)
 (with Vatsala, A. S.) Existence and comparison results for differential equations of Sobolev type. *Appl. Math. Comput.* **6** (1980), no. 2, 177-187. (V. Lakshmikantham) **81h:34006** 34A34 (45D05)
 Solutions of linear Sobolev differential equations. *Appl. Math. Comput.* **6** (1980), no. 3, 211-216. (E. H. Twizell) **81g:65123** 65M99
- Vaupell, Bernard (with Franchi-Zannettacci, Paul) Automates à file. *Theoret. Comput. Sci.* **11** (1980), no. 2, 221-225. (Authors' introduction) **81h:68119** 68F05
- Vause, C. (with Sak, J.) Non-Ising-like effects in the liquid-vapor transition: singularity in the coexistence curve diameter. *Phys. Lett. A* **77** (1980), no. 2-3, 191-195. (Authors' summary) **81g:82058** 82A50 (82A25)
 (with Sak, J.) Non-Ising-like effects in the liquid-vapor transition: equations of state. *Phys. Rev. A* (3) **21** (1980), no. 6, 2099-2114. (Authors' summary) **81c:82012** 82A25
- Vauthier, Jacques Homotopie stochastique dans le complexe de de Rham. Obstruction à des formules de la moyenne pour des formes harmoniques. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **290** (1980), no. 19, A901-A903. (Jean-Louis Ducourtioux) **81j:58006** 58G32 (58A12, 60H99)
- Vavilia, V. A. (with Vasil'ev, V. B.) ★Математическое моделирование процессов биологической очистки сточных вод активным илом. (Russian) [Mathematical modeling of processes of biological treatment of sewage by activated sludge] "Nauka", Moscow, 1979. 120 pp. (Authors' summary) **81d:92003** 92A05 (80A30, 90A30, 92A17, 93A13)
- Vavilov, N. A. (with Borevič, Z. I.) Subgroups of the general linear group over a semilocal ring that contain a group of diagonal matrices. (Russian) *Algebra, number theory and their applications. Trudy Mat. Inst. Steklov.* **148** (1978), 43-57, 271. (A. A. Mahnev) **81g:20085** 20G35
 (with Borevič, Z. I.; Narkiewicz, Władysław) Subgroups of the general linear group over a Dedekind ring. (Russian) *Rings and modules, 2. Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* **94** (1979), 13-20, 149. (M. M. Murač) **81i:20053** 20G35 (20H25)
 Parabolic subgroups of Chevalley groups of twisted type over a semilocal ring. (Russian) *Rings and modules, 2. Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* **94** (1979), 21-36, 149-150. (M. M. Murač) **81j:20069** 20H25 (20G35)
 (with Kolotilina, L. Ju.) The normal structure of the general linear group over a semilocal ring. (Russian) *Rings and modules, 2. Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* **94** (1979), 37-39, 150. (M. M. Murač) **81i:20054** 20G35
 (with Plotkin, E. B.) Net subgroups of Chevalley groups. (Russian) *Rings and modules, 2. Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* **94** (1979), 40-49, 150. (James E. Humphreys) **81i:20059** 20G35
- Vavilov, V. V. See Werner, John. **81f:31001**
- Vaykhman, I. A. See Vailman, I. A.
- Valdiev, V. P. Application of L. S. Pontrjagin's maximum principle to the solution of extremal problems in a class of functions with bounded mean modulus. (Russian) *Sibirsk. Mat. Ž.* **21** (1980), no. 3, 42-55, 235. (L. A. Aksej'ev) **81j:30035** 30C75 (30D55)
- Valešni, Ju. M. (with Perminov, E. A.) Rigid lattices and graphs. (Russian) *Ural. Gos. Univ. Mat. Zap.* **11** (1979), no. 3 *Issled. po Sovremen. Algebre*, 3-21, 209. (Larry Basenspieler) **81g:05061** 05C15 (06B99)
- Vazirani, Vijay V. (with Micali, Silvio) An $O(\sqrt{|V|} \cdot |E|)$ algorithm for finding maximum matching in general graphs. *21st Annual Symposium on Foundations of Computer Science (Syracuse, N.Y., 1980)*, pp. 17-27, IEEE, New York, 1980. (See **81h:68006**) **68E10** (68C25)
- Vasquez-Vazquez, J. See Casas-Vazquez, J.
- Vázquez, R. (with Herrlich, Horst; Salicrú López, Graciela) Light factorization structures. *Quaestiones Math.* **3** (1978/79), no. 3, 189-213. (Roy Dyckhoff) **81e:18003** 18A20 (54B30)
- V'oraki, I. H. Time optimal control of linear discrete systems. (Bulgarian. Russian and English summaries) *Godišnik Visš. Učebn. Zaved. Priložna Mat.* **14** (1978), no. 2, 155-163 (1979). (Author's summary) **81h:93024** 93C05 (93C55)
- Veber, K. Various notions of minimality of disjunctive normal forms. (Russian) *Problemy Kibernet.* **No. 36** (1979), 129-158, 279. (P. Ecsedi-Tóth) **81i:94041** 94C10
- di Vecchia, P. (with Veneziano, G.) Chiral dynamics in the large N limit. *Nuclear Phys. B* **171** (1980), no. 3, 253-272. (Authors' summary) **81h:81141** 81G05
- Vecchia, Sergio (with De Dominicis, Rodolfo) Some asymptotic properties of C -ergodic stochastic processes. (Italian. English summary) *Boll. Un. Mat. Ital. A* (5) **17** (1980), no. 2, 287-294. (Ștefan P. Niculescu) **81i:60081** 60K15
- Vedil, A. (with Granero Porat, M. I.; Porat, A.) Analytical conditions for the conservative form of the ecological equations. *Bull. Math. Biol.* **40** (1978), no. 2, 257-264. (Authors' summary) **81a:92020** 92A17
- Ved', Ju. A. A criterion for the existence of asymptotic solutions of differential equations with retarded argument. (Russian) *Izv. Akad. Nauk Kirgiz. SSR* **1979**, no. 4, 15-17, 105. (József Kalinowski) **81d:34066** 34K25
 An asymptotic problem for nonlinear integro-differential equations of the Volterra type. (Russian) *Izv. Akad. Nauk Kirgiz. SSR* **1980**, no. 1, 17-22, 113. (Sergiu Aizicovici) **81f:45019** 45K05
 (with Iskandarov, S.) Characteristic singularities of integro-differential systems of Volterra type. (Russian) *Izv. Akad. Nauk Kirgiz. SSR* **1980**, no. 3, 30-34, 97. (J. Švedja) **81k:45015** 45J05 (45M05)
- Vedel', Ja. Ja. See Wedel, Jakob
- Vedenecova, K. Z. See Golant, V. E.; et al., **81c:82018**
- Vedernikov, S. V. Homogeneous spaces generated by an algebra and their morphisms. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* **1979**, no. 11, 77-80. (Adrian C. Albu) **81d:53034** 53C30
 Geometry of a fundamental space. (Russian) *Kaliningrad. Gos. Univ. Differentsial'naja Geom. Mnogoobraz. Figur* **No. 10** (1979), 22-29, 161. (George Virsik) **81h:53011** 53B05
- Vedernikov, V. I. (with Bel'ko, I. V.; Vodnev, V. T.; Gusak, A. A.; Nahimovskaja, A. I.; Rjabuško, A. P.; Tutaeu, L. K.; Fedenko, A. S.) ★Сборник задач по дифференциальной геометрии. (Russian) [A collection of problems in differential geometry] Second edition, revised. "Nauka", Moscow, 1979. 272 pp. (Editors) **81i:53001** 53-01 (00A07)
- Vedle-Vedove, W. See Dalle-Vedove, W.
- Veech, William A. Ergodic theory and uniform distribution. *Journées Arithmétiques de Luminy (Colloq. Internat. CNRS, Centre Univ. Luminy, Luminy, 1978)*, pp. 223-234, *Astérisque*, 61, Soc. Math. France, Paris, 1979. (Gérard Raouy) **81g:10067** 10K05 (28D99)
 Weakly almost periodic functions on semisimple Lie groups. *Monatsh. Math. Ph.* **10** (1979), no. 1, 55-68. (S. G. Dani) **81h:22012** 22D40 (43A60)
- van der Veen, Henk (with van Tits, Martien) Simulation of a queueing problem with balking. *Simulation* **35** (1980), no. 3, 88-93. (Authors' summary) **81h:90063** 90B22 (68J05)
- Veevers, A. (with Boffey, T. B.) On the nonexistence of balanced designs for two-variety competition experiments. *Utilitas Math.* **16** (1979), 131-143. (M. L. Chandak) **81m:05019** 05B05 (62K10)

- de Vega, H. J. Large orders in the $1/N$ perturbation theory by inverse scattering in one dimension. *Comm. Math. Phys.* 70 (1979), no. 1, 29–42. (Pierre C. Sabatier) **81g:81017** 81C12 (81E99, 81F99, 82A05)
- Vega, J. (with Kapila, A. K.; Matkowsky, Bernard J.) Reactive-diffusive system with Arrhenius kinetics: peculiarities of the spherical geometry. *SIAM J. Appl. Math.* 38 (1980), no. 3, 382–401. (Mario Primicerio) **81h:80009** 80A30 (34B10)
- van de Vegte, J. See Van de Vegte, J.
- Veloso, H. See Beltrão da Veiga, Hugo
- Veller, E. L. The gap between sets and stability theorems in locally convex spaces. (Russian) *Topological spaces and their mappings* (Russian), pp. 14–30, 150, *Lato. Gos. Univ., Riga*, 1979. (M. M. Day) **81j:46006** 46A05
- Small perturbations and theorems on existence and uniqueness of solutions. (Russian) *Topological spaces and their mappings* (Russian), pp. 31–43, 150, *Lato. Gos. Univ., Riga*, 1979. (P. Rutkauskas) **81m:47025** 47A55 (35L99, 47H15)
- Vellon, Françoise One pass computation of morphological and geometrical properties of objects in digital pictures. (German and French summaries) *Signal Process.* 1 (1979), no. 3, 175–189. (Author's summary) **81g:68123** 68G10 (94A05)
- Veln, P. R. (with Dale, P.) Determinants, their derivatives and nonlinear differential equations. *J. Math. Anal. Appl.* 74 (1980), no. 2, 599–634. (H. E. Fettes) **81f:15013** 15A15 (33A65, 34A34, 83C99)
- Velson, I. A. (with Mamedov, R. G.) Some theorems on functional multipliers for Fourier and Laplace transforms. (Russian) *Studies in some questions of the constructive theory of functions and differential equations* (Russian), pp. 53–59, *Azerbaidžan. Inst. Nefti i Himii, Baku*, 1974. (See **80d:00021**) 42B15 (44A10)
- Velova, Š. I. An inequality of S. N. Bernstein-S. M. Nikol'skii's type for analytic functions of several variables. (Russian) *Studies in some questions of the constructive theory of functions and differential equations* (Russian), pp. 60–64, *Azerbaidžan. Inst. Nefti i Himii, Baku*, 1974. (See **80d:00021**) 46E99
- Velt, W. (with Dangelmayr, G.; Günttinger, W.) Semiclassical path integrals in terms of catastrophes. *Structural stability in physics* (Proc. Internat. Symposia Appl. Catastrophe Theory and Topological Concepts in Phys., Inst. Inform. Sci., Univ. Tübingen, Tübingen, 1978), pp. 104–121, *Springer Ser. in Synergetics*, 4, Springer, Berlin, 1979. (A. Voros) **81a:81033** 81C35 (28C20, 58C28)
- Veteh, L. G. (with Fujikoshi, Yasunori) Estimation of dimensionality in canonical correlation analysis. *Biometrika* 66 (1979), no. 2, 345–351. (Jacques Dauxois) **81f:62094** 62H20 (62J10)
- Vejrova, O. (with Štědrý, Milan) Periodic solutions of a weakly nonlinear autonomous wave equation. (Russian summary) *Partial differential equations* (Russian), pp. 17–36, 142, *Trudy Sem. S. L. Soboleva*, No. 2, 1978, *Akad. Nauk SSSR Sibsk. Otdel., Inst. Mat., Novosibirsk*, 1978. (Mitsuhiko Nakao) **81g:35083** 35L70 (58E05)
- Veksel, A. I. Normal measures on compact spaces and order continuous functionals on vector lattices. *Proceedings of the Conference on Topology and Measure*, I (Zimovitz, 1974), Part 2, pp. 383–391, *Ernst-Moritz-Arndt Univ., Greifswald*, 1978. (From the text) **81h:28010** 28C15 (46A40)
- (with Abramovič, Ju. A.; Koldunov, A. V.) Operators that preserve disjunction. (Russian) *Dokl. Akad. Nauk SSSR* 248 (1979), no. 5, 1033–1036. (N. Popa) **81e:47034** 47B55
- (with Zaharov, V. K.) Topological spaces and vector lattices. (Russian) *International Topology Conference* (Moscow State Univ., Moscow, 1979). *Uspehi Mat. Nauk* 35 (1980), no. 3(213), 153–157. (Y. Kodama) **81h:54047** 54G99
- Vekua, I. N. ★ Основы тензорного анализа и теории ковариантов. (Russian) [Foundations of tensor analysis and the theory of covariants] "Nauka", Moscow, 1978. 296 pp. (W. Wrona) **81a:53004** 53A45 (73L05)
- See also Theory of shells, **81c:73003**; Obituary: Vekua, I. N., **81h:01016**;
- Differential and integral equations. Boundary value problems, **81j:73002** and Gjunter, A. F., **81j:73064**
- Vekua, N. P. Some meromorphic solutions of a homogeneous Riemann-Hilbert boundary value problem for several unknown functions. (Russian. Georgian and English summaries) *Sakharth. SSR Mecl. Akad. Moambe* 89 (1978), no. 1, 17–20. (Author's summary) **81h:30075** 30E25
- van de Vel, Marcel (with van Mill, Jan) Path connectedness, contractibility, and LC-properties of superextensions. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math. Astron. Phys.* 26 (1978), no. 3, 261–269. (Authors' summary) **81g:54040** 54F99 (54C55)
- (with van Mill, Jan) On superextensions and hyperspaces. *Topological structures, II* (Proc. Sympos. Topology and Geom., Amsterdam, 1978), Part 1, pp. 169–180, *Math. Centre Tracts*, 115, *Math. Centrum, Amsterdam*, 1979. (Roman Duda) **81a:54011** 54B20
- On pseudoboundaries and pseudo-interiors. *Topological structures, II* (Proc. Sympos. Topology and Geom., Amsterdam, 1978), Part 2, pp. 263–270, *Math. Centre Tracts*, 116, *Math. Centrum, Amsterdam*, 1979. (V. P. Soltan) **81e:52001** 52A01 (54D15)
- (with van Mill, Jan) On an internal property of absolute retracts. The Proceedings of the 1979 Topology Conference (Ohio Univ., Athens, Ohio, 1979). *Topology Proc.* 4 (1979), no. 1, 193–200 (1980). (K. Sieklucki) **81j:54024** 54C55 (54F40)
- A Hahn-Banach theorem in subbase convexity theory. *Canad. J. Math.* 32 (1980), no. 4, 804–820. (Jean-Paul Doignon) **81h:52004** 52A01 (54B20)
- Some elementary proofs in fixed point theory. *Nederl. Akad. Wetensch. Indag. Math.* 42 (1980), no. 4, 437–444. (L. E. Ward, Jr.) **81m:54083** 54H25 (54F20)
- Velarde, M. G. (with Fairén, V.) Dissipative structures in a nonlinear reaction-diffusion model with forward inhibition. Stability of secondary multiple steady states. *Rep. Math. Phys.* 16 (1979), no. 3, 421–432. (From the summary and text) **81g:80011** 80A30 (35K55, 92A09)
- gonzález-Velasco, Enrique A. See González-Velasco, Enrique A.
- das Velasco, Flavio R. See Dias Velasco, Flavio R.
- Velasco, V. R. (with García-Moliner, F.) Surface effects in elastic surface waves. *Phys. Scripta* 20 (1979), no. 1, 111–120. (From the summary) **81g:73030** 73D20 (35Q20, 76Bxx)
- Velickii, I. V. Technological lines of program production. *Programirovanie* 1980, no. 6, 14–26, 94 (Russian); translated as *Programming and Comput. Software* 6 (1980), no. 2, 66–76 (1981). (Author's summary) **81m:68012** 68B05
- Vel't, Gernard H. (with Rozzi, Tullio E.) Variational treatment of the diffraction at the facet of d.h. lasers and of dielectric millimeter wave antennas. *IEEE Trans. Microwave Theory Tech.* 28 (1980), no. 2, 61–73. (Authors' summary) **81h:78007** 78A45 (49G05, 78A50)
- van Veldhuizen, M. Higher order schemes of positive type for singular perturbation problems. *Numerical analysis of singular perturbation problems* (Proc. Conf., Math. Inst., Catholic Univ., Nijmegen, 1978), pp. 361–383, *Academic Press, London*, 1979. (N. A. Sidorov) **81g:65114** 65L10
- Veldkamp, Ferdinand D. A note on the Campbell-Hausdorff formula. *J. Algebra* 62 (1980), no. 2, 477–478. (Bernard Kolman) **81m:17010** 17B05
- Veldkamp, G. R. The matrix equation $A^* = E$. (Dutch) *Nieuw Tijdschr. Wisk.* 67 (1979/80), no. 2, 76–83. (G. E. Wall) **81f:15024** 15A24
- A multiple-sided curve. (Dutch) *Nieuw Tijdschr. Wisk.* 67 (1979/80), no. 4, 183–187. (F. De Clerck) **81h:51011** 51M05 (51M15)
- (with Bottema, Oene) Instantane projectie and affine Kinematik. *Österreich. Akad. Wiss. Math.-Natur. Kl. Sitzungsber. II* 180 (1979), no. 1–3, 119–141. (H. Brauner) **81j:53009** 53A17 (51N30)
- Velerstein, R. A. (with Vasenin, V. A.; Formal'skii, A. M.) Locomotion of anthropomorphic mechanisms in the presence of pulse actions. (Russian) *Dynamics of control systems* (Third All-Union Česava Conf., Irkutsk, 1977) (Russian), pp. 53–71, 338, "Nauka" Sibsk. Otdel., Novosibirsk, 1979. (Authors' summary) **81e:70003** 70B15
- Vélez, William Yalas (with Slater, Peter J.) Permutations of the positive integers with restrictions on the sequence of differences. II. *Pacific J. Math.* 82 (1979), no. 2, 527–531. (N. G. de Bruijn) **81c:05001** 05A05
- On normal binomials. *Acta Arith.* 36 (1980), no. 2, 113–124. (C. F. Mopper) **81k:12026** 12F10
- Veličenko, V. V. (with Volkova, I. I.) Mathematical modeling of the motion of complex mechanical systems by the method of controlled couplings. (Russian) *Theory of stability and its applications* (Russian), pp. 261–264, 304, "Nauka" Sibsk. Otdel., Novosibirsk, 1979. (Authors' summary) **81e:90004** 93A10
- Velikin, V. N. Some special fields of pseudonormals on surfaces in Euclidean space. (Russian) *Geometry of imbedded manifolds* (Russian), pp. 26–32, *Moskov. Gos. Ped. Inst., Moscow*, 1978. (H. Kılıp) **81j:53002** 53A05 (53B05)
- Velikko, D. A. Random search for variants of solutions according to a vector criterion. (Russian) *Mathematical methods in operations research and reliability theory* (Russian), pp. 8–13, *Akad. Nauk Ukrain. SSR, Inst. Kibernet., Kiev*, 1978. (Editors) **81d:90066** 90B40
- Veller, M. A. (with Aliiev, F. A.) Solvability of the Cauchy problem for a second-order equation with operators of local type. (Russian. Azerbaijani and English summaries) *Akad. Nauk Azerbaidžan. SSR Dokl.* 35 (1979), no. 8, 16–20. (M. Švec) **81g:34077** 34G10
- Veller, M. B. (with Gadziev, I. T.) The S-matrix of a system of Sturm-Liouville equations on the entire axis. (Russian. Azerbaijani and English summaries) *Akad. Nauk Azerbaidžan. SSR Dokl.* 35 (1979), no. 6, 11–15. (A. A. Škalikov) **81j:34042** 34B25
- Veller, O. A. The one-dimensional Schrödinger operator with periodic complex-valued potential. (Russian) *Dokl. Akad. Nauk SSSR* 250 (1980), no. 6, 1292–1296. (Alexander Alenicyan) **81d:34022** 34B25 (47E05)
- Veliev, S. G. (with Maksudov, F. G.) Factorization of the scattering matrix for a system of Dirac equations on the entire axis. (Russian) *Spectral theory of operators* (Proc. Second All-Union Summer Math. School, Baku, 1975) (Russian), pp. 121–133, "Elm", Baku, 1979. (M. Otelbaev) **81h:34020** 34B25 (47E05)
- Vellikov, A. L. (with Liberman, M. A.) Shock waves in a transverse magnetic field. *Uspehi Fiz. Nauk* 129 (1979), no. 3, 377–406 (Russian); translated as *Soviet Phys. Uspekhi* 22 (1979), no. 11, 843–859 (1980). (Authors' summary) **81h:76036** 76L05 (76K05)
- Velling, E. J. M. (with Grasman, J.) Asymptotic methods for the Volterra-Lotka equations. *Asymptotic analysis*, pp. 146–157, *Lecture Notes in Math.*, 711, Springer, Berlin, 1979. (T. J. Mahar) **81e:92008** 92A15 (34C25)
- Vellou, N. P. Polystructures. (Bulgarian. Russian and English summaries) *Godišnik Viz. Učebn. Zaved. Prirodna Mat.* 14 (1978), no. 1, 65–76. (Author's summary) **81g:18013** 18D05
- (with Taškova, B. S.) Equivalence relations agreeing with a tolerance relation. (Bulgarian. Russian and English summaries) *Godišnik Viz. Učebn. Zaved. Prirodna Mat.* 14 (1978), no. 1, 77–84. (D. Kurepa) **81h:05096** 05C35 (04A05, 05C70)
- naerlovic-Veljkovic, Natalija See Naerlovic-Veljkovic, Natalija
- Veljkovic, Čiril (with Dobrovolic, Danica) Bibliography of the works of Ivan Vidav up to 1977. (Slovenian) *Obzornik Mat. Fiz.* 25 (1978), no. 2, 67–70. (Editors) **81h:01032** 01A70
- Velleman, Paul F. Definition and comparison of robust nonlinear data smoothing algorithms. *J. Amer. Statist. Assoc.* 75 (1980), no. 371, 609–615. (Colin L. Mallows) **81m:62179** 62M20 (62E25)
- Vefov, V. M. (with Gičev, Todor R.) The effect of inertia of the control device in the time-optimality problem. (Russian) *Servica* 5 (1979), no. 4, 362–369. (Authors' summary) **81g:93033** 93C05 (49B36)
- van Velsen, J. F. C. Curvature statistics of some few-body Debye-Hückel and Lennard-Jones systems. *J. Phys. A* 13 (1980), no. 3, 833–854. (Joseph Ford) **81h:82089** 82A05 (58F13)
- adel'son-Vel'skii, G. M. See Adel'son-Vel'skii, G. M.
- Veltkamp, G. W. Discretization and extrapolation. (Dutch) *Nieuw Tijdschr. Wisk.* 66 (1978/79), no. 4, 265–275. (Editors) **81h:65025** 65D99
- (with van der Sluis, A.) Restoring rank and consistency by orthogonal projection. *Linear Algebra Appl.* 28 (1979), 257–278. (M. Stojaković) **81e:15008** 15A09
- Veltman, M. (with Green, M.) Weak and e.m. radiative corrections to low-energy processes. *Nuclear Phys. B* 169 (1980), no. 1–2, 137–164. (Authors' summary) **81h:81147** 81G15 (81L05)
- Vetri, P. (with Dobrowolny, M.; Mangeney, A.) Fully developed anisotropic hydromagnetic turbulence in interplanetary space. *Phys. Rev. Lett.* 43 (1980), no. 2, 144–147. (Authors' summary) **81h:76103** 76W05 (76F99)
- Vélu, Jacques Le groupe cuspidal des courbes de Fermat. *Séminaire Delange-Pisot-Poitou*, 20e année: 1978/1979. *Théorie des nombres*, Fasc. 2 (French), Exp. No. 28, 11 pp.,

- Secrétariat Math., Paris*, 1980. (M. A. Kenku) **81k:14024** 14G99 (10D12, 10D35)
Sur un théorème de D. Rohrich. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **290** (1980), no. 3, A157–A160. (Author's introduction) **81f:14013** 14G25 (10B15, 14H25)
- Velupillai, Manoranjitham** The Diophantine equation $y^2 = Dx^4 + 4$. *Bull. Calcutta Math. Soc.* **68** (1976), no. 4, 275–278. (From the text) **81a:10024** 10B10
- Vehucsek, Antonio** (with Millevoi, Tomaso) The extension property in Noetherian rings. (Italian. English summary) *Rend. Sem. Mat. Univ. Padova* **60** (1978), 23–31 (1979). (Ezio Stagnaro) **81a:13012** 13E05 (14F05)
- Venable, T. C.** (with Bhapkar, V. P.) On Gart's test for interaction of second order. *Comm. Statist. A—Theory Methods* **8** (1979), no. 5, 463–470. (Dennis D. Wackerly) **81c:62062** 62H17
- Venables, W.** (with James, A. T.) Interval estimates for a bivariate principal axis. *Multivariate analysis, V (Proc. Fifth Internat. Sympos., Univ. Pittsburgh, Pittsburgh, Pa., 1978)*, pp. 399–411, North-Holland, Amsterdam, 1980. (Colin L. Mallows) **81c:62003** 62A30 (62F25, 62H25)
- Venčef, E. S.** Solution of certain linear boundary value problems of the theory of elasticity with a complex operator by means of simple boundary value problems. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* **1980**, no. 8, 36–39, 88. (Author's summary) **81b:73005** 73C02
- Vencko, Josef** On an application of the Tychonoff fixed point theorem to a Cauchy nonlinear problem. (Slovak and Russian summaries) *Acta Fac. Rerum Natur. Univ. Comenian. Math.* **34** (1979), 39–50. (I. Aganović) **81f:35034** 35G25
Bemerkungen zu einer Randwertaufgabe in drei Punkten für die Differentialgleichung dritter Ordnung. (Slovak and Russian summaries) *Acta Fac. Rerum Natur. Univ. Comenian. Math.* **34** (1979), 69–73. (Harold E. Benzing) **81b:34011** 34B10 (34C10)
- Vencovská, A.** A method for constructing some endomorphic universes. *Comment. Math. Univ. Carolin.* **20** (1979), no. 4, 655–668. (Editors) **81f:03005** 03E70
- Venec, V. I.** Differential inclusions in convex problems. *Avtomat. i Telemekh.* **1979**, no. 9, 5–14 (Russian. English summary); translated as *Automat. Remote Control* **40** (1979), no. 9, part 1, 1261–1269 (1980). (H. Mukai) **81c:90061** 90C25 (34A60, 49D45)
- Venetsanopoulos, Anastasios N.** (with Dubois, Eric) The generalized discrete Fourier transform in rings of algebraic integers. *IEEE Trans. Acoust. Speech Signal Process.* **28** (1980), no. 2, 169–175. (Stefan Dodunekov) **81f:12013** 12C99 (94A11)
- Venezia, Itzhak** The effect of increased variance on the duration of search: a note. *J. Econom. Theory* **23** (1980), no. 1, 127–129. (Author's summary) **81i:90050** 90A19
- Veneziano, G.** (with di Vecchia, P.) Chiral dynamics in the large N limit. *Nuclear Phys. B* **171** (1980), no. 3, 253–272. (Authors' summary) **81b:81141** 81G05
- Vengero, A. B.** The use of logical models for conducting data bases for problems of optimal planning and control. (Russian) *Optimizacija No. 22(39)* (1978), 98–102, 156. (Author's summary) **81b:68023** 68B15 (90B40)
- Venkov, V. A.** See *Energetics approach to systems research*, **81c:93005**
- Venisi, Eugenio** (with Cippo, Claudio Perelli) A neuro-model of the propositional calculus. (Italian summary) *Proceedings of the Brescia Mathematical Seminar, Vol. 3 (Italian)*, pp. 102–118, Univ. Cattolica Sacro Cuore, Milan, 1979. (Authors' summary) **81b:68032** 68C01 (03B05, 68D90)
- Venkatachallenger, K.** Elliptic modular functions and Picard's theorem. *Hyperbolic complex analysis (Proc. All India Sem., Ramanujan Inst., Univ. Madras, Madras, 1977)*, pp. 21–41, Publ. Ramanujan Inst., 4, Univ. Madras, Madras, 1979. (W. H. Simons) **81f:30028** 30D35
- Venketeswarar, S. V.** (with Walterscheid, R. L.) Influence of mean zonal motion and meridional temperature gradients on the solar semiannual atmospheric tide: a spectral study. I. Theory. *J. Atmospheric Sci.* **36** (1979), no. 9, 1623–1635. (Authors' summary) **81c:86012a** 86A10 (76R05, 86A05)
(with Walterscheid, R. L.) Influence of mean zonal motion and meridional temperature gradients on the solar semiannual atmospheric tide: a spectral study. II. Numerical results. *J. Atmospheric Sci.* **36** (1979), no. 9, 1636–1662. (Authors' summary) **81c:86012b** 86A10 (76R05, 86A05)
- Venketeswarar Rao, G.** (with Singa Rao, K.) Large amplitude supersonic flutter of panels with ends elastically restrained against rotation. *Comput. & Structures* **11** (1980), no. 3, 197–201. (Authors' summary) **81b:73025** 73J10 (65N30)
- Venkatramiah, S.** (with Sinha, T. N.) The equation $x^2 - Py^2 = 2z^2$, P , a Mersenne prime. *Indian J. Mech. Math.* **16** (1978), no. 2, 45–47. (E. L. Cohen) **81g:10030** 10B05
- Venkov, B. B.** Spectral theory of automorphic functions, the Selberg zeta function and some problems of analytic number theory and mathematical physics. (Russian) *Uspehi Mat. Nauk* **34** (1979), no. 3(207), 69–135, 248. (Larry J. Goldstein) **81c:10034** 10D24 (10H10, 35P25, 47A40, 58G25)
On the remainder term in the Weyl-Selberg asymptotic formula. (Russian. English summary) Analytic number theory and the theory of functions, 2. *Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* **91** (1979), 5–24, 180. (P. Günther) **81k:58070** 58G25 (10D24, 10J25)
Zeros of ξ - and L -functions of imaginary quadratic fields and eigenvalues of the PSL(2, \mathbb{Z})-automorphic Laplacian. (Russian) *Dokl. Akad. Nauk SSSR* **250** (1980), no. 3, 528–531. (Larry J. Goldstein) **81c:10035** 10D24 (12A70, 47A70, 58G25)
See also *Analytic number theory and the theory of functions*, **81a:10003**
- Venkov, B. B.** Classifications of integral even unimodular 24-dimensional quadratic forms. (Russian) Algebra, number theory and their applications. *Trudy Mat. Inst. Steklov.* **148** (1978), 65–76, 273. (S. A. Stepanov) **81d:10024** 10E25
Odd unimodular lattices. (Russian) Algebraic numbers and finite groups. *Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* **86** (1979), 40–48, 189. (R. A. Rankin) **81a:10043** 10E05 (52A43)
- stojanova-Venkova, Atanasa H.** See *Stojanova-Venkova, Atanasa H.*
- Venner, B. M.** Arbres de déduction naturelle et programmation en LCF: possibilités de "normalisation". *Les arbres en algèbre et en programmation (4ème Colloq., Lille, 1979)*, pp. 261–274, Univ. Lille I, Lille, 1979. (Author's summary) **81c:68074** 68G15 (03B40, 03F05)
- Vent'ef, A. D.** (with Freidlin, M. I.) ★Флуктуации в динамических системах под действием малых случайных возмущений. (Russian) [Fluctuations in dynamical systems subject to small random perturbations] Теория Вероятностей и
- МАТЕМАТИЧЕСКАЯ СТАТИСТИКА. [Probability Theory and Mathematical Statistics] "Nauka", Moscow, 1979. 424 pp. (A. Devinatz) **81c:60072** 60H10 (35B25, 58F30, 60J60, 93E15)
★Theorie zufälliger Prozesse. (German) [Theory of random processes] Translated from the Russian by Jürgen Groh. Edited and with a foreword by Hans Jürgen Engelbert and Jürgen Groh. Mathematische Lehrbücher und Monographien, II. Abteilung: Mathematische Monographien [Mathematical Textbooks and Monographs, Part 2: Mathematical Monographs], 50. Akademie-Verlag, Berlin, 1979. x+253 pp. (Editors) **81f:60003a** 60–02
★Theorie zufälliger Prozesse. (German) [Theory of random processes] Lehrbücher und Monographien aus dem Gebiete der Exakten Wissenschaften (LMW). Mathematische Reihe [Textbooks and Monographs in the Exact Sciences. Mathematical Series], 65. Birkhäuser Verlag, Basel-Boston, Mass., 1979. x+253 pp. ISBN 3-7643-1021-9 (Editors) **81f:60003b** 60–02
Rough limit theorems on large deviations for Markov random processes. III. (Russian. English summary) *Teor. Veroyatnost. i Primenen.* **24** (1979), no. 4, 673–691. (D. A. Darling) **81c:60040** 60F10 (60J75)
- Vent'ef, E. S.** ★Elements of game theory. Translated from the Russian by Vladimir Shokurov [Vladimir Šokurov]. Little Mathematics Library. "Mir", Moscow, 1980. 69 pp. (Editors) **81f:90119** 90Dxx
- Ventura, A.** (with Izé, Antonio Fernandez) Relationship in the neighbourhood of infinity and asymptotic equivalence of neutral functional differential equations. *Functional differential equations and bifurcation (Proc. Conf., Inst. Cienc. Mat. São Carlos, Univ. São Paulo, São Carlos, 1979)*, pp. 217–251, Lecture Notes in Math., 799, Springer, Berlin, 1980. (Tadeusz Dłotko) **81m:34098** 34K15
- Venturi, G.** (with Rigbi, R.) Conformal invariance and the fine-structure constant in a nonlinear approach to electrodynamics. (Italian and Russian summaries) *Nuovo Cimento A (11)* **57** (1980), no. 3, 309–319. (Authors' summary) **81b:81146** 81G10 (81L05)
- Venturini Zilli, Marisa** (with Longo, Giuseppe) A Δ -calculus with an algorithmic δ . *Arch. Math. Logik Grundlagen*, **20** (1980), no. 1–2, 41–52. (B. Lercher) **81b:03032** 03B40
- Venz, Paolo** On geodesic mappings in Riemannian and pseudo-Riemannian manifolds. *Tensor (N.S.)* **33** (1979), no. 1, 23–28. (Victor Bangert) **81m:53030a** 53B20 (53B30)
On conformally recurrent manifolds. *Tensor (N.S.)* **33** (1979), no. 1, 40–42. (J. Ferrand) **81g:53033** 53C20
On conformal mappings in Riemannian and pseudo-Riemannian manifolds with symmetry conditions. *Tensor (N.S.)* **33** (1979), no. 1, 109–113. (R. Miron) **81b:53044** 53C20
Geodätische Abbildungen in Riemannscher Mannigfaltigkeiten. *Tensor (N.S.)* **33** (1979), no. 3, 313–321. (Victor Bangert) **81m:53030b** 53B20 (53B30)
Geodätische Abbildungen mit $\lambda_{ij} = \delta_{ij}$. *Tensor (N.S.)* **34** (1980), no. 2, 230–234. (Victor Bangert) **81m:53030c** 53B20 (53B30)
- Veraart, Albert** See *Frege, Gottlob*, **81d:03001**
- Vera Saravia, Edgar** Locally convex spaces that are the injective limit of weakly compact injective sequences of locally convex spaces. (Spanish. English summary) *Rev. Cienc. (Lima)* **71** (1979), no. 1, 15–19. (M. Valdivia) **81i:46005** 46A12 (46A25)
- Veraverbeke, N.** Asymptotic behavior of the supremum of a process with stationary independent increments. *Bull. Soc. Math. Belg.* **28** (1976), no. 1, 17–27. (Author's summary) **81a:60082** 60J30
(with Callaert, H.; Janssen, P.) Some asymptotic results for the distribution function of U -statistics. *Proceedings of the Second Prague Symposium on Asymptotic Statistics (Hradec Králové, 1978)*, pp. 135–146, North-Holland, Amsterdam, 1979. (W. Hoeffding) **81c:60016** 60F05 (62E20)
(with Callaert, H.; Janssen, P.) An Edgeworth expansion for U -statistics. *Ann. Statist.* **8** (1980), no. 2, 299–312. (W. Hoeffding) **81c:60022** 60F05 (62E20)
- Verbeek, P. W.** (with Verhagen, C. J. D. M.; Duin, R. P. W.; Groen, F. C. A.; Joosten, J. C.) Progress report on pattern recognition. *Rep. Progr. Phys.* **43** (1980), no. 6, 785–831. (From the summary) **81b:68089** 68G10
- Verbeek, Rutger** ★Primitiv-rekursiv Grzegorzcz-Hierarchien. (German) [Primitively recursive Grzegorzcz-hierarchies] With an English summary. Informatik-Berichte [Reports on Information Science], 22. Universität Bonn, Institut für Informatik, Bonn, 1978. v+137 pp. (G. Wechsung) **81b:03086** 03D20
(with Weihrauch, Klaus) Data presentation and computational complexity. *Proceedings of a Conference on Theoretical Computer Science (Univ. Waterloo, Waterloo, Ont., 1977)*, pp. 111–119, Univ. Waterloo, Waterloo, Ont., 1978. (A. L. Selman) **81b:68059** 68C25 (03D15)
(with von Braumühl, Burchard) Finite-change automata. *Theoretical computer science (Fourth GI Conf., Aachen, 1979)*, pp. 91–100, Lecture Notes in Comput. Sci., 61, Springer, Berlin, 1979. (M. Tetruashvili) **81j:03062** 03D05 (03D10, 68C40, 68F10)
(with von Braumühl, Burchard) A recognition algorithm for deterministic CFLs optimal in time and space. 21st Annual Symposium on Foundations of Computer Science (Syracuse, N.Y., 1980), pp. 411–420, IEEE, New York, 1980. (See **81i:68008**) 68C25 (68F10)
- Verbeure, A.** (with Pulé, Joe V.) Dissipative operators for infinite classical systems and equilibrium. *J. Math. Phys.* **20** (1979), no. 11, 2286–2290. (Fritz Schwarz) **81c:82009** 82A05
(with Demeo, Bart; Vanheuverzwijn, Paul) Completely positive quasifree maps of the CCR-algebra. *Rep. Math. Phys.* **15** (1979), no. 1, 27–39. (Derek W. Robinson) **81b:46080** 46L55
(with Fannes, M.; Spohn, Herbert) Equilibrium states for mean field models. *J. Math. Phys.* **21** (1980), no. 2, 355–358. (Authors' summary) **81a:82015** 82A15 (81K05)
(with Fannes, M.) The condensed phase of the imperfect Bose gas. *J. Math. Phys.* **21** (1980), no. 7, 1809–1818. (F. Rocca) **81b:82017** 82A15
(with Fannes, M.) The condensed state of the imperfect Bose gas. *Phys. Lett. A* **76** (1980), no. 1, 31–33. (Authors' summary) **81b:82017** 82A25 (81Hxx)
- Verbitskii, B. V.** A global property of matrix-valued functions that depend on several variables. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* **1978**, no. 1(188), 8–17. (Ju. Trohimčuk) **81a:15022** 15A54 (15A21, 58C25)
- Verbitskii, I. E.** Multipliers of spaces l_p^k (Russian) *Funkcional. Anal. i Priložen.* **14** (1980),

- no. 3, 67-68. (V. V. Peller) **81m:30054** 30H05 (42A45, 46J15)
Estimate of the norm of a function in a Hardy space in terms of the norms of its real and imaginary parts. (Russian) *Linear operators. Mat. Issled.* No. 54 (1980), 16-20, 164-165. (P. L. Duren) **81k:30046** 30D55 (42A50)
- Verbitskiy, S. An extension of the inequality of Rajchman-Zygmund. *J. London Math. Soc.* (2) **22** (1980), no. 1, 87-98. (D. C. Russell) **81g:42009** 42A16 (26D20)
- Vercellotti, C. (with Archetti, Francesco) An application of nonlinear programming techniques to the energy-economic optimization of building design. *Optimization techniques (Proc. Ninth IFIP Conf., Warsaw, 1979), Part 2*, pp. 569-576. *Lecture Notes in Control and Information Sci.*, 23, Springer, Berlin, 1980. (See **81j:49001b**) 90A30
- Vertenko, I. Ja. (with Kolmogorov, A. N.; Boltjanskii, V. G.; Maslova, G. G.; Belousov, V. D.; Brovikov, I. S.; Gnedenko, B. V.; Sikorskii, K. P.; Čerkasov, R. S.; Švarčburd, S. I.) Aleksei Ivanovič Markuševič. (Russian) *Mat. v Škole* **1979**, no. 5, 77-78. (Editors) **81m:01059** 01A70
- Verdaguer, Enric Approximate Poincaré invariance of the post-Newtonian metric tensor and gauge conditions. *J. Phys. A* **13** (1980), no. 9, 3011-3021. (Larry L. Smalley) **81m:83019** 83C25 (22E70, 53B50, 83C10)
- Vervars, Joan On finitely generated and projective extensions of Banach algebras. *Proc. Amer. Math. Soc.* **80** (1980), no. 4, 614-620. (R. Arens) **81m:46070** 46J05
- Verrier, Jean-Louis Équations différentielles algébriques. *Séminaire Bourbaki, 30e année (1977/78), Exp. No. 512*, pp. 102-122. *Lecture Notes in Math.*, 710, Springer, Berlin, 1979. (A. M. Vinogradov) **81j:58050** 58F07 (14D05, 34A99)
- collab. de Verdère, Yves See Collin de Verdère, Yves
- Verdini, William A. (with Morris, James G.) Minimax L_1 distance location problems solved via a perturbed problem and Weiszfeld's algorithm. *Oper. Res.* **27** (1979), no. 6, 1180-1188. (John J. Dinkel) **81h:90064** 90B05 (90C08)
- Verdon, J. M. (with Werle, M. J.) Solutions for laminar subsonic trailing edge flows at asymptotically large Reynolds numbers. *Boundary and interior layers—computational and asymptotic methods (Proc. Conf., Trinity College, Dublin, 1980)*, pp. 164-178. Boole, Din Laoghaire, 1980. (See **81j:76001**) 76C99
- Verdooren, L. R. On estimation of variance components. *Statist. Neerlandica* **34** (1980), no. 2, 83-106. (Friedrich Pukelsheim) **81i:62125** 62J10
- Ventù, I. Solana, Ventura Distributive and Boolean logic. (Catalan. English summary) *Stochastica* **3** (1979), no. 2, 97-108. (Author's summary) **81d:03058** 03G10 (03B99, 03G05)
- Ver Eecke, Paul ★Calculus of jets and higher order connections. Translated from the French and Spanish, edited and with revisions by J. J. Cross and F. R. Smith. *University of Melbourne, Department of Mathematics, Parkville*, 1978. vi+290 pp. (Jean Pradines) **81c:58001** 58-01 (20L15, 53C05, 58A20, 58B20)
- ★Géométrie des espaces de Riemann. (French) [Geometry of Riemannian spaces] Publications de l'U.E.R. de Mathématiques de l'Université de Picardie. *Société d'Édition d'Enseignement Supérieur, Paris*, 1978. iii+165 pp. ISBN 2-7181-2815-1 (J. Vanzura) **81c:53001** 53-01 (53C20, 53C22)
- Vesel, F. A qualitative analysis of the plane, averaged, restricted, three-body problem. *Astronom. Z.* **57** (1980), no. 1, 182-189. (Russian); translated as *Soviet Astronom.* **24** (1980), no. 1, 107-111. (Author's summary) **81j:70002** 70F07
- Veselić, B. M. Reconstruction of a closed convex surface from a given function of the Gauss curvature. (Russian) *Questions of global geometry (Russian)*, pp. 7-12. *Leningrad. Gos. Ped. Inst., Leningrad*, 1979. (P. E. Markov) **81i:53047** 53C45
- Veselić, V. P. (with Kaščenko, M. P.) Markov form of the nonequilibrium statistical operator for systems with weak interaction. (Russian. English summary) *Teoret. Mat. Fiz.* **42** (1980), no. 1, 133-138. (Nicolae Angelescu) **81i:82031** 82A35 (82A77)
- Veselić, L. I. Invariant solutions of equations of a three-dimensional nonstationary boundary layer. (Russian. English summary) *Vestnik Leningrad. Univ. Mat. Meh. Astronom.* **1980**, vyp. 2, 61-65, 125. (B. A. Bondarenko) **81k:35011** 35A30 (35C99)
- Veser Ferrer, Ernesto Utility and information. (Spanish. English summary) *Estadist. Española* **80**, 80-81 (1978), 39-56. (From the introduction) **81g:62009** 62B10 (90A10, 94A15)
- The concavity of the expected information. (Spanish. English summary) *Estadist. Española* **80**, 82-83 (1979), 79-94. (Author's summary) **81k:62011** 62B10
- Vesesh, F. See Veser, F.
- Vetrennikov, A. Ju. Strong solutions of stochastic differential equations. (Russian. English summary) *Teor. Veroyatnost. i Primenen.* **24** (1979), no. 2, 348-360. (M. P. Eršov) **81b:60058** 60H10
- Vergara B., Luis A. Suboptimality of the deterministic control in the presence of random errors in the sample intervals. (French and German summaries) *Rev. Roumaine Sci. Tech. Sér. Électrotech. Énerg.* **25** (1980), no. 2, 247-257, viii, x. (Author's summary) **81h:93122** 93E20
- Vergese, S. N. (with Docenko, V. S.) Renormalizability of phase factors in nonabelian gauge theory. *Nuclear Phys. B* **169** (1980), no. 5-6, 527-546. (Authors' summary) **81f:81056** 81E99 (81E15)
- Verghese, George (with Van Dooren, P.; Kailath, Thomas) Properties of the system matrix of a generalized state-space system. *Proceedings of the 1978 IEEE Conference on Decision and Control including the 17th Symposium on Adaptive Processes (San Diego, Calif., 1979)*, pp. 173-175. *IEEE, New York*, 1979. (S. P. Bhattacharyya) **81c:93061** 93C99
- (with Friedlander, Benjamin; Kailath, Thomas) Scattering theory and linear least-squares estimation. III. The estimates. *IEEE Trans. Automat. Control* **25** (1980), no. 4, 794-802. (Authors' summary) **81j:93058** 93E10
- Comments on: "Properties of the system matrix of a generalized state-space system" [Internat. J. Control **30** (1979), no. 2, 235-243; MR **80i:93006**] by Verghese, P. Van Dooren and T. Kailath. *Internat. J. Control* **31** (1980), no. 5, 1007-1009. (B. L. Ovsievich) **81f:93009** 93A10
- las Vergnas, Michel See Las Vergnas, Michel
- Vergne, Michèle (with Kashiwara, Masaki) Functions on the Shilov boundary of the generalized half plane. *Noncommutative harmonic analysis (Proc. Third Colloq., Marseille-Luminy, 1978)*, pp. 136-176. *Lecture Notes in Math.*, 728, Springer, Berlin, 1979. (Hugo Rossi) **81c:22022** 22E46 (32M15)
- (with Kashiwara, Masaki) K-types and singular spectrum. *Noncommutative harmonic analysis (Proc. Third Colloq., Marseille-Luminy, 1978)*, pp. 177-200. *Lecture Notes in Math.*, 728, Springer, Berlin, 1979. (Juan Tirao) **81m:22022** 22E46
- On Rossmann's character formula for discrete series. *Invent. Math.* **54** (1979), no. 1, 11-14. (Juan Tirao) **81d:22017** 22E45
- (with Lion, Gérard) ★The Weil representation, Maslov index and theta series. *Progress in Mathematics*, 6, Birkhäuser, Boston, Mass., 1980. vi+337 pp. ISBN 3-7643-3007-4 (A. Crumeyrolle) **81j:58075** 58G15 (10D20, 14K25, 22D10, 81D05)
- (with Berline, Nicole) Équations de Hua et intégrales de Poisson. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **290** (1980), no. 3, A123-A125. (J. S. Joel) **81c:32059** 32M15 (22E99, 43A85)
- Vergnes, J. Détermination d'un pas optimum d'intégration pour la méthode de Simpson. *Math. Comput. Simulation* **22** (1980), no. 3, 177-188. (Walter Gautschi) **81j:65050** 65D30
- Verhagen, C. J. D. M. (with Duin, R. P. W.; Groen, F. C. A.; Joosten, J. C.; Verbeek, P. W.) Progress report on pattern recognition. *Rep. Progr. Phys.* **43** (1980), no. 6, 785-831. (From the summary) **81h:68089** 68G10
- Verheiden, Erik Integral and rational completions of combinatorial matrices. II. *J. Combin. Theory Ser. A* **27** (1979), no. 2, 198-212. (A. O. Morris) **81a:05022** 05B20
- Verhulst, Ferdinand (with Sanders, Jan A.) Approximations of higher order resonances with an application to Contopoulos' model problem. *Asymptotic analysis*, pp. 209-228. *Lecture Notes in Math.*, 711, Springer, Berlin, 1979. (James A. Murdock) **81f:58023** 58F05 (34C25, 70H99, 70K30)
- Periodic solutions of continuous self-gravitating systems. *Geometrical approaches to differential equations (Proc. Fourth Scheeceningen Conf., Scheeceningen, 1979)*, pp. 318-339. *Lecture Notes in Math.*, 810, Springer, Berlin, 1980. (Richard C. Churchill) **81c:85004** 85A05 (58F05, 70F15)
- See also Asymptotic analysis, **81a:00005**
- Verigina, N. N. (with Habibullin, I. L.; Halikov, G. A.) Axisymmetric problem of heat and mass transfer in saturated porous medium. *Int.-Fiz. Ž.* **38** (1980), no. 5, 913-918. (Russian); translated as *J. Engrg. Phys.* **38** (1980), no. 5, 581-588. (Authors' summary) **81k:76077** 76S05 (80A20)
- Verina, L. F. A solution of a parametric quadratic programming problem. (Russian. English summary) *Vesci Akad. Nauk BSSR Ser. Fiz.-Mat. Nauk* **1980**, no. 2, 17-22, 139. (Tomas Gal) **81f:90105** 90C31 (90C20)
- Verlan, A. F. (with Sizikov, V. S.) The standard example method for determining the regularization parameter in the Lavrent'ev and Tikhonov methods. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* **No. 6** (1979), 468-471, 495. (From the introduction) **81h:65054** 65J10
- Verma, A. P. (with Mohan, S. Rama) Existence and uniqueness of similarity solutions of imbibition equation. *Proc. Indian Acad. Sci. Sect. A Math. Sci.* **88** (1979), no. 5, 409-417. (R. K. Gupta) **81c:76043** 76S05 (35Q99)
- Verma, Arun On identities of Rogers-Ramanujan type. *Indian J. Pure Appl. Math.* **11** (1980), no. 6, 770-790. (L. Carlitz) **81i:05024** 05A19 (33A30)
- (with Jain, V. K.) Some summation formulae of basic hypergeometric series. *Indian J. Pure Appl. Math.* **11** (1980), no. 8, 1021-1038. (H. M. Srivastava) **81i:33004** 33A30
- (with Jain, V. K.) Transformations between basic hypergeometric series on different bases and identities of Rogers-Ramanujan type. *J. Math. Anal. Appl.* **76** (1980), no. 1, 230-269. (L. J. Slater) **81j:05024** 05A19 (33A30)
- A quadratic transformation of a basic hypergeometric series. *SIAM J. Math. Anal.* **11** (1980), no. 3, 425-427. (S. P. Goyal) **81f:33005** 33A35 (33A70)
- Verma, B. G. (with Singh, J. B.) Self-similar magnetogasdynamics problems with radiative heat transfer. *Acta Phys. Acad. Sci. Hungar.* **46** (1979), no. 4, 309-317. (R. M. Gundersen) **81f:76051** 76W05 (76L05)
- (with Singh, J. B.) Magnetogasdynamics converging spherical detonation waves. *Astrophys. and Space Sci.* **72** (1980), no. 1, 133-142. (Authors' summary) **81h:76037** 76W05 (76L05)
- Verma, Daya-Nand On a classical stability result on invariants of isotypical modules. *J. Algebra* **63** (1980), no. 1, 15-40. (H. H. Andersen) **81j:20060** 20G05 (14L35, 15A72)
- Verma, Manjula Subspaces of a Finsler space admitting concurrent vector field. *Indian J. Pure Appl. Math.* **11** (1980), no. 8, 988-993. (Hiroshi Yasuda) **81h:53027** 53B40
- Verma, P. D. S. (with Singh, D. V.; Singh, K.) Couette flow of microthermopolar fluids between concentric rotating cylinders. *Acta Tech. ČSAV* **25** (1980), no. 3, 369-383. (Authors' summary) **81h:76003** 76A05
- Verma, R. L. Hydromagnetic flow due to torsional oscillations of an infinite disk about a steady nonzero mean. (French and German summaries) *Internat. J. Non-Linear Mech.* **15** (1980), no. 1, 21-29. (M. N. L. Narasimhan) **81g:76116** 76W05
- Verma, R. U. Determinant theory of singular integral equations. *Demonstratio Math.* **13** (1980), no. 1, 65-75. (P. M. Gupta) **81m:45007** 45E05 (45B05)
- Verma, S. (with Tewari, K.) Compact rings and natural topology. *Bull. Calcutta Math. Soc.* **71** (1979), no. 2, 67-76. (S. Warner) **81k:16040** 16A80
- Vermant, L. R. A note on induced central extensions. *Bull. Austral. Math. Soc.* **20** (1979), no. 3, 411-420. (U. Stambach) **81c:20037** 20J05
- Vermeer, Johannes (with van Mill, Jan) Wallman compactifications and the continuum hypothesis. *Topological structures, II (Proc. Sympos. Topology and Geom., Amsterdam, 1978), Part 1*, pp. 181-185. *Math. Centre Tracts*, 115, Math. Centrum, Amsterdam, 1979. (Ronnie Levy) **81c:54039** 54D35 (04A30)
- Minimal Hausdorff and compactlike spaces. *Topological structures, II (Proc. Sympos. Topology and Geom., Amsterdam, 1978), Part 2*, pp. 271-283. *Math. Centre Tracts*, 116, Math. Centrum, Amsterdam, 1979. (Jack R. Porter) **81g:54018** 54D25 (54D15, 54D30)
- Vermeer, P. A. (with Verruigt, A.) An accuracy condition for consolidation by finite elements. *Internat. J. Numer. Anal. Methods Geomech.* **5** (1981), no. 1, 1-14. (Authors' summary) **81m:76050** 76S05 (65N30, 73Q05)
- Vermeir, D. (with Rozenberg, Grzegorz) Extending the notion of finite index. *Automata, languages and programming (Sixth Colloq., Graz, 1979)*, pp. 479-488. *Lecture Notes in Comput. Sci.*, 71, Springer, Berlin, 1979. (From the introduction) **81c:68104** 68F10
- (with Rozenberg, Grzegorz) On recursion in ETOL systems. *J. Comput. System Sci.* **19** (1979), no. 2, 179-196. (John P. Helm) **81f:68088** 68F05
- (with Ehrenfeucht, Andrzej; Rozenberg, Grzegorz) On ETOL systems with rank. *J. Comput. System Sci.* **19** (1979), no. 3, 237-255. (Authors' summary) **81a:68081** 68F05

- Vermes, I. Ausfüllungen der hyperbolischen Ebene durch kongruente Hyperzykelbereiche. *Period. Math. Hungar.* 10 (1979), no. 4, 217-229. (H. S. M. Coxeter) **81c:52018** 52A45 (51M10)
- Verner, A. L. Reconstruction from the extrinsic curvature of complete convex surfaces of nonzero genus in spaces of constant negative curvature. (Russian) *Questions of global geometry* (Russian), pp. 12-15, Leningrad. Gos. Ped. Inst., Leningrad, 1979. (P. E. Markov) **81b:53048** 53C45
- Relation of properties of relatively polar saddle surfaces. (Russian) *Ukrain. Geom. Sb.* No. 22 (1979), 29-35, 2. (S. B. Klimentov) **81b:53047** 53C99 (53A05)
- See also *Questions of global geometry*, **81b:53003**
- Verner, J. H. Families of imbedded Runge-Kutta methods. *SIAM J. Numer. Anal.* 16 (1979), no. 5, 857-875. (René Alt) **81d:65041** 65L05
- Verner, Lawrence A singular series in characteristic p . (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math. Astronom. Phys.* 26 (1978), no. 12, 957-961 (1979). (Author's introduction) **81i:10062** 10J10
- A singular series in characteristic p . (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math.* 27 (1979), no. 2, 147-151. (O. H. Körner) **81b:10032** 10C15 (10J10, 12A85)
- Vernet Glais, Juan An academicien of the Royal Academy of Sciences of Barcelona and science in Spain of the Romantic age (reign of Isabel II). (Spanish. Italian summary) *Physica-Rivista Storica Sci.* 19 (1977), no. 1-4, 281-304 (1979). (E. M. Bruins) **81m:01041** 01A55
- Vernik, A. N. Summability of series in root vectors of perturbations of differential operators. (Russian) *Functional analysis*, No. 12 (Russian), pp. 47-55, *Uf'yanosk. Gos. Ped. Inst., Uf'yanosk*, 1979. (E. R. Cekanovskii) **81g:47022** 47A70
- (with Etkin, A. E.) The eigenvalue problem with a spectral parameter that enters rationally into the boundary conditions. (Russian) *Functional analysis*, No. 12 (Russian), pp. 167-173, *Uf'yanosk. Gos. Ped. Inst., Uf'yanosk*, 1979. (T. Ja. Azizov) **81c:34050** 34G10 (47B50)
- Vernikov, E. M. (with Frolov, V. F.; Savkov, É. S.) Calculation of parameters of heat pipe with convective heat transfer. *Inzh.-Fiz. Zh.* 38 (1980), no. 2, 222-230 (Russian); translated as *J. Engrg. Phys.* 38 (1980), no. 2, 132-138. (Authors' summary) **81i:80004** 80A20 (76R05)
- Vernikov, M. B. On a proof of the equivalence of the axiom systems of H. Weyl and A. N. Kolmogorov. (Russian) *Moskov. Gos. Zaochn. Ped. Inst. Sb. Nauch. Trudov* No. 54 (1978), 64-83. (E. J. F. Primrose) **81f:51019** 51N99
- On the theory of curves of an odd-dimensional affine-symplectic space. (Russian) *Studies in the geometry of imbedded manifolds and projective geometry* (Russian), pp. 10-14, Leningrad. Gos. Ped. Inst., Leningrad, 1979. (Leo Boček) **81f:53007** 53A15
- Determination of a connection compatible with a symplectic structure on a differentiable manifold. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1980, no. 7, 77-79. (O. Kowalski) **81m:53050** 53C15 (53C05)
- Vernke, Paola (with Sinestrari, Eugenio) A hysteretic semilinear parabolic equation. (Italian summary) *Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur.* (8) 65 (1978), no. 1-2, 11-14 (1979). (Authors' introduction) **81g:35054** 35K55
- Vernov, Ju. S. (with Kurbatov, A. F.) Lower bound and zeros of the scattering amplitude. (Russian. English summary) *Teoret. Mat. Fiz.* 43 (1980), no. 3, 323-329. (V. S. Ol'hovskii) **81g:81090** 81F20
- Véron, Laurent Effets régularisants de semi-groupes non linéaires dans des espaces de Banach. (English summary) *Ann. Fac. Sci. Toulouse Math.* (5) 1 (1979), no. 2, 171-200. (A. Pazy) **81i:47066** 47H20 (35K22, 58E07)
- Un exemple concernant le comportement asymptotique de la solution bornée de l'équation $d^2u/dt^2 \in \mathfrak{D}(A)$. (English summary) *Monatsh. Math.* 89 (1980), no. 1, 57-67. (V. Seda) **81k:47089** 47H15 (34A60, 47H20)
- Verona, Andrei Triangulation of stratified fibre bundles. *Manuscripta Math.* 30 (1979/80), no. 4, 425-445. (Riccardo Benedetti) **81f:57019** 57R05 (58A35)
- Verra, Alessandro (with Picco Botta, Luciana) Discrete Aleksandrov schemes. (Italian) *Matematica (Catania)* 32 (1977), no. 1, 126-137 (1979). (Marco Fontana) **81j:14003** 14A15 (54D10)
- (with Picco Botta, Luciana) An example of unirational nonrational threefold which is a conic bundle over a rational surface. *Nederl. Akad. Wetensch. Indag. Math.* 42 (1980), no. 1, 19-32. (C. A. M. Peters) **81j:14021** 14J30
- Vernad, R. (with Ehrenfeucht, Andrzej; Rozenberg, Grzegorz) Many-to-one simulation in EOL forms is decidable. *Discrete Appl. Math.* 2 (1980), no. 1, 73-76. (From the introduction) **81h:68065** 68F05 (03D05)
- Verrulst, A. Finite element calculations on a microcomputer. *Internat. J. Numer. Methods Engrg.* 15 (1980), no. 10, 1570-1574. (Author's summary) **81j:65126** 65N30
- (with Vermeer, P. A.) An accuracy condition for consolidation by finite elements. *Internat. J. Numer. Anal. Methods Geomech.* 5 (1981), no. 1, 1-14. (Authors' summary) **81m:76050** 76S05 (65N30, 73Q05)
- Verschoren, A. A note on strictly local kernel functions. *Bull. Soc. Math. Belg.* 28 (1976), no. 3, 179-192. (Jonathan Golan) **81d:10019** 18E40 (14F05, 18F20)
- Localization of bimodules and p_i rings. *Ring theory* (Proc. Antwerp Conf. (NATO Adv. Study Inst.), Univ. Antwerp, Antwerp, 1978), pp. 329-350, *Lecture Notes in Pure and Appl. Math.*, 51, Dekker, New York, 1979. (B. J. Müller) **81f:16008** 16A08
- Torsion free extensions and perfect localizations. *Comm. Algebra* 8 (1980), no. 9, 839-859. (M. Teply) **81f:16009** 16A08 (16A63)
- On the Picard group of a Grothendieck category. *Comm. Algebra* 8 (1980), no. 12, 1169-1194. (R. T. Hoobler) **81j:18017** 18E35 (14C20, 18E15)
- Vershinsky, A. N. See Vershinskii, A. N.
- Versik, A. M. (with Kaimanovič, V. A.) Random walks on groups: boundary, entropy, uniform distribution. (Russian) *Dokl. Akad. Nauk SSSR* 249 (1979), no. 1, 15-18. (Pierre Crépel) **81f:60098** 60J15 (60B15)
- Vershina, V. V. S. P. Novikov's algebraic spectral sequence for the spectrum $M\mathbb{S}_p$. (Russian) *Sibirsk. Mat. Zh.* 21 (1980), no. 1, 26-43, 235. (P. S. Landweber) **81k:57020** 57R90 (55N22, 55T15)
- Vershinskii, A. N. (with Fleishman, B. S.) On information bounds of system formation. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* 1979, no. 3, 65-68, 220 (Russian); translated as *Engrg. Cybernetics* 17 (1979), no. 3, 41-45 (1980). (Authors' summary) **81h:93095** 93E03 (94A15)
- Vértesi, P. Hermite-Fejér and Lagrange interpolations. *Fourier analysis and approximation theory* (Proc. Colloq., Budapest, 1976), Vol. II, pp. 891-897, *Colloq. Math. Soc. János Bolyai*, 19, North-Holland, Amsterdam, 1978. (Author's summary) **81f:41003** 41A05
- Hermite-Fejér type interpolations. I. *Acta Math. Acad. Sci. Hungar.* 32 (1978), no. 3-4, 349-369. (A. Sharma) **81b:41005a** 41A05
- Hermite-Fejér type interpolations. II. *Acta Math. Acad. Sci. Hungar.* 33 (1979), no. 3-4, 333-343. (A. Sharma) **81b:41005b** 41A05
- Hermite-Fejér type interpolations. III. *Acta Math. Acad. Sci. Hungar.* 34 (1979), no. 1-2, 67-84. (A. Sharma) **81b:41005c** 41A05
- p -normal point systems. *Acta Math. Acad. Sci. Hungar.* 34 (1979), no. 3-4, 267-277 (1980). (Hans-Bernd Knoop) **81k:41003** 41A05 (41A63)
- On Hermite-Fejér and Lagrange interpolatory processes. *Period. Math. Hungar.* 10 (1979), no. 4, 273-284. (A. Sharma) **81b:41006** 41A05
- Note on mean convergence of Lagrange parabolas. *J. Approx. Theory* 28 (1980), no. 1, 30-35. (R. A. Askey) **81c:41011** 41A05 (41A25, 42C05)
- Vértesi, L. (with Huang, C. C.; Kira, D.) Stochastic dominance rules for multi-attribute utility functions. *Rev. Econom. Stud.* 45 (1978), no. 3, 611-615. (From the text) **81f:90018** 90A10
- Vervast, Wim On a stochastic difference equation and a representation of nonnegative infinitely divisible random variables. *Adv. in Appl. Probab.* 11 (1979), no. 4, 750-783. (H. Kesten) **81b:60064** 60H99 (39A10, 60E07, 60J15)
- Verver, J.-G. On generalized Runge-Kutta methods using an exact Jacobian at a nonstop point. *Z. Angew. Math. Mech.* 60 (1980), no. 5, 263-265. (Peter Alföld) **81k:65087** 65L07
- Vescan, Agneta On the algebraic foundations of spinor theory. (Hungarian) *Alkalmaz. Mat. Lapok* 3 (1977), no. 1-2, 207-211. (Editors) **81b:15018** 15A66
- Vescan, Robert T. Categories of relations with standard factorizations. *Publ. Math. Debrecen* 26 (1979), no. 3-4, 155-160. (H.-B. Brinkmann) **81h:18003** 18B10
- Vesceky, Carol B. See Bass, F. G.; et al., **81j:78016**
- Vesceky, John F. See Bass, F. G.; et al., **81j:78016**
- Veselić, K. On optimal linearizations of a quadratic eigenvalue problem. *Linear and Multilinear Algebra* 8 (1979/80), no. 3, 253-258. (Colette Lebaud) **81a:65044** 65F15
- (with Meyer, D.) On some new inclusion theorems for the eigenvalues of partitioned matrices. *Numer. Math.* 34 (1980), no. 4, 431-437. (Petr Liebi) **81j:15019** 15A42 (65F15)
- Veselinov, V. M. Weighted approximations in the Hausdorff metric. (Russian) *The theory of the approximation of functions* (Proc. Internat. Conf., Kaluga, 1975) (Russian), pp. 80-82, "Nauka", Moscow, 1977. (Bl. Sendov) **81b:41092** 41A65
- Asymptotic distribution of points of maximal deviation in the polynomials of best Hausdorff approximation. *Fourier analysis and approximation theory* (Proc. Colloq., Budapest, 1976), Vol. II, pp. 899-903, *Colloq. Math. Soc. János Bolyai*, 19, North-Holland, Amsterdam, 1978. (B. Bojanov) **81c:41064** 41A50 (41A10)
- A general method for determining the best constants in linear methods of Hausdorff approximation. (Russian) *C. R. Acad. Bulgare Sci.* 31 (1978), no. 11, 1385-1388. (A. B. Nemeth) **81c:41051** 41A36 (41A44)
- Veselić, A. P. Finite-zone potentials and integrable systems on a sphere with quadratic potential. (Russian) *Funkcional. Anal. i Prilozhen.* 14 (1980), no. 1, 48-50. (Alexander A. Pankov) **81d:58036** 58F07 (34B25)
- Veselova, G. V. Bending of surfaces and vector R -fields in E_3 . (Russian) *Studies in the geometry of imbedded manifolds and projective geometry* (Russian), pp. 15-25, Leningrad. Gos. Ped. Inst., Leningrad, 1979. (V. T. Fomenko) **81c:53060** 53C45
- Veselova, O. M. On the geometry of holonomic nets in the space E_3 . (Russian) *Studies in the geometry of imbedded manifolds and projective geometry* (Russian), pp. 26-31, Leningrad. Gos. Ped. Inst., Leningrad, 1979. (Vladislav Goldberg) **81b:53006** 53A05
- Veselovskii, O. O. (with Kostenko, V. G.) A general second-order linear partial differential equation on a plane, invariant with respect to a group of transformations with given trajectories. (Ukrainian. Russian summary) *Visnik L'viv. Derž. Univ. Ser. Meh.-Mat.* No. 13 (1978), 11-16, 120. (Authors' summary) **81j:35030** 35G05
- A general fourth-order linear partial differential equation on a plane, invariant with respect to a given group of transformations. (Ukrainian. Russian summary) *Visnik L'viv. Derž. Univ. Ser. Meh.-Mat.* No. 13 (1978), 38-41, 124. (Author's summary) **81j:35031** 35G05
- Solution of a boundary value problem on torsion of an anisotropic rod. (Russian) *Mat. Metody i Fiz.-Meh. Polja* No. 12 (1980), 81-85, 122. (Author's summary) **81h:73008** 73C30 (73K05)
- Vesolovskii, I. N. The Arithmetic of Diophantus of Alexandria. (Russian. English summary) *History and methodology of the natural sciences*, No. XX (Russian), pp. 38-48, *Moskov. Gos. Univ., Moscow*, 1978. (E. M. Bruins) **81m:01003** 01A20 (01A15)
- Vesely, J. (with Netuka, I.) Regions of harmonicity. *Amer. Math. Monthly* 87 (1980), no. 3, 203-205. (Michèle Mastrangelo-Dehen) **81f:31008** 31B05 (31B25)
- Vesely, Vítězslav A concentration of categories with noninjective monomorphisms. *Arch. Math. (Brno)* 15 (1979), no. 3, 179-184. (Tadashi Ohkuma) **81a:18002** 18A20
- (with Chajda, Ivan; Dalik, Josef; Niederle, Josef; Zelinka, Bohdan) How to draw tolerance lattices of finite chains. *Arch. Math. (Brno)* 16 (1980), no. 3, 161-165. (Hartmut Hof) **81k:06007** 06B15 (05A05)
- Vesley, Richard Intuitionistic analysis: the search for axiomatization and understanding. *The Kleene Symposium* (Proc. Sympos., Univ. Wisconsin, Madison, Wis., 1978), pp. 317-331, *Studies in Logic and Foundations of Math.*, 101, North-Holland, Amsterdam, 1980. (Stewart Shapiro) **81m:03072** 03F55 (01A60, 01A70, 03-03, 03A05, 03F35)
- Nieto-Vesperinas, M. See Nieto-Vesperinas, M.
- Vesztegömbö, K. Some remarks on the chromatic number of the strong product of graphs. *Acta Cybernet.* 4 (1978/79), no. 2, 207-212. (Jean-Claude Fournier) **81c:05073** 05C15
- Vetri, G. (with Carrazana, P.) Non-Markoffian effects in the spontaneous emission of a two-level system. (Italian and Russian summaries) *Nuovo Cimento B* (11) 55 (1980), no. 2, 191-204. (Authors' summary) **81c:81180** 81K05
- Vetro, Pasquale (with Di Bari, Cristina Maria) An observation concerning differentiability. (Italian. French summary) *Rend. Circ. Mat. Palermo* (2) 27 (1978), no. 2, 283-288. (P. V. Reichelderfer) **81b:26002** 26A24 (26A16, 26A45, 26A46)
- (with Bongiorno, Benedetto) A theorem on the representation of integrals. (Italian.

- English summary) *Rend. Circ. Mat. Palermo* (2) **28** (1979), no. 1, 33–36. (B. Rodríguez-Salinas) **81f:28003** 28A15
- Vetrov, L. G. On the filtering of semimartingales. (Russian) *Uspehi Mat. Nauk* **34** (1979), no. 4(208), 183–184. (I. M. Stojanov) **81m:60074** 60G35
- Vey, Jacques Algèbres commutatives de champs de vecteurs isochores. (English summary) *Bull. Soc. Math. France* **107** (1979), no. 4, 423–432. (A. Crumeyrolle) **81a:58031** 58F05
- Veyrac, Liliane L. (with Crouhy, Michel G.) National economic planning, environmental policy and stochastic capital productivity. *Applied optimal control*, pp. 171–183. *Studies in the Management Sci.*, 9, North-Holland, Amsterdam, 1978. (Authors' summary) **81i:90056** 90A30 (49C99)
- Veyrier, Jean-Pierre (with Boujot, Jacqueline; Pham Ngoc Dinh, Alain) Oscillateurs harmoniques faiblement perturbés: l'algorithme numérique des "pas de géants". (English summary) *RAIRO Anal. Numér.* **14** (1980), no. 1, 3–23. (W. F. Ames) **81f:65052** 65L05 (34E05)
- V. Golitschek, Manfred See v. Golitschek, Manfred
- Nguyen van Vi See Nguyễn Văn Vi
- Violet, C.-M. (with Daniel, M.) The geometrical setting of gauge theories of the Yang-Mills type. *Rev. Modern Phys.* **52** (1980), no. 1, 175–197. (J. H. Rawnsley) **81b:81015** 81E10 (53C05, 57R22, 58E20)
- Vina, Marlos A. G. Some combined estimators for a correlation coefficient. (Portuguese) *Proceedings of the 3rd National Symposium on Probability and Statistics (Inst. Mat. Estatist., Univ. São Paulo, São Paulo, 1978)* (Portuguese), pp. 109–113. *Univ. São Paulo, São Paulo*, 1979. (See **80j:62004**) **62H12**
- Vinello, Piergiorgio (with Bellomo, Ettore) Concomitance, the consequent structural identities and conservation laws. (Italian) *Rend. Sem. Mat. Univ. Padova* **60** (1978), 201–228 (1979). (H. Rund) **81c:53020** 53A55 (49H05)
- Vincent, J. D. M. (with Pedrosa, A. C.) On the Jordan algebra and the symmetric formulation of classical mechanics. *J. Phys. A* **13** (1980), no. 3, 825–831. (C. Martin Edwards) **81b:70009** 70G35 (17C65, 58D30)
- Vinso, G. A. (with Bertero, M.; de Mol, C.) On the regularization of linear inverse problems in Fourier optics. *Applied inverse problems*, pp. 180–199. *Lecture Notes in Phys.*, 85, Springer, Berlin, 1978. (Authors' summary) **81k:78002** 78A05 (47A70, 49D20, 65T05, 68G10)
- On the harmonic analysis of the elastic scattering amplitude of two spinless particles at fixed momentum transfer. *Ann. Inst. H. Poincaré Sect. A (N.S.)* **32** (1980), no. 2, 109–123. (Authors' summary) **81m:81064** 81F20 (22E30, 43A85)
- (with Bertero, M.; Pasqualetti, F.; Ronchi, L.; Toraldo di Francia, G.) The inverse scattering problem in the Born approximation and the number of degrees of freedom. *Optica Acta* **27** (1980), no. 8, 1011–1024. (Authors' summary) **81g:78021** 78A45 (35P25, 68G10)
- Vinso, Maria (with Rusu, I.; Bors, Maria; Marica, Carmen; Eftimescu, Cornelia) Central projections onto B_2 . (Romanian. French summary) *Bul. Inst. Politehn. Iași Sect. I* **25** (1979), no. 1–2, 91–94. (L. Bitay) **81i:51020** 51N05
- Vlaud, Jacques (with David, René) Sequentially self-checking circuits. *FTCS-10 (Tenth Internat. Sympos. Fault-Tolerant Comput., Kyoto, 1980)*, pp. 263–268. *IEEE*, New York, 1980. (See **81m:94002**) **94C05**
- Vlcknevelsky, Robert Partial differential equations in mathematical modeling. *Proceedings of the First International Conference on Mathematical Modeling (St. Louis, Mo., 1977)*, Vol. I, pp. 13–25. *Univ. Missouri-Rolla, Rolla, Mo.*, 1977. (From the text) **81m:00017** 00A69 (35–03)
- Vici, Alessandro Dionisi A characterization of dilatation analytic integral kernels. *Lett. Math. Phys.* **3** (1979), no. 6, 533–541. (R. V. Duduchava) **81b:47008** 47A20 (47B99, 81F10)
- Vickers, V. E. (with Silverman, J.) A technique for generating specialized Gray codes. *IEEE Trans. Comput.* **29** (1980), no. 4, 329–331. (Authors' summary) **81i:94040** 94B60
- Vickson, R. G. Generalized value bounds and column reduction in finite Markov decision problems. *Oper. Res.* **28** (1980), no. 2, 387–394. (Authors' summary) **81a:90153** 90C40
- Vicorek, É. See Wleczorek, E.
- Victor, Jonathan D. A counting problem arising in nonlinear systems analysis. *Utilities Math.* **16** (1979), 151–156. (J. E. Cigler) **81d:05009** 05A15 (94A99)
- Victory, H. D., Jr. On the spectral radius of integral operators defined by a class of difference kernels. *SIAM J. Math. Anal.* **9** (1978), no. 3, 558–567. (Authors' summary) **81e:45005** 45D05 (45M05)
- Criticality problems for slabs and spheres in energy dependent neutron transport theory. *J. Math. Anal. Appl.* **73** (1980), no. 1, 85–114. (Edward W. Larsen) **81c:82063** 82A70 (35Q20, 45K05)
- Convergence properties of discrete-ordinates solutions for neutron transport in three-dimensional media. *SIAM J. Numer. Anal.* **17** (1980), no. 1, 71–83. (Frank G. Hagin) **81g:45010** 45L10 (45K05, 65R20)
- Vidal, Christian See Asté-Vidal, Annie
- Vidal, Christian See Synergistics: Far from equilibrium, **81a:82002**
- Vidal, E. (with Hervella, Luis M.) New classes of almost Hermitian manifolds. *Tensor (N.S.)* **33** (1979), no. 3, 293–299. (K. Yano) **81k:53020** 53B35
- Vaigai Vidal, René Victor See Vaigai Vidal, René Victor
- Vidal, Robert Dérivations d'un corps local à corps résiduel de caractéristique nulle et algébriquement clos. *Séminaire d'Algèbre Paul Dubreil et Marie-Paule Malliavin, 32ème année (Paris, 1979)*, pp. 209–224. *Lecture Notes in Math.*, 795, Springer, Berlin, 1980. (Y. Nakai) **81m:16037** 16A72 (16A99)
- Vidar, Ivan ★Uvod v teorijo C^* -algebr. (Slovenian) [Introduction to the theory of C^* -algebras] With an English summary. *Postdiplomski Seminar iz Matematike* [Postgraduate Seminar in Mathematics], 12. *Državno Matematiško, Fizikovo in Astronomsko SRS, Ljubljana*, 1979. 80 pp. (Authors' summary) **81a:46002** 46–01 (46L05, 47D25)
- See also Dobrovoltse, Danica; et al., **81k:91032** and Krizan, France, **81k:91039**
- Videnskii, I. V. A generalization of Carleson's theory of imbedding and the interpolation of sequences of class P . (Russian. English summary) Investigations on linear operators and the theory of functions. IX. *Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov.* (LOMI) **92** (1979), 265–267, 325. (V. Kabaila) **81i:30060** 30D55 (30E05)
- Videnskii, V. S. Approximation of functions by rational fractions with fixed real poles. (Russian. English summary) *Vesti Akad. Nauk BSSR Ser. Fiz.-Mat. Nauk* **1979**, no. 1, 35–41, 139. (L. I. Hedberg) **81g:41025** 41A20 (41A36)
- Vidossich, Giovanni General differential equations. (Spanish. English summary) *Rev. Cienc. (Lima)* **71** (1979), no. 1, 7–14. (P. Talpalaru) **81f:34018** 34A99 (34C99)
- Vidyashchik, V. (with Narayana, P. C. L.) The Hall effects on hydromagnetic flow over a permeable bed. *Acta Phys. Acad. Sci. Hungar.* **46** (1979), no. 3, 137–152. (Authors' summary) **81c:76055** 76W05 (76S05)
- Vidysagar, Mathukumall (with El-Art, R. A.; Dutta, S. R. K.) An algorithm for l_1 -norm minimization with application to nonlinear l_1 -approximation. *SIAM J. Numer. Anal.* **16** (1979), no. 1, 70–86. (Authors' summary) **81h:65067** 65K10 (90C30)
- On the well-posedness of large-scale interconnected systems. *IEEE Trans. Automat. Control* **25** (1980), no. 3, 413–421. (Authors' summary) **81g:93007** 93A15
- On the stabilization of nonlinear systems using state detection. *IEEE Trans. Automat. Control* **25** (1980), no. 3, 504–509. (Authors' summary) **81g:93083** 93D15
- Decomposition techniques for large-scale systems with nonadditive interactions: stability and stabilizability. *IEEE Trans. Automat. Control* **25** (1980), no. 4, 773–779. (Authors' summary) **81h:93075** 93D20 (93A15)
- (with Moylan, Peter J.; Vannelli, Antonio) On the stability and well-posedness of interconnected nonlinear dynamical systems. *IEEE Trans. Circuits and Systems* **27** (1980), no. 11, 1097–1101. (From the conclusion) **81j:93040** 93D05 (93D25)
- Vidysankar, K. Covers and strong covers in directed bipartite graphs. *J. Graph Theory* **4** (1980), no. 3, 279–286. (D. H. Younger) **81m:05074** 05C20 (05C70)
- Vielweg, Eckart Classification theory of algebraic threefolds. *Rend. Sem. Mat. Univ. Politec. Torino* **37** (1979), no. 1, 11–16. (Fabrizio Catanese) **81a:14011** 14J10 (14J30)
- Vieira, A. (with Kailath, Thomas; Morf, Martin) Orthogonal transformation (square-root) implementations of the generalized Chandrasekhar and generalized Levinson algorithms. *International Symposium on Systems Optimization and Analysis (Rocquencourt, 1978)*, pp. 81–91. *Lecture Notes in Control and Information Sci.*, 14, Springer, Berlin, 1979. (Lennart Ljung) **81h:93069** 93E10
- Vieira-Martins, Roberto See Martins, Roberto Vieira
- Vielack, Peter The analogy between elastic rods and rigid body motions. II. Linear theory. *Solid Mech. Arch.* **5** (1980), no. 1, 1–27. (Yi-Yuan Yu) **81h:73030** 73K05 (70E15, 73H05)
- Viennot, Gérard (with Françon, Jean) Permutations selon leurs pics, creux, doubles montées et double descentes, nombres d'Euler et nombres de Genocchi. (English summary) *Discrete Math.* **28** (1979), no. 1, 21–35. (Cheryl E. Praeger) **81a:05002** 05A05 (10A40)
- Une interprétation combinatoire des coefficients des développements en série entière des fonctions elliptiques de Jacobi. (English summary) *J. Combin. Theory Ser. A* **29** (1980), no. 2, 121–133. (Harold Exton) **81h:33003** 33A25 (05A99)
- Ngô Việt Trung See Ngô Việt Trung
- Vijlancet, V. P. Integrable distributions with singularities. (Russian) *Mat. Zametki* **26**, (1979), no. 6, 921–930, 974. (Demeter Krupka) **81i:58004** 58A30
- The Frobenius theorem for differential systems with singularities. (Russian. English summary) *Vestnik Moskov. Univ. Ser. I Mat. Meh.* **1980**, no. 3, 11–14, 106. (I. Vaisman) **81j:58051** 58F07 (58A30)
- Vignak, V. M. Two-step control of the fastest plate heating. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A No. 5* (1979), 349–352, 399. (Authors' summary) **81j:93032** 93C20 (49B22)
- Construction of the solution of the heat equation for a piecewise-homogeneous body. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A No. 1* (1980), 30–32, 93. (Ju. K. Dem'janovich) **81k:65107** 65M99 (35C15)
- Solution of a second-order differential equation in relation to a heat conduction problem for multilayer piecewise-homogeneous bodies. (Russian) *Mat. Metody i Fiz.-Meh. Polja* No. 11 (1980), 104–107, 123. (Authors' summary) **81f:80007** 80A20
- Viganò, Carlo See Pizzaniglo, Pier Luigi, **81c:01014**
- Viganotti, C. (with Colli Franzone, P.; Guerri, L.) Relating surface to epicardial potentials with direct and inverse calculations. *Simulation of systems '79 (Proc. Ninth IMACS Congress, Sorrento, 1979)*, pp. 665–674. North-Holland, Amsterdam, 1980. (Authors' summary) **81m:92013** 92A09 (92A07)
- Vigier, J.-P. (with Cufaro Petroni, N.) Markov process at the velocity of light: the Klein-Gordon statistic. *Internat. J. Theoret. Phys.* **18** (1979), no. 11, 807–818 (1980). (Lawrence Sklar) **81g:81119** 81M05 (82A15)
- (with Cufaro Petroni, N.) Stochastic derivation of Proca's equation in terms of a fluid of Weyssenhoff tops endowed with random fluctuations at the velocity of light. *Phys. Lett. A* **73** (1979), no. 4, 289–291. (Authors' summary) **81j:81015** 81C20 (81D25)
- (with Garuccio, A.; Maccarrone, G. D.; Recami, E.) On the physical nonexistence of signals going backwards in time, and quantum mechanics. *Lett. Nuovo Cimento* (2) **27** (1980), no. 2, 60–64. (From the text) **81i:81006** 81B05
- (with Cufaro Petroni, N.) Stochastic derivation of the Dirac equation in terms of a fluid of spinning tops endowed with random fluctuations at the velocity of light. *Phys. Lett. A* (1981), no. 1, 12–14. (Authors' summary) **81m:81025** 81C20 (81D25)
- Viglin, E. S. Zero solutions of partial differential evolution equations with deviating time argument. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* **1980**, no. 1, 66–68. (L. E. Bobisud) **81c:35093** 35R10
- Vignéras, Marie-France La fonction zêta de Selberg. *Séminaire de Théorie des Nombres 1977–1978, Exp. No. 16, 4 pp.* CNRS, Talence, 1978. (Editors) **81d:10022** 10D24 (10H10)
- L'équation fonctionnelle de la fonction zêta de Selberg du groupe modulaire $PSL(2, Z)$. *Journées Arithmétiques de Luminy (Colloq. Internat. CNRS, Centre Univ. Luminy, Luminy, 1978)*, pp. 235–249. *Astérisque*, 61, Soc. Math. France, Paris, 1979. (A. B. Venkov) **81f:10040** 10D24
- Vigneron, J. P. (with Lambin, Ph.) Tables for the Gaussian computation of $\int_0^x x^e J_0(x) dx$ for values of x of a varying continuously between -1 and $+1$. *Math. Comp.* **33** (1979), no. 146, 805–811. (Authors' summary) **81i:65004** 65A05
- (with Lambin, Ph.) Transmission coefficient for one-dimensional potential barriers using continued fractions. *J. Phys. A* **13** (1980), no. 4, 1135–1144. (Authors' summary)

- 81a:81027** 81C05
Vignes-Adler, M. (with Hennenberg, Marcel; Bisch, P. M.; Sanfeld, A.) Interfacial instability and longitudinal waves in liquid-liquid systems. *Dynamics and instability of fluid interfaces* (Proc. Meeting, Tech. Univ. Denmark, Lyngby, 1978), pp. 229-259, *Lecture Notes in Phys.*, 105, Springer, Berlin, 1979. (See **81j:76045**) 76E05
- Vigrand, O. A.** Projections of plane angles. (Russian) *Geometrography*, No. 2 (Russian), pp. 87-94, 157, *Rizsk. Politehn. Inst., Riga*, 1977. (Author's summary) **81b:51020** 51M15
- On the question of projections of plane angles. (Russian) *Geometrography*, No. 2 (Russian), pp. 95-98, 158, *Rizsk. Politehn. Inst., Riga*, 1977. (Author's summary) **81b:51021** 51M15
- Angles with two equal orthogonal projections. (Russian) *Geometrography*, No. 2 (Russian), pp. 99-108, 159, *Rizsk. Politehn. Inst., Riga*, 1977. (Author's summary) **81b:51022** 51M15
- Vilensk, V. S.** (with Kulak, M. I.) The method of reduced dynamical functions in the theory of time correlation functions. (Russian. English summary) *Dokl. Akad. Nauk BSSR* 24 (1980), no. 2, 129-132, 189. (Kenneth Wickwire) **81b:82010** 82A60 (60K35)
- Vijayakumar, A.** (with Vasudevan, R.; Vittal, P. R.) On a class of two-barrier problems. *Proceedings of the Conference on Probability, Stochastic Processes and Statistical Mechanics* (Mysore, 1979), pp. 135-163, *Matscience Rep.*, 97, Inst. Math. Sci., Madras, 1979. (From the introduction) **81m:60140** 60J30
- (with Vasudevan, R.; Vittal, P. R.) A level crossing problem. *Proceedings of the Conference on Mathematical Methods in Physics* (Mysore, 1978), Part A, pp. 254-267, *Matscience Rep.*, 96, Inst. Math. Sci., Madras, 1979. (Authors' summary) **81g:60072** 60J30 (60K30)
- Vijayakumar, A. K.** (with Kannan, V.) Simpler proofs. I. Independent sets are thin. *J. Indian Math. Soc. (N.S.)* 42 (1978), no. 1-4, 131-134 (1979). (C. McGehee) **81g:43002** 43A05 (43A10, 43A46)
- Vijaya, K. S.** A short proof of the nonexistence of 8-transitive graphs of valence $p+1$. *Atti Sem. Mat. Fis. Univ. Modena* 27 (1978), no. 2, 247-249 (1979). (J. Dénes) **81f:05097** 05C25 (20M10)
- Vikaruk, A. Ja.** The Gauss mappings for minimal surfaces. (Russian) *Mat. Zameki* 28 (1980), no. 1, 79-84, 168. (Z. Nádénik) **81m:53009** 53A10
- Vikana, A. Ž.** (with Elsts, M. A.) On potential capabilities of a stochastic functional transformation. (Russian. English summary) *Larvijas PSR Zināt. Akad. Vēstis Fiz. Tehn. Zināt. Sēr.* 1980, no. 4, 119-124, 128. (Authors' summary) **81i:94007** 94A12
- Viktorov, E. D.** Convergence of a procedure for calculating an approximate solution in the extended Kantorovich method. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 19 (1979), no. 5, 1097-1106, 1355. (A. I. Schiopi) **81b:65060** 65J15
- Vila, Jorge** (with Marchi, Ezio) Recursive method in one-dimensional Ising model. *J. Phys. A* 13 (1980), no. 7, 2465-2477. (Authors' summary) **81e:82062** 82A67 (82A05)
- Vila Mirja, A.** g -valuations of distributive lattices. (Spanish) *Stochastica* 3 (1979), no. 1, 61-66. (R. S. Pierce) **81d:06019** 06E99 (20F99, 54H12)
- Vilaplana, J.-P.** In honor of two distinguished Spanish statisticians: Nicolas de Arriquer and Diego Ollero y Carmona. (Spanish) *Rev. Univ. Santander* No. 2, part 2 (1979), 1345-1348. (Editors) **81m:01081** 01A70
- Vilasi, Gaetano** (with de Filippo, S.; Grella, G.; Scarpetta, G.) Clusterlike expansion based on s.u.l. approximation. *Let. Nuovo Cimento* (2) 27 (1980), no. 12, 369-376. (From the text) **81e:81092** 81E99
- On the Hamiltonian structures of the Korteweg-de Vries and sine-Gordon theories. *Phys. Lett. B* 94 (1980), no. 2, 195-198. (L. A. Takhtajan (Tahtadžjan)) **81f:58028** 58F07 (35Q20)
- Vil'činskii, V. T.** Rational approximations to almost all real numbers. (Russian. English summary) *Vesci Akad. Nauk BSSR Ser. Fiz.-Mat. Nauk* 1979, no. 6, 20-24, 139. (Ju. V. Mel'ničuk) **81i:10065** 10K15 (10F30)
- Vilenkin, Alexander** Macroscopic parity-violating effects: neutrino fluxes from rotating black holes and in rotating thermal radiation. *Phys. Rev. D* (3) 20 (1979), no. 8, 1807-1812. (Andrew King) **81g:83073** 83F05
- Vilenkin, N. Ja.** (with Šapiro, R. L.) Irreducible representations of the group $SU(n)$ of class I relative to $SU(n-1)$. *Twelve papers in logic and algebra*, pp. 187-200, *Amer. Math. Soc. Trans.*, 113, Amer. Math. Soc., Providence, R.I., 1979. (See **80m:00006**) 22E70
- (with Nižnikov, A. I.) Integral relations for Meijer G -functions and representations of the n -dimensional Lorentz group. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1979, no. 5, 13-19. (Tom H. Koornwinder) **81h:22012** 22E43 (33A75)
- Vilenkin, S. Ja.** (with Fedotov, A. G.) Two-phase queueing systems with one input flow of requests. *Avtomat. i Telemekh.* 1979, no. 11, 66-75 (Russian. English summary); translated as *Automat. Remote Control* 40 (1979), no. 11, part 1, 1609-1616 (1980). (Ralph L. Disney) **81k:68024** 68C15 (60K25, 68A05)
- Vil'čenko, S. D.** (with Jakimov, Ju. L.) Hydrodynamic reactions on a small body with surface undergoing deformation in an ideal incompressible fluid when the flow is three-dimensional and irrotational or two-dimensional with uniform vorticity. *Izv. Akad. Nauk SSSR Meh. Židk. Gaza* 1980, no. 2, 45-52 (Russian); translated as *Fluid Dynamics* 15 (1980), no. 2, 210-216. (From the introduction) **81h:76013** 76B99 (76C05)
- Vilimovský, J.** Uniformly locally uniformly continuous functions. *Topology* (Proc. Fourth Colloq., Budapest, 1978), Vol. II, pp. 1227-1238, *Colloq. Math. Soc. János Bolyai*, 23, North-Holland, Amsterdam, 1980. (H. L. Bentley) **81k:54039** 54E15 (18B30, 54B30)
- Viljoen, J. du P.** (with Lemmer, R. H.) Phonon renormalization in an ideal Heisenberg ferromagnet. *Ann. Physics* 126 (1980), no. 2, 291-316. (Authors' summary) **81e:82067** 82A67
- Vilkas, Eduardas** An axiomatic definition of a generalized n -nucleolus. (Russian. Lithuanian and English summaries) *Mat. Metody v Social. Nauk.—Trudy Sem. Processy Optimal. Upravlenija II Sekcija* No. 12 (1979), 52-54, 127. (Author's summary) **81d:90114** 90D12 (90D35)
- Vil'čorčenko, S. D.** See Vil'čorčenko, S. D.
- Vil'kov, V. B.** Some properties of the N -nucleolus. (Russian. Lithuanian and English summaries) *Mat. Metody v Social. Nauk.—Trudy Sem. Processy Optimal. Upravlenija II Sekcija* No. 12 (1979), 55-64, 127. (Irinel Dragan) **81h:90149** 90D12
- Villa, A.** (with Canuto, E.; Menga, G.) Lower order model representation of multivariable systems by factorization techniques. *Numerical techniques for stochastic systems* (Conf. Gargnano, 1979), pp. 187-204, *North-Holland, Amsterdam*, 1980. (See **81f:93067**) 93C35
- Villa, Luis T.** (with Bouillet, Julio E.; de Saravia, Dolores A.) Similarity solutions of the equation of one-dimensional heat conduction. *J. Differential Equations* 35 (1980), no. 1, 55-65. (John M. Ball) **81c:35069** 35K55 (80A20)
- Villain, J.** See Martinez Villa, Roberto
- Villaggio, Piero** Maximum modulus theorems for the elastic half-space. *Riv. Mat. Univ. Parma* (4) 5 (1979), part 2, 663-672 (1980). (P. P. Teodorescu) **81m:73027** 73C99
- A unilateral contact problem in linear elasticity. *J. Elasticity* 10 (1980), no. 2, 113-119. (Author's summary) **81d:73099** 73T05
- Villain, J.** (with Bidaux, R.; Carton, J.-P.; Conte, R.) Order as an effect of disorder. (French summary) *J. Physique* 41 (1980), no. 11, 1263-1272. (Authors' summary) **81j:82036** 82A67
- Villamayor, Orlando** On the terrible points. *Proceedings of the Eleventh Brazilian Mathematical Colloquium* (Poços de Caldas, 1977), Vol. II (Portuguese), pp. 851-854, *Inst. Mat. Pura Apl., Rio de Janeiro*, 1978. (See **80c:00010b**) 14F05
- Villamayor, Orlando E.** (with Mount, Kenneth R.) Sur les nombres de Thom-Boardman et les transformations monodiales. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 299 (1980), no. 23, 1077-1079. (Authors' summary) **81i:14006** 14E15
- Villani, M.** (with Nitti, L.; Pellicoro, M.) Lower bounds for quantum energy levels through statistical mechanics methods. *J. Math. Phys.* 21 (1980), no. 4, 834-839. (Authors' summary) **81d:81025** 81C12 (41A21, 49G10, 81C30)
- Villani, Vincio** Increasing sequences of Stein manifolds. (Italian. English summary) *Rend. Sem. Mat. Fis. Milano* 47 (1977), 117-121 (1979). (Claudio Rea) **81c:32030** 32E10
- Villari, Gabriele** Liénard limit cycle and controllability. (Italian. English summary) *Boll. Un. Mat. Ital. A* (5) 17 (1980), no. 3, 406-413. (V. Popescu) **81k:34023** 34C05 (34H05, 49E20)
- Villarreal, Bernardo** (with Karwan, Mark H.; Zions, Stanley) An interactive branch-and-bound procedure for multicriterion integer linear programming. *Multiple criteria decision making theory and application* (Proc. Third Conf., Hagen/Königswinter, 1979), pp. 448-467, *Lecture Notes in Econom. and Math. Systems*, 177, Springer, Berlin, 1980. (Authors' summary) **81d:90080** 90C10 (90C11)
- gomez Villegas, Miguel Angel** See Gomez Villegas, Miguel Angel
- Villemain, P.** (with Billard, L.) The site percolation as a boundary problem. *J. Phys. A* 13 (1980), no. 4, 1335-1354. (Authors' summary) **81a:82050** 82A67
- Vilms, Jaak** On curvature operators of bounded rank. *Pacific J. Math.* 87 (1980), no. 2, 467-473. (T. J. Willmore) **81m:53031** 53B20
- Factorization of curvature operators. *Trans. Amer. Math. Soc.* 260 (1980), no. 2, 595-605. (Y. Muto) **81c:53034** 53C20 (15A63, 53B25, 53C40)
- Vinárek, Jiří** Representations of countable commutative semigroups by products of weakly homogeneous spaces. *Comment. Math. Univ. Carolin.* 21 (1980), no. 2, 219-229. (Jan Chvalina) **81j:54060** 54H10 (20M30, 54B10)
- Vince, Andrew** (with Harary, Frank) Graphical completions of a sequence. *SIAM J. Appl. Math.* 38 (1980), no. 3, 402. (R. A. Brualdi) **81g:05071** 05C35
- droz-Vincent, Ph.** See Droz-Vincent, Ph.
- Vincent, Thomas L.** Control design for magnetic suspension. *Optimal Control Appl. Methods* 1 (1980), no. 1, 41-53. (From the summary) **81g:93085** 93D20
- (with Pulliam, H. Ronald) Evolution of life history strategies for an asexual annual plant model. *Theoret. Population Biol.* 17 (1980), no. 2, 215-231. (Authors' summary) **81i:92022** 92A17 (90C39)
- sangiovanni-Vincentelli, Alberto** See Sangiovanni-Vincentelli, Alberto
- Vincenti, Rita** (with Coletti, Giulianella; Regoli, Giuliana) Algebraic and topological structure of nonstandard models of the reals. (Italian. English summary) *Rend. Sem. Mat. Univ. Politec. Torino* 37 (1979), no. 2, 75-82 (1980). (Annalisa Marçia) **81k:03065** 03H20 (12J15, 54J05)
- (with Coletti, Giulianella; Regoli, Giuliana) Errata: "Algebraic and topological structure of nonstandard models of the reals". (Italian) *Rend. Sem. Mat. Univ. Politec. Torino* 37 (1979), no. 3, 165 (1980). (Annalisa Marçia) **81k:03065b** 03H20 (12J15, 54J05)
- Vincke, Philippe** Ordres et préordres totaux à distance minimum d'un quasi-ordre. *Colloque Mathématiques Discrètes: Codes et Hypergraphes* (Brussels, 1978). *Cahier Centre Études Rech. Opér.* 20 (1978), no. 3-4, 451-461. (William T. Trotter, Jr.) **81d:06006** 06A99
- (with Roy, B.) Systèmes relationnels de préférences en présence de critères multiples avec seuils. (English summary) *Cahiers Centre Études Rech. Opér.* 22 (1980), no. 1, 23-38. (C. Harvey) **81h:90009** 90A06
- Mathématiques et analyse multicritère. *Cahiers Centre Études Rech. Opér.* 22 (1980), no. 1, 41-49. (Author's summary) **81g:90011** 90A06 (90A10)
- Linear utility functions on semiordered mixture spaces. *Econometrica* 48 (1980), no. 3, 771-775. (R. D. Luce) **81e:90017** 90A10
- Vincze, I.** (with Hayman, W. K.) Markov-type inequalities and entire functions. *Analytic function methods in probability theory* (Proc. Colloq. Methods of Complex Anal. in the Theory of Probab. and Statist., Kossuth L. Univ. Debrecen, Debrecen, 1977), pp. 153-163, *Colloq. Math. Soc. János Bolyai*, 21, North-Holland, Amsterdam, 1979. (H.-J. Roßberg) **81e:60015** 60E15 (30D20)
- On the Cramér-Fréchet-Reid inequality in the nonregular case. *Contributions to statistics*, pp. 253-262, *Reidel, Dordrecht*, 1979. (C. R. Rao) **81d:62025** 62F10
- Vinet, L.** (with Harnad, John; Shnider, Steven) Solution to Yang-Mills equations on \mathbb{R}^p invariant under subgroups of $O(A, 2)$. *Complex manifold techniques in theoretical physics* (Proc. Workshop, Lawrence, Kan., 1978), pp. 219-230, *Res. Notes in Math.*, 32, Pitman, San Francisco, Calif., 1979. (J. H. Rawnsley) **81e:81070** 81E10 (35Q20, 53C05, 53C80)
- Vinnikeno, A. P.** The investigation of a third-order equation that is not solved for the derivative with respect to time. (Russian) *Izv. Akad. Nauk SSSR Meh. Židk. Gaza* 1978, no. 6, 96-103. (Author's summary) **81k:76078** 76S05 (35Q20, 76T05)
- Vinnik'kii, B. V.** The growth of entire functions that are given by the series $\sum_{n=1}^{\infty} a_n J_n(x)$. (Russian) *Ukrain. Mat. Ž.* 31 (1979), no. 5, 537-540, 619. (A. È. Eremenko) **81h:30047** 30D10 (30B50)
- Representation of analytic functions by the series $\sum_{n=1}^{\infty} a_n J_n(\lambda z)$. (Russian) *Ukrain.*

- Mat. Ž.* 31 (1979), no. 6, 650–657, 765. (R. P. Boas, Jr.) **81c:30010** 30B50
Representation of entire functions by series $\sum_{n=0}^{\infty} a_n f_n(z)$. (Russian) *Mat. Zametki* 27 (1980), no. 3, 361–372, 492. (C. Tanaka) **81d:30046** 30D10
- Vincho, O. P.* (with Goyal, A. N.) On generalized directed-divergence in information theory. *Indian J. Pure Appl. Math.* 11 (1980), no. 2, 190–197. (P. N. Rathie) **81f:94004** 94A15
- Vinod, H. D.* See Smith, Gary; et al., **81m:62131**
- Vinogradov, A. I.* (with Tahtadjan, L. A.) Theory of the Eisenstein series for the group $SL(3, \mathbb{R})$ and its application to a binary problem. I. Fourier expansion of the highest Eisenstein series. (Russian) *Analytic number theory and the theory of functions. Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 76 (1978), 5–52, 216. (J. Tunnell) **81m:10061** 10D40 (10H25)
(with Skraginov, M. M.) The number of lattice points inside the sphere with variable center. (Russian. English summary) *Analytic number theory and the theory of functions. Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 91 (1979), 25–30, 180. (Ekkhard Krätzel) **81j:10079** 10J25
- Vinogradov, A. M.* A spectral sequence that is connected with a nonlinear differential equation, and the algebraic-geometry foundations of the Lagrange field theory with constraints. (Russian) *Dokl. Akad. Nauk SSSR* 238 (1978), no. 5, 1028–1031. (B. Cenkl) **81d:58060** 58G99 (58H10)
Hamiltonian structures in field theory. (Russian) *Dokl. Akad. Nauk SSSR* 241 (1978), no. 1, 18–21. (Demeter Krukpa) **81b:58019** 58F05
(with Krasil'shik, I. S.) A method of calculating higher symmetries of nonlinear evolutionary equations, and nonlocal symmetries. (Russian) *Dokl. Akad. Nauk SSSR* 253 (1980), no. 6, 1289–1293. (J. Christina) **81j:58091** 58H15 (35A20, 35Q20)
- Vinogradov, E. S.* Accelerating laminar flow of a viscous incompressible fluid along a plane ribbed surface. (Russian) *Uchen. Zap. CAGI* 10 (1979), no. 4, 115–121. (Author's summary) **81j:76027** 76D05
- Vinogradov, I. M.* See Theory of numbers, mathematical analysis and their applications, **81a:00014**; Mathematical encyclopedia, **81c:00008**
- Vinogradov, M. M.* Theory of residues in commutative algebras. (Russian) *Uspehi Mat. Nauk* 35 (1980), no. 2(212), 203–204. (C. Bănică) **81h:32005** 32A27 (13A99)
- Vinogradov, S. A.* (with Havin, V. P.) Letter to the editors: "Free interpolation in H^{∞} and in certain other classes of functions. I" [*Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 47 (1974), 15–54; MR 52 #14307]. (Russian) Investigations on linear operators and the theory of functions, IX. *Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 92 (1979), 317. (J. Siciak) **81h:30048** 30E05 (30H05, 46E15)
- Vinogradov, V. N.* (with Golubev, G. A.; Kuznetsov, S. G.; Livsic, N. A.) The method of polynomial filtering of random processes with discrete time. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* 1978, no. 4, 154–160. (Russian); translated as *Engng. Cybernetics* 16 (1978), no. 4, 106–112 (1979). (Authors' summary) **81j:93062** 93E11 (93E10)
- Vinogradov, V. S.* On the solvability of a singular integral equation. (Russian) *Dokl. Akad. Nauk SSSR* 241 (1978), no. 2, 272–274. (Georg Heinig) **81h:45005** 45E05 (47A53)
Liouville theorems for an equation of generalized analytic functions. (Russian) *Differentsial'nye Uravneniya* 16 (1980), no. 1, 42–46, 187 (loose errata). (Wolfgang Tutschke) **81c:35028** 35F05 (35C10)
- Vinogradova, I. A.* A condition for a total differential. (Russian. English summary) *Vestnik Moskov. Univ. Ser. I Mat. Meh.* 1979, no. 4, 51–55, 102. (G. Marinescu) **81j:26011** 26B05
- Vinogradova, T. K.* (with Sivčova, V. K.) On the solution of minimax problems of control theory. (Russian) *Dynamics of control systems (Third All-Union Četaev Conf., Irkutsk, 1977)* (Russian), pp. 76–80, 338. "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. (V. F. Dem'janov) **81j:49004** 49A40 (49B40)
- Vinograd'skaja, A. V.* Control of the spectrum of nuclear nonselfadjoint operators. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A No. 12* (1979), 1029–1031, 1070. (Author's summary) **81h:93030** 93C25 (47B10)
- Vinograd'skaja, T. M.* (with Rubčinskii, A. A.) Logical forms of binary relations in a criterion space. (Russian) *Dokl. Akad. Nauk SSSR* 251 (1980), no. 2, 300–304. (M. Vlach) **81k:90014** 90A08
- Vinokurov, V. A.* On the error of an approximate solution to linear inverse problems. (Russian) *Dokl. Akad. Nauk SSSR* 246 (1979), no. 4, 792–793. (Wazir Hasan Abdi) **81c:65026** 65J99 (47A50)
Regularizable functions in topological spaces and inverse problems. (Russian) *Dokl. Akad. Nauk SSSR* 246 (1979), no. 5, 1033–1037. (I. K. Marek) **81j:65067** 65J05 (47H99, 54C60)
Corrections: "Regularizability, and analytic representability" [*Dokl. Akad. Nauk SSSR* 220 (1975), no. 2, 269–272; MR 52 #1611] and "The differentiability of functions from a Sobolev space" [*Dokl. Akad. Nauk SSSR* 227 (1976), no. 1, 15–18; MR 53 #3682]. (Russian) *Dokl. Akad. Nauk SSSR* 247 (1979), no. 6, 1287. (Editors) **81a:46038** 46E35 (54C10, 58C20)
- Vinokurov, V. G.* An invariant of a discrete partition of a Lebesgue space. (Russian) *Random processes and mathematical statistics (Russian)*, pp. 31–35, 185–186, "Fan", Tashkent, 1978. (B. M. Gurevich) **81k:28021** 28D05
- Vinson-Mihu, Nicoleta* A generalization of the Jacobi multiplier (integral invariant). (Romanian. French summary) *Bul. Inst. Politehn. București Ser. Mec.* 41 (1979), no. 4, 9–13. (Author's summary) **81h:70009** 70H99
- Vinsonhaber, C.* (with Wickless, W. J.) Injective hulls of torsion-free abelian groups as modules over their endomorphism rings. *J. Algebra* 58 (1979), no. 1, 64–69. (Fred Richman) **81b:20036** 20K15 (20K30)
- Vintcent, J.* (with Eijkman, E. G. J.; Jongsmma, H. J.; van Oeffelen, M. P. J.) Identification of figural elements in a visual domain. *Biol. Cybernet.* 38 (1980), no. 4, 213–221. (Authors' summary) **81j:92054** 92A27 (68G10)
- Viter, R. B.* (with Lewis, Richard M.) New representation theorems for consistent flows. *Proc. London Math. Soc.* (3) 40 (1980), no. 3, 507–526. (J. E. Rubio) **81h:60017** 49B36
- Vlasea, Wilhelm* Ein Satz über Dreieckswinkel und seine Beziehung zu einer Ungleichung von O. Perron. (English summary) *J. Geom.* 14 (1980), no. 1, 35–37. (O. Bottema) **81i:51025** 51N25
- Viola, Tullio* (with Giacardi, Livia; Roero, Clara Silvia) Contribution à l'interprétation d'un passage du dialogue *Théétète* de Platon, concernant Théodore de Cyrène. C. R.
- Acad. Sci. Paris Vie Académique* 287 (1978), no. 7–11, 41–46. (William C. Waterhouse) **81f:01002** 01A20 (10F35)
- Violaz, Aldo José* Asymptotic distribution of L_2 norms of the deviations of density function estimates. *Ann. Statist.* 8 (1980), no. 2, 322–346. (C. Stone) **81g:62077** 62G05 (62E20)
- Viot, Michel* (with Fleming, Wendell H.) Some measure-valued Markov processes in population genetics theory. *Indiana Univ. Math. J.* 28 (1979), no. 5, 817–843. (Frank J. S. Wang) **81a:60059** 60G44 (60J25, 92A10)
- Viralat, N. A. A.* (with Sargent, R. W. H.) A new approach to the theory of nonlinear stochastic systems. *Analysis and optimization of stochastic systems (Proc. Internat. Conf., Univ. Oxford, Oxford, 1978)*, pp. 147–164, Academic Press, London, 1980. (See **81j:93069**) 93E03 (60Hxx)
- Virčenko, Ja. P.* (with Laskin, N. V.) Coarse-grained description of the distribution of solutions of the Langevin equation. (Russian. English summary) *Teoret. Mat. Fiz.* 41 (1979), no. 3, 406–417. (M. Lawrence Glasser) **81d:60062** 60J65 (60H10, 60K35, 82A40)
- Virčenko, N. O.* (with Ponomarenko, S. P.) Properties of the generalized Mehler-Fock integral transformation and its application to the solution of dual-integral equations. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A No. 2* (1979), 83–86, 155. (Vojislav Marić) **81a:44003** 44A15 (45F10)
- Virnovskii, G. A.* Self-similar inverse problems of the theory of nonstationary filtration in layered beds. (Russian) *Izv. Akad. Nauk SSSR Meh. Židk. Gaza* 1979, no. 4, 171–175. (E. Ungureanu-David) **81h:76063** 76S05 (76T05)
- Viro, O. Ja.* Construction of multicomponent real algebraic surfaces. (Russian) *Dokl. Akad. Nauk SSSR* 248 (1979), no. 2, 279–282. (V. M. Harlamov) **81d:14034** 14J99 (14G30, 14J25)
- Virtama, J. T.* Locally Maxwellian Vlasov equilibria. *Phys. Scripta* 22 (1980), no. 2, 134–140. (Author's summary) **81d:82046** 82A45 (82A40)
- Vitek, Jan Amos* Asymptotic distribution of simple estimate for rejective, Sampford and successive sampling. *Contributions to statistics*, pp. 263–275, Reidel, Dordrecht, 1979. (Dana Vorlíčková) **81j:62030** 62D05 (62E20)
A note on the assumptions used to find an asymptotic distribution of the likelihood ratio. *Proceedings of the Second Prague Symposium on Asymptotic Statistics (Hradec Králové, 1978)*, pp. 321–325, North-Holland, Amsterdam, 1979. (Takeru Suzuki) **81h:62041** 62E20 (62F05)
On asymptotic behaviour of likelihood ratio. *Transactions of the Eighth Prague Conference on Information Theory, Statistical Decision Functions, Random Processes (Prague, 1978)*, Vol. C, pp. 317–323, Reidel, Dordrecht, 1979. (M. Raghuvaran) **81h:62041** 62F12
- Višenčuk, I. M.* (with Trocenko, V. V.; Švečkil, B. I.) Analysis of transient processes in computational converters of integral signal parameters. (Russian) *Automat. i Vychisl. Tehn. (Riga)* 1978, no. 3, 37–44, 93. (Authors' summary) **81d:94003** 94A05
- Visentin, F.* Limiting equations in the problem of total stability. (Italian summary) *Ricerche Mat.* 28 (1979), no. 2, 323–331. (A. I. Kir'janen) **81j:34003** 34D05
Limiting processes in the stability problem. *Appl. Math. Comput.* 7 (1980), no. 1, 81–91. (Zvi Arstein) **81h:34049** 34D20
- Vishnevskii, V. M.* See *Vilnevskii, V. M.*
- Vishniak, Ethan T.* (with Press, William H.) Tenacious myths about cosmological perturbations larger than the horizon size. *Astrophys. J.* 239 (1980), no. 1, part 1, 1–11. (Authors' summary) **81g:83071** 83F05 (83B05)
- Vishveshwara, C. V.* (with Cohen, Jeffrey M.; Dhurandhar, S. V.) Electromagnetic fields in the Gödel universe. *J. Phys. A* 13 (1980), no. 3, 933–938. (Lawrence S. Kegeles) **81a:83019** 83C50 (34A30, 83C30)
(with Dhurandhar, S. V.; Cohen, Jeffrey M.) Electromagnetic fields in space-times with local rotational symmetry. *Phys. Rev. D* (3) 21 (1980), no. 10, 2794–2804. (N. V. Micevič) **81g:83036** 83C50 (53B50, 83F05)
- Viskic, George* A modification to Kruthof's double-factor method. *Transportation Res. Part B* 14 (1980), no. 4, 307–318. (Author's summary) **81k:90040** 90B20
- Vitk, M. I.* Analytic solutions of the Hopf equation, statistical solutions, moment functions corresponding to quasilinear parabolic equations. (Russian) *Proceedings of an All-Union Conference on Partial Differential Equations (Moscow State Univ., Moscow, 1976)* (Russian), pp. 71–74, Moskov. Gos. Univ., Meh.-Mat. Fakul'tet, Moscow, 1978. (See **80f:35002**) 35K55
(with Fursikov, A. V.) x -homogeneous space-time statistical solutions of the Navier-Stokes system, and individual solutions with infinite energy. (Russian) *Dokl. Akad. Nauk SSSR* 239 (1978), no. 5, 1025–1028. (From the text) **81f:35090** 35Q10 (76D05)
(with Komeč, A. I.) Solvability of the Cauchy problem for the Hopf equation that corresponds to the nonlinear hyperbolic equation. (Russian) *Trudy Sem. Petrovsk. No. 3* (1978), 19–42. (Editors) **81a:35087** 35Q10 (58D25)
(with Komeč, A. I.) Translationally homogeneous solutions to a stochastic Navier-Stokes system. (Russian) *Dokl. Akad. Nauk SSSR* 246 (1979), no. 5, 1037–1041. (S.-F. Shurlan) **81g:35105** 35Q10 (35R60, 76D05)
- Vitk, M. M.* A non-Archimedean analogue of perturbation theory. (Russian) *Dokl. Akad. Nauk SSSR* 249 (1979), no. 2, 267–271. (Neal Koblitz) **81h:12015** 12B40 (12B30, 46P05, 47A55)
- Vitnesnu, M.* (with Ghika, G.) Constraints on a generally covariant four-dimensional sigma model. *Phys. Lett. B* 93 (1980), no. 4, 411–414. (Authors' summary) **81e:81096** 81E99 (58G20, 83C99)
(with Ghika, G.) Gribov vacuum copies in terms of harmonic maps. *Phys. Rev. D* (3) 21 (1980), no. 6, 1538–1542. (Authors' summary) **81d:81051** 81E10 (53C05, 58E20)
- Vilnevskii, V. A.* The Mayan calendar and the numeration system of residue classes. *Automatika* 1979, no. 1, 51–54, 79. (Russian); translated as *Soviet Automat. Control* 12 (1979), no. 1, 42–45. (M. P. Cross) **81a:01002** 01A10 (10A10)
- Vitalita, A.* (with Quarteroni, Alfio) On the numerical solution of a nonlinear variational equation related to a filtration problem. (Italian summary) *Boll. Un. Mat. Ital. B* (5) 17 (1980), no. 1, 204–231. (N. Gasa) **81h:76052** 76S05 (49D15, 65N30)
- Vitnovskii, V. M.* (with Žarkih, V. A.; Žolikalvili, V. A.; Petuhova, N. V.) Analysis of algorithms for interfacing a large and small electronic computer in remotely operated

- queueing systems. I. *Automat. i Telemekh.* 1979, no. 3, 150-164 (Russian. English summary); translated as *Automat. Remote Control* 40 (1979), no. 3, part 2, 448-459. (D. C. McNickle) **81f:68051a** 68C15 (60K25)
- (with Žarkib, V. A.; Žožikašvili, V. A.; Petuhova, N. V.) Analysis of algorithms for interfacing a large and small electronic computer in remotely operated queueing systems. II. *Automat. i Telemekh.* 1979, no. 7, 156-165 (Russian. English summary); translated as *Automat. Remote Control* 40 (1979), no. 7, part 2, 1072-1079. (D. C. McNickle) **81f:68051b** 68C15 (60K25)
- Vlinjić-Triantafyllou, Georgia** ★ Äquivalente rationale Homotopietheorie. (German) [Equivariant rational homotopy theory] Dissertation, Rheinische Friedrich-Wilhelms-Universität Bonn, Bonn, 1977. Bonner Mathematische Schriften [Bonner Mathematical Publications], 110. Universität Bonn, Mathematisches Institut, Bonn, 1978. vii + 126 pp. (J. Stasheff) **81a:55021** 55P62
- Vlischer, W.** (with Goldman, André) Applications of integral equations in particle-size statistics. *Solution methods for integral equations*, pp. 169-182, *Math. Concepts and Methods in Sci. and Engng.*, 18, Plenum, New York, 1979. (Pamela J. Dichomides) **81c:65069** 65U05 (52A22, 60D05)
- Vismann, N.** (with Warrior, J.) Scattering theory and the discrete linear optimal control problem. *Internat. J. Systems Sci.* 11 (1980), no. 6, 659-676. (Authors' summary) **81f:93054** 93C55 (78A45)
- Vishwanath, K.** Operators on real Hilbert spaces. *J. Indian Math. Soc. (N.S.)* 42 (1978), no. 1-4, 1-13 (1979). (P. Miličević) **81d:47018** 47B15
- Vishwanath, K.** (with Achenbach, J. D.; Norris, A.) An inversion integral for crack-scattering data. *Wave Motion* 1 (1979), no. 4, 299-316. (Alok Nath Chakrabarti) **81a:73042** 73M05 (73D25)
- Vishwanath, K. S.** (with Mayer, Dieter H.) On the vacuum structure of an SU(2) Yang-Mills theory. *Rep. Math. Phys.* 16 (1979), no. 2, 281-291. (J. Peetre) **81g:81071** 81E99 (53C05, 58D25)
- (with Ragiadakos, Ch.) Contribution of meron-like configurations to 't Hooft's disorder parameter. *Phys. Lett. B* 93 (1980), no. 3, 262-264. (Authors' summary) **81e:81103** 81E99 (81C35)
- (with Chakrabarti, Amitabha; Comtet, A.) Static, self-dual, finite action SU(3) gauge fields in the de Sitter space. *Phys. Lett. B* 96 (1980), no. 1-2, 105-109. (M. J. Perry) **81k:81073** 81E99 (53C05, 53C30)
- Vishwanath, R.** (with Makhoul, J.) Adaptive lattice methods for linear predictive signal processing. *Pattern recognition and signal processing (Proc. NATO Adv. Study Inst., Paris, 1978)*, pp. 559-573, *NATO Adv. Study Inst. Ser., Ser. E: Appl. Sci.*, 29, Sijthoff & Noordhoff, Alphen aan den Rijn, 1978. (See **80j:68076**) 94A05
- Vishwanath, T. M.** Factorial coordinate rings of cones in P^2 . (Italian summary) *Boll. Un. Mat. Ital. A* (5) 17 (1980), no. 2, 247-248. (R. M. Fossum) **81g:13015** 13F15 (14C99)
- di Vita, P.** (with Rossi, U.) A modal approach to propagation in graded optical fibres. (French summary) *Optica Acta* 27 (1980), no. 8, 1117-1125. (Authors' summary) **81g:78008** 78A10 (78A55)
- Vitale, Cosimo** Local maximum likelihood and Bayesian estimates of the power spectrum. (Italian. English and French summaries) *Statistica (Bologna)* 39 (1979), no. 1, 117-123. (Authors' summary) **81h:62067** 62F15
- Vitale, Richard A.** (with Dalenius, Tore) A new randomized response design for estimating the mean of a distribution. *Contributions to statistics*, pp. 43-47, *Reidel, Dordrecht*, 1979. (Jan Lanke) **81d:62069** 62D05
- Approximation of convex set-valued functions. *J. Approx. Theory* 26 (1979), no. 4, 301-316. (Zvi Artstein) **81a:41063** 41A99
- (with Rubin, Herman) Asymptotic distribution of symmetric statistics. *Ann. Statist.* 8 (1980), no. 1, 165-170. (J. S. Rao) **81a:62018** 62E20
- (with Najfeld, Igor; Davis, Philip J.) Minkowski iteration of sets. *Linear Algebra Appl.* 29 (1980), 259-291. (Peter Gruber) **81f:52005** 52A20 (65H10)
- Vitalelli, Marcello** (with Benzi, Roberto; Vulpiani, Angelo) Energy dissipation and Kolmogorov law in turbulent flows. *J. Phys. A* 13 (1980), no. 9, L339-L343. (Authors' summary) **81h:76031** 76F99
- Vitányi, Paul M. B.** On the power of real-time Turing machines under varying specifications (extended abstract). *Automata, languages and programming (Proc. Seventh Internat. Colloq., Noordwijkerhout, 1980)*, pp. 658-671, *Lecture Notes in Comput. Sci.*, 85, Springer, Berlin, 1980. (Authors' summary) **81j:68065** 68C40 (03D10)
- Relativized obliviousness (extended abstract). *Mathematical foundations of computer science, 1980 (Proc. Ninth Sympos., Rydzyna, 1980)*, pp. 665-672, *Lecture Notes in Comput. Sci.*, 88, Springer, Berlin, 1980. (See **81k:68003**) 68C25
- Achievable high scores of e-moves and running times in DPDA computations. *Inform. Process. Lett.* 10 (1980), no. 2, 83-86. (From the introduction) **81d:68071** 68D35 (68C25, 68F25)
- Vitek, Vitold** Decomposition of the goal function of control and the hierarchy of control tasks in large-scale electric power systems. *Third Formator Symposium on Mathematical Methods for the Analysis of Large-Scale Systems*, pp. 269-277, *Academia, Prague*, 1979. (See **81j:93007**) 49C20
- Vitjak, A. N.** A difference method of solving the Goursat problem for a class of hyperbolic differential equations. (Russian) *Theoretical and applied questions of differential equations and algebra (Russian)*, pp. 53-56, 260, "Naukova Dumka", Kiev, 1978. (Authors' summary) **81h:65093** 65N10
- Vittal, P. R.** (with Vasudevan, R.; Vijayakumar, A.) On a class of two-barrier problems. *Proceedings of the Conference on Probability, Stochastic Processes and Statistical Mechanics (Mysore, 1979)*, pp. 135-163, *Matscience Rep.*, 97, Inst. Math. Sci., Madras, 1979. (From the introduction) **81m:60140** 60J30
- (with Vasudevan, R.; Vijayakumar, A.) A level crossing problem. *Proceedings of the Conference on Mathematical Methods in Physics (Mysore, 1978)*, Part A, pp. 254-267, *Matscience Rep.*, 96, Inst. Math. Sci., Madras, 1979. (Authors' summary) **81g:60072** 60J30 (60K30)
- Vitter, Al** On the growth of cohomology classes on smooth affine varieties. *Invent. Math.* 44 (1978), no. 2, 179-187. (Michael J. Cowen) **81f:32033** 32H25 (32C25)
- Vitulli, Marie A.** Complete intersections in C^2 and R^2 . *Proc. Amer. Math. Soc.* 78 (1980), no. 3, 331-336. (G. A. Efroymsen) **81c:14012** 14G30 (14M10)
- Vivaldi, Maria Agostina** (with Capuzzo Dolcetta, I.) Existence of a regular solution of a quasivariational inequality in an unbounded domain. *Comm. Partial Differential Equations* 3 (1978), no. 5, 443-470. (M. Biroli) **81h:35024** 35K55 (49A29)
- (with Matzeu, Michele) A dual estimate for the Hamilton-Jacobi function of a continuous and impulsive stochastic control problem. (Italian summary) *Boll. Un. Mat. Ital. B* (5) 17 (1980), no. 2, 458-477. (B. I. Anan'ev) **81i:49004** 49A29 (93E10)
- Vivarelli, Maria Dina** Rank two spinors and the light cone: geometric representation. (Italian. English summary) *Istit. Lombardo Accad. Sci. Lett. Rend. A* 112 (1978), no. 1, 78-90 (1979). (Elisa Udeschini-Brinis) **81a:53014** 53A50 (51B20, 83C99)
- Contribution to the taxonomy of polytopes and polytopic nets. (Italian. English summary) *Proceedings of the Brescia Mathematical Seminar, Vol. 3 (Italian)*, pp. 18-62, *Univ. Cattolica Sacro Cuore, Milan*, 1979. (H. W. Guggenheimer) **81c:52008** 52A25
- Viviani, Henri** (with Morice, Philippe) Équations de conservation et condition d'irréversibilité pour les écoulements transsoniques potentiels. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 291 (1980), no. 10, B235-B238. (Authors' summary) **81k:35104** 35L67 (76H05, 76N10)
- (with Le Balleur, Jean-Claude; Peyret, R.) Numerical studies in high Reynolds number aerodynamics. Special issue: computers in aerodynamics. *Comput. & Fluids* 8 (1980), no. 1, 1-30. (From the summary) **81d:76074** 76N10 (65P05, 76G99)
- de Vivo, Clorinda** A minimality problem concerning Sylow towers in finite groups. (Italian. English summary) *Rend. Accad. Sci. Fis. Mat. Napoli* (4) 46 (1979), 43-61 (1980). (Thomas Laffey) **81m:20031** 20D20
- Viziev, Ivan S.** An iterative approach to the realization of self-checking check circuits for 1-out-of-n codes. (Bulgarian. Russian and English summaries) *Problemi Tehn. Kibernet.* 9 (1980), 44-51. (Authors' summary) **81f:94050** 94C30 (68D15)
- Vizitis, V. N.** Uniqueness of the continuation of m -topologies of a field onto its algebraic extensions. (Russian) *Topological spaces and algebraic systems. Mat. Issled.* No. 53 (1979), 27-42, 222. (Witold Węslow) **81e:12029** 12J99
- Vjaceslavov, N. S.** Approximation of x^* by rational functions. (Russian) *Izv. Akad. Nauk SSSR Ser. Mat.* 44 (1980), no. 1, 92-109, 239. (V. G. Verdiev) **81e:41028** 41A20
- Vjalev, A. F.** Identification of contours in a graph. (Russian) *Mathematical methods of optimization and structuring of systems (Russian)*, pp. 171-174, 187, *Kaliningrad. Gos. Univ., Kaliningrad*, 1979. (Authors' summary) **81k:05070** 05C40
- Vjazovik, A. P.** On the problem of synthesis of control for mechanical systems. (Russian) *Dynamics of control systems (Third All-Union Četaev Conf., Irkutsk, 1977) (Russian)*, pp. 92-98, 338, "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. (Authors' summary) **81e:93034** 93B50
- Use of a second-order equation of Ljapunov's type in a problem of control synthesis. (Russian) *Mathematical methods of optimization and structuring of systems (Russian)*, pp. 130-137, 185, *Kaliningrad. Gos. Univ., Kaliningrad*, 1979. (Authors' summary) **81m:93055** 93D05 (34D20, 93B50)
- Vlach, Milan** Conditions for the existence of a solution to the multi-index transportation problems. *Survey of mathematical programming (Proc. Ninth Internat. Math. Programming Sympos., Budapest, 1976)*, Vol. 1, pp. 109-119, *North-Holland, Amsterdam*, 1979. (Gerald Hammer) **81i:90134** 90C08
- Dubovitskii-Milyutin optimization formalism for multiple-criteria problems. *Third Symposium on Operations Research (Univ. Mannheim, Mannheim, 1978)*, Section I, pp. 677-687, *Operations Research Verfahren*, 31, Hain, Meisenheim, 1979. (See **80d:90004a**) 90C31
- Vlada, Marcin** Fixed points of some operators in the space of languages. *Rev. Roumaine Math. Pures Appl.* 24 (1979), no. 4, 659-661. (Jürgen Dassow) **81c:68064** 68F05
- Vladimirov, A. A.** Necessary conditions for successive maximin in an optimal control problem. (Russian) *Vestnik Moskov. Univ. Ser. XV Vyčisl. Mat. Kibernet.* 1979, no. 3, 27-35, 72. (M. Junusov) **81c:49029** 49D30 (49B40)
- Vladimirov, Ju. S.** (with Antonov, V. I.; Efremov, V. N.) Monad method and canonical formalism of general relativity. *Gen. Relativity Gravitation* 9 (1978), no. 1, 9-19. (Carl Brans) **81k:83009** 83C05 (83C45)
- Vladimirov, S. A.** (with Kresin, Ju. V.) Lie-Bäcklund groups and supersymmetry. *Jadernaja Fiz.* 30 (1979), no. 1, 279-282 (Russian); translated as *Soviet J. Nuclear Phys.* 30 (1979), no. 1, 142-143. (M. Carmeli) **81c:81071** 81G25 (22E65, 58H99)
- Vladimirov, V. A.** (with Tarasov, V. F.) Formation of vortex rings. (Russian) *Izv. Sibirsk. Otdel. Akad. Nauk SSSR Ser. Tehn. Nauk* 1980, no. 3, 3-11, 145. (Authors' summary) **81g:76031** 76C05
- Vladimirov, V. S.** Functions of several complex variables in mathematical physics. (Russian) *Komplexe Analysis und ihre Anwendung auf partielle Differentialgleichungen (Tagung, Martin-Luther-Universität, Halle, 1976)*. *Wis. Beir. Martin-Luther-Univ. Halle-Wittenberg M 27* (1977), 71-75. (Editors) **81h:32001** 32-02 (81E05)
- (with Mitropol'skii, Ju. O.; Guz', O. M.; Parajuk, O. S.) Nikolai Nikolaevič Bogoljubov (on the occasion of his seventieth birthday). (Russian) *Prikl. Meh.* 15 (1979), no. 8, 124-127. (Editors) **81g:01020a** 01A70
- (with Logunov, A. A.) Nikolai Nikolaevič Bogoljubov (on the occasion of his seventieth birthday). (Russian) *Teoret. Mat. Fiz.* 40 (1979), no. 2, 147-154. (Editor) **81g:01020b** 01A70
- (with Zav'jalov, B. I.) Tauberian theorems in quantum field theory. (Russian. English summary) *Teoret. Mat. Fiz.* 40 (1979), no. 2, 155-178. (Authors' summary) **81c:81032** 81E05 (46F12)
- (with Mitropol'skii, Ju. O.; Parajuk, O. S.) Nikolai Nikolaevič Bogoljubov (on the occasion of his seventieth birthday). (Russian) *Ukrain. Mat. Ž.* 31 (1979), no. 4, 339-340 (1 plate). (Editors) **81g:01020c** 01A70
- (with Aleksandrov, P. S.; Lavrent'ev, M. A.; Logunov, A. A.) Nikolai Nikolaevič Bogoljubov (on the occasion of his seventieth birthday). (Russian) *Uspehi Mat. Nauk* 34 (1979), no. 5(209), 3-11. (Editors) **81g:01020c** 01A70
- (with Žarinov, V. V.) Closed forms associated with linear differential operators. (Russian) *Differencial'nye Uravnenija* 16 (1980), no. 5, 845-867, 956. (V. Oproia) **81h:47039** 47F05 (35N10, 81E99)
- Vladimirov, Y. S.** See **Vladimirov, Ju. S.**
- Vladimirova, L. F.** (with Borisova, L. B.) Monadic criteria of gravitational-inertial waves: the effect of gravitational-inertial waves of various types on the detector. (Russian) *Problemy Teor. Gravitacii i Element. Častic* No. 10 (1979), 181-187. (Ilija Lukačević) **81c:83019** 83C35 (83B05)
- Vlahov, A.** (with Tošić, B. S.; Žakula, R. B.) A new method for solving the

- one-dimensional Schrödinger equation. *Phys. A* **100** (1980), no. 1, 196–204. (B. Hellwig) **81c:81010** 81C05 (34B25)
- Vlasenko, V. F. Summation of bounded divergent sequences with finite and infinite sets of partial limits. (Russian) *Mat. Zametki* **26** (1979), no. 4, 575–581, 654. (Authors' summary) **81k:40008** 40C05
- Vlasov, N. M. (with Egorov, V. S.; Kolesov, V. S.; Fedik, I. I.) Analogy of a two-dimensional problem of thermoelasticity with plate flexion (a survey). (Russian) *Mat. Metody i Fiz.-Meh. Polja* No. 10 (1979), 90–98, 135. (L. Jentsch) **81m:73063** 73U05
- Vlasov, V. I. Solution to the Dirichlet problem using Fourier-series expansion. (Russian) *Dokl. Akad. Nauk SSSR* **249** (1979), no. 1, 19–22. (R. P. Boas, Jr.) **81j:31003** 31A25 (30E15)
- Vlasova, L. I. On the determination of groups by groups of homomorphisms. (Russian. English summary) *Vestnik Moskov. Univ. Ser. I Mat. Meh.* **1979**, no. 5, 52–55, 88. (A. I. Moskalenko) **81i:20069** 20K30
- Vlek, Vladimir On a distribution of zeros of solutions of a fourth-order iterated linear differential equation. (Czech and Russian summaries) *Sb. Práci Přírodověd. Fak. Univ. Palackého v Olomouci* **57** (1978), 85–108. (V. B. Headley) **81b:34025** 34C10
- Vlčková, Marie Models for the analysis of the multiprocessor computer system performance. *Systems analysis and simulation* (Proc. Internat. Sympos., Berlin, 1980), pp. 244–248, *Math. Research, 5*, Akademie-Verlag, Berlin, 1980. (See **81j:93009**) 68B20 (68A05)
- van Vleck, F. S. See Van Vleck, F. S.
- Vlieger, J. (with Albano, A. M.; Bedeaux, D.) On the description of interfacial electromagnetic properties using singular fields, charge density and currents at a dividing surface. *Phys. A* **102** (1980), no. 1, 105–119. (Authors' summary) **81f:78003** 78A25
- von der Vlist, H. (with Ruijgrok, Th. W.) On the Hamiltonian and Lagrangian formulation of classical dynamics for particles with spin. *Phys. A* **101** (1980), no. 2-3, 571–580. (Frans Cantrijn) **81f:70019** 70H99 (58F05, 81C99)
- Vodá, Václav G. (with Iliescu, Dan V.) Some notes on Pareto distribution. *Rev. Roumaine Math. Pures Appl.* **24** (1979), no. 4, 597–609. (Madanlal T. Wasan) **81g:62050** 62F10 (62C20, 90C15)
- Vodčáček, M. I. Algebraic radicals and radical-semisimple classes of topological modules. (Russian) Topological spaces and algebraic systems. *Mat. Issled.* No. 53 (1979), 43–53, 222. (Witold Wiśniewski) **81g:16045** 16A80 (16A21)
- Vodjanik, E. A. (with Rjabuhin, Ju. M.) Description of coatoms in the lattice of superimposed radicals of algebras of bounded dimension. (Russian) Algebraic structures. *Mat. Issled.* No. 56 (1980), 112–122, 161. (B. J. Gardner) **81h:16018** 16A21
- Vodner, V. T. (with Bel'ko, I. V.; Vedernikov, V. I.; Gusak, A. A.; Nahimovskaja, A. I.; Rjabulko, A. P.; Tutave, L. K.; Fedenko, A. S.) ★Сборник задач по дифференциальной геометрии. (Russian) [A collection of problems in differential geometry] Second edition, revised. "Nauka", Moscow, 1979. 272 pp. (Editors) **81i:53001** 53-01 (00A07)
- Vodnyanov, Sergei Konstantinovich (with Gol'dštejn, Vladimir Mikhailovich) Prolongement des fonctions de classe \mathcal{C}_b^1 et applications quasi conformes. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **290** (1980), no. 10, A453–A456. (T. Kuusalo) **81k:30024** 30C60 (46E35)
- Voelkel, Lutz Language recognition by linear bounded and copy programs. *Fundamentals of computation theory* (Proc. Conf. Algebraic, Arith. and Categorical Methods in Comput. Theory, Berlin/Wendisch-Rietz, 1979), pp. 491–495, *Math. Research, 2*, Akademie-Verlag, Berlin, 1979. (From the introduction) **81b:68101** 68F10
- Voelker, John A. (with Pierakalla, William P.) Test selection for a mass screening program. *Naval Res. Logist. Quart.* **27** (1980), no. 1, 43–55. (Authors' summary) **81b:90085** 90B25
- Vogan, David A., Jr. Lie algebra cohomology and a multiplicity formula of Kostant. *J. Algebra* **51** (1978), no. 1, 69–75. (Author's introduction) **81c:22027** 22E47
- The algebraic structure of the representation of semisimple Lie groups. I. *Ann. of Math.* (2) **109** (1979), no. 1, 1–60. (A. U. Klimyk) **81j:22020** 22E46 (22E47)
- Irreducible characters of semisimple Lie groups. II. The Kazhdan-Lusztig conjectures. *Duke Math. J.* **46** (1979), no. 4, 805–859. (A. U. Klimyk) **81f:22024** 22E46 (20G05, 22E47)
- A generalized τ -invariant for the primitive spectrum of a semisimple Lie algebra. *Math. Ann.* **242** (1979), no. 3, 209–224. (Anthony Joseph) **81e:17014** 17B35
- Ordering of the primitive spectrum of a semisimple Lie algebra. *Math. Ann.* **248** (1980), no. 3, 195–203. (Jouko Mickelson) **81k:17006** 17B35
- Vogel, Jürgen (with Gillert, Heinz) Asymptotische Entwicklungen in einem zentralen Grenzwertsatz für homogene Markovsche Prozesse. *Math. Nachr.* **92** (1979), 231–241. (C. D. Lai) **81c:60024** 60F05 (60J05)
- (with Gillert, Heinz) Über Güteeigenschaften von Tests bei homogenen Markovschen Prozessen. (English and Russian summaries) *Math. Operationsforsch. Statist. Ser. Statist.* **10** (1979), no. 1, 141–152. (Norbert Schmitz) **81b:62098** 62M02 (62F05)
- Vogel, Karl Merchants' aids in practical arithmetic from the Middle Ages. (Russian) Translated from the German by N. N. Gendrihson. *Istor.-Mat. Issled.* No. 23 (1978), 235–249, 359. (A. I. Volodarskij) **81a:01012** 01A35 (01A40)
- See also Tropfke, Johannes, **81j:01004**
- Vogel, Pierre Localization in algebraic L -theory. *Topology Symposium, Siegen 1979* (Proc. Sympos., Univ. Siegen, Siegen, 1979), pp. 482–495, *Lecture Notes in Math.*, 788, Springer, Berlin, 1980. (A. A. Ranicki) **81k:18011** 18F25 (57R60)
- Torsion de Whitehead généralisée. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **290** (1980), no. 11, A491–A493. (Ross Staffeldt) **81c:57025** 57Q10 (16A54, 18F25)
- Vogel, Wolfgang (with Schmitt, Thomas) Note on set-theoretic intersections of subvarieties of projective space. *Math. Ann.* **245** (1979), no. 3, 247–253. (D. Kirby) **81a:14025** 14M10 (11C99)
- (with Tutschke, Wolfgang; Kühnau, Reiner; Zielke, Gerhard; Krötenheerdt, Otto; Stämmler, Ludwig; Schleiff, Martin; Strehmel, Karl; Köhler, Jürgen) Mathematische Forschung für Theorie und Anwendung. *Wiss. Z. Martin-Luther-Univ.*
- Halle-Wittenberg *Math.-Natur. Reihe* **28** (1979), no. 3, 5–21. (Editors) **81m:81103** 01A72 (00A05)
- Vögelin, Johannes See Jervis, Jane L., **81m:91009**
- Vogl, F. Über eine Verallgemeinerung Bruijnerscher Reihen. *Österreich. Akad. Wiss. Math.-Natur. Kl. Sitzungsber. II* **186** (1978), no. 8-10, 351–372. (R. N. Jain) **81k:30030** 30D10
- Vogler, H. Vorwort: Prof. Dr. Hohenberg zum 70. Geburtstag. *Ber. Math.-Statist. Sekt. Forsch. Graz* No. 92-95 (1978), 3 pp. (Editors) **81c:91030** 01A70
- Vogt, Andrew (with Johnson, Harold H.) A geometric method for approximating convex arcs. *SIAM J. Appl. Math.* **38** (1980), no. 2, 317–325. (H. T. Croft) **81f:52020** 52A99 (65D10)
- Vogt, Dietmar (with Wagner, Max-Josef) Charakterisierung der Quotientenräume von s und eine Vermutung von Martineau. (English summary) *Studia Math.* **67** (1980), no. 3, 225–240. (Tosun Terzioğlu) **81k:46002** 46A12 (46A45)
- Vogt, Herbert Über eine Variante der empirischen Verteilungsfunktion. (English summary) *Metrika* **25** (1978), no. 1, 49–58. (Paul Deheuvels) **81k:62068** 62G30
- Unbiasedness of confidence intervals based on Galton's statistic. *Metrika* **26** (1979), no. 4, 237–241. (Yves Lepage) **81j:62009** 62G15
- Vogt, W. Ein Defekt-Korrektur-Verfahren variabler Approximationsordnung für Zweipunkt-Randwertaufgaben. *Wiss. Z. Tech. Hochsch. Ilmenau* **26** (1980), no. 3, 49–72. (W. S. Loud) **81j:65095** 65L10
- Vogt, William G. (with Younis, Mohamed I.; Mahmoud, Magdi S.) A computational procedure to stabilize nonlinear sampled-data systems. *Comput. Electr. Engrg.* **7** (1980), no. 1, 3–9. (Authors' summary) **81g:93004** 93D15
- Vogtmann, Karen Homology stability for O_{∞} . *Comm. Algebra* **7** (1979), no. 1, 9–38. (Jean-Louis Loday) **81b:18005** 18F25 (10C30, 20G10, 22E40)
- Vo Hong Anh A quantum approach to the parametric excitation problem in solids. *Phys. Rep.* **64** (1980), no. 1, 45 pp. (Author's summary) **81b:81182** 81Hxx (82A40)
- Voicu, Mihail Kirchhoff interconnectability of linear constant dynamical systems. *Internat. J. Systems Sci.* **11** (1980), no. 8, 907–919. (Author's summary) **81i:93020** 93C35 (93B05, 94C05)
- Voicu, N. (with Iordache, M.; Iordache, D.; Ionescu, G.) A new algorithm and program of the analysis of linear networks with controlled sources, magnetic couplings and excess elements in transient behaviour. (French and German summaries) *Rev. Roumaine Sci. Tech. Sér. Électrotech. Énerg.* **25** (1980), no. 2, 189–203, ii, iv. (Authors' summary) **81g:94049** 94C05
- Volcencu, Dan (with Foiş, Ciprian; Pănicu, C.) Weak limits of almost invariant projections. *J. Operator Theory* **2** (1979), no. 1, 79–93. (P. A. Fillmore) **81m:47012** 47A15 (46L05)
- A note on quasitriangularity and trace-class self-commutators. *Acta Sci. Math.* (Szeged) **42** (1980), no. 1-2, 195–199. (Lawrence Fialkow) **81k:47035** 47B20 (47A15)
- Volgt, Bernd The partition problem for finite abelian groups. *J. Combin. Theory Ser. A* **28** (1980), no. 3, 257–271. (Gary L. Walls) **81h:05016** 05A17 (05C55, 20K01)
- Voigt, Jürgen (with Dierolf, Peter) Convolution and S' -convolution of distributions. *Collect. Math.* **29** (1978), no. 3, 185–196. (Olaf von Gunderin) **81d:46041** 46F10 (44A35, 46F05)
- On Y -closed subspaces of X , for Banach spaces $X \subset Y$; existence of alternating elements in subspaces of $C(J)$. *Pacific J. Math.* **81** (1979), no. 1, 253–266. (M. I. Kadec) **81b:47028** 47B05 (46A50)
- Regularity of mild solutions of nonlinear parabolic equations. *Transport Theory Statist. Phys.* **8** (1979), no. 1, 17–22. (Sadakazu Aizawa) **81k:34058** 34G20 (82A67)
- (with Dierolf, Peter) Weak compactness of Fréchet derivatives: application to composition operators. *J. Austral. Math. Soc. Ser. A* **29** (1980), no. 4, 399–406. (Sadayuki Yamamoto) **81k:47062** 47H99 (46G05, 58C20, 90C25)
- Volkov, G. K. Torsion classes of combinatorial semigroups. (Russian) *C. R. Acad. Bulgare Sci.* **32** (1979), no. 12, 1615–1618. (Anna Ja. Aizenšt) **81c:20009** 20M10
- Volnov, V. V. Use of the principle of complexity for automation of the initial stages of designing automatic control systems. (Russian) *Avtomat. Uprav. i Vychisl. Tekhnika* No. 12 (1978), 109–126, 294. (Author's summary) **81j:93021** 93C10
- Vošé, Waldemar The career of a Polish neo-Aristotelian: Smigulewicz. *Arch. Internat. Hist. Sci.* **29** (1979), no. 104, 23–27. (Joong Fang) **81b:01013** 01A45 (01A70)
- Voisin, Christine (with Malgoire, Jean) ★Factorisation de Stein topologique; découpe. (French) [Topological Stein factorization; cutting] With an introduction by Alexandre Grothendieck. *Cahiers Mathématiques Montpellier, 15. Université des Sciences et Techniques du Languedoc, U.E.R. de Mathématiques, Montpellier, 1979.* v+63 pp. (Jack Weinstein) **81m:57005** 57N05 (14F20, 18F20, 54C10)
- Vošvillo, E. K. (with Bočarov, V. A.; Dragalin, A. G.; Smirnov, V. A.) Some problems of the development of logic. (Russian) *Voprosy Filoz.* **1979**, no. 6, 102–114. (Stanislav J. Surma) **81i:03005** 03-03 (01A60, 03A05)
- Vojtisek, L. V. See Vojtisek, L. V.
- Volton, E. F. (with Daugavet, V. A.; Malozëmov, V. N.) Nonlinear approximation of problems of electric circuit synthesis. (Russian) *Operations research and statistical simulation*, No. 5 (Russian), pp. 28–55, 200, *Leningrad. Univ., Leningrad*, 1979. (Authors' summary) **81f:94035** 94C05
- Voitovik, N. N. Naturalness of boundary conditions in a variational method for solving boundary value problems. (Russian) *Z. Vychisl. Mat. i Mat. Fiz.* **20** (1980), no. 3, 781–786, 815. (Garry J. Tee) **81h:65119** 65N30
- Vojták, Peter (with Balcar, Bohuslav) Almost disjoint refinement of families of subsets of N . *Proc. Amer. Math. Soc.* **79** (1980), no. 3, 465–470. (A. Kanamori) **81c:04004** 04A20 (54A25, 54D40)
- Vojtisek, L. V. Construction of cubature formulas with change of step. (Russian) *Theory of cubature formulas and the application of functional analysis to problems of mathematical physics* (Russian), pp. 46–53, 165, *Trudy Sem. S. L. Soboleva*, No. 1, 1978, *Akad. Nauk SSSR Sibirsk. Otdel., Inst. Mat., Novosibirsk*, 1978. (A. Coju) **81m:65041** 65D32
- Volanová, Jella On the confidence region of a vector parameter. (Russian summary) *Math. Slovaca* **30** (1980), no. 2, 113–120. (I. S. Alalouf) **81k:62045** 62F25
- Vol'berg, A. L. Mean quadratic completeness of polynomials beyond the limits of Szegő's theorem. (Russian) *Dokl. Akad. Nauk SSSR* **241** (1978), no. 3, 521–524. (Z. Rubinstein) **81i:30008** 30B60
- Simultaneous approximation by polynomials on the circle and in the interior of the

- disc. (Russian. English summary) Investigations on linear operators and the theory of functions, IX. *Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 92 (1979), 60–84, 319. (V. Khabala) **81i:30068** 30E10
- Volčenko, Ju. M.** (with Čuberkis, V. P.) Stochastic stability of a programmed control for a rolling process. (Russian) *Akad. Nauk Ukrain. SSR Inst. Kibernet. Preprint* 1978, no. 80 *Modelir. Optimiz. Proizvodst. Proc.*, 15–24, 49. (Authors' summary) **81c:93093** 93E15
- Volčenko, V. F.** (with Šul'man, Z. P.) Convective dissipative heat exchange in generalized Couette flow of a nonlinearly viscoplastic liquid. *Inž.-Fiz. Ž.* 37 (1979), no. 1, 50–58 (Russian); translated as *J. Engng. Phys.* 37 (1979), no. 1, 790–796 (1980). (S. Bhargava) **81k:80003** 80A20 (76A05)
- Volčič, Alenčo** A comparison of the Daniell-Stone integral and the Lebesgue integral. (Italian. English summary) *Rend. Circ. Mat. Palermo (2)* 27 (1978), no. 2, 327–336. (B. Rodríguez-Salinas) **81c:26007** 26A42
- The differentiation of Daniell-Stone integrals. (Italian. English summary) *Rend. Sem. Mat. Univ. Padova* 61 (1979), 251–258 (1980). (B. Bongiorno) **81d:26003** 26A39
- Differentiation of Daniell integrals. *Measure theory, Oberwolfach 1979 (Proc. Conf., Oberwolfach, 1979)*, pp. 284–294, *Lecture Notes in Math.*, 794, Springer, Berlin, 1980. (Ivan Dobrakov) **81i:28019** 28C05 (28A15)
- Volčinskaja, M. I.** (with Četveruškin, B. N.) Solution of two-dimensional non-steady-state problems of radiative gas dynamics. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 19 (1979), no. 5, 1262–1275, 1358. (V. Ju. Ljapidevskij) **81e:76057** 76N15 (35Q99, 85A25)
- Vold, H.** Efficient implementation of the discrete Fourier transform analysis of cyclically symmetric structures. *Mathematics of finite elements and applications, III (Proc. Third MAFELAP Conf., Brunel Univ., Uxbridge, 1978)*, pp. 467–475, Academic Press, London, 1979. (H. G. Hopkins) **81c:65067** 65T05 (73K30)
- Volevič, L. R.** (with Gindikin, S. G.) The method of energy estimates in the Cauchy problem for differential operators with variable coefficients. (Russian) *Proceedings of an All-Union Conference on Partial Differential Equations (Moscow State Univ., Moscow, 1976)* (Russian), pp. 75–77, *Moskov. Gos. Univ., Meh.-Mat. Fakul'tet, Moscow*, 1978. (See **80i:35002**) 35G05
- (with Gindikin, S. G.) Energy estimates in a mixed problem for $(2b+1)$ -hyperbolic equations. (Russian. English summary) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint* No. 137 (1978), 63 pp. (V. Ju. Ljapidevskij) **81b:35016** 35G15 (35L99)
- (with Gindikin, S. G.) Unbounded operators in scales of spaces and boundary value problems for Wiener-Fokker equations in a half-space. (Russian) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint* No. 71 (1978), 68 pp. (Editors) **81b:46057** 46F10 (47B35)
- (with Gindikin, S. G.) Solvability of a mixed problem for $(2b+1)$ -hyperbolic equations. (Russian) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint* No. 130 (1979), 61 pp. (V. Rosa) **81c:35097** 35L25 (35A22)
- (with Gindikin, S. G.) A mixed problem for $(2b+1)$ -hyperbolic equations of higher order with respect to time. (Russian) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint* No. 194 (1979), 32 pp. (J. Christina) **81c:35080** 35L55
- (with Gindikin, S. G.) The Wiener-Fokker equation in generalized functions that are smooth on a half-line. (Russian) *Trudy Moskov. Mat. Obšč.* 38 (1979), 29–74. (V. S. Rabinovič) **81d:46044** 46F10 (45P05, 47G05)
- (with Gindikin, S. G.) The Wiener-Fokker equation for smooth and generalized functions in a half-space. (Russian) *Trudy Moskov. Mat. Obšč.* 40 (1979), 241–295. (V. S. Rabinovič) **81d:46044** 46F10 (45P05, 47G05)
- Volgenant, Ton** (with Jonker, Roy; Kaas, Rob) Data-dependent bounds for heuristics to find a minimum weight Hamiltonian circuit. *Oper. Res.* 28 (1980), no. 5, 1219–1222. (Authors' summary) **81j:05080** 05C45
- Volger, Hugo** Sheaf representations of algebras and transfer theorems for model-theoretic properties. *Algebraische Modelle, Kategorien und Gruppoide*, pp. 155–163, *Studien zur Algebra und ihre Anwendungen*, 7, Akademie-Verlag, Berlin, 1979. (Andreas Blass) **81m:03050** 03C90 (18F20)
- Volkenko, I. B.** Bases of a free Lie algebra modulo T -ideals. (Russian. English summary) *Dokl. Akad. Nauk BSSR* 24 (1980), no. 5, 400–403, 475. (P. M. Cohn) **81h:17007** 17B05
- Voll, A. P.** See Questions in the dynamical theory of seismic wave propagation, **81b:86003**
- Volljak, K. I.** (with Etkin, V. S.) Nonlinear interaction of weakly modulated surface and sound waves. *Izv. Akad. Nauk SSSR Ser. Fiz. Atmosf. i Okean* 15 (1979), no. 5 (Russian); translated as *Izv. Acad. Sci. USSR Atmospher. Ocean. Phys.* 15 (1979), no. 5, 376–380 (1980). (Authors' summary) **81f:76011** 76B15 (76Q05, 86A05)
- Volljank, G. D.** Invariance of solutions of systems of second-order differential-difference equations of neutral type. (Russian) *Theory of invariance and its application (Proc. Fifth All-Union Conf., Kiev, 1976)*, Part 1 (Russian), pp. 304–308, "Naukova Dumka", Kiev, 1979. (V. G. Angelov) **81k:34066** 34K05 (93C05)
- Volk, O.** Johann Heinrich Lambert and the determination of orbits for planets and comets. (German summary) *Proceedings of the Sixth Conference on Mathematical Methods in Celestial Mechanics (Math. Forschungsmün., Oberwolfach, 1978)*, Part II. *Celestial Mech.* 21 (1980), no. 2, 237–250. (Peeter Müntsepp) **81c:81018** 01A50 (70–03)
- Volkenshtein, M. V.** (with Distrov, B. F.; Livšic, M. A.) The effect of a time lag in the immune reaction. *Modelling and optimization of complex systems (Proc. IFIP-TC 7 Working Conf., Nicosia, 1978)*, pp. 87–94, *Lecture Notes in Control and Information Sci.*, 18, Springer, Berlin, 1979. (Zvi Grossman) **81k:92002** 92A05 (92A07)
- Volkman, Bodo** Un problème concernant des nombres normaux. *Séminaire de Théorie des Nombres 1977–1978, Exp. No. 27*, 3 pp., CNRS, Talence, 1978. (Editors) **81f:10066** 10K25
- Volkman, Lutz** Über ganze Funktionen der unteren Ordnung $\mu < 1$. *Rev. Roumaine Math. Pures Appl.* 23 (1978), no. 5, 807–813. (L. R. Sons) **81b:30062** 30D35
- Anwendungen einer Methode von Pólya in der Theorie der ganzen Funktionen. *Ann. Acad. Sci. Fenn. Ser. A I Math.* 4 (1979), no. 2, 299–309. (S. Hellerstein) **81f:30029** 30D35 (30D20)
- Volkman, Peter** Ein Existenzsatz für gewöhnliche Differentialgleichungen in Banachräumen. (English summary) *Proc. Amer. Math. Soc.* 80 (1980), no. 2, 297–300. (Jan Prüsa) **81c:34087** 34G20
- Volkovarov, V. F.** (with Nikolaev, N. Ja.) Solution of the Neumann problem for the Euler-Darboux equation. (Russian) *Proceedings of a Seminar on Differential Equations*, No. 3 (Russian), pp. 28–32, 144, *Kuibyshev. Gos. Univ., Kuibyshev*, 1977. (Todor G. Genčev) **81d:35066** 35Q05 (35L80, 35M05)
- (with Nikolaev, N. Ja.) Solution of boundary value problems for the Euler-Darboux equation in special classes. (Russian) *Proceedings of a Seminar on Differential Equations*, No. 3 (Russian), pp. 32–38, 144, *Kuibyshev. Gos. Univ., Kuibyshev*, 1977. (Todor G. Genčev) **81d:35067** 35Q05 (35L80, 35M05)
- (with Hafizov, Š. G.) A boundary value problem for an equation of mixed type with singular coefficients on a circle. (Russian) *Kuibyshev. Gos. Ped. Inst. Nauchn. Trudy* 226 (1978), *Funkcional. Anal. i Differencial. Uravnenija*, 20–25. (From the text) **81g:35093** 35M05
- (with Makušina, R. V.) Uniqueness and existence of the solutions to a problem with shift in a bounded domain for the Euler-Darboux equation. (Russian) *Differencial'nye Uravnenija (Ryazan)* No. 14 (1979), 32–40. (Authors' summary) **81h:35057** 35L65 (35Q20)
- Volkov, A. A.** On the theory of a profiled support for the stroke of a reciprocating piston. (Russian) *Gidromeh. (Kiev)* No. 42 (1980), 56–62, 122. (Author's summary) **81d:76044** 76D99
- Volkov, Anatole B.** (with Lichtner, Peter C.; Griffin, James J.; Schultheis, Hildegard; Schultheis, Rainer) Time-dependent Hartree-Fock phase: unique implication of variational principle. *Phys. Lett. B* 88 (1979), no. 3–4, 221–225. (Authors' summary) **81a:81107** 81G35
- (with Gulshani, P.) Heisenberg-symplectic angular momentum coherent states in two dimensions. *J. Phys. A* 13 (1980), no. 10, 3195–3204. (Authors' summary) **81h:81036** 81C40 (22E70)
- Volkov, D. V.** (with Akulov, V. P.) Supersymmetric equations in the space $(1, 2)$. (Russian. English summary) *Teor. Mat. Fiz.* 42 (1980), no. 1, 16–22. (P. K. Smrz) **81c:83026** 83C45 (22E70, 81G25)
- (with Pašnev, A. I.) Supersymmetric Lagrangian for particles in proper time. (Russian. English summary) *Teor. Mat. Fiz.* 44 (1980), no. 3, 321–326. (Author's summary) **81k:81100** 81G20
- Volkov, E. A.** The method of nets for the Laplace and Poisson equations on domains with smooth and piecewise-smooth boundaries. (Russian) *Proceedings of an All-Union Conference on Partial Differential Equations (Moscow State Univ., Moscow, 1976)* (Russian), pp. 78–81, *Moskov. Gos. Univ., Meh.-Mat. Fakul'tet, Moscow*, 1978. (See **80i:35002**) 65N05
- An exponentially converging method of conformal mapping of multiangular domains. (Russian) *Dokl. Akad. Nauk SSSR* 249 (1979), no. 6, 1292–1295. (E. Reich) **81d:30012** 30C20 (30C30)
- See also *Boundary value problems of mathematical physics*, **81d:35001**
- Volkov, Ju. A.** A priori estimates of principal radii of curvature of a closed convex surface of a Lobachevskij space. (Russian) *Questions of global geometry (Russian)*, pp. 15–21, *Leningrad. Gos. Ped. Inst., Leningrad*, 1979. (V. G. Kopp) **81g:53052** 53C50 (83C40)
- Volkov, M. V.** Periodic varieties of associative rings. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1979, no. 8, 3–13. (A. P. Popov) **81f:16027** 16A38 (08B15, 16A44)
- On the existence of finite bases for varieties of rings with finite index. II. (Russian) *Ural. Gos. Univ. Mat. Zap.* 11 (1979), no. 3 *Issled. po Sovremen. Algebra*, 40–43, 209. (N. Latyšev) **81k:08008** 08B99
- Volkov, V. A.** ★Элементы теории множеств и развитие понятия числа. (Russian) [Elements of set theory and the development of the concept of number] *Leningrad. Univ., Leningrad*, 1978. 83 pp. (Editors) **81h:04001** 04–01
- Volkova, I. I.** (with Veličenko, V. V.) Mathematical modeling of the motion of complex mechanical systems by the method of controlled couplings. (Russian) *Theory of stability and its applications (Russian)*, pp. 261–264, 304, "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. (Authors' summary) **81c:93004** 93A10
- Volkova, N. I.** (with Novikova, N. S.) Absolute summability of degree p of series that are connected with Fourier series, by triangular matrix methods. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1980, no. 1, 45–49. (M. F. Timan) **81e:42019** 42A28
- Vol'kov, V. E.** Analytic description of algebras of K. Urbanik. (Russian) *Izv. Akad. Nauk UzSSR Ser. Fiz.-Mat. Nauk* 1979, no. 5, 12–17, 79. (I. V. Ostrovskij) **81f:60029** 60E99
- Vollmer, H. D.** (with Risken, H.) Low friction nonlinear mobility for the diffusive motion in periodic potentials. *Phys. Lett. A* 69 (1978/79), no. 6, 387–389. (Authors' summary) **81h:82055** 82A70
- (with Risken, H.) On the application of truncated generalized Fokker-Planck equations. *Z. Phys. B* 35 (1979), no. 3, 313–315. (G. Papanicolaou) **81g:82028** 82A35
- (with Risken, H.) Solutions and applications of triagonal vector recurrence relations. *Z. Phys. B* 39 (1980), no. 4, 339–346. (L. F. Shampein) **81h:65099** 65L15 (65F15)
- (with Risken, H.; Mörsch, N.) Matrix continued fraction solutions of the Kramers equation and their inverse friction expansions. *Z. Phys. B* 40 (1980/81), no. 4, 343–352. (Authors' summary) **81m:82010** 82A05 (65N99, 82A70)
- Volodina, A. A.** (with Levij, V. D.) An algorithm for optimizing the graph of operation of a fleet, using generalized Lagrange multipliers. (Russian) *Heuristic algorithms of optimization (Russian)*, pp. 88–93, *Jaroslav. Gos. Univ., Yaroslavl*, 1978. (From the introduction) **81f:90055** 90B35
- Volodina, B. A.** (with Hapaev, A. M.) The solution of a boundary value problem of motion and the interaction of charged particles with the field of a moving electromagnetic wave. (Russian) *Differencial'nye Uravnenija* 16 (1980), no. 4, 589–597, 763. (Corneliu Eftimiu) **81h:78005** 78A35 (78A40)
- Volodina, I. N.** Lower bounds for average sample size in tests of invariance. (Russian. English summary) *Teor. Verojatnost. i Primenen.* 25 (1980), no. 2, 359–364. (M. Huškova) **81k:62113** 62L10 (62F03)
- Volodina, N. A.** (with Morozova, L. N.) Some estimates of probabilities of large deviations for martingales and sums of random vectors. (Russian) *Random processes and mathematical statistics (Russian)*, pp. 35–43, 186, "Fan", Tashkent, 1978. (Zdzisław Rychlik) **81g:60027** 60F10 (60G42)
- Volokitin, E. P.** Differential games of survival. (Russian) *Upravljajemye Sistemy* No. 16 (1977), 20–30, 81. (Author's summary) **81i:90226** 90D25
- Volokitin, S. S.** Investigation of the convergence of block modifications of the

- Newton-Kantorovič method. (Russian) *Numerical methods of optimization (applied mathematics)* (Russian), pp. 118–127, *Akad. Nauk SSSR Sibirsk. Otdel., Énerget. Inst., Irkutsk*, 1978. (B. T. Poljak) **81b:65050** 65J15 (58C15)
- On the optimization of block processes of Newton-Kantorovič. (Russian) *Optimizacija* No. 21(38) (1978), 75–91, 179. (Boro Döring) **81d:65026** 65J05 (65K05)
- Volos, N. P. The method of approximate separation of variables in a problem of natural oscillations of plates in a refined formulation. (Russian) *Dinamika i Pročnost' Matin* No. 31 (1980), 39–46, 1. (Author's summary) **81g:73078** 73K12
- Voloschenko, A. B. (with Kuznetsov, Ju. N.; Kuzubov, V. I.) ★Математическое программирование. (Russian) [Mathematical programming] Second edition, revised and augmented. "Vysš. Škola", Moscow, 1980. 301 pp. (J. S. Joel) **81i:90002** 90-01 (65K05, 90Cxx)
- Volosina, M. S. (with Gupalo, G.-V. S.; Lopušanská, G. P.) The generalized Dirichlet problem for a class of strongly elliptic systems of differential equations in the case of a multiply connected domain. (Ukrainian. Russian summary) *Visnik L'viv. Derž. Univ. Ser. Meh.-Mat.* No. 13 (1978), 5–8, 119. (Authors' summary) **81k:35060** 35J55
- Volosov, V. M. See Bicadze, A. V.; et al. **81i:00003**
- Volosov, V. V. (with Voronova, L. I.; Čehovil, Ju. M.) Two classes of iterative algorithms for correction of systems of programmed control of motion. (Russian) *Dynamics of control systems (Third All-Union Cetero Conf., Irkutsk, 1977)* (Russian), pp. 81–91, 338, "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. (Authors' summary) **81e:93005** 93A10
- Volosova, I. G. See Bicadze, A. V.; et al. **81i:00003**
- Volovik, G. E. (with Džalošinskii, I. E.) Poisson brackets in condensed matter physics. *Ann. Physics* **125** (1980), no. 1, 67–97. (A. K. Rajagopal) **81a:81129** 81J05 (82A42, 82A50)
- (with Dcenko, V. S.) Hydrodynamics of defects in condensed media, using as examples vortices in rotating He II and disclinations in a planar magnet. *Ž. Eksper. Teoret. Fiz.* **78** (1980), no. 1, 132–148. (Russian); translated as *Soviet Phys. JETP* **51** (1980), no. 1, 65–73. (Authors' summary) **81i:82048** 82A42 (76Y05, 81J05)
- Volovik, A. Ju. Two theorems from the theory of periodic transformations. (Russian) *Mat. Sb. (N.S.)* **110(152)** (1979), no. 1, 128–134, 160. (Gencho Skordev) **81d:55006** 55M35
- Volpato, Mario (with Bressan, Alberto) The absolute continuity of a random variable whose density is the limit of a sequence of piecewise constant densities. (Italian) *Rend. Sem. Mat. Univ. Padova* **60** (1978), 237–255. (F. G. Heyes) **81b:60015** 60E05
- Volpienista, A. (with Pianca, P.; Zecchin, M.) On the solution of a class of extremal problems with integer variables connected with the problem of optimal allocation at a service center. (Italian) *Proceedings of the First AMASES Meeting (Pisa, 1977)* (Italian), pp. 309–331, Giappichelli, Turin, 1979. (Peter Bod) **81i:90151** 90C10 (90B35)
- Some remarks about homomorphisms and group minimization problems. *Survey of mathematical programming (Proc. Ninth Internat. Math. Programming Sympos., Budapest, 1976)*, Vol. 2, pp. 553–557, North-Holland, Amsterdam, 1979. (F. Giannessi) **81j:90085** 90C10 (20K01)
- Equi-assignments and explicit solutions of a particular discrete optimization problem. *Discrete Appl. Math.* **2** (1980), no. 3, 261–265. (Author's summary) **81h:90102** 90C10
- Volpi, Giampiero (with Gambolati, Giuseppe) An improved iterative scheme for refining the solution of ill-conditioned systems. *Information processing 80 (Proc. IFIP Congr., Tokyo/Melbourne, 1980)*, pp. 729–734, IFIP Congress Ser., 8, North-Holland, Amsterdam, 1980. (See **81i:68009**) 65F10
- Volpini, Allan J. (with Lubell, David) Primitivity of relations. (French summary) *Problèmes combinatoires et théorie des graphes (Colloq. Internat. CNRS, Univ. Orsay, Orsay, 1976)*, pp. 281–283, Colloques Internat. CNRS, 260, CNRS, Paris, 1978. (See **80e:05005**) 05C25 (05C99)
- Volta, G. (with Astolfi, M.; Contini, S.; Van den Muyzenberg, C. L.) Fault tree analysis by list-processing techniques. *Synthesis and analysis methods for safety and reliability studies (Proc. NATO Adv. Study Inst., Urbino, 1978)*, pp. 5–32, Plenum, New York, 1980. (See **81j:93008**) 94C15
- See also *Synthesis and analysis methods for safety and reliability studies*, **81j:93008**
- Voljak, K. I. See Voljak, K. I.
- Volynskii, E. I. (with Kas'janenko, S. I.; Henkin, M. Z.) A method of relaxing constraints in the problems for a conditional extremum. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* **20** (1980), no. 2, 289–297, 549. (A. B. Pevnyi) **81f:65047** 65K05 (49D30, 90C30)
- Volzone, Gaetano (with de Paris, Gennaro) Block systems of a class of incidence structures. (Italian. English summary) *Rend. Mat.* (6) **11** (1978), no. 2, 217–230. (Authors' introduction) **81i:05044** 05B25 (51F99)
- Vom Scheidt, Jürgen See vom Scheidt, Jürgen
- Von Bahr, Bengt See von Bahr, Bengt
- Von Boehm, J. See von Boehm, J.
- Von Braunmühl, Burchard See von Braunmühl, Burchard
- Von Collani, E. See von Collani, E.
- Von Dobschütz, L. See von Dobschütz, L.
- Von Eye, A. See von Eye, A.
- Von Grudziński, Olaf See von Grudziński, Olaf
- Von Laetow, H. Baussus See Baussus von Laetow, H.
- Von Meyenn, Karl See von Meyenn, Karl
- Von Mises, Richard See von Mises, Richard
- Von Neumann, John See von Neumann, John
- Von Randow, Rabe See von Randow, Rabe
- Von Renteln, Michael See von Renteln, Michael
- Von Solms, S. H. See von Solms, S. H.
- Von Trotha, Hartmut See von Trotha, Hartmut
- Von Wahl, Wolf See von Wahl, Wolf
- Von Weizsäcker, C. F. See von Weizsäcker, C. F.
- Von Wilucki, Ingeborg See von Wilucki, Ingeborg
- Von Wright, Georg Henrik See von Wright, Georg Henrik
- Von zur Mühlen, Peter See von zur Mühlen, Peter
- Voogd, H. Stochastic multicriteria evaluation by means of geometric scaling. *Delft Progr. Rep.* **5** (1980), no. 2, 112–125. (Author's summary) **81g:92030** 92A27 (90A05, 90C31)
- Voornhe, M. (with Brouwer, Andries E.) Turán theory and the lotto problem. *Packing and coloring in combinatorics*, pp. 99–105, *Math. Centre Tracts*, 106, *Math. Centrum, Amsterdam*, 1979. (See **81b:05001**) 05C35 (05B40)
- A generalization of Descartes' rule. *J. London Math. Soc.* (2) **20** (1979), no. 3, 446–456. (N. A. Širokov) **81c:30016** 30C15
- Vopěnka, Petr (with Sochor, Antonín) Endomorphic universes and their standard extensions. *Comment. Math. Univ. Carolin.* **20** (1979), no. 4, 605–629. (Authors' summary) **81i:03083** 03E70 (03H05)
- The lattice of indiscernibility equivalences. *Comment. Math. Univ. Carolin.* **20** (1979), no. 4, 631–638. (L. Bukovský) **81f:03062** 03E70 (04A99)
- (with Čuda, Karel) Real and imaginary classes in the alternative set theory. *Comment. Math. Univ. Carolin.* **20** (1979), no. 4, 639–653. (Authors' summary) **81i:03084** 03E70
- (with Sochor, Antonín) Revelements. *Comment. Math. Univ. Carolin.* **21** (1980), no. 1, 97–118. (L. Bukovský) **81f:03065** 03E70 (04A99)
- Vorel, Zdeněk (with Flores, Rubén) Necessary and sufficient conditions for continuous dependence for Volterra operator equations. *Bol. Soc. Mat. Mexicana* (2) **23** (1978), no. 1, 34–35. (T. L. Herdman) **81i:45003** 45D05
- Vorob'ev, E. M. (with Belov, V. V.) ★Сборник задач по дополнительным главам математической физики. (Russian) [A collection of problems in supplementary chapters of mathematical physics] *Izdat. "Vysšaja Škola", Moscow*, 1978. 271 pp. (Stig I. Andersson) **81k:00003** 00A07 (00A69, 35B40, 35C20, 35S99, 58F06, 58G15, 81Cxx)
- Vorob'ev, N. N. See Vorob'ev, M. M.
- Vorob'ev, N. T. Maximal screens of local formations. (Russian) *Algebra i Logika* **18** (1979), no. 2, 137–161, 253. (S. S. Levickienko) **81f:20030** 20D10
- Vorob'ev, M. M. ★Criteria for divisibility. Translated and adapted from the Russian edition by Daniel A. Levine and Timothy McLarnan. *Popular Lectures in Mathematics. University of Chicago Press, Chicago, Ill.-London*, 1980. ix+69 pp. ISBN 0-226-86516-9. (L. C. Eggan) **81f:10001** 10-01 (10A05)
- Voronov, E. G. (with Jahno, O. M.) Velocity profiles in the hydrodynamic stabilization zone of a falling film produced by slot with nonparallel sides. A translation of *Gidromekh.* **34** (1976), 105–111. *Fluid Mech.—Soviet Res.* **8** (1979), no. 3, 110–117. (Authors' summary) **81h:76023** 76D05
- Voronov, Ju. I. The measurement of the energy-time indeterminacy relation. (Russian) *Dokl. Akad. Nauk SSSR* **251** (1980), no. 5, 1110–1113. **81f:81000** 81B05
- Voronts, A. N. (with Pavlov, V. V.) A generalized quality criterion for ergatic control systems. *Avtomatika* **1979**, no. 4, 66–71, 96. (Russian); translated as *Soviet Automat. Control* **12** (1979), no. 4, 53–56. (Authors' summary) **81f:93003** 93A10
- Vector optimization of multilink dynamic systems. *Avtomatika* **1979**, no. 5, 19–26, 92. (Russian); translated as *Soviet Automat. Control* **12** (1979), no. 5, 13–18. (Author's summary) **81f:93011** 93A15
- Voronts, S. M. Zeros of some Dirichlet series lying on the critical line. (Russian) *Izv. Akad. Nauk SSSR Ser. Mat.* **44** (1980), no. 1, 63–91, 238. (Matti Jutila) **81e:10036** 10H05
- Voronova, L. I. (with Volosov, V. V.; Čehovil, Ju. M.) Two classes of iterative algorithms for correction of systems of programmed control of motion. (Russian) *Dynamics of control systems (Third All-Union Cetero Conf., Irkutsk, 1977)* (Russian), pp. 81–91, 338, "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. (Authors' summary) **81e:93005** 93A10
- Voronov, A. G. Hamiltonian formalism for internal waves in the ocean. *Izv. Akad. Nauk SSSR Ser. Fiz. Atmosf. i Okeana* **15** (1979), no. 1. (Russian); translated as *Izv. Acad. Sci. USSR Atmosf. Ocean. Phys.* **15** (1979), no. 1, 52–57 (1980). (Author's summary) **81d:76009** 76V05 (86A05)
- Voronoš, Ye. G. See Voronoš, E. G.
- Voros, A. (with Balian, R.; Parisi, G.) Quartic oscillator. *Feynman path integrals (Proc. Internat. Colloq., Marseille, 1978)*, pp. 337–360, *Lecture Notes in Phys.*, 106, *Springer, Berlin*, 1979. (J. S. Joel) **81b:41083** 41A60 (34E20, 58G25, 81C12)
- Symbol calculus by symbolic computation and semiclassical expansions. *Symbolic and algebraic computation (EUROSAM '79, Internat. Sympos., Marseille, 1979)*, pp. 45–51, *Lecture Notes in Comput. Sci.*, 72, *Springer, Berlin*, 1979. (J. S. Joel) **81i:81025** 81C15 (34E20, 35B40, 35J10, 58G15, 68C20)
- (with Berry, M. V.; Balazs, N. L.; Tabor, M.) Quantum maps. *Ann. Physics* **122** (1979), no. 1, 26–63. (Jean-Pierre Eckmann) **81b:81034** 81Hxx (58F11, 58F14)
- (with Grammaticos, B.) Semiclassical approximations for nuclear Hamiltonians. I. Spin-independent potentials. *Ann. Physics* **123** (1979), no. 2, 359–380. (Authors' summary) **81m:81077a** 81G35 (35B99, 58G15, 81C12)
- (with Grammaticos, B.) Semiclassical approximations for nuclear Hamiltonians. II. Spin-dependent potentials. *Ann. Physics* **129** (1980), no. 1, 153–171. (Authors' summary) **81m:81077b** 81G35 (35B99, 58G15, 81C12)
- Vorovič, I. I. (with Babelko, V. A.) ★Динамические смешанные задачи теории упругости для неклассических областей. (Russian) [Dynamic mixed problems of the theory of elasticity for nonclassical domains] "Nauka", Moscow, 1979. 320 pp. (A. G. Ramm) **81b:73002** 73-02 (35P99, 45E99)
- Vorožcov, E. V. (with Janenko, N. N.) On some algorithms for shock wave recognition by shock-capturing computational results. *Comput. & Fluids* **8** (1980), no. 3, 313–326. (Authors' summary) **81h:76037** 76L05 (65M10)
- Vos, Robert G. (with Jones, Robert E.) Development and evaluation of two nonlinear shell elements. *Internat. J. Numer. Methods Engrg.* **16** (1980), Special Issue, 65–80. (Authors' summary) **81m:73064** 73L99 (65N30)
- Voshhaar, J. H. Oude ($k-1$)-mean significance levels of nonparametric multiple comparisons procedures. *Ann. Statist.* **8** (1980), no. 1, 75–86. (M. Hušková) **81e:62083** 62J15 (62G99)
- Voskanjan, A. A. Some extremal problems in the theory of approximation on the entire real axis. (Russian. Armenian and English summaries) *Izv. Akad. Nauk Armjan. SSR Ser. Mat.* **14** (1979), no. 2, 107–123, 155. (J. Szabados) **81b:41042** 41A20
- Vosko, S. H. (with Chow, H. C.) Special points for two-dimensional Brillouin zone or Wigner-Seitz cell integrations. (French summary) *Canad. J. Phys.* **58** (1980), no. 4, 497–503. (Authors' summary) **81b:82044** 82A60 (65H10)
- Vosmansky, Jaromir The distribution of zeros of the solutions of second-order linear differential equations. (Russian) *Differentsial'nye Uravneniya* **15** (1979), no. 12, 2115–2124, 2298. (P. Talpalaru) **81d:34026** 34C10
- Voss, Heinrich (with Sprekels, Jürgen) Bounds for the critical value of a nonlinear circular

- membrane under normal pressure. *Constructive methods for nonlinear boundary value problems and nonlinear oscillations* (Proc. Conf. Math. Res. Inst., Oberwolfach, 1978), pp. 170-175, Internat. Ser. Numer. Math., 48, Birkhäuser, Basel, 1979. (A. Radu) **81h:73038** 73K15 (34B15, 35P15, 49G05)
- (with Werner, Bodo) Ein Quotientenabschließungssatz für den kritischen Parameter nichtlinearer Randwertaufgaben. *Numerical mathematics* (Sympos., Inst. Appl. Math., Univ. Hamburg, Hamburg, 1979), pp. 147-158, Internat. Ser. Numer. Math., 49, Birkhäuser, Basel, 1979. (W. Börsch-Supan) **81h:65085** 65N25 (35B32, 35B50, 58E07)
- (with Mooney, J. W.; Werner, Bodo) The dependence of critical parameter bounds on the monotonicity of a Newton sequence. *Numer. Math.* 33 (1979), no. 3, 291-301. (Theodore Laetsch) **81c:35049** 35J60 (47H12, 58C15, 65J15)
- Voß, Heinz-Jürgen** Graphs having odd circuits with at least k chords. (German and Russian summaries) *Elektron. Informatsioverarb. Kibernet.* 16 (1980), no. 1-3, 77-86. (P. Erdős) **81m:05091** 05C38
- Voß, Klaus** Ein rechenstechnisches Verfahren zur Konstruktion hierarchisch strukturierter Klassifikatoren. (English and Russian summaries) *Elektron. Informationsverarb. Kibernet.* 16 (1980), no. 5-6, 281-286. (Author's summary) **81m:68076** 68G10
- Voss, Waltraud** Graphs and groups. *Algebraische Modelle, Kategorien und Gruppoide*, pp. 91-98, *Studien zur Algebra und ihre Anwendungen*, 7, Akademie-Verlag, Berlin, 1979. (Hugo S. Sun) **81g:20075** 20F32 (05C25)
- Vostanenko, V. V.** The evasion problem with integral and geometric constraints on control. (Russian. English summary) *Kibernetika (Kiev)* 1978, no. 3, 140-141. (A. I. Subbotin) **81h:90190** 90D26
- Vostokov, S. V.** The reciprocity law in an algebraic number field. (Russian) *Algebra, number theory and their applications. Trudy Mat. Inst. Steklov.* 148 (1978), 77-81, 273. (Helmut Koch) **81a:12012** 12A65
- Normed pairing in formal modules. (Russian) *Izv. Akad. Nauk SSSR Ser. Mat.* 43 (1979), no. 4, 765-794, 966. (Helmut Koch) **81h:12017** 12B25 (14L05)
- The Hilbert symbol in a discretely valued field. (Russian) *Rings and modules*, 2. *Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 94 (1979), 50-69, 150. (Helmut Koch) **81h:12019** 12B20
- Vostrov, L. E.** Boundary value problems for a wave equation in noncharacteristic domains. (Russian) *Differentsial'nye Uravneniya* 15 (1979), no. 12, 2266-2268, 2303. (Author's summary) **81h:35027** 35L05
- Vo Thanh Liem** Factorizations of free actions of finite groups on compact Q -manifolds. *Proc. Amer. Math. Soc.* 75 (1979), no. 2, 334-338. (Author's summary) **81i:57036** 57S17 (57N20)
- Vought, Eldon J.** On decompositions of hereditarily uncoherent continua. *Fund. Math.* 102 (1979), no. 1, 73-79. (G. R. Gordh, Jr.) **81f:54018** 54F20 (54B15, 54F50, 54F55)
- (with Grace, E. E.) Monotone decompositions of θ -continua. *Trans. Amer. Math. Soc.* 263 (1981), no. 1, 261-270. (József Krasinkiewicz) **81i:54058** 54F20 (54B15)
- Voukalis, D. C.** A comparison between burst error correcting codes. *Internat. J. Electron.* 49 (1980), no. 4, 319-325. (Author's summary) **81k:94032** 94B20
- Vo Van Tan** The "restrum" problem for 1-convex spaces. *Romanian-Finnish Seminar on Complex Analysis* (Proc. Bucharest, 1976), pp. 483-484, *Lecture Notes in Math.*, 743, Springer, Berlin, 1979. (J. S. Joel) **81e:32023** 32F10
- (with Ancona, V.) Embedding Moishezon spaces into 1-convex spaces. *Math. Ann.* 247 (1980), no. 2, 143-147. (Shigeho Nakano) **81f:32011** 32C15 (32F10)
- Vanishing theorems and Kählerity for strongly pseudoconvex manifolds. *Trans. Amer. Math. Soc.* 261 (1980), no. 1, 297-302. (Shigeho Nakano) **81f:32042** 32L20 (32F30, 53C55)
- Vork, V. N.** (with Savula, Ja. G.; Šinkarenko, G. A.) A posteriori estimate of an approximate solution obtained by the finite element method in a problem of rod torsion. (Ukrainian. Russian summary) *Viznik L'vov. Derž. Univ. Ser. Meh.-Mat.* No. 12 (1977), 63-68, 96. (V. G. Korneev) **81h:65107** 65N15 (65N30)
- Vovsi, S. M.** Locally finite varieties of representations of groups. (Russian) *Izv. Vyss. Uchebn. Zaved. Matematika* 1979, no. 6, 16-27. (A. Kulikulejs) **81f:20008** 20C07 (20E10)
- Voxman, W.** (with Cobb, J.) Dispersion points and fixed points. *Amer. Math. Monthly* 87 (1980), no. 4, 278-281. (K. D. Magill, Jr.) **81e:54036** 54G15 (54H25)
- Voyladis, G. Z.** (with Baluch, M. H.) Higher order plate equations based on Reissner's formulation of the plate problem. (Arabic summary) *Arabian J. Sci. Engrg.* 5 (1980), no. 2, 75-80. (Authors' summary) **81d:73052** 73K10
- Vrabie, Ioan I.** A compactness method for a class of nonlinear variational inequalities of parabolic type. *Variational inequalities and optimization problems* (Proc. Summer School, Constanța, 1979), pp. 131-137, *Minist. Ed. Încălzimintului, Constanța*, 1979. (Pierre-Louis Lions) **81m:49010** 49A29
- (with Pavel, Nicolae H.) Differential equations associated with continuous and dissipative time-dependent domain operators. *Volterra equations* (Proc. Helsinki Sympos. Integral Equations, Otaniemi, 1978), pp. 236-250, *Lecture Notes in Math.*, 737, Springer, Berlin, 1979. (Robert H. Martin, Jr.) **81h:34074** 34G20
- (with Pavel, Nicolae H.) Semilinear evolution equations with multivalued right-hand side in Banach spaces. *An. Stiint. Univ. "Al. I. Cuza" Iași Sect. I a Mat. (N.S.)* 25 (1979), no. 1, 137-157. (J. A. Nohel) **81a:47060** 47H15 (34G20, 35K55, 49A27)
- Une méthode de compacité pour une classe d'inéquations d'évolution non linéaires. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 16, A749-A752. (Author's summary) **81c:49009** 49A29 (35K22, 47H15)
- Vraciu, George** (with Popa, Aurel) An algorithm for approximating the solution of an elliptic equation. *An. Univ. Craiova Mat. Fiz.-Chim. No. 5* (1977), 55-60. (Editors) **81g:65161** 65N30
- Vragov, V. N.** See *Application of the methods of functional analysis to problems of mathematical physics and numerical analysis*, **81j:35001**
- Vrănceanu, G.** Tetrahedral surfaces. (Romanian) *Stud. Cerc. Mat.* 30 (1978), no. 1, 119-120. (P. Drăgăla) **81j:53003** 53A05
- Vrănceanu, George** See Teodorescu, Nicolae, **81k:01050** and Iann, S.; et al., **81m:01054**
- Vrem, Richard C.** Harmonic analysis on compact hypergroups. *Pacific J. Math.* 85 (1979), no. 1, 239-251. (C. F. Dunkl) **81g:43009** 43A30 (43A10)
- de Vries, G.** (with Norris, D. H.) ★ An introduction to finite element analysis. *Academic Press* [Harcourt Brace Jovanovich, Publishers], New York-London, 1978. xiii + 301 pp. ISBN 0-12-521660-2 (Jan Gladwell) **81m:6502b** 65-01 (65N30)
- de Vries, J.** Integration on locally compact groups. *Representations of locally compact groups with applications* (Colloq., Math. Centre, Amsterdam, 1977/78), pp. 157-219, *MC Syllabus*, 38, Math. Centrum, Amsterdam, 1979. (See **81k:22001**) 28C10 (43A99)
- (with Aarts, J. M.) Local dynamical systems and their morphisms. *Topological structures, II* (Proc. Sympos. Topology and Geom., Amsterdam, 1978), Part 1, pp. 1-14, *Math. Centre Tracts*, 115, Math. Centrum, Amsterdam, 1979. (Helmut Ludescher) **81h:54041** 54H20 (34C35)
- Topics in the theory of topological transformation groups. *Topological structures, II* (Proc. Sympos. Topology and Geom., Amsterdam, 1978), Part 2, pp. 291-304, *Math. Centre Tracts*, 116, Math. Centrum, Amsterdam, 1979. (Jan Chvalina) **81g:54045** 54H15 (18B99, 57S05)
- de Vries, R. W.** Invariant imbedding methods for integral equations. *Colloquium Numerical Treatment of Integral Equations* (Math. Centre, Amsterdam, 1978/79), pp. 87-96, *MC Syllabus*, 41, Math. Centrum, Amsterdam, 1979. (Christopher T. H. Baker) **81h:65136** 65R20
- de Vries, S. A.** (with Stam, A. J.; Reddingius, J.) Note on a death process. *J. Appl. Probab.* 17 (1980), no. 3, 853-855. (W. A. O'N. Waugh) **81i:60079** 60J80 (92A15)
- Vrieze, O. J.** (with Tijis, S. H.) Perturbation theory for games in normal form and stochastic games. *J. Optim. Theory Appl.* 30 (1980), no. 4, 549-567. (Tamer Başar) **81g:90098** 90D05 (93E05)
- V. Rimscha, Michael** See *V. Rimscha, Michael*
- Vrkoč, Ivo** Correction to the paper: "Continuous dependence of holomorphic functions on partly given boundary values" [Czechoslovak Math. J. 23(98) (1973), 455-466; MR 47 #8839]. *Czechoslovak Math. J.* 29(104) (1979), no. 3, 502. (H. T. Mathews) **81k:30041** 30D40
- Scorza-Dragoni property of Filippov mappings. *Tōhoku Math. J. (2)* 32 (1980), no. 2, 309-316. (J. Jarník) **81h:34019** 34A60
- de Vroedt, C.** On bounds for codes in Hamming schemes and Johnson schemes. *Deft Progr. Rep.* 5 (1980), no. 2, 78-91. (K. P. Bogart) **81h:94028** 94B05
- Vroegedewey, P. G.** (with Kreinovic, V. Ja.; Kodelova, O. M.) An extension of a theorem of A. D. Aleksandrov to a class of partially ordered fields. *Nederl. Akad. Wetensch. Indag. Math.* 41 (1979), no. 3, 363-376. (A. K. Guć) **81i:51007** 51B20 (12J15)
- Vizorova-Karevskaja, B. Ja.** (with Litvak, E. I.) On the reliability of systems admitting failures of two kinds. *Ukr. Akad. Nauk SSSR Tehn. Kibernet.* 1979, no. 4, 150-152, 221 (Russian); translated as *Engrg. Cybernetics* 17 (1979), no. 4, 133-135 (1980). (Authors' summary) **81i:90046** 90B25
- le Vu An'** See *Le Vu An'*
- Vuchkov, I. N.** (with Solakov, E. B.) The influence of experimental design on robustness to nonnormality of the F test in regression analysis. *Biometrika* 67 (1980), no. 2, 489-492. (Mir Masoom Ali) **81i:62135** 62K99 (62J99)
- Vučkova, I. V.** Investigation of an integral expression for determining the absolute flow velocity in the cascade region. (Bulgarian. Russian and English summaries) *Godišnik Visš. Uchebn. Zaved. Prirodoz. Mat.* 14 (1978), no. 1, 213-224. (Author's summary) **81f:76006** 76B05
- Vučjek, V. A.** See *Vučjek, V. A.*
- Vuillemin, Jean E.** (with Flajolet, Philippe; François, Jean) Computing integrated costs of sequences of operations with application to dictionaries. *Conference Record of the Eleventh Annual ACM Symposium on Theory of Computing* (Atlanta, Ga., 1979), pp. 49-61, *ACM, New York*, 1979. (Authors' summary) **81g:68027** 68B15 (68E05)
- (with Raoult, J. C.) Optimal unbounded search strategies. *Automata, languages and programming* (Proc. Seventh Internat. Colloq., Noordwijkerhout, 1980), pp. 512-530, *Lecture Notes in Comput. Sci.*, 85, Springer, Berlin, 1980. (Authors' summary) **81i:68075** 68E05
- A unifying look at data structures. *Comm. ACM* 23 (1980), no. 4, 229-239. (Authors' summary) **81h:68024** 68B15
- Vujanović, B.** On a gradient method in nonconservative mechanics. (German summary) *Acta Mech.* 34 (1979), no. 3-4, 167-179. (Author's review) **81h:70013** 70H99 (70F20, 70J20)
- On the field momenta method in mechanics. *Tensor (N.S.)* 33 (1979), no. 1, 117-122. (Author's introduction) **81j:70018** 70H99
- Vučjek, M.** (with Herbut, F.; Papadopolos, Z.) A new look at unitary-antiunitary representations of groups and their construction. *J. Phys. A* 13 (1980), no. 8, 2577-2589. (Authors' summary) **81i:81038** 81C40 (22E70)
- Vučjek, V. A.** A contribution to Pfaff-Bilimović differential forms. (Russian. English and Serbo-Croatian summaries) *Teor. Prirodn. Meh. No. 5* (1979), 174-179. (B. Vujanović) **81g:49031** 49C99 (58A17)
- Vujošević, Slobodan T.** On the limits of the families of Lindenbaum algebras. *Publ. Inst. Math. (Beograd)* (N.S.) 26(40) (1979), 293-296. (Anna Labella) **81f:03073** 03G05
- Vukajlović, F. R.** (with Mogilevskii, O. A.) Asymptotic form of the electron repulsion matrix elements for hydrogen molecules in the adiabatic representation. *J. Phys. B* 13 (1980), no. 10, 1947-1952. (Authors' summary) **81i:81165** 81G50
- (with Mogilevskii, O. A.) Electron repulsion potentials of diatomic molecules in the adiabatic basis. *J. Phys. B* 13 (1980), no. 11, 2157-2164. (Authors' summary) **81e:81172** 81G55
- (with Mogilevskii, O. A.; Ponomarev, L. I.) The hydrogen molecule in the adiabatic representation. *J. Phys. B* 13 (1980), no. 13, 2489-2496. (Authors' summary) **81i:81171** 81G55
- Vukobratović, Miroslav** (with Stokić, Dragan) Contribution to the decoupled control of large-scale mechanical systems. *Automatica—J. IFAC* 16 (1980), no. 1, 9-21. (Authors' summary) **81g:93067** 93C35 (93A15)
- Vuković, Mirjana** On an asymptotic relation between the spherical mean of higher order and the Riesz mean of multiple Fourier series. (Serbo-Croatian summary) *Akad. Nauka Umjet. Bosne Hercegov. Rad. Odjel. Prirod. Mat. Nauka No. 19* (1980), 161-171. (R. L. Cooke) **81j:42032** 42B05
- Vu Kook Fong** Universality of the operator of differentiation in $L^2(0, \infty)$ and inequalities for powers of dissipative operators. (Russian) *Funkcional. Anal. i Priložen.* 13 (1979), no. 4, 62-63. (A. B. Buche) **81f:47039** 47B44 (47D05)
- Vupei, I. M.** (with Dimitric, P. N.; Čebotaru, I. S.) Application of multidimensional

- Taylor transforms to the solution of differential equations of mathematical physics and the calculation of electronic circuits. (Russian) *Contemporary questions of applied mathematics and programming* (Russian), pp. 23-31, 166, "Siniica", Kishinev, 1979. (Authors' summary) **81b:94062** 94C05 (78A40)
- Vajnshteyn, Angelo (with Benzi, Roberto; Vitoletti, Marcello) Energy dissipation and Kolmogorov law in turbulent flows. *J. Phys. A* 13 (1980), no. 9, L339-L343. (Authors' summary) **81b:76031** 76F99
- Vasilenko, Matti Lower bounds for the n -moduli of path families with applications to boundary behavior of quasiconformal and quasiregular mappings. *Complex analysis Joensuu 1978* (Proc. Colloq., Univ. Joensuu, Joensuu, 1978), pp. 428-433, *Lecture Notes in Math.*, 747, Springer, Berlin, 1979. (Jukka Sarvas) **81a:30016** 30C60
- Asymptotic values and angular limits of quasiregular mappings. *Romanian-Finnish Seminar on Complex Analysis* (Proc., Bucharest, 1976), pp. 262-267, *Lecture Notes in Math.*, 743, Springer, Berlin, 1979. (W. P. Ziemer) **81b:30041** 30C60
- Lower bounds for the moduli of path families with applications to nontangential limits of quasiconformal mappings. *Ann. Acad. Sci. Fenn. Ser. A I Math.* 4 (1979), no. 2, 279-291. (Jukka Sarvas) **81f:30022** 30C60
- Vũ Trọng Tuấn (with Đinh Đình Ấng) A representation theorem for differentiable functions. *Proc. Amer. Math. Soc.* 75 (1979), no. 2, 343-350. (Leslie Lander) **81b:58009** 58C25 (58E05)
- Vona, Dan Sur les homomorphismes invariants par rapport à un monoïde. *Rev. Roumaine Math. Pures Appl.* 23 (1978), no. 10, 1607-1616. (From the text) **81k:20102** 20M99
- Vredenski, O. M. The possibility of constructing duality in elliptic curves over global and quasiglobal fields. (Russian) *Mathematical analysis and probability theory* (Russian), pp. 24-27, 206, "Naukova Dumka", Kiev, 1978. (Michiel Hazewinkel) **81b:14020** 14K07 (14G25)
- The Artin effect in elliptic curves. I. (Russian) *Izv. Akad. Nauk SSSR Ser. Mat.* 43 (1979), no. 5, 1042-1053, 1197. (Reinhard Bölling) **81b:14021** 14K07 (14K15)
- The Artin effect in abelian varieties. (Russian) *Dokl. Akad. Nauk SSSR* 252 (1980), no. 1, 20. (Reinhard Bölling) **81b:14016** 14G25 (14K15)
- V. Weizsäcker, Carl Friedrich See v. Weizsäcker, Carl Friedrich
- V. Weizsäcker, Heinrich See v. Weizsäcker, Heinrich
- V. Westenholz, Cornelius See v. Westenholz, Cornelius
- V. Wolfersdorf, L. See v. Wolfersdorf, L.
- de Vylder, Florian See De Vylder, Florian
- Vylov, V. M. The power of bicompartments with lattices of open maps. (Russian) *C. R. Acad. Bulgare Sci.* 32 (1979), no. 8, 1005-1006. (H. H. Wicke) **81b:54006** 54A25 (54D30)
- Vypilavina, R. P. (with Denisova, N. S.) Application of biquaternions and their analogues to the differential geometry of 5-dimensional spaces. (Russian) *Geometry of imbedded manifolds* (Russian), pp. 85-91, *Moskov. Gos. Ped. Inst., Moscow*, 1978. (J. Katětňák) **81m:53015** 53A35 (51M30)
- Vypil, Z. See Schlicker, Wolfgang, **81d:01022**
- Vysotskii, S. V. (with Meunargia, O. V.) Asymptotics of the pion electromagnetic form-factor in a new phase representation. (Russian. English summary) *Theoret. Mat. Fiz.* 43 (1980), no. 1, 100-106. (Authors' summary) **81i:81096** 81G05 (81F20)
- Vysotskii, V. A. See Vilms'ki, V. A.
- Vysotskii, V. V. (with Grankin, E. P.; Nesterenko, B. B.) Existence and uniqueness of the solution of a system of differential equations describing a two-phase filtration process. (Russian) *Theoretical and applied questions of differential equations and algebra* (Russian), pp. 57-60, 261, "Naukova Dumka", Kiev, 1978. (Authors' summary) **81c:76044** 76S05
- Vystavkin, Ja. P. Optimal distribution of computational load and optimal routing of communications in a computer network. (Russian) *Telephone traffic theory and networks with controllable elements* (Russian), pp. 41-54, 212, "Nauka", Moscow, 1980. (Authors' summary) **81k:68007** 68A05 (90B22)
- Wandeland, Haakon (with Thron, W. J.) Accelerating convergence of limit periodic continued fractions $K(a_n/1)$. *Numer. Math.* 34 (1980), no. 2, 155-170. (H. I. Kutzma'ska) **81c:30008** 30B70 (40A15)
- (with Jones, William B.; Thron, W. J.) A strong Stieltjes moment problem. *Trans. Amer. Math. Soc.* 261 (1980), no. 2, 503-528. (E. P. Merkes) **81j:30055** 30E05 (30B70)
- de Waal, D. J. (with Nagel, P. J. A.) Bayesian classification, estimation and prediction of growth curves. *South African J. Stat.* 13 (1979), no. 2, 127-137. (Jack C. Lee) **81f:62102** 62H30
- van der Waal, Robert W. Minimal non-M-groups. I, II. *Nederl. Akad. Wetensch. Indag. Math.* 42 (1980), no. 1, 93-106, 107-111. (R. W. Carter) **81j:20035** 20D10
- Wachecka-Skowron, Anna Uniqueness for anti-plane crack problems in the micropolar theory of elasticity. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Tech.* 26 (1978), no. 5, 397-401. (Authors' summary) **81f:73020** 73M05 (73S99)
- Wachnicki, Eugeniusz (with Barański, Feliks) On a certain generalization of the Orlicz theorem. *Comment. Math. Prace Mat.* 20 (1977/78), no. 2, 255-258. (J. Albrecht) **81b:46037** 46E30
- On the quasipotential for the circle and the ball. *Wyz. Szkoła Ped. Krakow. Rocznik Nauk.-Dydakt. Prace Mat.* 9 (1979), 165-169. (Michèle Mastrangelo-Dehen) **81f:31012** 31B15 (35C15)
- Wacher, Kenneth W. The limiting empirical measure of multiple discriminant ratios. *Ann. Statist.* 8 (1980), no. 5, 937-957. (Authors' summary) **81i:62107** 62H30 (60F05, 62E20, 62H10)
- Wachukha, Adam On the Dirichlet problem for certain angular domain. *Wyz. Szkoła Ped. Krakow. Rocznik Nauk.-Dydakt. Prace Mat.* 9 (1979), 171-177. (J. Donig) **81b:35009** 35J05 (35C15)
- Wacker, H. (with Hackl, H.; Zulehner, W.) Aufwandsoptimale Schrittweitensteuerung bei Einbettungsmethoden. *Constructive methods for nonlinear boundary value problems and nonlinear oscillations* (Proc. Conf., Math. Res. Inst., Oberwolfach, 1978), pp. 48-67, *Internat. Ser. Numer. Math.*, 48, Birkhäuser, Basel, 1979. (W. C. Rheinboldt) **81f:65053** 65L05
- (with Hackl, J.; Zulehner, W.) Aufwandsoptimale Schrittweitensteuerung bei Einbettungsmethoden. Vorträge der Wissenschaftlichen Jahrestagung der Gesellschaft für Angewandte Mathematik und Mechanik, Teil I (Brussels, 1978). *Z. Angew. Math. Mech.* 59 (1979), no. 3, T62-T63. (From the introduction) **81g:65058** 65H05
- (with Hackl, H.; Zulehner, W.) Aufwandsoptimale Schrittweitensteuerung bei Einbettungsmethoden. *Numerical methods of approximation theory*, Vol. 5 (Conf., Math. Res. Inst., Oberwolfach, 1979), pp. 125-143, *Internat. Ser. Numer. Math.*, 52, Birkhäuser, Basel, 1980. (H. Schwetlick) **81k:65051** 65H10
- Wackerly, D. D. (with Rao, P. V.) A large deviation result for the difference in sample medians. *Statist. Neerlandica* 34 (1980), no. 2, 107-116. (Jan C. Geertsema) **81m:60043** 60F10 (62F07, 62L10)
- Wada, Hideo Some computations on the criteria of Kummer. *Tokyo J. Math.* 3 (1980), no. 1, 173-176. (L. Skula) **81m:10028** 10B15
- Wada, Hiroshi Reflection characteristics of torsional waves in a semi-infinite cylindrical rod connected to an elastic half-space. *J. Acoust. Soc. Amer.* 68 (1980), no. 1, 198-202. (Authors' summary) **81d:73029** 73D99
- Wada, Koh (with Takayama, Hajime) Nonlinear susceptibilities of the Sherrington-Kirkpatrick model and the spherical model. *Progr. Theoret. Phys.* 64 (1980), no. 1, 327-329. (Authors' summary) **81b:82024** 82A25 (82A55)
- Wadati, Miki (with Ichikawa, Yoshi H.) Solitons in plasma and other dispersive media. Dawn of nonlinear physics. *The Ta-Yu Wu Festschrift: Science of matter*, pp. 137-164, Gordon & Breach, New York, 1978. (G. L. Lamb, Jr.) **81c:35113** 35Q20 (01A65, 35-02, 35A25, 35A30, 82A45)
- (with Konno, Kimiaki; Ichikawa, Yoshi H.) New integrable nonlinear evolution equations. *J. Phys. Soc. Japan* 47 (1979), no. 5, 1698-1700. (Mark J. Ablowitz) **81g:35111** 35Q20 (58F07, 76B15)
- (with Omote, Minoru; Michihiro, Y.) A Bäcklund transformation of the axially symmetric stationary Einstein-Maxwell equations. *Phys. Lett. A* 79 (1980), no. 2-3, 141-142. (From the summary) **81b:83032** 83C50 (35A25, 53A35, 58A15)
- Wade, B. W. (with Blasgen, M. W.; Astrahan, M. M.; Chamberlin, D. D.; Gray, James N.; King, W. F.; Lindsay, B. G.; Lorie, R. A.; Mehl, J. W.; Price, T. G.; Putzolu, G. R.; Schkolnick, M.; Selinger, P. G.; Slutz, D. R.; Strong, H. R.; Traiger, I. L.; Yost, R. A.) System R: an architectural overview. *IBM Systems J.* 20 (1981), no. 1, 41-62. (Authors' summary) **81m:68079** 68H05
- Wade, Michael J. Kin selection: its components. *Science* 210 (1980), no. 4470, 665-667. (Authors' summary) **81i:92014** 92A10
- Wade, William R. H^{∞} -sets for the group of integers of a p -series field. *Harmonic analysis in Euclidean spaces* (Proc. Sympos. Pure Math., Williams Coll., Williamstown, Mass., 1978), Part 2, pp. 325-328, *Proc. Sympos. Pure Math.*, XXXV, Part 2, Amer. Math. Soc., Providence, R.I., 1979. (Authors' summary) **81c:42033** 42C25 (42C10, 43A75)
- Sets of uniqueness for the group of integers of a p -series field. *Canad. J. Math.* 31 (1979), no. 4, 858-866. (Ian R. Inglis) **81d:43008** 43A46 (12B40, 42C10)
- Uniqueness of Walsh series which satisfy an averaged growth condition. *SIAM J. Math. Anal.* 11 (1980), no. 6, 933-937. (P. Simon) **81m:42025** 42C10 (42C25)
- Wadge, William W. An extensional treatment of dataflow deadlock. *Theoret. Comput. Sci.* 13 (1981), no. 1, 3-15. (Authors' summary) **81j:68026** 68B10
- Wadhawan, M. C. Steady-state thermoelastic response of an infinite slab. *J. Math. Phys.* 31 (1979), no. 6, 571-582. (Authors' summary) **81d:73103** 73U05
- Wadhwa, Bhushan L. On operator ranges. *Proc. Amer. Math. Soc.* 80 (1980), no. 4, 653-654. (Mehdi Radjabipour) **81m:47009** 47A05 (47B20)
- Wadhwa, Ram S. See Kabanin, L. A. **81c:10001**
- Wadia, Aspi Rustom (with Payne, Fred R.) A mixed method for unsteady flow problems. *Proceedings of the 16th Midwestern Mechanics Conference* (Kansas State Univ., Manhattan, Kan., 1979), pp. 161-165, *Develop. in Mech.*, 10, Kansas St. Univ., Manhattan, Kan., 1979. (See **81m:73010**) 65N99
- On a fast numerical quadrature formula. *Internat. J. Comput. Math.* 8 (1980), no. 2, 177-182. (C. Dagnino) **81f:65025** 65D30
- Wadia, Spenta R. $N = \infty$ phase transition in a class of exactly soluble model lattice gauge theories. *Phys. Lett. B* 93 (1980), no. 4, 403-410. (Authors' summary) **81e:81108** 81E99 (82A25)
- Wadleigh, Frank Taylor-Dirichlet series and algebraic differential-difference equations. *Proc. Amer. Math. Soc.* 80 (1980), no. 1, 83-89. (J. R. Shackell) **81i:30007** 30B50
- Wadsworth, Adrian R. Polynomial invariants for operators. *Integral Equations Operator Theory* 2 (1979), no. 3, 421-433. (P. A. Fillmore) **81c:47038** 47B47 (47B10)
- (with Elman, Richard; Lam, Tsit Yuen) Pfister ideals in Witt rings. *Math. Ann.* 245 (1979), no. 3, 219-245. (Thomas C. Craven) **81j:10037** 10C05
- (with Fein, Burton; Schacher, Murray) Division rings and the square root of -1. *J. Algebra* 65 (1980), no. 2, 340-346. (A. Rosenberg) **81j:12015** 12D15 (16A39)
- (with Elman, Richard; Lam, Tsit Yuen) Quadratic forms under multiquadratic extensions. *Nederl. Akad. Wetensch. Indag. Math.* 42 (1980), no. 2, 131-145. (Craig Cordes) **81j:10028** 10C05
- Wadsworth, Christopher P. Approximate reduction and lambda calculus models. *SIAM J. Comput.* 7 (1978), no. 3, 337-356. (Authors' summary) **81f:03020** 03B40 (68B10)
- van der Waerden, Bartel Leendert ★ Die Pythagoreer. (German) [The Pythagoreans] Religiöse Bruderschaft und Schule der Wissenschaft. [Religious brotherhood and school of science]. Die Bibliothek der Alten Welt. [The library of the Old World] Artemis Verlag, Zurich, 1979. 505 pp. ISBN 3-7608-3650-X (H. L. L. Busard) **81g:01003** 01A20
- The (2:n) table in the Rhind Papyrus. *Centaurus* 23 (1979/80), no. 4, 259-274. (Bruno Poizat) **81m:01001** 01A15
- Die "genetische Methode" und der Mittelwertsatz der Differentialrechnung. *Praxis Math.* 22 (1980), no. 2, 52-54. (M. Kline) **81g:01018** 01A60
- Waff, A. (with Khan, Huzoor H.) On the degree of approximation by matrix means. *Studia Sci. Math. Hungar.* 12 (1977), no. 1-2, 185-192 (1980). (Jean Tzimbarario) **81c:42003** 42A10 (40C05)
- Saturation of local approximation by linear positive operators of Jackson type. *Indian J. Pure Appl. Math.* 11 (1980), no. 9, 1194-1201. (Jean Tzimbarario) **81j:41040** 41A10
- Wage, Michael L. (with van Douwen, Eric K.) Small subsets of first countable spaces. *Fund. Math.* 103 (1979), no. 2, 103-110. (William G. Fleissner) **81f:54015** 54E30 (03E50)
- Weakly compact subsets of Banach spaces. *Surveys in general topology*, pp. 479-494, Academic Press, New York, 1980. (R. H. Lohman) **81g:46002** 46-02 (46B05, 54D99)

- The product of Radon spaces. (Russian) International Topology Conference (Moscow State Univ., Moscow, 1979). Translated from the English by A. V. Arhangel'skii. *Uspehi Mat. Nauk* 35 (1980), no. 3(213), 151-153. (Dimitr Vandev) **81i:28010** 28A35 (04A30)
- Wagh, Arun S. A perturbation method to solve Boltzmann transport equation. *Proceedings of the Conference on Mathematical Methods in Physics (Mysore, 1978), Part A*, pp. 268-283, *Matscience Rep.*, 96, Inst. Math. Sci., Madras, 1979. (From the summary) **81i:82084** 82A70 (45L99)
- Wagh, Meghna D. (with Kanetkar, Sharad V.) Group character tables in discrete transform theory. *J. Comput. System Sci.* 19 (1979), no. 3, 211-221. (W. Spletstösser) **81i:94006** 94A05 (20K01)
- (with Ganesh, H.) A new algorithm for the discrete cosine transforms of arbitrary number of points. *IEEE Trans. Comput.* 29 (1980), no. 4, 269-277. (Authors' summary) **81i:94076** 94C99 (68C05)
- (with Kanetkar, Sharad V.) Interpolation of data from redundancies in Fourier transforms over finite abelian groups. *IEEE Trans. Inform. Theory* 26 (1980), no. 2, 259-261. (From the text) **81i:94007** 94A12
- (with Kanetkar, Sharad V.) On construction of matrices with distinct submatrices. *SIAM J. Algebraic Discrete Methods* 1 (1980), no. 1, 107-113. (H. Mine) **81i:15018** 15A36 (05B20, 15A30)
- Wagner, Aucher Collineation groups generated by homologies of order greater than 2. *Geom. Dedicata* 7 (1978), no. 4, 387-398. (F. C. Piper) **81i:20055** 20C40
- The subgroups of PSL(5, 2). *Residue Math.* 1 (1978), no. 2, 207-226. (Ulrich Dempwolff) **81i:20054** 20G99 (20D06, 20F32)
- (with Di Martino, Lino) The irreducible subgroups of PSL(V, q), where q is odd. *Residue Math.* 2 (1979), no. 1, 54-61. (W. M. Kantor) **81i:20053** 20G40 (20H30)
- Determination of the finite primitive reflection groups over an arbitrary field of characteristic not 2. *Geom. Dedicata* 9 (1980), no. 2, 239-253. (E. W. Ellers) **81i:20096** 20H15
- Wagner, Bernd Charaktere symmetrischer und monomialer Gruppen als Polynomfunktionen. *Bayreuth. Math. Schr.* No. 2 (1979), xii + 111 + vii pp. (Wolfgang Knapp) **81i:20027** 20C30
- (with Kerber, Adalbert) Gleichungen in endlichen Gruppen. *Arch. Math. (Basel)* 35 (1980), no. 3, 252-262. (Wolfgang Knapp) **81i:20015** 20C15 (10G99, 12C25, 20C30)
- Wagner, Carl G. Minimal multiplicative covers of an integer. *Discrete Math.* 24 (1978), no. 1, 87-94. (V. Krishnamurthy) **81i:05008** 05A15 (10L10)
- (with Aczel, Janos) A characterization of weighted arithmetic means. *SIAM J. Algebraic Discrete Methods* 1 (1980), no. 3, 259-260. (J. Matkowski) **81i:39012** 39B40 (62C25)
- Wagner, D. (with Chandrasekaran, R.; Kumar, Santosh) Critical path problem under assignment constraint—an application of an extreme point mathematical programming problem. *J. Inform. Optim. Sci.* 1 (1980), no. 1, 41-51. (Authors' summary) **81i:90070** 90B10 (90C05)
- Wagner, Eberhard Zur Asymptotik der Lösungen linearer Volterra'scher Integralgleichungssysteme zweiter Art vom Faltungstyp mit nichtnegativen Kernen. *Math. Nachr.* 90 (1979), 173-187. (Hans-Jürgen Glaske) **81i:45025** 45M05 (45D05)
- Asymptotische Darstellung einer Klasse von Faltungsintegralen. *Wiss. Z. Martin-Luther-Univ. Halle-Wittenberg Math.-Natur. Reihe* 29 (1980), no. 1, 47-52. (A. Corduneanu) **81i:45007** 45D05
- Wagner, Elzbieta Convergence in category. (Italian summary) *Rend. Accad. Sci. Fis. Mat. Napoli* (4) 45 (1978), 303-312 (1979). (H. Herrlich) **81i:54019** 54C50 (54A20, 54B30)
- Wagner, Eric G. (with Thatcher, James W.; Wright, Jesse B.) More on advice on structuring compilers and proving them correct. *Automata, languages and programming (Sixth Colloq., Graz, 1979)*, pp. 596-615, *Lecture Notes in Comput. Sci.*, 71, Springer, Berlin, 1979. (Authors' summary) **81i:68018** 68B05
- (with Thatcher, James W.; Wright, Jesse B.) Notes on algebraic fundamentals for theoretical computer science. *Foundations of computer science, III (Third Adv. Course, Amsterdam, 1978), Part 2*, pp. 83-164, *Math. Centre Tracts*, 109, Math. Centrum, Amsterdam, 1979. (V. Ju. Meitus) **81i:68035** 68B15 (18C10, 68F20)
- (with Ehrig, Hartmut; Krewski, Hans-Jörg; Thatcher, James W.; Wright, Jesse B.) Parameterized data types in algebraic specification languages (short version). *Automata, languages and programming (Proc. Seventh Internat. Colloq., Noordwijkerhout, 1980)*, pp. 157-168, *Lecture Notes in Comput. Sci.*, 85, Springer, Berlin, 1980. (From the introduction) **81i:68030** 68B15
- Wagner, Gerold On a problem of Erdős in Diophantine approximation. *Bull. London Math. Soc.* 12 (1980), no. 2, 81-88. (L. Kuipers) **81i:10048** 10F99 (30C10)
- (with Tijdeman, R.) A sequence has almost nowhere small discrepancy. *Monatsh. Math.* 90 (1980), no. 4, 315-329. (Henri Faure) **81i:10100** 10K30 (10K05)
- Wagner, Heinz-Josef (with Spletstösser, W.) Eine dyadische Infinitesimalrechnung für Haar-Funktionen. (English and Russian summaries) *Z. Angew. Math. Mech.* 57 (1977), no. 9, 527-541. (Authors' summary) **81i:42024** 42C10 (94A11)
- Wagner, Jacques Estimations en norme L^p pour $\tilde{f} = f$ dans un domaine fortement pseudoconvexe. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 1, A21-A23. (Eric Bedford) **81i:32031** 32F20 (35N15)
- Wagner, Klaus Bounded recursion and complexity classes. *Mathematical foundations of computer science, 1979 (Proc. Eighth Sympos., Olomouc, 1979)*, pp. 492-498, *Lecture Notes in Comput. Sci.*, 74, Springer, Berlin, 1979. (R. Verbeek) **81i:03085** 03D15 (68C25)
- On ω -regular sets. *Inform. and Control* 43 (1979), no. 2, 123-177. (K. L. Juščenko) **81i:68070** 68D45 (03D15)
- (with Wechsung, Gerd) Kompliziertheithierarchien. (Russian and English summaries) *Wiss. Z. Friedrich-Schiller-Univ. Jena Math.-Natur. Reihe* 29 (1980), no. 2, 229-250. (Authors' summary) **81i:68033** 68C25 (03D15)
- (with Bodendiek, R.; Schumacher, H.) Zur Minimalstruktur der nicht in die projektive Ebene einbettbaren Graphen. *J. Reine Angew. Math.* 321 (1981), 99-112. (Rudolf Halin) **81i:05063** 05C10
- Wagner, Max-Josef Quotientenräume von stabilen Potenzreihenräumen endlichen Typs. (English summary) *Manuscripta Math.* 31 (1980), no. 1-3, 97-109. (M. S. Ramanujan) **81i:46021** 46A45
- (with Vogt, Dietmar) Charakterisierung der Quotientenräume von s und eine Vermutung von Martineau. (English summary) *Studia Math.* 67 (1980), no. 3, 225-240. (Tosun Terzioğlu) **81i:46002** 46A12 (46A45)
- Wagner, R. Harrison Impartiality and equity. *Theory and Decision* 12 (1980), no. 1, 61-74. (Kazuo Sato) **81i:90014** 90A08
- Wagner, Richard C. On odd Hermitian forms. *J. Algebra* 58 (1979), no. 2, 370-398. (S. Böge) **81i:10025** 10C05 (15A63)
- Wagner, Robert A. (with Trivedi, Kishor S.; Sigmon, Timothy M.) Optimal selection of CPU speed, device capacities, and file assignments. *J. Assoc. Comput. Mach.* 27 (1980), no. 3, 457-473. (Authors' summary) **81i:68012** 68A05 (68B15)
- Wagner, S. L. (with Hamaker, C.; Smith, K. T.; Solmon, D. C.) The divergent beam X-ray transform. *Rocky Mountain J. Math.* 10 (1980), no. 1, 253-283. (Gabor T. Herman) **81i:44003** 44A15 (68G10, 92A05)
- Wagner, T. J. (with Devroye, Luc P.) The strong uniform consistency of kernel density estimates. *Multivariate analysis, V (Proc. Fifth Internat. Sympos., Univ. Pittsburgh, Pittsburgh, Pa., 1978)*, pp. 59-77, North-Holland, Amsterdam, 1980. (M. Bertrand-Retali) **81i:62065** 62G05
- (with Devroye, Luc P.) Distribution-free consistency results in nonparametric discrimination and regression function estimation. *Ann. Statist.* 8 (1980), no. 2, 231-239. (Paul Deheuvels) **81i:62051** 62G05 (62H30)
- (with Devroye, Luc P.) On the L_1 convergence of kernel estimators of regression functions with applications in discrimination. *Z. Wahrsch. Verw. Gebiete* 51 (1980), no. 1, 15-25. (M. Bertrand-Retali) **81i:62066** 62G05
- Wagon, Stanley The saturation of a product of ideals. *Canad. J. Math.* 32 (1980), no. 1, 70-75. (A. Kanamori) **81i:03058** 03E55
- The structure of precipitous ideals. *Fund. Math.* 106 (1980), no. 1, 47-52. (A. Kanamori) **81i:03081** 03E55
- Wagoner, Robert V. (with Gaiser, Bradley D.) Gravitational radiation from slowly rotating collapse: an exact Green function. *Astrophys. J.* 240 (1980), no. 2, part 1, 648-657. (J. D. McCrea) **81i:83022** 83C35
- Wagschal, C. Le problème de Goursat non-linéaire. *Séminaire Goulaouic-Schwartz (1978/1979)*, Exp. No. 17, 11 pp., École Polytech., Palaiseau, 1979. (Sadakazu Aizawa) **81i:35001** 35A05
- Wagstaff, Samuel S., Jr. Additive h -bases for n . *Number theory, Carbonate 1979 (Proc. Southern Illinois Conf., Southern Illinois Univ., Carbonate, Ill., 1979)*, pp. 302-327, *Lecture Notes in Math.*, 751, Springer, Berlin, 1979. (Graham Lord) **81i:10103** 10L10
- Greatest of the least primes in arithmetic progressions having a given modulus. *Math. Comp.* 33 (1979), no. 147, 1073-1080. (Jean-Marc Deshouillers) **81i:10038** 10H20 (10-04)
- (with Erdős, Paul) The fractional parts of the Bernoulli numbers. *Illinois J. Math.* 24 (1980), no. 1, 104-112. (J. A. Haight) **81i:10064** 10K05 (10F40, 10L10)
- p -divisibility of certain sets of Bernoulli numbers. *Math. Comp.* 34 (1980), no. 150, 647-649. (T. Metsänkylä) **81i:10018** 10A40 (12A50)
- (with Baillie, Robert) Lucas pseudoprimes. *Math. Comp.* 35 (1980), no. 152, 1391-1417. (V. C. Harris) **81i:10005** 10A25
- Wahba, Grace (with Craven, Peter) Smoothing noisy data with spline functions. Estimating the correct degree of smoothing by the method of generalized cross-validation. *Numer. Math.* 31 (1978/79), no. 4, 377-403. (From the summary) **81i:65018** 65D10 (62M99, 65D07)
- Practical techniques of optimal smoothing, with application to the numerical differentiation of noisy data and smoothing of log spectral density estimates. *Information linkage between applied mathematics and industry (Proc. First Annual Workshop, Naval Postgraduate School, Monterey, Calif., 1978)*, pp. 575-577, Academic Press, New York, 1979. (Anthony Ephremides) **81i:93105** 93E10
- Convergence rate of "thin plate" smoothing splines when the data are noisy (preliminary report). *Smoothing techniques for curve estimation (Proc. Workshop, Heidelberg, 1979)*, pp. 233-245, *Lecture Notes in Math.*, 757, Springer, Berlin, 1979. (Philip W. Smith) **81i:62081** 62G05 (41A15, 65D07)
- Smoothing and ill-posed problems. *Solution methods for integral equations*, pp. 183-194, *Math. Concepts and Methods in Sci. and Engrg.*, 18, Plenum, New York, 1979. (Charles W. Groetsch) **81i:65137** 65R20 (65D25)
- (with Golub, Gene H.; Heath, Michael) Generalized cross-validation as a method for choosing a good ridge parameter. *Technometrics* 21 (1979), no. 2, 215-223. (Colin L. Mallows) **81i:62079** 62J07
- Parameter estimation in linear dynamic systems. *IEEE Trans. Automat. Control* 25 (1980), no. 2, 235-238. (Bennett Eisenberg) **81i:62159** 62M10 (62K99, 93E11)
- Wahl, F. Eine kanonische Transformation als Lösungsvorschlag für eine Funktionalgleichung. (English summary) *Z. Naturforsch. A* 35 (1980), no. 6, 567-578. (Author's summary) **81i:82049** 82A55
- von Wahl, Wolf (with Pecher, Hartmut) Time dependent nonlinear Schrödinger equations. *Manuscripta Math.* 27 (1979), no. 2, 125-157. (R. Glassey) **81i:35106** 35L75 (35B65, 35J10)
- Regularity questions for the Navier-Stokes equations. *Approximation methods for Navier-Stokes problems (Proc. Sympos., Univ. Paderborn, Paderborn, 1979)*, pp. 539-542, *Lecture Notes in Math.*, 771, Springer, Berlin, 1980. (A. A. Arsen'ev) **81i:35099** 35Q10 (47D05, 76D05)
- Regularitätsfragen für die instationären Navier-Stokesschen Gleichungen in höheren Dimensionen. *J. Math. Soc. Japan* 32 (1980), no. 2, 263-283. (M. Biroli) **81i:35137** 35Q10 (35B65, 76D05)
- Wahlbin, Lars B. (with Schatz, Alfred H.; Thomée, Vidar) Maximum norm stability and error estimates in parabolic finite element equations. *Comm. Pure Appl. Math.* 33 (1980), no. 3, 265-304. (Georges A. Lebaud) **81i:65136** 65N10
- A remark on parabolic smoothing and the finite element method. *SIAM J. Numer. Anal.* 17 (1980), no. 1, 33-38. (G. Fairweather) **81i:65128** 65N30
- Wahlquist, Hugo (with Estabrook, Frank B.) Prolongation structures, connection theory and Bäcklund transformation. *Nonlinear evolution equations solvable by the spectral transform (Internat. Sympos., Accad. Lincei, Rome, 1977)*, pp. 64-83, *Res. Notes in Math.*, 26, Pitman, London, 1978. (Ngô Van Quê) **81i:58006** 58A17 (35A30, 35Q99, 58H05)
- See also Hermann, Robert, **81i:83042**

- Waldman, Per (with Gustafsson, Bertil) Finite-difference methods for computing the steady flow about blunt bodies. *J. Comput. Phys.* 36 (1980), no. 3, 327-346. (H. R. Aggarwal) **81j:76066** 76N15 (65P05)
- Waldendorf, Jürgen Inference in contingency tables with ordered categories using Plackett's coefficient of association for bivariate distributions. *Biometrika* 67 (1980), no. 1, 15-21. (Alan Agresti) **81j:62102** 62H17
- Waldmann, S. (with Dayan, J.) Solving the two point boundary value problem for the optimal control of a simple batch reactor by several methods—a comparison study. *Israel J. Tech.* 17 (1979), no. 3, 139-150 (1980). (Authors' summary) **81k:65095** 65L10
- Wal, W. B. (with Shieh, L. S.; Yates, R. E.) A geometric series approach for approximation of transition matrices in quadratic synthesis. *Trans. ASME Ser. G J. Dynamic Systems Measurement Control* 102 (1980), no. 3, 193-197. (Authors' summary) **81i:93013** 93B50
- Wald, Margaret C. (with Ford, Wayne T.; Fuente, Maria C.) Porous media problems. *SIAM J. Math. Anal.* 11 (1980), no. 2, 340-347. (Alberto Valli) **81a:76043** 76S05 (35Q20, 76N10)
- Walser, S. S. See *Recursion theory: its generalisations and applications*, **81j:03007**
- Walser, Stephen (with Nagel, Alexander; Stein, Elias M.) Hilbert transforms and maximal functions related to variable curves. *Harmonic analysis in Euclidean spaces (Proc. Sympos. Pure Math., Williams Coll., Williamstown, Mass., 1978)*, Part 1, pp. 95-98, *Proc. Sympos. Pure Math.*, XXXV, Part 1, Amer. Math. Soc., Providence, R.I., 1979. (Hans P. Heine) **81a:42027** 42B25
- (with Marshall, Bernard; Strauss, Walter Alexander) Estimates from L^p to its dual for the Klein-Gordon equation. *Harmonic analysis in Euclidean spaces (Proc. Sympos. Pure Math., Williams Coll., Williamstown, Mass., 1978)*, Part 2, pp. 175-177, *Proc. Sympos. Pure Math.*, XXXV, Part 2, Amer. Math. Soc., Providence, R.I., 1979. (Gustavo Perla Menzala) **81a:35053** 35L05 (35C20)
- (with Marshall, Bernard; Strauss, Walter Alexander) L^p - L^q estimates for solutions of the Klein-Gordon equation. *Fourier analysis (Proc. Sem., El Escorial, 1979)*, pp. 193-200, *Assoc. Mat. Española, I, Asoc. Mat. Española, Madrid, 1980*. (Editors) **81m:35080** 35L05
- (with Brézis, Haim) A note on limiting cases of Sobolev embeddings and convolution inequalities. *Comm. Partial Differential Equations* 5 (1980), no. 7, 773-789. (O. John) **81k:46028** 46E35
- Walwright, J. (with Marshall, B. J.) Some exact cosmological models with gravitational waves. *Phys. Lett. A* 72 (1979), no. 4-5, 275-276. (Authors' summary) **81i:83022** 83C35 (53B50, 83F05)
- Walt, R. See *Survey of numerical methods for partial differential equations*, **81i:65002**
- Walveris, Charles Intersections of countably compact subspaces of BX . The Proceedings of the 1979 Topology Conference (Ohio Univ., Athens, Ohio, 1979). *Topology* 18 (1979), no. 1, 177-191 (1980). (E. Halpern) **81i:54016** 54D35 (54A25)
- Wajima, Masayuki (with Okuyama, Tetsuro) Irreducible characters of p -solvable groups. *Proc. Japan Acad. Ser. A Math. Sci.* 55 (1979), no. 8, 309-312. (Karin Erdmann) **81g:20023** 20C20
- Wajuryh, Bronisław On the monodromy group of plane curve singularities. *Math. Ann.* 246 (1979/80), no. 2, 141-154. (Richard Randell) **81d:14016** 14H20 (57R45)
- Wakabayashi, Seichiro Propagation of singularities for hyperbolic operators with constant coefficient principal part. *Tsukuba J. Math.* 2 (1978), 91-107. (Bent E. Petersen) **81b:35049** 35L30
- Propagation of singularities of fundamental solutions of hyperbolic mixed problems. *Publ. Res. Inst. Math. Sci.* 15 (1979), no. 3, 653-678. (S. Cinqini) **81i:35091** 35L05
- Wakne, Masami The generalized Smith indices. *IV. Sōka Econom. Stud.* 5 (1976), no. 3-4, 234-245. (M.-C. Ku) **81a:55007** 55M35 (57S17)
- Wakamatsu, Takayoshi Note on adjoints. *Comm. Algebra* 8 (1980), no. 8, 707-716. (Temple H. Fay) **81d:18007** 18A40 (13C99)
- Wakano, M. An interacting instanton and anti-instanton system under external color magnetic fields. *Nuclear Phys. B* 169 (1980), no. 3-4, 241-252. (Author's summary) **81b:81142** 81G05
- Wake, G. C. (with Fradkin, L. Ju.) Perturbations of the spectrum of nonlinear eigenvalue problems. *J. Math. Anal. Appl.* 66 (1978), no. 2, 433-441. (Cornelius O. Horgan) **81g:35101** 35P30 (35J65, 80A25)
- el Wakil, S. A. See *El Wakil, S. A.*
- Wakimura, Yoshiaki (with Tohma, Yoshihiro) Structural calculation of Boolean differences. *Systems-Comput.-Controls* 9 (1978), no. 2, 58-67. (Authors' summary) **81b:94037** 94C10
- van der Wal, J. (with van Hee, Kees M.) Strongly convergent dynamic programming: some results. *Dynamische Optimisierung (Tagung, Inst. Angewandte Math., Univ. Bonn, Bonn, 1976)*, pp. 165-172, *Bonner Math. Schriften*, 98, Inst. Angew. Math., Univ. Bonn, Bonn, 1977. (Jaap Wessels) **81i:90201** 90C40
- Positive Markov games with stopping actions. *Game theory and related topics (Proc. Sem., Bonn and Hagen, 1978)*, pp. 117-127, *North-Holland, Amsterdam*, 1979. (Jaap Wessels) **81b:93065** 93E05
- Successive approximations for average reward Markov games. *Internat. J. Game Theory* 9 (1980), no. 1, 13-24. (Vera Winitzky de Spinadel) **81i:90221** 90D15 (93E05)
- Walsh, Eugene (with Zehab, Ezra) Sign test of multivariable real polynomials. *IEEE Trans. Circuits and Systems* 27 (1980), no. 7, 619-625. (Authors' summary) **81f:65039** 65H05
- Walch, Ray (with Jordan, J. H.; Wisner, R. J.) Triangles with integer sides. *Amer. Math. Monthly* 86 (1979), no. 8, 686-689. (Heiko Harborth) **81i:05013** 05A15 (10A21, 52A37)
- Walczak, B. A necessary and sufficient condition for the existence of a bundle in differential spaces. *Ann. Polon. Math.* 37 (1980), no. 1, 49-57. (Charles D. Marshall) **81j:58013** 58A40 (55R10)
- Walczak, Paweł (with Suominen, Kalevi) Chern characteristic classes of vector bundles. *Proceedings of the First Finnish-Polish Summer School in Complex Analysis (Podlesie, 1977)*, Part II, pp. 45-59, *Univ. Łódź, Łódź*, 1978. (James B. Carrell) **81b:58003** 58A12 (57R20)
- Walczak, Stanisław (with Pelczewski, Władysław) Method for determining the nonexistence of common points of the optimal trajectory and state constraints set boundary. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Tech.* 27 (1979), no. 5-6, 537-544. (V. N. Igolkin) **81d:49002** 49A21
- Walczak, Zofia Uniform convergence of sequences of functions with values in a topological space. *Demonstratio Math.* 11 (1978), no. 3, 703-706. (Ivan L. Reilly) **81h:54004** 54A20
- Wald, Jan David (with Baker, Lynne Rudder) Indexical reference and de re belief. *Philos. Stud.* 66 (1979), no. 3, 317-327. (From the introduction) **81j:03013** 03B45 (03A05)
- Wald, Robert M. A new method for solving perturbation equations. *Gen. Relativity Gravitation* 11 (1979), no. 5, 321-324. (J. D. Finley, III) **81e:83017** 83C25
- (with Horowitz, Gary T.) Quantum stress energy in nearly conformally flat spacetimes. *Phys. Rev. D* (3) 21 (1980), no. 6, 1462-1465. (Authors' summary) **81a:81141** 81M05 (83C99)
- (with Ramaswamy, Sriram) Particle production by white holes. *Phys. Rev. D* (3) 21 (1980), no. 10, 2736-2741. (Authors' summary) **81f:83022** 83C45
- Quantum gravity and time reversibility. *Phys. Rev. D* (3) 21 (1980), no. 10, 2742-2755. (C. J. S. Clarke) **81g:83033** 83C45
- Walden, A. T. (with Prescott, P.) Maximum likelihood estimation of the parameters of the generalized extreme-value distribution. *Biometrika* 67 (1980), no. 3, 723-724. (Authors' summary) **81m:62046** 62F10
- Waldhausen, Friedhelm Algebraic K-theory of topological spaces. I. *Algebraic and geometric topology (Proc. Sympos. Pure Math., Stanford Univ., Stanford, Calif., 1976)*, Part 1, pp. 35-60, *Proc. Sympos. Pure Math.*, XXXII, Amer. Math. Soc., Providence, R.I., 1978. (Ross Staffeldt) **81i:18014a** 18F25 (57Q10, 57Q20, 57R90)
- Algebraic K-theory of topological spaces. II. *Algebraic topology, Aarhus 1978 (Proc. Sympos., Univ. Aarhus, Aarhus, 1978)*, pp. 356-394, *Lecture Notes in Math.*, 763, Springer, Berlin, 1979. (Ross Staffeldt) **81i:18014b** 18F25 (57Q10, 57Q20, 57R90)
- See also *Loday, Jean-Louis*, **81h:57006**
- Wald, Rolf Zur Konstruktion von Weierstrasspunkten mit vorgegebener Halbgruppe. (English summary) *Manuscripta Math.* 30 (1980), no. 3, 257-278. (R. F. Lax) **81e:14013** 14H20 (14F07, 30F10)
- Waldinger, Richard (with Manna, Zohar) The logic of computer programming. *IEEE Trans. Software Engng.* 4 (1978), no. 3, 199-229. (Andrea Maggiolo-Schettini) **81b:68011** 68B10
- Waldman, Donald M. (with Olson, Jerome A.; Schmidt, Peter) A Monte Carlo study of estimators of stochastic frontier production functions. Specification and estimation of frontier production, profit and cost functions. *J. Econometrics* 13 (1980), no. 1, 67-82. (See **81k:62157**) 62P20
- Waldmann, K.-H. An extrapolation method for Bayesian control of Markov chains. *Proceedings in Operations Research, 8 (Seventh Annual Meeting, Deutsch. Gesellsch. Operations Res., Freie Univ. Berlin, Berlin, 1978)*, pp. 130-138, *Physica, Würzburg*, 1979. (Jaap Wessels) **81g:90093** 90C40
- On the optimality of (z, Z) -order policies in adaptive inventory control. (German summary) *Z. Oper. Res. Ser. A-B* 24 (1980), no. 1, A61-A67. (Author's summary) **81a:90077** 90B05
- Janison-Waldner, Robert See *Janison-Waldner, Robert*
- Waldschmidt, Michel Applications de la théorie de Kummer à des problèmes de transcendance. *Séminaire de Théorie des Nombres, 1978-1979, Exp. No. 22, 14 pp.*, CNRS, Talence, 1979. (D. W. Masser) **81i:10054** 10F35
- Walshburger, Jean-Loup Relèvement et formes quadratiques à 4 variables. *Séminaire Delange-Pisot-Poitou, 18e année: 1976/77, Théorie des nombres, Fasc. 2, Exp. No. 25, 7 pp.*, Secrétariat Math., Paris, 1977. (Marie-France Vignéras) **81e:10026** 10C15 (10D05)
- Waldvogel, Jörg Stable and unstable manifolds in planar triple collision. *Instabilities in dynamical systems (Proc. NATO Adv. Study Inst., Cortina d'Ampezzo, 1978)*, pp. 263-271, *NATO Adv. Study Inst. Ser., Ser. C: Math. and Phys. Sci.*, 47, Reidel, Dordrecht, 1979. (Robert L. Devaney) **81c:70009** 70F35 (58F05)
- (with Szebehely, Victor; Saari, Donald G.; Kirchgraber, Urs) Eduard L. Stiefel (1909-1978). Proceedings of the Sixth Conference on Mathematical Methods in Celestial Mechanics (Math. Forschungsinst., Oberwolfach, 1978), Part I. *Celestial Mech.* 21 (1980), no. 1, 3-4. (Editors) **81a:01042** 01A70 (22-03, 57-03, 65-03, 70-03)
- Wales, David B. (with Huffman, W. Cary) Linear groups of degree nine with no elements of order seven. *J. Algebra* 51 (1978), no. 1, 149-163. (From the introduction) **81e:20016** 20C30
- Some projective representations of S_n . *J. Algebra* 61 (1979), no. 1, 37-57. (Jürgen Tappe) **81f:20015** 20C30 (20C25)
- Walff, A. A. See *Val'fis, Anna*
- Walgraf, D. (with Dewel, G.; Borkmans, P.) Concepts in the theory of nonequilibrium phase transitions. *J. Physique* 41 (1980), no. 5 Colloq. C-4, C101-C107. (Authors' summary) **81e:82018** 82A25 (82A35, 92A40)
- Walikar, H. B. (with Sampathkumar, E.) The connected domination number of a graph. *J. Math. Phys. Sci.* 13 (1979), no. 6, 607-613. (F. Harary) **81g:05077** 05C40
- Walsh, Gösta (with Rahm, Lars) On thermally forced stratified rotating fluids. *J. Fluid Mech.* 97 (1980), no. 4, 807-828. (Authors' summary) **81d:76098** 76V05 (76U05)
- Walt, H. Sequential estimation of the solution of an integral equation in filtering theory. *Stochastic control theory and stochastic differential systems (Proc. Workshop, Deutsch. Forschungsgemeinschaft, Univ. Bonn, Bad Honnef, 1979)*, pp. 598-605, *Lecture Notes in Control and Information Sci.*, 16, Springer, Berlin, 1979. (From the text) **81m:60075** 60G35 (62L20, 93E11)
- Walker, A. C. (with Syngellakis, S.) Elastic buckling of cylinders with widely spaced stiffeners. *Theory of shells (Proc. Third IUTAM Sympos., Tbilisi, 1978)*, pp. 553-574, *North-Holland, Amsterdam*, 1980. (T. J. Mahar) **81e:73048** 73H05 (73L99)
- Walker, D. E. (with Broucke, R.) Numerical explorations of the rectilinear problem of three bodies. Proceedings of the Sixth Conference on Mathematical Methods in Celestial Mechanics (Math. Forschungsinst., Oberwolfach, 1978), Part I. *Celestial Mech.* 21 (1980), no. 1, 73-81. (Authors' summary) **81a:70004** 70F07
- Walker, Elbert (with Arnold, David M.; Hunter, Roger H.) Direct sums of cyclic valued groups. *Symposia Mathematica, Vol. XXIII (Conf. Abelian Groups and their Relationship to the Theory of Modules, INdAM, Rome, 1977)*, pp. 77-84, *Academic Press, London*, 1979. (P. L. Sperry) **81k:20066** 20K20
- Walker, Grant (with Eccles, Peter John) The elements β_i are representable as framed

- hypersurfaces. *J. London Math. Soc. (2)* **22** (1980), no. 1, 153–160. (Donald M. Davis) **81f:55012** 55Q10 (57R40)
- Walker, Homer F. Estimating the proportions of two populations in a mixture using linear maps. *Comm. Statist. A—Theory Methods* **9** (1980), no. 8, 837–849. (Bradford R. Crain) **81h:62079** 62G05
- Walker, J. F., Jr. (with Meyer, R. H.; Gerace, W. J.) The effective Hamiltonian approach for the two-nucleon distribution function. *Nuclear Phys. A* **331** (1979), no. 2, 464–476. (Authors' summary) **81a:81106** 81G35
- Walker, J. S. (with El-Consul, A. M.) Inertial perturbations to inertialess MHD flows in insulating, rectangular ducts with small divergences. *Proceedings of the 16th Midwestern Mechanics Conference (Kansas State Univ., Manhattan, Kan., 1979)*, pp. 167–171. *Develop. in Mech.*, 10, Kansas St. Univ., Manhattan, Kan., 1979. (See **81m:73010**) 76W05
- Walker, John Andrew ★ Dynamical systems and evolution equations. Theory and applications. Mathematical Concepts and Methods in Science and Engineering, 20. Plenum Press, New York-London, 1980. viii + 236 pp. ISBN 0-306-40362-5 (J. A. Goldstein) **81f:34061** 34Gxx (58Fxx, 90A16, 93-02)
(with Carvalho, Luis Antonio Viera; Infante, Ettore Ferrari) On the existence of simple Liapunov functions for linear retarded difference-differential equations. *Tôhoku Math. J. (2)* **32** (1980), no. 2, 283–297. (A. Halanay) **81g:34100** 34K20
- Walker, M. W. (with Luh, J. Y. S.; Paul, R. P. C.) On-line computational scheme for mechanical manipulators. *Trans. ASME Ser. G. J. Dynamic Systems Measurement Control* **102** (1980), no. 2, 69–76. (From the summary) **81g:70001** 70B15
- Walker, Mark A generalization of the maximum theorem. *Internat. Econom. Rev.* **20** (1979), no. 1, 267–272. (From the introduction) **81i:90014** 90A05 (54D99, 90D30)
On the nonexistence of a dominant strategy mechanism for making optimal public decisions. *Econometrica* **48** (1980), no. 6, 1521–1540. (Heinz-Michael Winkels) **81j:90012** 90A08 (90A15)
- Walker, Martin (with Will, Clifford M.) Relativistic Kepler problem. I. Behavior in the distant past of orbits with gravitational radiation damping. *Phys. Rev. D* (3) **19** (1979), no. 12, 3483–3494. (Authors' summary) **81d:83027a** 83C35 (83F05)
(with Will, Clifford M.) Relativistic Kepler problem. II. Asymptotic behavior of the field in the infinite past. *Phys. Rev. D* (3) **19** (1979), no. 12, 3495–3508. (Authors' summary) **81d:83027b** 83C35 (83F05)
- Walker, Michael A characterization of some translation planes. *Abh. Math. Sem. Univ. Hamburg* **49** (1979), 216–233. (J. André) **81a:51004** 51A40 (51E15)
(with Hering, Christoph) Perspectives in irreducible collineation groups of projective planes. II. *J. Statist. Plann. Inference* **3** (1979), no. 2, 151–177. (T. G. Room) **81b:51007** 51A40 (20D05, 51J10)
- Walkup, David W. How many ways can a permutation be factored into two n -cycles? *Discrete Math.* **28** (1979), no. 3, 315–319. (J. L. Brenner) **81d:05005** 05A05 (20B05)
Matchings in random regular bipartite digraphs. *Discrete Math.* **31** (1980), no. 1, 59–64. (András Frank) **81i:05078** 05C20 (05C70, 60C05)
- Wall, Charles T. C. Periodic projective resolutions. *Proc. London Math. Soc. (3)* **39** (1979), no. 3, 509–553. (Kenneth S. Brown) **81h:18013** 18G10 (55M35, 57Q10)
A note on symmetry of singularities. *Bull. London Math. Soc.* **12** (1980), no. 3, 169–175. (M. Sebastiani) **81f:32009** 32B30 (14B05, 58C27)
A second note on symmetry of singularities. *Bull. London Math. Soc.* **12** (1980), no. 5, 347–354. (P. Orlík) **81j:58022** 58C27 (32B30)
The first canonical stratum. *J. London Math. Soc. (2)* **21** (1980), no. 3, 419–433. (G. N. Himiasivili) **81k:58014** 58C27 (58F14)
Affine cubic functions. III. The real plane. *Math. Proc. Cambridge Philos. Soc.* **87** (1980), no. 1, 1–14. (I. Dolgachev) **81k:58017** 58C28 (57R45)
Relatively 1-dimensional complexes. *Math. Z.* **172** (1980), no. 1, 77–79. (Ross Geoghegan) **81i:57015** 57Q10
Affine cubic functions. II. Functions on C^3 with a corank 2 singular point. *Topology* **19** (1980), no. 1, 89–98. (I. Dolgachev) **81k:32010** 32B30 (14B07, 57R45)
See also Problems: Homological group theory, **81f:00062** and Metzler, Wolfgang, **81h:55003**
- Wall, Frederick T. (with Seitz, William A.; Chin, John C.) Orthogonal vector analyses of distributions of self-avoiding and limited order random walks on lattices. *J. Chem. Phys.* **68** (1978), no. 8, 3845–3849. (Authors' summary) **81e:82011** 82A05 (33A30)
- Wall, H. S. (with Dennis, Joseph J.) The limit-circle case for a positive definite J -fraction. *Black mathematicians and their works*, pp. 87–105 (1 plate), Dorrance, Ardmore, Pa., 1980. (See **81e:00004**) 30B70
- Wall, Terry (with Scott, G. Peter) Topological methods in group theory. *Homological group theory (Proc. Sympos., Durham, 1977)*, pp. 137–203. *London Math. Soc. Lecture Note Ser.*, 36, Cambridge Univ. Press, Cambridge, 1979. (W. Jaco) **81m:57002** 57M05 (20E06)
- Wallace, D. J. Strong interaction models in 6-e dimensions. *Hadron structure and lepton-hadron interactions (Proc. Cargèse Summer Inst., Cargèse, 1977)*, pp. 687–696. *NATO Adv. Study Inst. Ser. B: Physics*, 39, Plenum, New York, 1979. (Author's summary) **81c:81063** 81G05 (82A25)
- Wallace, David L. The Behrens-Fisher and Fieller-Creasy problems. *R. A. Fisher: an appreciation*, pp. 119–147. *Lecture Notes in Statist.*, 1, Springer, New York, 1980. (See **81k:01024**) 62P99
- Wallace, Duane C. Equation of state from weak shocks in solids. *Phys. Rev. B* (3) **22** (1980), no. 4, 1495–1502. (Tommaso Ruggeri) **81j:73035** 73D99
- Wallace, G. L. (with Zund, Joseph D.) Electromagnetic theory in general relativity. VI. The Poynting vector and zilch tensor. *Tensor (N.S.)* **33** (1979), no. 3, 322–328. (P. C. Vaidya) **81j:83027** 83C50
(with O'Connell, R. F.) Energy flow vector of the electromagnetic field. (French summary) *Canad. J. Phys.* **58** (1980), no. 6, 744–745. (Authors' summary) **81h:78007** 78A25 (78A40)
- Wallace, M. R. Applications of ultrastability. *Kybernetes* **8** (1979), no. 3, 185–191. (Gábor Dávid) **81h:93058** 93D99
- Wallace, T. Duxley (with Toyoda, Toshihisa) Pre-testing on part of the data. *J. Econometrics* **10** (1979), no. 1, 119–123. (Chien-Pai Han) **81f:62112** 62J05
- Wallach, Nolan R. (with DeGeorge, David L.) Limit formulas for multiplicities in $L^2(\Gamma \backslash G)$. II. The tempered spectrum. *Ann. of Math. (2)* **109** (1979), no. 3, 477–495. (J.
- A. C. Kolk) **81g:22010** 22E30 (43A85, 43A90)
The analytic continuation of the discrete series. I, II. *Trans. Amer. Math. Soc.* **251** (1979), 1–17, 19–37. (Mitsuo Sugiyara) **81a:22009** 22E45 (17B10, 20G05)
The spectrum of compact quotients of semisimple Lie groups. *Proceedings of the International Congress of Mathematicians (Helsinki, 1978)*, pp. 715–719. *Acad. Sci. Fennica, Helsinki*, 1980. (J. J. Duistermaat) **81f:22021** 22E45 (10D40, 58G25)
(with Enright, Thomas J.) Notes on homological algebra and representations of Lie algebras. *Duke Math. J.* **47** (1980), no. 1, 1–15. (Floyd L. Williams) **81e:17013** 17B10 (17B56, 18E25, 18G10)
- Wallenius, J. (with Zions, Stanley) On finding the subset of efficient vectors of an arbitrary set of vectors. *Studies on mathematical programming (Papers, Third Conf. Math. Programming, Mátrafüred, 1975)*, pp. 187–200. *Math. Methods Oper. Res.*, 1, Akad. Kiadó, Budapest, 1980. (Authors' summary) **81k:90061** 90C05
- Wallenius, K. T. (with Alam, Khurshed) Distribution of a sum of order statistics. *Scand. J. Statist.* **6** (1979), no. 3, 123–126. (G. S. Lingappaiah) **81c:62011** 62E15 (62G30)
- Wallenstein, Sylvan Distributions of some one-sided k -sample Smirnov-type statistics. *J. Amer. Statist. Assoc.* **75** (1980), no. 370, 441–446. (Kumar Jogdeo) **81i:62061** 62G10 (62E15)
- Walker, Derek A. A graph-theoretical model for telecommunications networks. (French summary) *Problèmes combinatoires et théorie des graphes (Colloq. Internat. CNRS, Univ. Orsay, Orsay, 1976)*, pp. 417–418. *Colloques Internat. CNRS*, 260, CNRS, Paris, 1978. (See **80a:05005**) 05C20
(with Clarke, F. W.; Thomas, A. D.) Embeddings of covering projections of graphs. *J. Combin. Theory Ser. B* **28** (1980), no. 1, 10–17. (W. Dörfler) **81f:05066** 05C10 (05C70)
- Walker, W. G. (with Banerjee, Mahadev) Summation of the series $y^{n+1}(y+1)^n + \dots + x^n$. *Fibonacci Quart.* **18** (1980), no. 1, 35. (Lawrence S. Levy) **81g:10033** 10B15
- Walley, D. (with Galbraith, R. F.) Ergodic properties of a two-dimensional binary process. *J. Appl. Probab.* **17** (1980), no. 1, 124–133. (Lawrence Gray) **81h:60107** 60K35
- Wallgren, Cheryl M. The distribution of the product of two correlated t variates. *J. Amer. Statist. Assoc.* **75** (1980), no. 372, 996–1000. (Author's summary) **81m:62089** 62H10 (62E15)
- Wallin, Hans (with Jonsson, Alf) A Whitney extension theorem in L_p and Besov spaces. (French summary) *Ann. Inst. Fourier (Grenoble)* **28** (1978), no. 1, vi, 139–192. (A. Kufner) **81c:46024** 46E35
Potential theory and approximation of analytic functions by rational interpolation. *Complex analysis Joensuu 1978 (Proc. Colloq. Univ. Joensuu, Joensuu, 1978)*, pp. 434–450. *Lecture Notes in Math.*, 747, Springer, Berlin, 1979. (M. Hervé) **81i:30030** 30E10
(with Jonsson, Alf) The trace to closed sets of functions in R^n with second difference of order $O(h)$. *J. Approx. Theory* **26** (1979), no. 2, 159–184. (H. Triebel) **81b:46046** 46E35 (41A65)
- Wallington, C. E. Objective analysis of geophysical field data. *Numerical simulation of fluid motion (Proc. Internat. Conf. Numerical Simulation of Fluid Dynamic Systems, Monash Univ., Melbourne, 1976)*, pp. 567–573. *North-Holland, Amsterdam*, 1978. (See **81a:76005**) 86A99 (65P05)
- Wallis, Kenneth F. Econometric implications of the rational expectations hypothesis. *Econometrica* **48** (1980), no. 1, 49–73. (P. C. B. Phillips) **81i:62201** 62P20 (90A20)
- Wallis, W. Allen The Statistical Research Group, 1942–1945. With comments by F. J. Anscombe and William H. Kruskal and a reply by the author. *J. Amer. Statist. Assoc.* **75** (1980), no. 370, 320–335. (Author's summary) **81j:62004** 62-03
- Wallis, W. D. (with Caccetta, Louis) Maximal sets of deficiency three. *Proceedings of the Tenth Southeastern Conference on Combinatorics, Graph Theory and Computing (Florida Atlantic Univ., Boca Raton, Fla., 1979)*, pp. 217–227. *Congress. Numer.*, XXIII–XXIV, Utilitas Math., Winnipeg, Man., 1979. (Karsten Steffens) **81e:05064** 05C70 (05C45)
Spouse-avoiding mixed doubles tournaments. *Second International Conference on Combinatorial Mathematics (New York, 1978)*, pp. 549–554. *Ann. New York Acad. Sci.*, 319, New York Acad. Sci., New York, 1979. (R. C. Mullin) **81m:05040** 05B15
(with Stinson, Douglas) Some designs used in constructing skew Room squares. *Combinatorics 79 (Proc. Colloq. Univ. Montréal, Montréal, Que., 1979)*, Part I. *Am. Discrete Math.* **8** (1980), 171–175. (Arnold Neumaier) **81m:05038** 05B15
- Wallisch, Walter Beziehungen zwischen Schießverfahren und Differenzmethoden. (Russian and English summaries) *Wiss. Z. Friedrich-Schiller-Universität Jena Math.-Natur. Reihe* **29** (1980), no. 2, 311–318. (R. M. M. Mattheij) **81j:65096** 65L10
- Walliser, Rolf (with Bundschuh, Peter) Untere Schranken für Polynome in Werten der p -adischen Exponentialfunktion. *Math. Ann.* **244** (1979), no. 3, 185–191. (Marthe Grandet) **81i:10047** 10F45
- Wallner, R. P. Superpotential-forms and total energy/momentum in general relativity. *Acta Phys. Austriaca* **52** (1980), no. 2, 121–124. (Author's summary) **81h:83018** 83C40 (49H05, 58A10)
- Walls, D. F. (with Gardiner, C. W.; Chaturvedi, S.) Master equations, stochastic differential equations, and bifurcations. *Bifurcation theory and applications in scientific disciplines (Papers, Conf., New York, 1977)*, pp. 453–462. *Ann. New York Acad. Sci.*, 316, New York Acad. Sci., New York, 1979. (Richard J. Field) **81m:92019** 92A09 (60H15)
(with Drummond, P. D.; McNeil, K. J.) Nonequilibrium transitions in sub-second harmonic generation. I. Semiclassical theory. *Optica Acta* **27** (1980), no. 3, 321–335. (Authors' summary) **81e:78003** 78A05 (82A25)
(with Drummond, P. D.; McNeil, K. J.) Statistical properties of an incoherently driven nonlinear interferometer. *Phys. Rev. A* (3) **22** (1980), no. 4, 1672–1679. (Author's summary) **81h:81189** 81K05
- Walmsley, S. H. (with Crisp, G. M.) Polyhedral cavity field tensors. *Chem. Phys. Lett.* **74** (1980), no. 1, 181–187. (Authors' summary) **81f:82032** 82A60
- Walpole, Ronald E. (with Freund, John E.) ★ Mathematical statistics. Third edition. Prentice-Hall, Inc., Englewood Cliffs, N.J., 1980. xii + 548 pp. ISBN 0-13-562066-X (Editors) **81k:62002** 62-01
- Walrand, Jean (with Varaiya, Pravin) A minimum principle for decentralized stochastic control problems. *Dynamic optimization and mathematical economics*, pp. 253–266. *Math. Concepts and Methods in Sci. and Engrg.*, 19, Plenum, New York, 1980. (M. Aoki) **81g:93133** 93E20 (90A17)

- (with Varaiya, Pravin) Sojourn times and the overtaking condition in Jacksonian networks. *Adv. in Appl. Probab.* 12 (1980), no. 4, 1000-1018. (Benjamin Melamed) **81i:60099** 60K25 (90B22)
- (with Ephremides, A.; Varaiya, Pravin) A simple dynamic routing problem. *IEEE Trans. Automat. Control* 25 (1980), no. 4, 690-693. (Authors' summary) **81i:90083** 90B22 (60K25)
- Wahab, Edward K. (with Nunziato, Jace W.) On ideal multiphase mixtures with chemical reactions and diffusion. *Arch. Rational Mech. Anal.* 73 (1980), no. 4, 285-311. (Hilmi Demiryol) **81i:73005** 73B05 (73S99, 80A30)
- Wahab, Joan See Survey of numerical methods for partial differential equations. **81i:65002**
- Wahab, John B. A diffusion with a discontinuous local time. *Temps locaux (Exp. Sém. J. Azema-M. Yor, Univ. Pierre et Marie Curie, Paris, 1976-1977)*, pp. 37-45, *Astérisque*, 52,53, Soc. Math. France, Paris, 1978. (See **81i:60042**) 60J55 (60J60)
- The local time of the Brownian sheet. *Temps locaux (Exp. Sém. J. Azema-M. Yor, Univ. Pierre et Marie Curie, Paris, 1976-1977)*, pp. 47-61, *Astérisque*, 52,53, Soc. Math. France, Paris, 1978. (See **81i:60042**) 60J55
- Downcrossings and the Markov property of local time. *Temps locaux (Exp. Sém. J. Azema-M. Yor, Univ. Pierre et Marie Curie, Paris, 1976-1977)*, pp. 89-115, *Astérisque*, 52,53, Soc. Math. France, Paris, 1978. (See **81i:60042**) 60J55
- Excursions and local time. *Temps locaux (Exp. Sém. J. Azema-M. Yor, Univ. Pierre et Marie Curie, Paris, 1976-1977)*, pp. 159-192, *Astérisque*, 52,53, Soc. Math. France, Paris, 1978. (See **81i:60042**) 60J55
- Wahab, John J. Extending monotone decompositions of manifolds. *Proc. Amer. Math. Soc.* 74 (1979), no. 1, 197-201. (Donald Coram) **81i:57012** 57N15 (54B15)
- (with Kozłowski, George) The cell-like mapping problem. *Bull. Amer. Math. Soc. (N.S.)* 2 (1980), no. 2, 315-316. (G. H. M. Thomas) **81i:54033** 54F45 (54F43, 57N10, 57N60)
- Wahab, T. R. S. Counting of three-connected graphs. (Russian) *Dokl. Akad. Nauk SSSR* 247 (1979), no. 2, 297-301. (Pavel Tomasta) **81i:05006** 05C30
- Wahner, G. W. (with Tretter, Marietta J.) Further comments on the computation of modified Bessel function ratios. *Math. Comp.* 35 (1980), no. 151, 937-939. (James M. Horner) **81i:33005** 33A40
- (with Tretter, Marietta J.) Analytic subtraction applied to the incomplete gamma and beta functions. *SIAM J. Math. Statist. Comput.* 1 (1980), no. 3, 321-326. (Anton Hut'a) **81i:65029** 65D20 (33A15)
- Walter, Colin D. The ambiguous class group and the genus group of certain nonnormal extensions. *Mathematika* 26 (1979), no. 1, 113-124. (G. Frei-Imfeld) **81i:12008** 12A35 (12A50)
- Walter, Gilbert G. (with Blum, Julius R.) Probability density estimation using delta sequences. *Ann. Statist.* 7 (1979), no. 2, 328-340. (Paul Deheuvels) **81i:62057** 62G05 (41A30)
- A class of spectral density estimators. *Ann. Inst. Statist. Math.* 32 (1980), no. 1, 65-80. (M. A. Mirzamedov) **81i:62136** 62M15
- Addendum to: "Properties of Hermite series estimation of probability density" [*Ann. Statist.* 5 (1977), no. 6, 1258-1264; MR 56 #6997]. *Ann. Statist.* 8 (1980), no. 2, 454-455. (Paul Deheuvels) **81i:62072** 62G05
- Walter, Hermann K.-G. Invariants of grammar transformations. *Fundamentals of computation theory (Proc. Conf. Algebraic, Arith. and Categorical Methods in Comput. Theory, Berlin/Wendisch-Rietz, 1979)*, pp. 496-507, *Math. Research*, 2, Akademie-Verlag, Berlin, 1979. (From the introduction) **81i:68098** 68F05
- Walter, Lutz (with Künle, Heinz-Uwe) Ein Lagerhaltungsmodell mit kontingierten Liefermengen. (English and Russian summaries) *Math. Operationsforsch. Statist. Ser. Optim.* 10 (1979), no. 4, 567-573. (Paul van Beek) **81i:90044** 90B05
- Walter, S. D. Some generalizations of the committee problem. (French summary) *Canad. J. Statist.* 7 (1979), no. 1, 1-10. (P. W. Mielke, Jr.) **81i:05005** 05A05 (62G99)
- Walter, Wolfgang Fixpunkte der Poincaré-Abbildung. *Arch. Math. (Basel)* 33 (1979/80), no. 1, 80-84. (G. A. Klaassen) **81i:34035** 34C15
- (with Redheffer, Raymond) Inequalities involving derivatives. *Pacific J. Math.* 85 (1979), no. 1, 165-178. (Jöran Bergh) **81i:26012** 26D10
- (with Redheffer, Raymond) Comparison theorems for parabolic functional inequalities. *Pacific J. Math.* 85 (1979), no. 2, 447-470. (A. I. Atanasov) **81i:35164** 35R45 (35K60)
- (with Redheffer, Raymond) Counterexamples for uniqueness in strongly coupled parabolic systems. *Math. Z.* 171 (1980), no. 1, 83-90. (Jagdish Chandra) **81i:35066** 35K55
- (with Bondge, B. K.; Pachpatte, B. G.) On generalized Wendroff-type inequalities and their applications. *Nonlinear Anal.* 4 (1980), no. 3, 491-495. (Paul R. Beesack) **81i:26007** 26D10 (26D15, 39C05)
- Remarks on a paper by F. Browder about contraction: "Remarks on fixed point theorems of contractive type" [*Nonlinear Anal.* 3 (1979), no. 5, 657-661; MR 81a:54046]. *Nonlinear Anal.* 5 (1981), no. 1, 21-25. (Editors) **81i:54080** 54H25 (47H10)
- Walters, Terry (with Kartasatos, Athanasios G.) Some oscillation results for matrix and vector differential equations with forcing term. *J. Math. Anal. Appl.* 73 (1980), no. 2, 506-513. (G. J. Egen) **81i:34039** 34C10
- A characterization of positive linear functionals and oscillation criteria for matrix differential equations. *Proc. Amer. Math. Soc.* 78 (1980), no. 2, 198-202. (G. J. Egen) **81i:34037** 34C10 (34G10)
- Walters, William P. (with Lacetera, Janet E.) Theoretical and experimental studies of hemispherical shaped-charge liners. *Transactions of the Twenty-Fifth Conference of Army Mathematicians (Johns Hopkins Univ., Baltimore, Md., 1979)*, pp. 57-68, *ARO Rep.* 80, 1, U. S. Army Res. Office, Research Triangle Park, N.C., 1980. (See **80m:73002**) 76L05
- Walterscheid, R. L. (with Venkateswaran, S. V.) Influence of mean zonal motion and meridional temperature gradients on the solar semi-diurnal atmospheric tide: a spectral study. I. Theory. *J. Atmospheric Sci.* 36 (1979), no. 9, 1623-1635. (Authors' summary) **81i:86012a** 86A10 (76R05, 86A05)
- (with Venkateswaran, S. V.) Influence of mean zonal motion and meridional temperature gradients on the solar semi-diurnal atmospheric tide: a spectral study. II. Numerical results. *J. Atmospheric Sci.* 36 (1979), no. 9, 1636-1662. (Authors' summary)
- 81i:86012b** 86A10 (76R05, 86A05)
- Walther, Hansjochim ★Anwendungen der Graphentheorie. (German) [Applications of graph theory] *VEB Deutscher Verlag der Wissenschaften, Berlin*, 1979. 239 pp. (E. Ja. Gabovitz) **81i:90035** 90B10 (05Cxx, 90C35)
- (with Harant, J.) Über Abstandsparameter in Polyedergraphen. *Wiss. Z. Tech. Hochsch. Ilmenau* 25 (1979), no. 2, 31-39. (J. Sedláček) **81i:05042** 05C10
- Walton, D. J. (with Hoskins, W. D.; Pathan, G. M.) Solution of bilinear systems arising from high order discretizations of Poisson-type equations. *BIT* 20 (1980), no. 2, 212-214. (Luciano Biasini) **81i:65108** 65N05
- Walton, Douglas N. (with Woods, John) Circular demonstration and von Wright-Geach entailment. *Notre Dame J. Formal Logic* 20 (1979), no. 4, 768-772. (Alex Blum) **81i:03009** 03A05 (03B45)
- Philosophical basis of relatedness logic. *Philos. Stud.* 36 (1979), no. 2, 115-136. (A. A. Mullin) **81i:03023** 03B45 (03A05)
- Relatedness in intensional action chains. *Philos. Stud.* 36 (1979), no. 2, 175-223. (A. A. Mullin) **81i:03024** 03B45 (03A05)
- (with Woods, John) Equivocation and practical logic. *Ratio* 21 (1979), no. 1, 31-43. (From the introduction) **81i:03009** 03A05
- Walton, I. C. The transition to Taylor vortices in a closed rapidly rotating cylindrical annulus. *Proc. Roy. Soc. London Ser. A* 372 (1980), no. 1749, 201-218. (Author's summary) **81i:76021** 76E10 (76U05)
- The stability of free convection in a horizontal cylindrical annulus. *Quart. J. Mech. Appl. Math.* 33 (1980), no. 2, 125-139. (C. R. Illingworth) **81i:76034** 76E15 (35J40, 76R10)
- Walton, Jay R. (with Lowengrub, M.) Systems of generalized Abel equations. *SIAM J. Math. Anal.* 10 (1979), no. 4, 794-807. (I. M. Longman) **81i:45010** 45F10
- Systems of generalized Abel integral equations with applications to simultaneous dual relations. *SIAM J. Math. Anal.* 10 (1979), no. 4, 808-822. (I. M. Longman) **81i:45011** 45F10 (45E05)
- (with Nachman, Arje) Energy release rate calculations for interface edge cracks based on a conservation integral. *Internat. J. Solids and Structures* 16 (1980), no. 8, 695-699. (Authors' summary) **81i:73084** 73M05
- Walton, P. N. (with Welsh, Dominic) On the chromatic number of binary matroids. *Mathematika* 27 (1980), no. 1, 1-9. (James G. Oxley) **81i:05060** 05B35 (05C15)
- Walukiewicz, S. (with Kaliszewski, I.) Tighter equivalent formulations of integer programming problems. *Survey of mathematical programming (Proc. Ninth Internat. Math. Programming Sympos., Budapest, 1976)*, Vol. 2, pp. 525-536, North-Holland, Amsterdam, 1979. (From the introduction) **81m:90077** 90C10
- See also Optimization techniques. **81i:49001**
- Walum, Herbert A recurrent pattern in the list of quadratic residues mod a prime and in the values of the Liouville λ function. *J. Number Theory* 12 (1980), no. 1, 53-56. (J. Chidambaramswamy) **81i:10010** 10A20
- Wan, Bai Wu (with Wu, Shou Zhang) Model reduction of large-scale systems. (Chinese. English summary) *Acta Automat. Sinica* 6 (1980), no. 1, 57-66. (Authors' summary) **81i:93008** 93A15
- Wan, Frederic Y. M. (with Ascher, Uri) Horizontal and flat points in shallow cap dimpling. *Boundary and interior layers—computational and asymptotic methods (Proc. Conf., Trinity College, Dublin, 1980)*, pp. 415-420, Boole, Din Laoghaire, 1980. (See **81i:76001**) 73L99
- Polar dimpling of complete spherical shells. *Theory of shells (Proc. Third IUTAM Sympos., Tbilisi, 1978)*, pp. 589-605, North-Holland, Amsterdam, 1980. (Yi-Yuan Yu) **81i:73010** 73K15 (73L99)
- The buckling of flexible columns. *Appl. Math. Notes* 5 (1980), no. 3-4, 109-122. (Author's introduction) **81i:73052** 73H05 (34H05)
- Flapping response of lifting rotor blades to spanwise nonuniform random excitation. *J. Engng. Math.* 14 (1980), no. 4, 241-261. (Author's summary) **81i:70029** 70L05
- (with Ascher, Uri) Numerical solutions for maximum sustainable consumption growth with a multi-grade exhaustible resource. *SIAM J. Sci. Statist. Comput.* 1 (1980), no. 1, 160-172. (Kare M. Mjelde) **81i:90036** 90A30
- Constant sustainable consumption rate in optimal growth with exhaustible resources. *Stud. Appl. Math.* 63 (1980), no. 1, 47-66. (Edwin Burmeister) **81i:90032** 90A16 (49A10)
- Wan, Henry Y., Jr. (with Leitmann, George) Performance improvement of uncertain macroeconomic systems. *Dynamic optimization and mathematical economics*, pp. 71-88, *Math. Concepts and Methods in Sci. and Engng.*, 19, Plenum, New York, 1980. (G. Tintner) **81i:90028** 90A17 (93A10)
- Wan, Kay Kong Superselection rules, quantum measurement, and the Schrödinger's cat. (French summary) *Canad. J. Phys.* 58 (1980), no. 7, 976-982. (S. Gudder) **81i:81009** 81B10
- Wan, Yieh Hsi Bifurcations of periodic orbits in autonomous systems. *Global analysis (Proc. Biennial Sem. Canad. Math. Congr., Univ. Calgary, Calgary, Alta., 1978)*, pp. 371-377, *Lecture Notes in Math.*, 755, Springer, Berlin, 1979. (A. A. Reinfeldt) **81i:58043** 58F14 (34C40)
- Generic deformations of varieties. *Trans. Amer. Math. Soc.* 259 (1980), no. 1, 107-119. (Stephen Schecter) **81i:58020** 58C27
- Wan, Zhe Xian (with Wu, Xiao Long) On the second commutator subgroup of $PGL_2(\mathbb{Z})$. *C. R. Math. Rep. Acad. Sci. Canada* 2 (1980), no. 6, 303-308. (From the text) **81m:20060** 20G30
- Wanby, Göran A generalization of the Phragmén-Lindelöf principle for elliptic differential equations. *Math. Scand.* 43 (1978), no. 2, 259-274 (1979). (M. H. Protter) **81i:35021** 35J15 (31C05)
- Wand, Mitchell Final algebra semantics and data type extensions. *J. Comput. System Sci.* 19 (1979), no. 1, 27-44. (E. G. Wagner) **81i:68015** 68B15 (68B05)
- ★Induction, recursion, and programming. *North-Holland, New York-Oxford*, 1980. xiii + 202 pp. ISBN 0-444-00322-3 (Immo O. Kerner) **81i:68001** 68-01 (03-01, 68B05)
- First-order identities as a defining language. *Acta Inform.* 14 (1980), no. 4, 337-357. (Author's summary) **81m:68024** 68B10
- Wanders, G. (with Caussignac, Ph.) Bethe-Salpeter bound states in the ladder approximation with effective propagators and vacuum stability. (Italian and Russian

- summaries) *Nuovo Cimento A* (11) 55 (1980), no. 1, 45-58. (Authors' summary) 81h:81038 81D10
- Wang, H. (with Bunke, Olaf) Projection estimators for unknown covariance matrices in linear models. (German and Russian summaries) *Math. Operationsforsch. Statist. Ser. Statist.* 11 (1980), no. 2, 175-191. (Friedrich Pukelsheim) 81m:62132 62J10
- Wang, A. P. On surface-area integration and the related mapping. *Appl. Math. Comput.* 6 (1980), no. 3, 251-262. (E. F. Beckenbach) 81c:65013 65D30 (30C30, 53A30)
- A mathematical model of a cloud. *Astrophys. and Space Sci.* 70 (1980), no. 2, 447-459. (Authors' summary) 81c:85010 85A25 (78A40, 86A10)
- Wang, Albert T. Time-dependent functions of Brownian motion that are Markovian. *Ann. Probab.* 7 (1979), no. 3, 515-525. (N. C. Jain) 81c:60083 60J25
- (with Chen, Chang Shing) Functions of an n -dimensional Brownian motion that are Markovian. *Israel J. Math.* 34 (1979), no. 4, 343-352 (1980). (Mou-Hsiung Chang) 81k:60087 60J65 (60J25)
- Wang, C. Y. (with Wang, Paul P.) Experiment on character recognition using fuzzy filters. *Fuzzy sets (Proc. Sympos. Policy Anal. Inform. Systems, Duke Univ., Durham, N.C., 1980)*, pp. 195-221, Plenum, New York, 1980. (Authors' summary) 81j:68111 68G10 (03E72)
- Wang, Cecilia Y. A biharmonic kernel function. *J. Math. Anal. Appl.* 72 (1979), no. 2, 595-598. (Lung Ock Chung) 81b:31011 31B30 (31C12)
- Wang, Chang Bin (with Tong, Fu; Wu, Lian Da) Recurrence relations of the inclination function. *Chinese Astron. J.* 4 (1980), no. 1, 17-24. (Ram Krishna Sharma) 81h:70017 70M05 (70F15)
- Wang, Chang Yi (with Greenwell, Raymond N.) Fluid flow through a partially filled cylinder. *Appl. Sci. Res.* 36 (1980), no. 1, 61-75. (Authors' summary) 81h:76019 76D05
- Wang, Chao Chen (with Chou, S. I.) Error estimates of finite element approximations for problems in linear elasticity. I. Problems in elastostatics. *Arch. Rational Mech. Anal.* 72 (1979/80), no. 1, 41-60. (Hwa-Shan Ho) 81j:73065a 73K25 (65N30, 73C35)
- (with Chou, S. I.) Error estimates in finite element approximations for problems in linear elasticity. II. Problems in elastodynamics; continuous time approximations. *Arch. Rational Mech. Anal.* 72 (1979/80), no. 2, 155-174. (Hwa-Shan Ho) 81j:73065b 73K25 (65N30, 73C35)
- Wang, Chin San (with Glover, Henry H.; Huneke, John Philip) On a Kuratowski theorem for the projective plane. *Graph theory and related topics (Proc. Conf., Univ. Waterloo, Waterloo, Ont., 1977)*, pp. 207-218, Academic Press, New York, 1979. (Jonathan L. Gross) 81a:05041 05C10
- (with Glover, Henry H.; Huneke, John Philip) 103 graphs that are irreducible for the projective plane. *J. Combin. Theory Ser. B* 27 (1979), no. 3, 332-370. (Gary Haggard) 81h:05060 05C10
- Wang, Chung Lie Inequalities of the Rado-Popoviciu type and their determinantal analogues. *Chinese J. Math.* 7 (1979), no. 2, 103-112. (Peter Bullen) 81f:26014 26D15
- Convexity and inequalities. *J. Math. Anal. Appl.* 72 (1979), no. 1, 355-361. (E. F. Beckenbach) 81c:26017 26D15 (26A51)
- An extension of the Bernoulli inequality and its application. *Soochow J. Math.* 5 (1979), 101-105. (William N. Everitt) 81c:28016 28D20
- An extension of two sequences of inequalities of Mitrinović and Vasić. *Univ. Beograd. Publ. Elektrotehn. Fak. Ser. Mat. Fiz.* No. 634-677 (1979), 94-96. (Paul R. Beesack) 81h:26017 26D15
- On a Ky Fan inequality of the complementary A-G type and its variants. *J. Math. Anal. Appl.* 73 (1980), no. 2, 501-505. (Peter Bullen) 81b:26015 26D15
- Wang, De Yu A variational principle for the equilibrium of a free-boundary plasma. (Chinese. English summary) *Acta Phys. Sinica* 29 (1980), no. 2, 233-240. (P. K. C. Wang) 81h:76065 76W05 (35R35, 49H05)
- Wang, Frank J. S. The convergence of a branching Brownian motion used as a model describing the spread of an epidemic. *J. Appl. Probab.* 17 (1980), no. 2, 301-312. (Søren Asmussen) 81h:60109 60J80 (60J85, 92A15)
- Wang, George H. K. (with Hidiroglou, Michael; Fuller, Wayne A.) Estimation of seemingly unrelated regression with lagged dependent variables and autocorrelated errors. *J. Statist. Comput. Simulation* 10 (1979/80), no. 2, 133-146. (Susan D. Horn) 81g:62124 62J05
- Wang, Guang Yin (with Mai, Ming Cheng; Lu, Zhu Jia) Discrete phenomena in the initial value problem. (Chinese) *Kexue Tongbao* 23 (1978), no. 5, 279-282. (Chung Lie Wang) 81i:35115 35L70 (35M05)
- (with Mai, Ming Cheng; Lu, Zhu Jia) A remark on uniqueness for partial differential equations of nonprincipal type. (Chinese. English summary) *Acta Math. Sinica* 22 (1979), no. 6, 713-718. (Long-Yi Tsai) 81m:35008 35A07
- (with Lu, Zhu Jia; Mai, Ming Cheng) Discrete phenomena in existence in the initial value problems. *Sci. Sinica* 22 (1979), no. 11, 1229-1237. (Maria Cinquini-Cibrario) 81i:35121 35M05
- Wang, Guo Rong (with Kuang, Jiao Xun) A new measure of the degree of ill-conditioning of a matrix. (Chinese. English summary) *Numer. Math. J. Chinese Univ.* 1 (1979), no. 1, 20-30. (Authors' summary) 81i:15006 15A12 (65F35)
- Wang, Hao Kurt Gödel's intellectual development. *Math. Intelligencer* 1 (1978), no. 3, 182-185. (Editors) 81h:01015 01A70 (03-03)
- Wang, Helen P. Locally analytically connected topologies. *Illinois J. Math.* 22 (1978), no. 3, 443-448. (From the text) 81g:46058 46G20 (46J20, 54C35)
- Wang, Hui Ch'uan A note on Segal algebras on Euclidean spaces. *Proc. Amer. Math. Soc.* 72 (1978), no. 3, 513-518. (R. B. Burckel) 81d:43005 43A15 (42B25, 43A32)
- (with Jih, Rong Song) Rudin synthesis on homogeneous Banach algebras. *J. Austral. Math. Soc. Ser. A* 29 (1980), no. 4, 407-416. (Stephen H. Friedberg) 81i:43003 43A15 (46J30)
- Wang, James Li Ming Approximation on boundary sets. *Canad. Math. Bull.* 22 (1979), no. 3, 377-379. (Anthony G. O'Farrell) 81c:46032 46J10
- An example concerning parts and Newtonian capacity. *Proc. Amer. Math. Soc.* 75 (1979), no. 2, 218-220. (Anthony G. O'Farrell) 81c:46033 46J10
- A note on modulus of approximate continuity on $R(X)$. *Rocky Mountain J. Math.* 9 (1979), no. 4, 755-759. (T. W. Gamelin) 81c:46063 46J15 (30H05, 41A99)
- (with Trent, Tavan T.) Uniform approximation by rational modules on nowhere dense sets. *Proc. Amer. Math. Soc.* 81 (1981), no. 1, 62-64. (Anthony G. O'Farrell) 81j:30062 30E10 (46E15)
- Wang, Jian Fang (with Zhu, Yong Jin) On alphabetic-extended binary trees with restricted path length. *Sci. Sinica* 22 (1979), no. 12, 1362-1371. (Eberhard Lüdde) 81h:68060 68E10 (05C05, 68H05)
- Wang, Jing Hua Decay of solutions of a conservation law. A translation of *Kexue Tongbao* (Chinese) 25 (1980), no. 10, 433-436. *Kexue Tongbao (English)* 25 (1980), no. 7, 537-542. (Ronald Di Perina) 81m:35089 35L65
- Wang, Ju Kwei (with Hu, Men Ch'ang) On rearrangements of series. *Bull. Inst. Math. Acad. Sinica* 7 (1979), no. 4, 363-376. (From the introduction) 81k:40001 40A05
- Wang, Kai Differentiable actions on Brieskorn manifolds. *Bull. Inst. Math. Acad. Sinica* 7 (1979), no. 4, 409-418. (W. D. Neumann) 81c:57050 57S25
- On the generalizations of circulants. *Linear Algebra Appl.* 25 (1979), 197-218. (Peter M. Gibson) 81i:15022 15A57 (15A09, 15A30)
- (with Tang, Ren Ji) Griffith crack problem under asymmetrical loads. (Chinese. English summary) *Acta Mech. Sinica (Beijing)* 1980, no. 3, 269-278. (Authors' summary) 81k:73061 73M05 (45E05)
- On the matrix equation $A^m = \lambda J$. *J. Combin. Theory Ser. A* 29 (1980), no. 2, 134-141. (E. Deutsch) 81j:15018 15A36
- Wang, Lian A nonlinear second-order ordinary differential equation arising in the design of a high-tension power line network: $\ddot{x} + R\dot{x} + F(x)/L = A \cos \omega t$, $F(x) = \alpha x + \beta x^3$. (Chinese) *Knowledge Practice Math.* No. 1 (1978), 50-59. (Editor) 81a:34010 34A34
- (with Wang, Mu Qiu) V. I. Arnold's problem for $n=2$. (Chinese) *Kexue Tongbao* 24 (1979), no. 8, 342-347. (Takayuki Nono) 81h:58038 58F10 (34C35)
- (with Wang, Mu Qiu) Qualitative study of a type of differential equation on a cylinder phase space. *Sci. Sinica* 1979, Special Issue II on Math., 29-40. (J. K. Hale) 81k:34030 34C15 (58F14)
- (with Wang, Mu Qiu) On a group of differential equations on the cylinder. I. (Chinese) *Acta Math. Sinica* 23 (1980), no. 3, 331-340. (J. S. W. Wong) 81m:34036 34C05 (58F22)
- Wang, Lian Xiang (with Zhu, Yao Chen; Xu, Guang Shan) On the transcendence of a class of series. An application of W. M. Schmidt's theorem. A translation of *Kexue Tongbao* (Chinese) 25 (1980), no. 2, 49-53. *Kexue Tongbao (English)* 25 (1980), no. 1, 1-6. (Maurice Mignotte) 81m:10067 10F35
- Wang, Ming Shu (with Chen, Lan Sun) The relative position, and the number, of limit cycles of a quadratic differential system. (Chinese. English summary) *Acta Math. Sinica* 22 (1979), no. 6, 751-758. (Authors' summary) 81g:34031 34C05 (58F21)
- Wang, Ming Yi A fixed-memory recursive least squares method. (Chinese. English summary) *Kexue Tongbao* 24 (1979), no. 21, 961-965. (Kang Hoh Phua) 81c:65030 65K10 (68A05)
- Wang, Mu Qiu (with Wang, Lian) V. I. Arnold's problem for $n=2$. (Chinese) *Kexue Tongbao* 24 (1979), no. 8, 342-347. (Takayuki Nono) 81h:58038 58F10 (34C35)
- (with Wang, Lian) Qualitative study of a type of differential equation on a cylinder phase space. *Sci. Sinica* 1979, Special Issue II on Math., 29-40. (J. K. Hale) 81k:34030 34C15 (58F14)
- (with Wang, Lian) On a group of differential equations on the cylinder. I. (Chinese) *Acta Math. Sinica* 23 (1980), no. 3, 331-340. (J. S. W. Wong) 81m:34036 34C05 (58F22)
- Wang, Neng Chao The piecewise spline interpolation method. (Chinese. English summary) *J. Huazhong Inst. Tech.* 1979, no. 3, 50-59. (From the summary) 81m:65030 65D07
- Wang, P. K. C. (with Masui, K.) Intermittent phase unlocking in a resonant three-wave interaction with parametric excitation. *Phys. Lett. A* 81 (1981), no. 2-3, 97-101. (Authors' summary) 81k:82038 82A45 (58F13, 70K30, 76W05)
- Wang, Pao Hsi Solution procedures for nonlinear structural dynamic analysis. (Chinese summary) *J. Chinese Inst. Engrs.* 3 (1980), no. 1, 61-68. (Author's summary) 81i:73035 73K30 (65N30)
- Wang, Patrick Shen Pei Some new results on isotonic array grammars. *Inform. Process. Lett.* 10 (1980), no. 3, 129-131. (From the introduction) 81c:68097 68F05 (68G10)
- Wang, Paul P. (with Wang, C. Y.) Experiment on character recognition using fuzzy filters. *Fuzzy sets (Proc. Sympos. Policy Anal. Inform. Systems, Duke Univ., Durham, N.C., 1980)*, pp. 195-221, Plenum, New York, 1980. (Authors' summary) 81j:68111 68G10 (03E72)
- See also Fuzzy sets, 81h:03105
- Wang, Pei (with Hou, Bo Yu; Wang, Yu Bin; Hou, Bo Yuan) Non-self-dual instantons of two-dimensional CP(N) ($N > 2$) chiral theory. *Phys. Lett. B* 93 (1980), no. 4, 415-418. (Authors' summary) 81c:81099 81E99 (53C10)
- Wang, Pei Zhuang (with Jiang, Chun Xuan) Graphical procedure for the symmetrical analysis of stable groups. *Hadronic J.* 3 (1979/80), no. 4, 1320-1332. (Brian G. Wybourne) 81i:20002 20B05 (05C25, 81C40)
- Introduction to fuzzy mathematics. I. (Chinese) *Knowledge Practice Math.* No. 2 (1980), 45-59. (Editors) 81k:03057 03E72
- Wang, Qi Ming (with Peng, Jia Gui) Critical points of finite Blaschke products and the equation $\Delta u = e^{2u}$. (Chinese. English summary) *Kexue Tongbao* 24 (1979), no. 13, 583-586. (Wu Yung Ch'en) 81d:30055 30D50
- Wang, Ren Hong The degree of approximation by Hermite-Fejér interpolating polynomials. (Chinese) *Kexue Tongbao* 24 (1979), no. 7, 292-295. (Yung-Ming Chen) 81f:41008 41A10 (41A50)
- Wang, Ru Quan (with Liu, Xue Zong; Jiao, Lü Qiong; Gao, Zhi) Simplified Navier-Stokes equations and their mathematical characteristics. (Chinese. English summary) *Acta Mech. Sinica (Beijing)* 1980, no. 3, 226-231. (Authors' summary) 81i:35135 35Q10 (65P05, 76K05)
- Wang, S. P. On S-subgroups of locally compact groups. *Bull. Inst. Math. Acad. Sinica* 7 (1979), no. 3, 235-260. (M. I. Kabenjuk) 81c:22015 22D05
- On density properties of certain subgroups with boundedness conditions. *Monatsh. Math.* 89 (1980), no. 2, 141-162. (M. I. Kabenjuk) 81j:22014 22E20 (22D05, 28D05)
- Wang, S. S. (with Yau, J. F.; Corten, H. T.) A mixed-mode crack analysis of rectilinear anisotropic solids using conservation laws of elasticity. (French summary) *Internat. J. Fracture* 16 (1980), no. 3, 247-259. (Authors' summary) 81d:73089 73M05

- Wang, Shao Lin (with Avizienis, Algirdas) The design of totally self-checking circuits using programmable logic arrays. *FTCS-9 (Ninth Annual Internat. Sympos. Fault-Tolerant Comput., Madison, Wis., 1979)*, pp. 173-180, IEEE, New York, 1979. (See 81m:94001) 94C05
- Wang, Shao Lin (with Leibbrandt, George; Morf, Rudolf) Solutions of the sine-Gordon equation in higher dimensions. *J. Math. Phys.* 21 (1980), no. 7, 1613-1624. (George Leibbrandt) 81f:35106 35Q20 (76B25, 81C05)
- Wang, Si Lei On a problem posed by Zygmund. (Chinese) *Acta Math. Sinica* 22 (1979), no. 4, 502-510. (Yung-Ming Chen) 81i:42007 42A20
- Wang, Stuart Shih A note on commutative separable algebras. *Math. J. Okayama Univ.* 22 (1980), no. 1, 1-3. (Gerald S. Garfinkel) 81h:16013 16A16 (13B99)
- Wang, Tan Chih (with Sergeev, V. S.; Stepanov, S. Ja.) Computer solution of a problem of stability. (Russian) *Theory of stability and its applications (Russian)*, pp. 255-260, 303, "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. (A. A. Martynuk) 81j:65087 65L07
- Wang, Xing Hua The remainder terms of a formula for numerical differentiation. (Chinese. English summary) *Kexue Tongbao* 24 (1979), no. 19, 869-872. (P. S. Chiang) 81b:65020 65D25
- Wang, Y. H. (with Srivastava, R. C.) A characterization of the exponential and related distributions by linear regression. *Ann. Statist.* 8 (1980), no. 1, 217-220. (J. S. Huang) 81c:62010 62E10
- Wang, Yu Bin (with Hou, Bo Yu; Hou, Bo Yuan; Wang, Pei) Non-self-dual instantons of two-dimensional CP(N) ($N > 2$) chiral theory. *Phys. Lett. B* 93 (1980), no. 4, 415-418. (Authors' summary) 81e:81099 81E99 (53C10)
- Wang, Yu Feng (with Wu, Le Guang) Enumeration of equivalence classes of matrices having the same characteristic polynomial. (Chinese. English summary) *J. Huachung Inst. Tech.* 6 (1978), no. 3, 139-143, 146. (Editors) 81j:15011 15A21
- Wang, Yuan On sieve method and Goldbach problem. *Séminaire Delange-Pisot-Poitou, 20e année: 1978/1979. Théorie des nombres, Fasc. 2 (French)*, Exp. No. 30, 4 pp., Secrétariat Math., Paris, 1980. (D. H. Lehmer) 81i:10060 10H32 (10J15)
- Wang, Yung Tserng (with Desoer, Charles A.) The robust nonlinear servomechanism problem. *Proceedings of the 1978 IEEE Conference on Decision and Control including the 17th Symposium on Adaptive Processes (San Diego, Calif., 1979)*, pp. 7-11, IEEE, New York, 1979. (N. Harris McClamroch) 81c:93036 93C10
(with Desoer, Charles A.) Linear time-invariant robust servomechanism problem: a self-contained exposition. *Control and dynamic systems*, Vol. 16, pp. 81-129, Academic Press, New York, 1980. (See 81j:93002) 93C45
(with Desoer, Charles A.) On the generalized Nyquist stability criterion. *IEEE Trans. Automat. Control* 25 (1980), no. 2, 187-196. (Adly T. Fam) 81c:93065 93D15
(with Desoer, Charles A.) Foundations of feedback theory for nonlinear dynamical systems. *IEEE Trans. Circuits and Systems* 27 (1980), no. 2, 104-123. (Authors' summary) 81a:93038 93C10 (93D15)
- Wang, Zi Kun Sojourn times and first passage times for birth and death processes. *Sci. Sinica* 23 (1980), no. 3, 269-279. (Andrew D. Barbour) 81c:60088 60J75 (60J55)
- Wang, Zu Yue Darboux function oscillating everywhere. (Chinese. English summary) *Kexue Tongbao* 24 (1979), no. 24, 1105-1107. (Author's summary) 81k:26006 26A15
- Wang, C. L. (with Tewari, K.) Right Noetherian rings integral over their centers. *Comm. Algebra* 7 (1979), no. 15, 1573-1598. (A. V. Jategaonkar) 81e:16012 16A34 (16A46, 16A64)
- Waninski, J. (with Rahman, Q. I.) Coefficient regions for univalent trinomials. *Canad. J. Math.* 32 (1980), no. 1, 1-20. (W. C. Royster) 81b:30027 30C50
- Wanna, Selma A spectral sequence for group presentations with applications to links. *Trans. Amer. Math. Soc.* 261 (1980), no. 1, 271-285. (W. D. Neumann) 81i:57003 57M05 (55T99, 57M25)
- Wanner, G. (with Hairer, E.; Nørsett, Syvert P.) Order stars and stability theorems. *BIT* 18 (1978), no. 4, 475-489. (Rolf Jettsch) 81b:65070 65L07 (41A21, 65L05)
(with Nørsett, Syvert P.) The real-plane sandwich for rational approximations and oscillation equations. *BIT* 19 (1979), no. 1, 79-94. (Hans-Peter Blatt) 81d:65040 65L05 (65D15, 65L07)
- Wanhsa, Boleslaw P. A remark on infinite complete subgraphs. (Polish. Russian and English summaries) *Zeszyty Nauk. Politech. Śląsk. Mat.-Fiz.* No. 34 (1979), 53-54. (Author's summary) 81a:05092 05C55
A characterization of k -connected graphs. (Polish. Russian and English summaries) *Zeszyty Nauk. Politech. Śląsk. Mat.-Fiz.* No. 34 (1979), 55-56. (Author's summary) 81a:05085 05C40
Round-off errors in iteration processes. (Polish. Russian and English summaries) *Zeszyty Nauk. Politech. Śląsk. Mat.-Fiz.* No. 35 (1979), 143-146. (Author's summary) 81b:65039 65G05 (65J15)
- Wapnik, W. N. See Vapnik, V. N.
- Waragai, Toshikazu Ontological burden of grammatical categories. *Ann. Japan Assoc. Philol. Sci.* 5 (1979), no. 4, 185-205. (W. S. Hatcher) 81b:03021 03A05
- Warburton, J. D. (with Reddy, J. N.) A comparative study of numerical schemes for the solution of two-dimensional advection flows. *Nonlinear partial differential equations in engineering and applied science (Proc. Conf., Univ. Rhode Island, Kingston, R.I., 1979)*, pp. 187-212, *Lecture Notes in Pure and Appl. Math.*, 54, Dekker, New York, 1980. (Stephen W. Bradu) 81m:76015 76C05 (65M10)
- Ward, Harold N. (with Pless, Vera; Sloane, N. J. A.) Ternary codes of minimum weight 6 and the classification of the self-dual codes of length 20. *IEEE Trans. Inform. Theory* 26 (1980), no. 3, 305-316. (Authors' summary) 81b:94033 94B05
(with Newman, Bill) The weight enumerator of a family of codes over GF(4). *IEEE Trans. Inform. Theory* 26 (1980), no. 3, 366-367. (Authors' summary) 81b:94032 94B05
Center sets and ternary codes. *J. Algebra* 65 (1980), no. 1, 206-224. (E. F. Assmus, Jr.) 81m:94019 94B05 (20G40)
- Ward, J. D. (with Chui, Charles K.; Smith, Wm. B.) Approximation by minimum norm interpolants in the disc algebra. *J. Approx. Theory* 27 (1979), no. 3, 291-295. (Ivan Singer) 81e:41038 41A50 (41A25, 46J15)
(with Chui, Charles K.; Smith, Philip W.) Monotone approximation by spline functions. *Quantitative approximation (Proc. Internat. Sympos., Bonn, 1979)*, pp. 81-98, Academic Press, New York, 1980. (David R. Hill) 81i:41006 41A15 (41A25, 65D07)
(with Allen, G. D.; Legg, D. A.) Essentially Hermitian operators in $B(L_p)$. *Proc. Amer. Math. Soc.* 80 (1980), no. 1, 71-77. (Richard Fleming) 81f:47028 47B15
(with Chui, Charles K.; Smith, Philip W.) Degree of L_p approximation by monotone splines. *SIAM J. Math. Anal.* 11 (1980), no. 3, 436-447. (J. Prasad) 81h:41019 41A29 (41A15, 41A17)
- Ward, James E., III Vector spaces of magic squares. *Math. Mag.* 53 (1980), no. 2, 108-111. (K. T. Phelps) 81f:05050 05B30 (05B20)
- Ward, James R., Jr. Semilinear boundary value problems in Banach space. *Nonlinear equations in abstract spaces (Proc. Internat. Sympos., Univ. Texas, Arlington, Tex., 1977)*, pp. 469-477, Academic Press, New York, 1978. (Robert H. Martin, Jr.) 81c:45030 45N05 (34G20)
(with Bates, Peter W.) Periodic solutions of higher order systems. *Pacific J. Math.* 84 (1979), no. 2, 275-282. (R. E. Gaines) 81c:34036 34C25
Existence theorems for nonlinear boundary value problems at resonance. *J. Differential Equations* 35 (1980), no. 2, 232-247. (R. Kannan) 81k:47090 47H15 (34B15)
Periodic solutions for a class of ordinary differential equations. *Proc. Amer. Math. Soc.* 78 (1980), no. 3, 350-352. (G. Bojadziev) 81c:34037 34C25
- Ward, L. E., Jr. A note on Whitney maps. *Canad. Math. Bull.* 23 (1980), no. 3, 373-374. (Laurence Boxer) 81k:54056 54F05 (54B20)
- Ward, R. S. The self-dual Yang-Mills and Einstein equations. *Complex manifold techniques in theoretical physics (Proc. Workshop, Lawrence, Kan., 1978)*, pp. 12-34, *Res. Notes in Math.*, 32, Pitman, San Francisco, Calif., 1979. (Nicholas M. J. Woodhouse) 81h:81076 81E10 (53C05, 83C05)
(with Tod, K. P.) Self-dual metrics with self-dual Killing vectors. *Proc. Roy. Soc. London Ser. A* 368 (1979), no. 1734, 411-427. (George Debnay) 81e:83011 83C15 (53C05, 58G10)
- Ward, Stephen A. (with Halstead, Robert H., Jr.) A syntactic theory of message passing. *J. Assoc. Comput. Mach.* 27 (1980), no. 2, 365-383. (Authors' summary) 81b:68013 68B10 (03B40)
- Ward, William D. (with Dubien, Janice L.) A mathematical comparison of the members of an infinite family of agglomerative clustering algorithms. (French summary) *Canad. J. Statist.* 7 (1979), no. 1, 29-38. (A. Aiello) 81c:62111 62H30 (62P10)
- Wardrop, Robert L. (with Shapiro, C. P.) Dynkin's identity applied to Bayes sequential estimation of a Poisson process rate. *Ann. Statist.* 8 (1980), no. 1, 171-182. (Wolfgang Winkler) 81g:62139 62L12 (62F15)
(with Chen, Evan E.) Bayes sequential estimation in a life test and asymptotic properties. *Comm. Statist. A—Theory Methods* 9 (1980), no. 6, 659-672. (B. K. Ghosh) 81j:62070 62F15 (62L12, 62N05)
(with Shapiro, C. P.) Simultaneous Bayesian sequential estimation. *J. Amer. Statist. Assoc.* 75 (1980), no. 370, 359-365. (Rasul A. Khan) 81f:62129 62L12
- Ware, James H. (with Gail, M. H.) Comparing observed life table data with a known survival curve in the presence of random censorship. (French summary) *Biometrics* 35 (1979), no. 2, 385-391. (Bruce W. Turnbull) 81c:62103 62P05 (62G10)
(with Halperin, Max; Wu, Margaret) Conditional distribution-free tests for the two-sample problem in the presence of right censoring. *J. Amer. Statist. Assoc.* 75 (1980), no. 371, 638-645. (G. E. Noether) 81k:62058 62G10 (62G20)
- Warfield, John N. Complementary relations and map reading. *IEEE Trans. Systems Man Cybernet.* 10 (1980), no. 6, 285-291. (Bill Walker) 81i:05079 05C20 (92A20, 94C15)
- Warfield, R. B., Jr. Bezout rings and serial rings. *Comm. Algebra* 7 (1979), no. 5, 533-545. (B. L. Osofsky) 81a:16015 16A45
- Warmuth, Elke (with Warmuth, Walter) Quantil-artige Ungleichungen für die Systemzuverlässigkeit. *Kybernetika (Prague)* 16 (1980), no. 5, 426-430. (Authors' summary) 81m:62183 62N05 (62F25, 90B25)
- Warmuth, Walter (with Rossmann, H.) Eine Unschärferelation für diskrete Verteilungen. (English and Russian summaries) *Math. Operationsforsch. Statist. Ser. Statist.* 10 (1979), no. 1, 173-178. (Olav Kallenberg) 81i:60014 60E05 (62E15)
(with Warmuth, Elke) Quantil-artige Ungleichungen für die Systemzuverlässigkeit. *Kybernetika (Prague)* 16 (1980), no. 5, 426-430. (Authors' summary) 81m:62183 62N05 (62F25, 90B25)
- Warne, R. J. On the structure of standard regular semigroups. *Acta Sci. Math. (Szeged)* 41 (1979), no. 3-4, 435-443. (J. E. Mills) 81h:20091 20M10
On the structure of certain classes of regular semigroups. *Math. Japon.* 24 (1979/80), no. 6, 579-600. (Karl Bylen) 81h:20092 20M10
Orthodox congruences on strongly regular semigroups. *Comment. Math. Univ. St. Paul.* 28 (1980), no. 2, 203-208. (M. Yamada) 81e:20090 20M10
- Warner, C. Robert (with Whitley, Robert) Ideals of finite codimension in $C[0, 1]$ and $L^1(\mathbb{R})$. *Proc. Amer. Math. Soc.* 76 (1979), no. 2, 263-267. (D. R. Wilken) 81b:46070 46J10 (43A20)
- Warner, Garth (with Osborne, M. Scott) Multiplicities of the integrable discrete series: the case of a nonuniform lattice in an R -rank one semisimple group. *J. Funct. Anal.* 30 (1978), no. 3, 287-310. (J. A. C. Kolk) 81j:22011 22E30 (43A85, 43A90)
Selberg's trace formula for nonuniform lattices: the R -rank one case. *Studies in algebra and number theory*, pp. 1-142, *Advances in Math., Suppl. Studies*, 6, Academic Press, New York, 1979. (Audrey A. Terras) 81f:10044 10D40 (22E46, 58G25)
- Warner, M. W. (with Muir, A.) Homogeneous tolerance spaces. *Czechoslovak Math. J.* 30(105) (1980), no. 1, 118-126. (A. Császár) 81c:54005 54A05 (90A06)
Fixed biots in tolerance automata. *Kybernetika* 9 (1980), no. 3, 193-195. (Author's summary) 81i:68072 68D35
- Warner, Seth A new approach to Gelfand-Mazur theory and the extension theorem. *Michigan Math. J.* 26 (1979), no. 1, 13-17. (John W. Petro) 81b:16030 16A80 (12J20, 46H05)
Generalizations of a theorem of Mitylin. *Proc. Amer. Math. Soc.* 78 (1980), no. 3, 327-330. (Robert L. Ellis) 81a:12023 12J99
- Warren, F. W. Restrictions upon instabilities of plane and helical gas flows. *Proc. Roy. Soc. London Ser. A* 368 (1979), no. 1733, 225-237. (Author's summary) 81k:76032 76E99 (76N15)
- Warren, M. E. (with Emam, A.) Reducing polynomial matrices to canonical form. *Comput. Electr. Engrg.* 6 (1979), no. 2, 123-136. (S. P. Bhattacharyya) 81c:93034 93C05
- Warren, Richard H. (with Gantner, T. E.; Steinlage, R. C.) Compactness in fuzzy

- topological spaces. *J. Math. Anal. Appl.* **62** (1978), no. 3, 547–562. (Authors' summary) **81f:54006** 54A40 (54D30, 54D35)
- (with Gantner, T. E.; Steinlage, R. C.) Errata: "Compactness in fuzzy topological spaces" [*J. Math. Anal. Appl.* **62** (1978), no. 3, 547–562; MR **81e:54006**]. *J. Math. Anal. Appl.* **65** (1978), no. 2, 503. (From the text) **81i:54015** 54D30 (54A40)
- Fuzzy topologies characterized by neighborhood systems. *Rocky Mountain J. Math.* **9** (1979), no. 4, 761–764. (Siegfried Gottwald) **81a:54009** 54A40
- Fuzzy topological results. *Proceedings of the International Seminar on Fuzzy Set Theory (Inst. Math., Johannes Kepler Univ., Linz, 1979)*, pp. 109–115, Johannes Kepler Univ., Linz, 1980. (See **81m:03067**) 54A40 (03E72)
- Warren, W. S. (with Weitekamp, D. P.; Pines, A.) Theory of selective excitation of multiple-quantum transitions. *J. Chem. Phys.* **73** (1980), no. 5, 2084–2099. (Authors' summary) **81k:81175** 81G55
- Warrior, J. (with Viswanadham, N.) Scattering theory and the discrete linear optimal control problem. *Internat. J. Systems Sci.* **11** (1980), no. 6, 659–676. (Authors' summary) **81f:93054** 93C55 (78A45)
- Waschawski, Stefan E. (with Rodin, Burton) Extremal length and univalent functions. III. Consequences of the Ahlfors distortion property. *Bull. Inst. Math. Acad. Sinica* **6** (1978), no. 2, part 2, 583–597. (Stanisław Walczak) **81k:30013** 30C35 (30C75, 30C85)
- (with Rodin, Burton) Estimates of the Riemann mapping function near a boundary point. *Romanian-Finnish Seminar on Complex Analysis (Proc., Bucharest, 1976)*, pp. 349–366, *Lecture Notes in Math.*, **743**, Springer, Berlin, 1979. (E. C. Schlesinger) **81f:30005** 30C35 (30D40)
- (with Rodin, Burton) Extremal length and univalent functions. II. Integral estimates of strip mappings. *J. Math. Soc. Japan* **31** (1979), no. 1, 87–99. (Y. Komatu) **81k:30012** 30C35 (30C75, 30C85)
- (with Rodin, Burton) On the derivative of the Riemann mapping function near a boundary point and the Visser-Ostrowski problem. *Math. Ann.* **248** (1980), no. 2, 125–137. (D. Gaier) **81d:30049** 30D40 (30C35)
- Warth, Wolfgang On the uniqueness of best uniform approximations in the presence of constraints. *J. Approx. Theory* **25** (1979), no. 1, 1–11. (Darrell Schmidt) **81a:41044** 41A50
- Wasna, Sirci Krishnan (with Sharma, Bhu Dev) Weak cyclic codes. *Serdica* **5** (1979), no. 4, 321–326. (M. C. Cheng) **81f:94022** 94B15
- Waschbüch, Josef Über Bimoduln in Artinringen vom endlichen Modultyp. *Comm. Algebra* **8** (1980), no. 2, 105–151. (C. M. Ringel) **81f:16049** 16A64
- Washburn, A. R. On a search for a moving target. *Naval Res. Logist. Quart.* **27** (1980), no. 2, 315–322. (Lawrence D. Stone) **81f:90060** 90B40 (90D26, 93E20)
- Washburn, H. D. (with Mendel, J. M.) Minimum-variance state estimation for uniform causal functional equations. *Proceedings of the 1978 IEEE Conference on Decision and Control including the 17th Symposium on Adaptive Processes (San Diego, Calif., 1979)*, pp. 715–724, IEEE, New York, 1979. (Ivar Gustavsson) **81e:93081** 93E10
- (with Mendel, J. M.) Multistage estimation of dynamical and weakly coupled states in continuous-time linear systems. *IEEE Trans. Automat. Control* **25** (1980), no. 1, 71–76. (Authors' summary) **81a:93095** 93E10
- Washburn, Sherwood On the moduli of plane curve singularities. I. *J. Algebra* **56** (1979), no. 1, 91–102. (Lê Dũng Tráng) **81c:14017** 14H20
- Washington, Lawrence C. (with Ferrero, Bruce) The Iwasawa invariant μ_p vanishes for abelian number fields. *Ann. of Math. (2)* **109** (1979), no. 2, 377–395. (Wells Johnson) **81a:12005** 12A35 (12A50)
- Units of irregular cyclotomic fields. *Illinois J. Math.* **23** (1979), no. 4, 635–647. (J. C. Lagarias) **81a:12006** 12A35 (12A45, 12A70)
- Washio, Tadashi On class numbers of hyperelliptic function fields. II. *Sci. Bull. Fac. Ed. Nagasaki Univ. No. 31* (1980), 1–4. (H. Yokoi) **81f:12011** 12A90
- Washino, Kyūchiro Complementary variational principles in elasticity and plasticity. *Duality and complementarity in mechanics of solids (School-Conf. Duality Problems of Mech. Deformable Bodies, Jabłonna, 1977)*, pp. 7–93, Ossolineum, Wrocław, 1979. (S. Dost) **81c:73004** 73-06 (49H05)
- (with Hanaoka, M.) Optimum design of Beck's column. *Comput. & Structures* **11** (1980), no. 6, 473–480. (Z. Mróz) **81h:73043** 73K40 (73H10, 73K25)
- (with Nakayama, Tsukasa) Nonlinear analysis of liquid motion in a container subjected to forced pitching oscillation. *Internat. J. Numer. Methods Engrg.* **15** (1980), no. 8, 1207–1220. (Authors' summary) **81e:76017** 76B99 (65N30)
- Wasilewska, Anita A constructive proof of Craig's interpolation lemma for m -valued logic. *Studia Logica* **38** (1979), no. 3, 267–275. (Henry Africk) **81e:03019** 03B50 (03C40, 03F99)
- Wasilewski, Z. (with Milo, W.) Comparison of methods for detecting outliers. *Publ. Économétriques* **12** (1979), no. 2, 43–53. (Steven J. Schwager) **81m:62041** 62F05
- Wason, Judith C. On the boundary of reduced Teichmüller space. *Proc. Amer. Math. Soc.* **79** (1980), no. 4, 577–580. (I. Kra) **81c:32027** 32G15 (30F35)
- Wason, Wolfgang On the spectrum of Hermitian matrix-valued functions. *Resulante Math.* **2** (1979), no. 2, 206–214. (J. de Pillis) **81g:15010** 15A18 (47A10)
- van Wassenhove, Luc N. (with Gelders, Ludo F.) Solving a bicriterion scheduling problem. *European J. Oper. Res.* **4** (1980), no. 1, 42–48. (Józef Grabowski) **81a:90102** 90B35
- Wasserman, A. (with Smoller, J.; Tromba, Anthony J.) Nondegenerate solutions of boundary value problems. *Nonlinear Anal.* **4** (1980), no. 2, 207–216. (Tassilo Küpper) **81h:34009** 34B05 (58F14)
- Wassermann, Gerhard D. Testability of the role of natural selection within theories of population genetics and evolution. *British J. Philos. Sci.* **29** (1978), no. 3, 223–242. (From the text) **81e:92012** 92A10 (00A25)
- Waszak, Aleksander (with Musielak, Julian) Some theorems concerning modulars depending on a parameter. *Funct. Approx. Comment. Math.* **6** (1978), 81–85. (J. Albrecht) **81h:46029** 46E30
- (with Kotkowski, Bogdan) An application of Abel's transformation. *Univ. Beograd. Publ. Elektroteh. Fak. Ser. Mat. Fiz.* **No. 602-633** (1978), 203–210 (1979). (Miomir S. Stanković) **81i:39005** 39A12
- (with Kotkowski, Bogdan) A remark on convex methods of summability. Special issue dedicated to Władysław Orlicz on the occasion of his seventy-fifth birthday. *Comment. Math. Special Issue* **2** (1979), 189–193. (B. P. Mishra) **81b:40008** 40C05 (40C05)
- (with Musielak, Julian) A contribution to the theory of countably modular spaces. *Funct. Approx. Comment. Math.* **7** (1979), 123–127. (J. Albrecht) **81j:46041** 46E30
- Waszczyszyn, Zenon (with Pabisek, Ewa; Przybyło, Wacław; Radwańska, Maria) A program for computing ribbed plates described on a rectangular grid. (Polish. English and Russian summaries) *Mechanics and computers. Vol. 2 (Polish)*, pp. 177–186, PWN, Warsaw, 1980. (See **81m:73006**) 73K30
- Watabe, Tsuyoshi (with Komiya, Haruo) On the compact connected transformation group of n -sphere with codimension two principal orbit. *Sci. Rep. Niigata Univ. Ser. A No. 17* (1980), 1–21. (Tohl Asoh) **81e:57039** 57S15
- Watanabe, Hiroshi (with Nakamura, Akihiro; Ohya, Fumimasa) On some properties of functions in weighted Bergman spaces. *Proc. Fac. Sci. Tokai Univ.* **15** (1980), 33–44. (Manfred Stoll) **81i:30084** 30H05
- Watanabe, Hisako Theorems of Korovkin type in an ordered vector space with a locally convex topology. *Natur. Sci. Rep. Ochanomizu Univ.* **30** (1979), no. 2, 37–46. (Balmohan V. Limaye) **81h:41028** 41A36 (41A65, 46A40)
- Watanabe, Hisao (with Kasahara, Yuji; Kotani, Shinichi) On the Green functions of 1-dimensional diffusion processes. *Publ. Res. Inst. Math. Sci.* **16** (1980), no. 1, 175–188. (L. Stoica) **81f:60106** 60J45 (60J60)
- Watanabe, Kelgo (with Yoshimura, Toshio; Soeda, Takashi) Optimal nonlinear estimation for distributed-parameter systems via the partition theorem. *Internat. J. Systems Sci.* **11** (1980), no. 9, 1113–1130. (Authors' summary) **81j:93033** 93C20
- Watanabe, Kōichi (with Goto, Shiro) On graded rings. I. *J. Math. Soc. Japan* **30** (1978), no. 2, 179–213. (Gerald S. Garfinkel) **81m:13021** 13H10 (13D03, 14B15)
- (with Goto, Shiro) On graded rings. II. (\mathbb{Z} -graded rings). *Tokyo J. Math.* **1** (1978), no. 2, 237–261. (D. Kirby) **81m:13022** 13H10 (13D03, 14B15)
- Watanabe, Kiyoshi Domains in Grassmann manifolds with vanishing cohomology groups. *Math. Sem. Notes Kobe Univ.* **7** (1979), no. 3, 639–646. (A. Hirschowitz) **81a:32018** 32E10 (32F15)
- Watanabe, Mamoru On the characteristic polynomial of a multigraph. *Math. Rep. Toyama Univ.* **2** (1979), 87–94. (R. J. Wilson) **81e:05121** 05C99
- Note on integral trees. *Math. Rep. Toyama Univ.* **2** (1979), 95–100. (R. J. Wilson) **81e:05061** 05C05
- Watanabe, Masafumi An almost sure convergence theorem in a stochastic approximation method with dependent random variables. *Bull. Math. Statist.* **18** (1978/79), no. 3-4, 95–112. (V. Fabian) **81d:62091** 62L20 (60F15)
- Watanabe, Osamu Nuclear spaces of abelian differentials on open Riemann surfaces. (Japanese) *Sūgaku* **31** (1979), no. 4, 368–369. (Y. Kusunoki) **81c:30082** 30F30 (46A12)
- Watanabe, Ruyji (with Kikuno, Toru; Yoshida, Norihiro) On a parallel computation model PSN. *Systems-Comput.-Controls* **9** (1978), no. 2, 41–48. (Authors' summary) **81h:68017** 68B20
- Watanabe, Seiji Ergodic theorems for dynamical semigroups on operator algebras. *Hokkaido Math. J.* **8** (1979), no. 2, 176–190. (G. Arsene) **81e:46058** 46L55
- Watanabe, Shinzo (with Ito, Kiyosi) Introduction to stochastic differential equations. *Proceedings of the International Symposium on Stochastic Differential Equations (Res. Inst. Math. Sci., Kyoto Univ., Kyoto, 1976)*, pp. i–xxx, Wiley, New York, 1978. (Dominique Lepingle) **81b:60055** 60H10
- (with Ikeda, Nobuyuki) Heat equation and diffusion on Riemannian manifold with boundary. *Proceedings of the International Symposium on Stochastic Differential Equations (Res. Inst. Math. Sci., Kyoto Univ., Kyoto, 1976)*, pp. 75–94, Wiley, New York, 1978. (Hélène Airault) **81b:58046** 58G32 (60J60)
- A limit theorem for sums of i.i.d. random variables with slowly varying tail probability. *Multivariate analysis, V (Proc. Fifth Internat. Sympos., Univ. Pittsburgh, Pittsburgh, Pa., 1978)*, pp. 249–261, North-Holland, Amsterdam, 1980. (Shinichi Kotani) **81i:60025** 60F05 (60G50, 60J65)
- Watanabe, Shōji (with Ikeda, Fumio) On Finsler spaces satisfying the C-reducibility condition and the T-condition. *Tensor (N.S.)* **34** (1980), no. 1, 103–108. (Makoto Matsumoto) **81d:53020** 53B40
- Watanabe, Shunrō A verification for nonexistence of movable branch points of six Painlevé transcendents by formula manipulations. *Tokyo J. Math.* **2** (1979), no. 2, 285–291. (M. Rama Mohana Rao) **81a:34010** 34A20
- Watanabe, Takahiro (with Asano, Takao; Nishizeki, Takao) An upper bound on the length of a Hamiltonian walk of a maximal planar graph. *J. Graph Theory* **4** (1980), no. 3, 315–336. (Jean-Claude Bermond) **81h:05090** 05C45
- Watanabe, Takeshi Infinitely divisible distributions and ordinary differential equations. *Proc. Japan Acad. Ser. A Math. Sci.* **55** (1979), no. 10, 375–378. (Lennart Bondesson) **81e:60014** 60E07
- Watanabe, Toitsu Asymptotic behavior of average number of neutron's collisions. *Bull. Aichi Univ. Ed. Natur. Sci.* **29** (1980), 39–42. (Author's summary) **81k:82070** 82A77
- Watanabe, Yoshiyuki Geodesic symmetries in Sasakian locally ϕ -symmetric spaces. *Kodai Math. J.* **3** (1980), no. 1, 48–55. (Y. Tashiro) **81f:53039** 53C25
- Watatani, Yasuo On Miles' theorem for C^* -algebras. *Math. Japon.* **23** (1978/79), no. 6, 627–628. (Man-Duen Choi) **81a:46076** 46L05 (46K05)
- (with Enomoto, Masatoshi; Takehana, Hiroaki) Automorphisms on Cuntz algebras. *Math. Japon.* **24** (1979/80), no. 2, 231–234. (William L. Green) **81i:46086** 46L40
- (with Choda, Marie) Conditions for inner amenability of groups. *Math. Japon.* **24** (1979/80), no. 4, 401–402. (A. T.-M. Lau) **81a:43001** 43A07 (22D25, 46L99)
- (with Enomoto, Masatoshi; Fujii, Masatoshi; Takehana, Hiroaki) Automorphisms on Cuntz algebras. II. *Math. Japon.* **24** (1979/80), no. 4, 463–468. (William L. Green) **81i:46086** 46L40
- Derivations on continuous functions. *Proc. Amer. Math. Soc.* **79** (1980), no. 2, 206. (Author's summary) **81g:46080** 46J10 (46L05)
- Waterhouse, William C. Note on a method of extracting roots in as -Samawal. *Arch. Hist. Exact Sci.* **19** (1978/79), no. 4, 383–384. (Bruno Poizat) **81i:01006** 01A30
- The normal basis theorem. *Amer. Math. Monthly* **86** (1979), no. 3, 212. (From the text) **81g:12024** 12F10
- Commutative polynomial group laws over valuation rings. *Illinois J. Math.* **24** (1980), no. 3, 408–411. (Noriko Yui) **81k:14038** 14L15

- Automorphisms of $GL_n(R)$. *Proc. Amer. Math. Soc.* **79** (1980), no. 3, 347-351. (B. R. McDonald) **81h:20055** 20G35
- Subgroups of $ax+b$ and the splitting of triangular group schemes. *Proc. Amer. Math. Soc.* **79** (1980), no. 4, 520-522. (Andy R. Magid) **81h:14026** 14L17 (20G15)
- (with James, David G.; Weisfeller, Boris) Abstract homomorphisms of algebraic groups: problems and bibliography. *Comm. Algebra* **9** (1981), no. 1, 95-114. (From the introduction) **81m:20059** 20Gxx
- Waterman, Daniel On the note of C. L. Beina. *Proc. Amer. Math. Soc.* **80** (1980), no. 3, 445-447. (Luciana Lupas) **81j:26009** 26A45
- Waterman, Christine M. (with Muirhead, Robb J.) Asymptotic distributions in canonical correlation analysis and other multivariate procedures for nonnormal populations. *Biometrika* **67** (1980), no. 1, 31-43. (I. Olkin) **81g:62009** 62H10 (62F35)
- Waters, H. R. Excess of loss reinsurance limits. *Scand. Actuar. J. No. 1* (1979), 37-43. (H. L. Seal) **81a:62106** 62P05
- Premium rates under inflationary conditions. *Astin Bull.* **11** (1980/81), no. 1, 29-34. (Hans U. Gerber) **81f:62155** 62P05
- Waterson, Michael Oligopoly and derived demand. *Econom. Lett.* **5** (1980), no. 2, 115-118. (Author's summary) **81j:90029** 90A14
- Watkins, David S. A generalization of the Bramble-Hilbert lemma and applications to multivariate interpolation. *J. Approx. Theory* **26** (1979), no. 3, 219-231. (D. D. Stancu) **81c:41006** 41A05 (41A63)
- Watkins, Mark E. Les graphes de Cayley de connectivité un. (English summary) *Problèmes combinatoires et théorie des graphes (Colloq. Internat. CNRS, Univ. Orsay, Orsay, 1976)*, pp. 419-422, *Colloques Internat. CNRS*, 260, CNRS, Paris, 1978. (Joseph B. Klerlein) **81a:05067** 05C25
- (with Babai, László) Connectivity of infinite graphs having a transitive torsion group action. *Arch. Math. (Basel)* **34** (1980), no. 1, 90-96. (A. T. White) **81f:05091** 05C25 (05C40)
- Watkins, William Similarity of matrices. *Amer. Math. Monthly* **87** (1980), no. 4, 300. (Author's introduction) **81a:15014** 15A21
- Watson, Bill The present state of pure mathematics. (Spanish) *Bol. Mat.* **12** (1978), no. 4-6, 188-211. (Robert M. Diefenbach) **81c:00002** 00-02 (01A65)
- Watson, Dan A. Estimating the size of a truncated sample. *Comm. Statist. A—Theory Methods* **9** (1980), no. 15, 1535-1550. (Author's summary) **81h:62058** 62F10
- Watson, Donald Network models in models of production. *Networks* **10** (1980), no. 1, 1-15. (From the summary) **81a:90044** 90A11 (94C05)
- Watson, F. R. The role of proof and conjecture in mathematics and mathematics teaching. *Internat. J. Math. Ed. Sci. Tech.* **11** (1980), no. 2, 163-167. (H. B. Griffiths) **81h:00004** 00A25 (00A05)
- Watson, G. Allstair (with Osborne, M. R.) Nonlinear approximation problems in vector norms. *Numerical analysis (Proc. 7th Biennial Conf., Univ. Dundee, Dundee, 1977)*, pp. 117-132, *Lecture Notes in Math.*, 630, Springer, Berlin, 1978. (From the introduction) **81c:65027** 65K10
- A class of programming problems whose objective function contains a norm. *J. Approx. Theory* **23** (1978), no. 4, 401-411. (Hansgeorg Jeggle) **81h:90123** 90C25 (49B34)
- (with McLean, Robin A.) Numerical methods for nonlinear discrete L_1 approximation problems. *Numerical methods of approximation theory*, Vol. 5 (Conf. Math. Res. Inst., Oberwolfach, 1979), pp. 169-183, *Internat. Ser. Numer. Math.*, 52, Birkhäuser, Basel, 1980. (J. Albrecht) **81h:65012** 65D10 (41A25)
- Best approximation with prescribed norm. *J. Approx. Theory* **29** (1980), no. 2, 132-143. (G. D. Taylor) **81m:41018** 41A29 (41A65)
- (with Fletcher, R.) First- and second-order conditions for a class of nondifferentiable optimization problems. *Math. Programming* **18** (1980), no. 3, 291-307. (Jean-Baptiste Hiriart-Urruty) **81h:90124** 90C30
- See also Numerical analysis, **81h:65005**
- Watson, G. L. Determination of a binary quadratic form by its values at integer points. *Mathematika* **26** (1979), no. 1, 72-75. (Bart Rice) **81c:10019** 10C05
- Watson, Kym S. Sylvester's problem for spreads of curves. *Canad. J. Math.* **32** (1980), no. 1, 219-239. (B. B. Phadke) **81j:52006** 52A37 (51D25)
- Watson, Layne T. A globally convergent algorithm for computing fixed points of C^2 maps. *Appl. Math. Comput.* **5** (1979), no. 4, 297-311. (G. Chichilnisky) **81h:55006** 55M20 (54H25, 58C15, 65H10, 90C30)
- An algorithm that is globally convergent with probability one for a class of nonlinear two-point boundary value problems. *SIAM J. Numer. Anal.* **16** (1979), no. 3, 394-401. (Jacob Steinberg) **81h:65075** 65L10
- Computational experience with the Chow-Yorke algorithm. *Math. Programming* **19** (1980), no. 1, 92-101. (J. L. Solomon) **81g:65078** 65K05 (54H25, 55M20, 90C33)
- Watson, N. A. Uniqueness and representation theorems for the inhomogeneous heat equation. *J. Math. Anal. Appl.* **67** (1979), no. 2, 513-524. (W. F. Ames) **81c:35017** 35C15 (35A05)
- Convexity of mean values of nonnegative subtemperatures. *Arch. Rational Mech. Anal.* **73** (1980), no. 1, 53-62. (U. Kuran) **81c:35059** 35K05 (31B99)
- Watson, Ray A useful random time-scale transformation for the standard epidemic model. *J. Appl. Probab.* **17** (1980), no. 2, 324-332. (Vincenzo Capasso) **81h:92019** 92A15
- Watson, Saleem (with Husain, Taqdir) Algebras with unconditional orthogonal bases. *Proc. Amer. Math. Soc.* **79** (1980), no. 4, 539-545. (Authors' summary) **81h:46056** 46H10
- Watson, W. Stephen Pseudocompact metacompact spaces are compact. *Proc. Amer. Math. Soc.* **81** (1981), no. 1, 151-152. (P. Fletcher) **81j:54042** 54D30 (54D18)
- Watt, J. M. See Survey of numerical methods for partial differential equations, **81h:65002**
- Wattel, E. (with van Mill, Jan) Souslin dendrons. *Proc. Amer. Math. Soc.* **72** (1978), no. 3, 545-555. (G. R. Gordh, Jr.) **81c:54058** 54F50
- A hereditarily separable compact ordered space X for which λX is not first countable. *Topological structures, II (Proc. Sympos. Topology and Geom., Amsterdam, 1978)*, Part 2, pp. 319-321, *Math. Centre Tracts*, 116, Math. Centrum, Amsterdam, 1979. (J. van Mill) **81c:54038** 54D30 (54E65)
- Watters, J. F. Serrin prime rings with divisible elements. *Arch. Math. (Basel)* **33** (1979/80), no. 3, 222-225. (Thomas Laffey) **81f:16013** 16A12 (16A34)
- (with Nicholson, W. K.) The strongly prime radical. *Proc. Amer. Math. Soc.* **76** (1979), no. 2, 235-240. (Authors' summary) **81h:16006** 16A12 (16A21)
- (with Nicholson, W. K.; Zelmanowitz, J. M.) On extensions of weakly primitive rings. *Canad. J. Math.* **32** (1980), no. 4, 937-944. (J. Luh) **81m:16012** 16A20 (16A27)
- Block triangularization of algebras of matrices. *Linear Algebra Appl.* **32** (1980), 3-7. (K. B. Datta) **81g:15015** 15A33 (15A21)
- Waterson, G. A. (with Anderson, R.) Detecting natural selection: the stepwise mutation model with heterosis. *Austral. J. Statist.* **22** (1980), no. 2, 125-142. (Authors' summary) **81h:92011** 92A10 (60J70)
- Watts, Donald G. (with Bates, Douglas M.) Relative curvature measures of nonlinearity. With discussion. *J. Roy. Statist. Soc. Ser. B* **42** (1980), no. 1, 1-25. (I. Guttman) **81c:62070** 62J02 (52A22, 62-07)
- Watts, R. O. (with Gaylor, K. J.; Snook, I. K.; van Megen, W. J.) Dynamics of colloidal systems: time-dependent structure factors. *J. Phys. A* **13** (1980), no. 7, 2513-2520. (Authors' summary) **81c:82045** 82A50
- Wang, J. S. (with Suwelack, D.; Rothwell, W. P.) Slow molecular motion detected in the NMR spectra of rotating solids. *J. Chem. Phys.* **73** (1980), no. 6, 2559-2569. (Authors' summary) **81h:81174** 81G55
- Waverman, Leonard (with Denny, Michael; Fuss, Melvyn) An application of optimal control theory to the estimation of the demand for energy in Canadian manufacturing industries. *Optimization techniques (Proc. Ninth IFIP Conf., Warsaw, 1979)*, Part 2, pp. 492-501, *Lecture Notes in Control and Information Sci.*, 23, Springer, Berlin, 1980. (See **81j:6901b**) 90A30
- Wawrzyńczyk, Antoni ★ Współczesna teoria funkcji specjalnych. (Polish) [Contemporary theories of special functions] Wstęp do analizy harmonicznej na przestrzeniach jednorodnych. [Introduction to harmonic analysis in homogeneous spaces]. With a section on problems by Aleksander Strasburger. Biblioteka Matematyczna [Mathematics Library], 52. Państwowe Wydawnictwo Naukowe (PWN), Warsaw, 1978. 527 pp. (errata insert). (J. S. Joel) **81c:33011** 33A75 (22E30, 43A85)
- G-index of an invariant differential operator and its applications. *Analytic functions, Kozubnik 1979 (Proc. Seventh Conf., Kozubnik, 1979)*, pp. 456-464, *Lecture Notes in Math.*, 798, Springer, Berlin, 1980. (M. F. Atiyah) **81c:22015** 22E46 (58G10)
- Waxman, Allen M. On MacLaurin and Jacobi objects embedded in halos: the shift in the point of bifurcation. *Stud. Appl. Math.* **62** (1980), no. 3, 263-271. (P. C. Parks) **81c:85004** 85A05 (58F14, 76U05)
- Wayland, J. R. (with Brannen, J. P.) Applications of absolute reaction rate theory in biological modeling. *Proceedings of the First International Conference on Mathematical Modeling (St. Louis, Mo., 1977)*, Vol. II, pp. 1067-1074, *Univ. Missouri-Rolla, Rolla, Mo., 1977*. (Authors' summary) **81h:92011** 92A09 (80A30)
- Waymire, S. G. (with Valentine, J. E.) The Ceva property characterizes real, strictly convex Banach spaces. *Proc. Amer. Math. Soc.* **78** (1980), no. 4, 559-567. (Robert E. Jamison) **81c:51022** 51F99 (46B20, 52A01)
- Waymire, Ed Zero-range interaction at Bose-Einstein speeds under a positive recurrent single particle law. *Ann. Probab.* **8** (1980), no. 3, 441-450. (T. M. Liggett) **81c:60107** 60K35 (47A35, 82A05)
- Weaver, George A note on the compactness theorem in first order logic. *Z. Math. Logik Grundlag. Math.* **26** (1980), no. 2, 111-113. (Luiz Paulo de Alcantara) **81h:03050** 03C55
- Webb, Cary (with Gibbons, Joel) Circle-preserving functions of spheres. *Trans. Amer. Math. Soc.* **248** (1979), no. 1, 67-83. (M. St. Botz) **81h:51016** 51M10
- Webb, G. F. (with Travis, C. C.) Second order differential equations in Banach space. *Nonlinear equations in abstract space (Proc. Internat. Sympos., Univ. Texas, Arlington, Tex., 1977)*, pp. 331-361, *Academic Press, New York*, 1978. (A. Corduneanu) **81j:34110** 34G10 (47A50)
- A bifurcation problem for a nonlinear hyperbolic partial differential equation. *SIAM J. Math. Anal.* **10** (1979), no. 5, 922-932. (V. S. Rabinović) **81c:35086** 35L70 (35B32)
- An age-dependent epidemic model with spatial diffusion. *Arch. Rational Mech. Anal.* **75** (1980/81), no. 1, 91-102. (Andris Abakus) **81h:92052** 92A15 (35K22, 47D05)
- Existence and asymptotic behavior for a strongly damped nonlinear wave equation. *Canad. J. Math.* **32** (1980), no. 3, 631-643. (R. Glassey) **81h:35116** 35L70 (34G20, 35B40)
- Webb, G. M. (with Gleason, L. J.) Cosmic-ray flow lines and energy changes. *Astrophys. and Space Sci.* **70** (1980), no. 1, 3-31. (Authors' summary) **81c:85007** 85A99
- Webb, Heywood E., Jr. (with Hodge, David C.; Beck, Bruno; Dehne, John S.; Ives, Russell B.) NATO research study group on pattern recognition: final report. *Pattern recognition and signal processing (Proc. NATO Adv. Study Inst., Paris, 1978)*, pp. 587-655, *NATO Adv. Study Inst. Ser., Ser. E: Appl. Sci.*, 29, Sijthoff & Noordhoff, Alphen aan den Rijn, 1978. (See **80j:68076**) 68G10
- Webb, J. H. Inductively reflexive spaces with extended Schauder decompositions. *Math. Colloq. Univ. Cape Town* **12** (1978/79), 79-83 (1980). (H. Jarchow) **81h:46083** 46A05 (46A25, 46A35)
- Webb, M. C. (with Stratton, A. E.) Abelian groups, nil modulo a subgroup, need not have nil quotient group. *Publ. Math. Debrecen* **27** (1980), no. 1-2, 127-130. (Delmar L. Boyer) **81h:20077** 20K27
- Webb, U. H. M. An elementary proof of Gaschütz' theorem. *Arch. Math. (Basel)* **35** (1980), no. 1-2, 23-26. (Thomas Laffey) **81m:20030** 20D15 (20D45)
- Outer automorphisms of some finitely generated nilpotent groups. *I. J. London Math. Soc.* (2) **21** (1980), no. 2, 216-224. (John F. Bowers) **81h:20044** 20F18
- Webb, William A. (with Knight, Melvin J.) Uniform distribution of third-order linear recurrence sequences. *Acta Arith.* **36** (1980), no. 1, 7-20. (Jau-Shyong Shue) **81h:10082** 10K05 (10A35)
- Webber, B. (with Rienecker, M. M.; Teubner, M. D.; Noye, B. J.) Comparison of some finite difference and analytical methods of solving tidal propagation equations. *Numerical simulation of fluid motion (Proc. Internat. Conf. Numerical Simulation of Fluid Dynamic Systems, Monash Univ., Melbourne, 1976)*, pp. 453-465, *North-Holland, Amsterdam*, 1978. (See **81c:76005**) 76B15 (65P05)
- Webber, D. M. (with Robson, D.) Gauge theories on a small lattice. *Z. Phys. C* **7** (1980/81), no. 1, 53-60. (Authors' summary) **81m:81051** 81E99

- Weber, Albin Relativ kompakte Störungen elliptischer Differentialoperatoren. *Math. Nachr.* 90 (1979), 91–101. (H.-W. Rohde) **81a:35076** 35P05 (47F05)
- Über das wesentliche Spektrum des gestörten polyharmonischen Operators. *Math. Nachr.* 94 (1980), 57–67. (D. H. Armitage) **81a:47053** 47F05 (35P05)
- Weber, Ch. A local compactness theorem for Maxwell's equations. *Math. Methods Appl. Sci.* 2 (1980), no. 1, 12–25. (D. L. Colton) **81f:78005** 78A25 (35P25, 78A45)
- Weber, Claude (with Quach thi Cam Van) Une famille infinie de noeuds fibrés cobordants à zéro et ayant même polynôme d'Alexander. *Comment. Math. Helv.* 54 (1979), no. 4, 562–566. (G. Burde) **81a:57012** 57M25
- Sur une formule de R. H. Fox concernant l'homologie des revêtements cycliques. *Enseign. Math.* (2) 25 (1979), no. 3–4, 261–272 (1980). (Jonathan A. Hillman) **81d:57011** 57M25 (57M12)
- Weber, Glenn M. (with Nemhauser, George L.) Optimal set partitioning, matchings and Lagrangian duality. *Naval Res. Logist. Quart.* 26 (1979), no. 4, 553–563. (R. L. Graves) **81g:90063** 90C09 (05A05)
- Weber, H. J. (with Namysłowski, J. M.) Bound states and scattering from bound states in the light-front field theory dynamics. *Z. Phys. A* 295 (1980), no. 3, 219–234. (G. R. Allcock) **81i:81190** 81M05 (81F20)
- Weber, Helmut Numerische Behandlung von Verzweigungsproblemen bei gewöhnlichen Randwertaufgaben. (English summary) *Constructive methods for nonlinear boundary value problems and nonlinear oscillations (Proc. Conf., Math. Res. Inst., Oberwolfach, 1978)*, pp. 176–190. *Internat. Ser. Numer. Math.*, 48, Birkhäuser, Basel, 1979. (Jürgen Scheurle) **81c:65042** 65L15 (34B15, 58E07)
- Numerical solution of Hopf bifurcation problems. *Math. Methods Appl. Sci.* 2 (1980), no. 2, 178–190. (F. Odeh) **81c:65052** 65L10 (58F14, 92A09)
- See also Bifurcation problems and their numerical solution, **81i:58003**
- Weber, J. (with Hardy, J.) Diffusion in a periodic wind-tree model. *J. Math. Phys.* 21 (1980), no. 7, 1802–1808. (Authors' summary) **81e:82071** 82A70 (28D99)
- Weber, Joseph Gravitational radiation. *Albert Einstein: his influence on physics, philosophy and politics*, pp. 25–31. *Vieweg, Braunschweig*, 1979. (See **81f:01039**) 85–03 (01A70)
- Weber, N. C. (with Erickson, R. V.; Quine, M. P.) Explicit bounds for the departure from normality of sums of dependent random variables. *Acta Math. Acad. Sci. Hungar.* 34 (1979), no. 1–2, 27–32. (Adhir K. Basu) **81a:60030** 60F05
- A martingale approach to central limit theorems for exchangeable random variables. *J. Appl. Probab.* 17 (1980), no. 3, 662–673. (David J. Scott) **81m:60042** 60F05 (60C42)
- Weber, Reinhard (with Huckert, K.; Rhode, R.; Roglin, O.) On the interactive solution to a multicriteria scheduling problem. (German summary) *Z. Oper. Res. Ser. A-B* 24 (1980), no. 1, A47–A60. (Authors' summary) **81a:90100** 90B35
- Weber, Robert James Subjectivity in the valuation of games. *Game theory and related topics (Proc. Sem., Bonn and Hagen, 1978)*, pp. 129–136. *North-Holland, Amsterdam*, 1979. (Authors' summary) **81a:90176** 90D45 (90A08)
- Weber, Sh. On ϵ -cores of balanced games. *Internat. J. Game Theory* 8 (1979), no. 4, 241–250. (V. N. Burkov) **81i:90174** 90D13
- Weber, T. (with Ghirardi, G. C.; Rimini, A.) A general argument against superluminal transmission through the quantum mechanical measurement process. *Lett. Nuovo Cimento* (2) 27 (1980), no. 10, 293–298. (From the text) **81k:81006** 81B05
- Weber, S. M. Biholomorphic mappings and the Bergman kernel of the diagonal. *Invent. Math.* 51 (1979), no. 2, 155–169. (R. Michael Range) **81e:32029** 32H10 (32F30, 32H99)
- On mapping an n -ball into an $(n+1)$ -ball in complex spaces. *Pacific J. Math.* 81 (1979), no. 1, 267–272. (M. Skrzaczewski) **81k:32022** 32E35 (32F25, 32H99)
- (with Nirenberg, Louis; Yang, Paul C.) Local boundary regularity of holomorphic mappings. *Comm. Pure Appl. Math.* 33 (1980), no. 3, 305–338. (Herbert Alexander) **81g:32020** 32H99
- Wechsler, Wolfgang Fuzzy sets and languages. *Advances in fuzzy set theory and applications*, pp. 263–278. *North-Holland, Amsterdam*, 1979. (Editors) **81a:68067** 68F05
- Characterization of rational and algebraic power series. *Mathematical foundations of computer science*, 1979 (Proc. Eighth Symp., Olomouc, 1979), pp. 499–507. *Lecture Notes in Comput. Sci.*, 74, Springer, Berlin, 1979. (A. Salomaa) **81j:68100** 68F10 (68D30)
- An acceptor for algebraic power series. (German and Russian summaries) *Elektron. Informationsverarb. Kybernet.* 15 (1979), no. 12, 611–619. (Authors' summary) **81k:68042** 68D05
- Wechsung, Gerd A crossing measure for 2-tape Turing machines. *Mathematical foundations of computer science*, 1979 (Proc. Eighth Symp., Olomouc, 1979), pp. 508–516. *Lecture Notes in Comput. Sci.*, 74, Springer, Berlin, 1979. (Pavel Strnad) **81c:03034** 03D10 (03D15, 68C40)
- (with Wagner, Klaus) Kompliziertheithierarchien. (Russian and English summaries) *Wiss. Z. Friedrich-Schiller-Universität Jena Math.-Natur. Reihe* 29 (1980), no. 2, 229–250. (Authors' summary) **81h:68033** 68C25 (03D15)
- Wedde, Horst (with Maggiolo-Schettini, Andrea; Winkowski, József) Modeling a solution for a control problem in distributed systems by restrictions. *Semantics of concurrent computation (Proc. Internat. Symp., Erci, 1979)*, pp. 226–248. *Lecture Notes in Comput. Sci.*, 70, Springer, Berlin, 1979. (Authors' summary) **81f:68036** 68B20
- (with Kraft, Norbert) Inducing patterns of behaviour in distributed system parts. *Mathematical foundations of computer science*, 1980 (Proc. Ninth Symp., Rzeszów, 1980), pp. 375–386. *Lecture Notes in Comput. Sci.*, 88, Springer, Berlin, 1980. (See **81i:68003**) 68J10 (68B20)
- Wedel, Jakob The quasiholomorph of a loop. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1978, no. 4(191), 19–25. (É. M. Pal'čik) **81c:20055** 20N05
- Wedell, R. Electromagnetic radiation of relativistic positrons and electrons during axial and planar channelling in monocrystals. *Phys. Status Solidi (B)* 99 (1980), no. 1, 11–49. (From the introduction) **81d:82057** 82A60 (81F20)
- Weder, Ricardo Second order operators in the uniform norm. *Comm. Partial Differential Equations* 3 (1978), no. 5, 381–406. (Authors' summary) **81e:35038** 35J25 (47F05)
- (with Schechter, Martin) Rigorous results on the existence of dyon solutions. *Phys. Rev. Lett.* 44 (1980), no. 2, 1303–1305. (Authors' summary) **81g:81058** 81E10 (58E20)
- Weeks, Jeffrey R. (with Bogart, Kenneth P.) Consensus signed digraphs. *SIAM J. Appl. Math.* 36 (1979), no. 1, 1–14. (Manfred Kochen) **81i:92026** 92A20 (05C20)
- Weeks, John D. (with Shugard, William J.) Renormalized finite-cluster method for lattice models. I. Site renormalization and star cluster expansions. *Phys. Rev. B* (3) 22 (1980), no. 11, 5245–5258. (Authors' summary) **81i:82074** 82A67
- Weerandi, Samaradana (with Zidek, James V.) A characterization of the general mean. (French summary) *Canad. J. Statist.* 7 (1979), no. 1, 83–90. (R. J. Buehler) **81a:60027** 60E99 (39B70, 62A99)
- (with Tsui, Kam Wah; Zidek, James V.) Inadmissibility of the best fully equivariant estimator of the generalized residual variance. *Ann. Statist.* 8 (1980), no. 5, 1156–1159. (Steven Arnold) **81m:62015** 62C15 (62H12)
- Weese, Martin Mad families and its classification. *Diskrete Mathematik und ihre Anwendungen in der Mathematischen Kybernetik (10. Arbeitssym. Gebiet Diskrete Math., Wilhelm-Pieck-Universität, Rostock, 1978)*. *Rostock. Math. Kolloq.* No. 10 (1978), 123–125. (Editors) **81d:06020** 06E99 (03E50, 54H05)
- Mad families and ultrafilters. *Proc. Amer. Math. Soc.* 80 (1980), no. 3, 475–477. (W. W. Comfort) **81i:54004** 54A25 (03E35, 04A20)
- Wefelmeyer, W. (with Planzagl, J.) An asymptotically complete class of tests. *Z. Wahrsch. Verw. Gebiete* 45 (1978), no. 1, 49–72. (Authors' summary) **81i:62044** 62F05 (62C07, 62E20)
- (with Planzagl, J.) Addendum to: "A third-order optimum property of the maximum likelihood estimator" [J. Multivariate Anal. 9 (1978), no. 1, 1–29; MR 80c:62037]. *J. Multivariate Anal.* 9 (1979), no. 1, 179–182. (R. Ponnappalli) **81c:62033** 62F12 (62C07, 62E20)
- Wefelscheid, Heinrich Eine Orthogonalitätsbeziehung in Hyperbelstrukturen. *Abh. Math. Sem. Univ. Hamburg* 48 (1979), 225–230. (E. H. Kronheimer) **81i:51013** 51B20 (51E25)
- ZT-subgroups of sharply 3-transitive groups. *Proc. Edinburgh Math. Soc.* (2) 23 (1980), no. 1, 9–14. (Cheryl E. Praeger) **81j:20008** 20B22
- Wegen, Ingo Switching functions whose monotone complexity is nearly quadratic. *Conference Record of the Tenth Annual ACM Symposium on Theory of Computing (San Diego, Calif., 1978)*, pp. 143–149. *ACM, New York*, 1978. (From the summary) **81i:94057** 94C10 (68C25)
- (with Ahlswede, Rudolf) ★Suchprobleme. (German) [Search problems] Teubner Studienbücher. B. G. Teubner, Stuttgart, 1979. 328 pp. ISBN 3-519-02058-0 (Eberhard Lüdde) **81d:94022** 94A50 (62L20, 68E05, 68H05, 90B40, 90C50, 90D45, 94–02)
- On separating systems whose elements are sets of at most k elements. *Discrete Math.* 28 (1979), no. 2, 219–222. (Renu Laskar) **81b:05019** 05A20 (05A05)
- Switching functions whose monotone complexity is nearly quadratic. *Theoret. Comput. Sci.* 9 (1979), no. 1, 83–97. (Authors' summary) **81i:94042** 94C10 (68C75)
- A new lower bound on the monotone network complexity of Boolean sums. *Acta Inform.* 13 (1980), no. 2, 109–114. (Authors' summary) **81i:68075** 68C25 (94C10)
- Weglarz, Jan (with Blazewicz, J.) Scheduling under resource constraints—achievements and prospects. *Performance of computer systems (Proc. Fourth Internat. Symp. Modelling Performance Evaluation Comput. Systems, Vienna, 1979)*, pp. 181–199. *North-Holland, Amsterdam*, 1979. (Authors' summary) **81c:68037** 68C15
- Control in resource allocation systems. *Found. Control Engrg.* 5 (1980), no. 3, 159–180. (Editors) **81i:90035** 90A16 (90B05, 90B35)
- Multiprocessor scheduling with memory allocation—a deterministic approach. *IEEE Trans. Comput.* 29 (1980), no. 8, 703–709. (Authors' summary) **81f:68052** 68C15 (68B20)
- Weglarz, Bogdan Some α -fields of subsets of reals. *Logic Colloquium '78 (Mons, 1978)*, pp. 427–434. *Studies in Logic and Foundations of Math.*, 97, North-Holland, Amsterdam, 1979. (Jack B. Brown) **81i:03075** 03E05 (28A05)
- Wegman, Edward J. (with Wright, Ian W.) Isotonic, convex and related splines. *Ann. Statist.* 8 (1980), no. 5, 1023–1035. (L. L. Schumaker) **81k:41009** 41A15 (62G05, 65D07)
- See also Statistical analysis of weather modification experiments, **81k:86001**
- Wegmann, Rudolf A construction method for a free boundary value problem of potential theory. *Free and mixed boundary value problems (Proc. Conf., Oberwolfach, 1978)*, pp. 61–79. *Methoden u. Verfahren d. Math. Phys.*, 18, Lang, Frankfurt, 1979. (J. Domig) **81h:31005** 31A25 (35R35, 45E05, 65R20)
- Einige Masszahlen für nichtkonvexe Mengen. *Arch. Math. (Basel)* 34 (1980), no. 1, 69–74. (Diethard Pallaschke) **81m:52006** 52A05
- Wegner, Franz (with Houghton, A.; Schäfer, Lothar) Two-particle spectral function and ac conductivity of an amorphous system far below the mobility edge: a problem of interacting instantons. *Phys. Rev. B* (3) 22 (1980), no. 8, 3598–3608. (Authors' summary) **81i:82044** 82A42 (82A65)
- (with Schäfer, Lothar) Disordered system with n orbitals per site: Lagrange formulation, hyperbolic symmetry, and Goldstone modes. *Z. Phys. B* 38 (1980), no. 2, 113–126. (Authors' summary) **81d:82041** 82A42
- Wegner, Lutz Michael On parsing two-level grammars. *Acta Inform.* 14 (1980), no. 2, 175–193. (Authors' summary) **81i:68099** 68F25
- Węgrzyk, Roman (with Matkowski, Janusz) On equivalence of some fixed point theorems for self-mappings of metrically convex space. (Italian summary) *Boll. Un. Mat. Ital. A* (5) 15 (1978), no. 2, 359–369. (Authors' summary) **81h:54054** 54H25
- (with Choczewski, Bogdan; Turdza, Erwin) On the stability of a linear functional equation. *Wyż. Szkoła Ped. Kraków. Rocznik Nauk.-Dydakt. Prace Mat.* No. 9 (1979), 15–21. (B. Crstici) **81h:39006** 39B10
- Wenhage, Roger A. (with Haug, Edward J.) Computer-aided analysis of mechanical systems with intermittent motion. *Transactions of the Twenty-Sixth Conference of Army Mathematicians (Hanover, N.H., 1980)*, pp. 89–114. *ARO Rep.* 81, 1, U. S. Army Res. Office, Research Triangle Park, N.C., 1981. (See **81m:00008**) 70B99
- Wehausen, J. V. See Annual review of fluid mechanics, **81a:76001**
- Welking, Annette (with Henze, Ernst) Räumlich homogene Markovketten höherer Ordnung. *Abh. Braunschweig. Wiss. Ges.* 30 (1979), 50–53. (M. A. Maher) **81j:60075** 60J10 (60J30)
- Welsh, M. (with Butzer, P. L.; Stens, R. L.) Approximation by algebraic convolution integrals. *Approximation theory and functional analysis (Proc. Internat. Symp. Approximation Theory, Univ. Estadual de Campinas, Campinas, 1977)*, pp. 71–120. *North-Holland Math. Studies*, 35, North-Holland, Amsterdam, 1979. (Karl Scherert)

- 81h:41021** 41A30
(with Butzer, P. L.; Stens, R. L.) Higher order moduli of continuity based on the Jacobi translation operator and best approximation. *C. R. Math. Rep. Acad. Sci. Canada* 2 (1980), no. 2, 83–88. (Authors' summary) **81h:41040** 41A50
(with Stens, R. L.) Legendre transform methods and best algebraic approximation. *Comment. Math. Prace Mat.* 21 (1980), no. 2, 351–380. (Myron S. Henry) **81j:41013** 41A10 (44A15)
(with Butzer, P. L.; Stens, R. L.) The continuous Legendre transform, its inverse transform, and applications. *Internat. J. Math. Math. Sci.* 3 (1980), no. 1, 47–67. (R. C. Varma) **81h:44002** 44A15 (94A05)
- Wehrhitz, Bertram A. F.** The centralizer poset in groups of semilinear maps. *Mathematika* 25 (1978), no. 2, 251–263. (J. E. Roseblade) **81d:20030** 20F28
Invariant maximal ideals of commutative rings. *J. Algebra* 56 (1979), no. 2, 472–480. (From the text) **81j:20015** 20C07
The rank of a linear p -group; an apology. *J. London Math. Soc.* (2) 21 (1980), no. 2, 237–243. (C. D. H. Cooper) **81h:20063** 20H20
On finitely generated soluble linear groups. *Math. Z.* 170 (1980), no. 2, 155–167. (John S. Wilson) **81f:20063** 20H20
Finitely generated modules over polycyclic groups. *Quart. J. Math. Oxford Ser.* (2) 31 (1980), no. 121, 109–127. (Donald S. Passman) **81e:20009** 20C07 (16A27, 20F16)
- Wehrhahn, C. F.** (with Gulizia, Charles) A model of electrophoretic variation: finite populations and finite numbers of mutable sites. *Theoret. Population Biol.* 18 (1980), no. 1, 1–15. (Authors' summary) **81k:92019** 92A09 (92A10)
- Wehr, Alfred** A remark on the concavity of entropy. *Found. Phys.* 9 (1979), no. 11–12, 939–946. (G. Lassner) **81a:82026** 82A30 (47D45)
On the relation between classical and quantum-mechanical entropy. *Rep. Math. Phys.* 16 (1979), no. 3, 353–358. (G. Della Riccia) **81i:80002** 80A10 (82A05, 94A17)
- Wehrly, Thomas E.** (with Johnson, Richard A.) Bivariate models for dependence of angular observations and a related Markov process. *Biometrika* 67 (1980), no. 1, 255–256. (Paul Sampson) **81i:62087** 62H05 (62M10)
- Wei, Duan** Asymptotic properties of perturbed random Volterra integral equations. *Bull. Inst. Math. Acad. Sinica* 8 (1980), no. 1, 73–82. (J. S. Milton) **81d:60064** 60H20
- Wei, L. J.** (with Padgett, W. J.) Maximum likelihood estimation of a distribution function with increasing failure rate based on censored observations. *Biometrika* 67 (1980), no. 2, 470–474. (Adhir K. Basu) **81h:62052** 62F10 (62N05)
(with Spurrier, John D.) A test of the parameter of the exponential distribution in the type I censoring case. *J. Amer. Statist. Assoc.* 75 (1980), no. 370, 405–409. (B. Raja Rao) **81h:62176** 62N05 (62L05)
A generalized Gehan and Gilbert test for paired observations that are subject to arbitrary right censorship. *J. Amer. Statist. Assoc.* 75 (1980), no. 371, 634–637. (Young Jack Lee) **81m:62079** 62G10 (62J15)
- Wei, Victor K. W.** (with Scholtz, Robert A.) On the characterization of statistically synchronizable codes. *IEEE Trans. Inform. Theory* 26 (1980), no. 6, 733–735. (Authors' summary) **81h:94022** 94A29 (94B50)
- Wei, Wan Di** Generalized principle of inclusion and exclusion and its applications. A translation of Kexue Tongbao (Chinese) 25 (1980), no. 7, 296–299. *Kexue Tongbao (English)* 25 (1980), no. 3, 196–200. (Hugo S. Sun) **81j:05021** 05A15 (05A19)
- Wei, William W. S.** The effect of temporal aggregation on parameter estimation in distributed lag model. *J. Econometrics* 8 (1978), no. 2, 237–246. (Author's summary) **81h:62107** 62M10
- Weibel, Charles A.** (with Dayton, Barry H.) Spectral sequences for the K -theory of glued rings. *C. R. Math. Rep. Acad. Sci. Canada* 2 (1980), no. 2, 67–71. (Authors' summary) **81a:13011** 13D15
(with Geramita, A. V.) Ideals with trivial canonical bundle. *Canad. J. Math.* 32 (1980), no. 1, 210–218. (D. Kirby) **81a:13009** 13C10 (14M10, 58C27)
(with Geramita, A. V.) Principal ideals and smooth curves. *J. Algebra* 62 (1980), no. 1, 235–248. (M. Fried) **81i:14021** 14H40 (10B15, 13A17, 14G99)
(with Dayton, Barry H.) K -theory of hyperplanes. *Trans. Amer. Math. Soc.* 257 (1980), no. 1, 119–141. (Daniel R. Grayson) **81i:18015** 18F25 (14C35)
- vander Weide, James** See **Vander Weide, James**
- Weidenmann, A. W.** Quantum fields in a "Lorentz basis". (Italian and Russian summaries) *Nuovo Cimento A* (11) 57 (1980), no. 2, 221–233. (Authors' summary) **81e:81060** 81D25
- van der Weiden, Antonius J. J.** (with Bosgra, Okko H.) Input-output invariants for linear multivariable systems. *IEEE Trans. Automat. Control* 25 (1980), no. 1, 20–36. (Michiel Hazewinkel) **81m:93022** 93B25 (14D20)
(with Bosgra, Okko H.) The determination of structural properties of a linear multivariable system by operations of system similarity. II. Nonproper systems in generalized state-space form. *Internat. J. Control* 32 (1980), no. 3, 489–537. (Authors' summary) **81j:93036** 93C35 (93C05)
- Weidenmüller, Hans A.** Transport theory of deeply inelastic heavy-ion reactions. *Theoretical methods in medium-energy and heavy-ion physics (Proc. NATO Adv. Stud. Inst. Theoret. Nuclear Phys., Univ. Wisconsin, Madison, Wis., 1978)*, pp. 369–414, *NATO Adv. Study Inst. Ser., Ser. B: Physics*, 38, Plenum, New York, 1978. (See **81b:81030**) 81G99
(with Grangé, P.; Pauli, Hans-Christian) Suzuki's scaling limit and the theory of statistical fluctuations in nuclear fission. *Z. Phys. A* 296 (1980), no. 2, 107–110. (Authors' summary) **81i:81086** 81G35
- Weidhaas, Patrick P.** See **Sextl, Roman U.**; et al. **81b:85001**
- Weidlich, Wolfgang** (with Grabert, Hermann) Renormalization of transport equations in Fokker-Planck models. *Phys. Rev. A* (3) 21 (1980), no. 6, 2147–2155. (G. A. Skorobogatov) **81j:82037** 82A70
- Weidman, Lynn** Serial arrays and change-over designs. *J. Statist. Plann. Inference* 2 (1978), no. 2, 165–171. (Author's summary) **81j:62156** 62K10
- Weidmann, Joachim** ★Linear operators in Hilbert spaces. Translated from the German by Joseph Szűcs. Graduate Texts in Mathematics, 68. Springer-Verlag, New York-Heidelberg, 1980. xiii + 402 pp. ISBN 0-387-90427-1 (Editors) **81e:47001** 47–01 (46–01)
Continuity of the eigenvalues of selfadjoint operators with respect to the strong operator topology. *Integral Equations Operator Theory* 3 (1980), no. 1, 138–142. (W.
- Allegretto) 81j:47019** 47B25 (35J10, 47H10, 81C10)
Monotone continuity of the spectral resolution and the eigenvalues. *Proc. Roy. Soc. Edinburgh Sect. A* 85 (1980), no. 1–2, 131–136. (W. Allegretto) **81j:47018** 47B25 (35J10, 47A10, 81C10)
- Weidner, Richard J.** (with Mulholland, Robert J.) Kronecker product representation for the solution of the general linear matrix equation. *IEEE Trans. Automat. Control* 25 (1980), no. 3, 563–564. (D. P. Rašković) **81h:15003** 15A06 (93C15)
- Weier, Josef** Über die Nielsenschen Fixpunktclassen. *Math. Sem. Notes Kobe Univ.* 8 (1980), no. 1, 103–118. (Christian Fenske) **81k:55003** 55M20
- Weiguny, A.** (with Pätz, B.; Stingl, M.) Scattering solutions to nonlocal Hamiltonians in terms of generalized Bessel-Neumann series. *Nuclear Phys. A* 339 (1980), no. 1, 175–188. (R. G. Newton) **81e:81048** 81F05 (41A58)
- Weilshuch, Klaus** (with Verbeek, Rutger) Data presentation and computational complexity. *Proceedings of a Conference on Theoretical Computer Science (Univ. Waterloo, Waterloo, Ont., 1977)*, pp. 111–119, Univ. Waterloo, Waterloo, Ont., 1978. (A. L. Selman) **81b:68059** 68C25 (03D15)
(with Schreiber, Ulrich) Metric spaces defined by weighted algebraic cpo's. *Fundamentals of computation theory (Proc. Conf. Algebraic, Arith. and Categorical Methods in Comput. Theory, Berlin/Wendisch-Rietz, 1979)*, pp. 516–522, *Math. Research*, 2, Akademie-Verlag, Berlin, 1979. (Authors' introduction) **81e:68055** 68C30 (03G99, 54A99, 65J99)
See also **Theoretical computer science**, **81i:68013**
- Weil, André** Riemann, Betti and the birth of topology. *Arch. Hist. Exact Sci.* 20 (1979), no. 2, 91–96. (Umberto Bottazzini) **81j:01028** 01A55 (55–03)
A postscript to: "Riemann, Betti and the birth of topology". *Arch. Hist. Exact Sci.* 21 (1979/80), no. 4, 387. (Editors) **81j:01028** 01A55 (55–03)
History of mathematics: why and how. *Proceedings of the International Congress of Mathematicians (Helsinki, 1978)*, pp. 227–236, *Acad. Sci. Fennica, Helsinki*, 1980. (Bertram Ross) **81b:01001** 01–01
See also **Zink, Ernst-Wilhelm**, **81e:12028**
- Weil, C. E.** (with O'Malley, Richard J.) Iterated L_p derivatives. *Bull. Inst. Math. Acad. Sinica* 6 (1978), no. 1, 93–99. (Authors' summary) **81h:26003** 26A24
- Weil, F.** Existence theorem for the difference equation $Y_{n+1} - 2Y_n + Y_{n-1} = f(n)(Y_n)$. *Internat. J. Math. Math. Sci.* 3 (1980), no. 1, 69–77. (André Hautot) **81f:39005** 39A10
- Weil, Wolfgang** Kinematic integral formulas for convex bodies. *Contributions to geometry (Proc. Geom. Sympos., Siegen, 1978)*, pp. 60–76, Birkhäuser, Basel, 1979. (K. J. Falconer) **81f:52009** 52A22 (53C65, 60D05)
Eine Charakterisierung von Summanden konvexer Körper. *Arch. Math. (Basel)* 34 (1980), no. 3, 283–288. (J. M. Wills) **81j:52003** 52A20
On surface area measures of convex bodies. *Geom. Dedicata* 9 (1980), no. 3, 299–306. (W. J. Firey) **81m:52014** 52A20 (28A75)
- Weiland, J.** (with Sanuki, H.) Formation of convective cells by modulational instability of drift Alfvén waves. *Phys. Lett. A* 72 (1979), no. 3, 221–224. (Authors' summary) **81j:76112** 76X05 (76E15)
(with Pavlenko, V. P.) Nonlinear excitation of convective cells by interchange modes and spectrum cascade processes. *Phys. Fluids* 23 (1980), no. 4, 719–724. (T. Kahan) **81e:76090** 76X05
- Weima, J.** (with van der Laan, P.) Asymptotic power of the two-sample test of Wilcoxon for logistic shift alternatives, and comparison with simulation results. *Statist. Neerlandica* 34 (1980), no. 2, 117–121. (Authors' summary) **81f:62075** 62G10 (62E25)
- Weinacht, Richard J.** (with Hsiao, George C.) Singular perturbations for a weakly nonlinear hyperbolic equation. *Applicable Anal.* 10 (1980), no. 3, 221–229. (A. Elcrat) **81j:35076** 35L70 (35B25, 76D30)
- Weinberg, Aaron** The effects of repeater hard-limiting, filter distortion, and noise on a pseudo-noise, time-of-arrival estimation system. *IEEE Trans. Comm.* 27 (1979), no. 9, 1271–1279. (Author's summary) **81a:94009** 94A05
- Weinberg, Bernard C.** (with Berger, Alan E.; Solomon, Jay M.; Ciment, Melvyn; Leventhal, Stephen H.) Generalized OCI schemes for boundary layer problems. *Math. Comp.* 35 (1980), no. 151, 695–731. (C. Wayne Mastin) **81i:65057** 65L10 (65M10)
- Weinberg, Franz** A spectral algorithm for sequential aggregation of m linear Diophantine constraints. (German summary) *Z. Angew. Math. Phys.* 30 (1979), no. 4, 677–698. (E. Morgantini) **81b:10007** 10B05 (90C10)
- Weinberg, Jakob B.** A topological degree of locally A -proper maps. *J. Math. Anal. Appl.* 65 (1978), no. 1, 66–79. (From the introduction) **81f:47061** 47H15
- Weinberg, Louis** (with Inukai, Thomas) Theorems on matroid connectivity. *Discrete Math.* 22 (1978), no. 3, 311–312. (Jerald A. Kabell) **81i:05050** 05B35 (05C40)
(with Inukai, Thomas) Graph-realizability of matroids. *Second International Conference on Combinatorial Mathematics (New York, 1978)*, pp. 289–305, *Ann. New York Acad. Sci.*, 319, New York Acad. Sci., New York, 1979. (Robert E. Bixby) **81m:05056** 05B35 (05C99)
(with Riederer, Alois J.) Synthesis of lumped-distributed networks: lossless cascades. *IEEE Trans. Circuits and Systems* 27 (1980), no. 10, 943–956. (Authors' summary) **81i:94025** 94C05
- Weinberg, N. N.** On some generalizations of the Lorentz transformation. *Phys. Lett. A* 80 (1980), no. 2–3, 102–104. (Author's summary) **81m:83007** 83A05 (51B20)
- Weinberg, Steven** Ultraviolet divergences in quantum theories of gravitation. *General relativity*, pp. 790–831, Cambridge Univ. Press, Cambridge, 1979. (See **81i:83002**) 83C45
(with Witten, Edward) Limits of massless particles. *Phys. Lett. B* 96 (1980), no. 1–2, 59–62. (Authors' summary) **81h:81094** 81E99
- Weinberger, H. F.** Genetic wave propagation, convex sets, and semi-infinite programming. *Constructive approaches to mathematical models (Proc. Conf. in honor of R. J. Duffin, Pittsburgh, Pa., 1978)*, pp. 293–317, Academic Press, New York, 1979. (S.-F. Sburian) **81g:92021** 92A15 (90C50)
- Weinert, Wilfried** Differenzenverfahren für die stationäre Wärmeleitungsungleichung mit nichtlinearem Anteil vom Strahlungstyp—Methode der monotonen Operatoren. *Beiträge Numer. Math.* 8 (1980), 167–175. (A. O. Garder) **81g:65130a** 65N10
(with Windisch, Günther) Numerische Lösung der Wärmeleitungsungleichung mit

- nichtlinearem Anteil für Rechteckgebiete durch Differenzenmethoden. *Beiträge Numer. Math.* 8 (1980), 177-180. (A. O. Garder) **81g:65136** 65N10
- Weiner, Donald D. (with Ewen, Edward J.) Identification of weakly nonlinear systems using input and output measurements. *IEEE Trans. Circuits and Systems* 27 (1980), no. 12, 1255-1261. (From the summary) **81k:93017** 93B30
- Weiner, Howard See Tanemura, Masaharu; et al. **81b:60013**
- Weiner, J. H. (with Perchak, D.) Local-mode approximations in the Frenkel-Kontorova or sine-Gordon chain. *Phys. Rev. B* (3) 22 (1980), no. 6, 2683-2694. (Authors' summary) **81k:82051** 82A67 (35Q20)
- Weinert, H. J. A concept of characteristic for semigroups and semirings. *Acta Sci. Math. (Szeged)* 41 (1979), no. 3-4, 445-456. (J. R. Mosher) **81e:16034** 16A78
- Multiplicative cancellativity of semirings and semigroups. *Acta Math. Acad. Sci. Hungar.* 35 (1980), no. 3-4, 335-338. (J. R. Mosher) **81k:16038** 16A78 (20M10)
- S-sets and semigroups of quotients. *Semigroup Forum* 19 (1980), no. 1, 1-78. (William R. Nico) **81d:20062** 20M20
- Weinert, Howard L. (with Sidhu, Gursharan S.) Vector-valued Ig-splines. I. Interpolating splines. *J. Math. Anal. Appl.* 70 (1979), no. 2, 505-529. (L. L. Schumaker) **81c:41028** 41A15 (65D07)
- Weinert, U. (with Lin, S. L.; Mason, E. A.) Solutions of the nonlinear Boltzmann equation describing relaxation to equilibrium. *Phys. Rev. A* (3) 22 (1980), no. 5, 2262-2269. (K. Kumar) **81k:82028** 82A40 (45K05)
- Weingarten, Don (with Chalfour, J. L.) Continuum limit of QED₂ on a lattice. *Ann. Physics* 123 (1979), no. 1, 61-101. (From the summary) **81a:81137** 81L05
- Continuum limit of QED₂ on a lattice. II. *Ann. Physics* 126 (1980), no. 1, 154-175. (Franco Strocchi) **81g:81060** 81E10 (81L05)
- (with Petcher, D.) Monte Carlo calculations and a model of the phase structure for gauge theories on discrete subgroups of SU(2). *Phys. Rev. D* (3) 22 (1980), no. 10, 2465-2477. (Authors' summary) **81j:81052** 81E99 (81-04)
- Weingartner, Paul On the characterization of entities by means of individuals and properties. With discussion. *Problems in logic and ontology (Colloq., Inst. Wissenschaftstheorie, Salzburg, 1973)*, pp. 229-242, 291-298. *Akad. Druck- und Verlagsanstalt, Graz*, 1977. (Ruth Manor) **81d:03023** 03B45 (03A05)
- Weinman, D. G. See Hsieh, Hui Kuang. **81c:62026**
- Weinstein, Alan The order and symbol of a distribution. *Trans. Amer. Math. Soc.* 241 (1978), 1-54. (S. Łojasiewicz) **81g:58037** 58G15 (46G05, 58C35)
- On the hypotheses of Rabinowitz' periodic orbit theorems. *J. Differential Equations* 33 (1979), no. 3, 353-358. (A. Vanderbauwhede) **81a:58036** 58F05 (34C25, 70H05)
- Eigenvalues of the Laplacian plus a potential. *Proceedings of the International Congress of Mathematicians (Helsinki, 1978)*, pp. 803-805. *Acad. Sci. Fennica, Helsinki*, 1980. (P. Wintgen) **81c:58064** 58G25 (35P99)
- See also Geometry of the Laplace operator. **81c:58002**
- Weinstein, D. H. Observability in general relativity. *Acta Phys. Polon. B* 11 (1980), no. 2, 101-106. (Author's summary) **81d:83046** 83C99
- Weinstein, Gerald An algorithm for packing complements of finite sets of integers. *Fibonacci Quart.* 17 (1979), no. 4, 289-293. (Calvin T. Long) **81d:10049** 10L05
- Weinstein, Leonard The mean value of the Artin L-series and its derivative of a cubic field. *Glasgow Math. J.* 21 (1980), no. 1, 9-18. (H. Iwaniec) **81a:12013** 12A70 (10H10)
- Weinstein, Marvin (with Svetitsky, Benjamin; Drell, Sidney D.; Quinn, Helen R.) Dynamical breaking of chiral symmetry in lattice gauge theories. *Phys. Rev. D* (3) 22 (1980), no. 2, 490-504. (Authors' summary) **81e:81127** 81G05
- Weinstock, Barnett M. On a theorem of A. Sakai. *Osaka J. Math.* 17 (1980), no. 3, 763-767. (E. L. Stout) **81m:32021** 32E25 (32E30, 46J15)
- (with Cima, Joseph A.) The Zygmund condition for Bloch functions in the ball in \mathbb{C}^n . *Proc. Amer. Math. Soc.* 79 (1980), no. 4, 597-600. (Charles Horowitz) **81f:32003** 32A40 (46E30)
- Weintraub, Andrés (with González, Jaime) An algorithm for the traffic assignment problem. *Networks* 10 (1980), no. 3, 197-209. (Authors' summary) **81h:90060** 90B20
- Weintraub, Sol A large prime gap. *Math. Comp.* 36 (1981), no. 153, 279. (From the text) **81k:10011** 10A25
- Weintraub, Steven H. Inefficiently embedded surfaces in 4-manifolds. *Algebraic topology, Aarhus 1978 (Proc. Sympos., Univ. Aarhus, Aarhus, 1978)*, pp. 664-672. *Lecture Notes in Math.*, 763, Springer, Berlin, 1979. (R. C. Kirby) **81e:70111** 57N15 (55M99)
- Weir, G. J. Singular spin harmonics. *J. Math. Phys.* 20 (1979), no. 8, 1648-1649. (Mary L. Boas) **81c:33006** 33A45
- (with McNabb, A.) Heat losses from an insulated pipe. *J. Math. Anal. Appl.* 77 (1980), no. 1, 270-277. (L. N. Tao) **81m:80005** 80A20
- Weisberg, Sanford ★ Applied linear regression. Wiley Series in Probability and Mathematical Statistics. John Wiley & Sons, Inc., New York, 1980. xiii + 283 pp. ISBN 0-471-04419-9 (From the preface) **81k:62096** 62J05
- See also White, Halbert; et al. **81c:62077**
- Weisel, Justa Lösung singulärer Variationsprobleme durch die Verfahren von Ritz und Galerkin mit finiten Elementen—Anwendungen in der konformen Abbildung. *Math. Sem. Giessen No. 138* (1979), 156 pp. (Juhani Pitkäranta) **81c:65062** 65N30 (30C30)
- Numerische Ermittlung quasikonformer Abbildungen mit finiten Elementen. (English summary) *Numer. Math.* 35 (1980), no. 2, 201-222. (R. Kühnau) **81j:30086** 30G20 (30C60, 65E05, 65N30)
- Weisfelder, Boris On Lie algebras of differential formal groups of Ritt. *Bull. Amer. Math. Soc.* 84 (1978), no. 1, 127-130. (Author's review (Zbl 382:14016)) **81f:14027** 14L05 (12H05, 17B45)
- (with Mills, Wendell; Krall, Allan M.) Discovering theorems with a computer: the case of $y' = \sin(xy)$. *Amer. Math. Monthly* 86 (1979), no. 9, 733-739. (R. B. Grafton) **81c:34002** 34-01 (34A50)
- Abstract monomorphisms between big subgroups of some groups of type B_2 in characteristic 2. *J. Algebra* 60 (1979), no. 1, 204-222. (E. A. Connors) **81e:20050** 20G15 (10C30, 15A63)
- On a case of extensions of group schemes. *Trans. Amer. Math. Soc.* 248 (1979), no. 1, 171-189. (T. Kamayashi) **81c:14027** 14L15 (20G10)
- (with James, David G.; Waterhouse, William C.) Abstract homomorphisms of algebraic groups: problems and bibliography. *Comm. Algebra* 9 (1981), no. 1, 95-114. (From the introduction) **81m:20059** 20Gxx
- Weisinger, J. R. (with Harder, G.; Li, Wen Ch'ing Winnie) Dimensions of spaces of cup forms over function fields. *J. Reine Angew. Math.* 319 (1980), 73-103. (Roy Fuller) **81k:10042** 10D15 (10D05, 10D40, 22E55)
- Weisfening, Volker Lattice products. *Logic Colloquium '78 (Mos., 1978)*, pp. 423-426. *Studies in Logic and Foundations of Math.*, 97, North-Holland, Amsterdam, 1979. (Andreas Blass) **81j:03048** 03C30 (03C90)
- Weiss, A. Idempotents in group rings. *J. Pure Appl. Algebra* 16 (1980), no. 2, 207-213. (S. M. Vovsi) **81k:16024** 16A27 (20C07)
- Weiss, Benjamin (with Aaronson, Jonathan; Lin, Michael) Mixing properties of Markov operators and ergodic transformations, and ergodicity of Cartesian products. A collection of invited papers on ergodic theory. *Israel J. Math.* 33 (1979), no. 3-4, 198-224 (1980). (Yves Derriennic) **81i:47010a** 47A35
- (with Aaronson, Jonathan; Lin, Michael) Correction to: "Mixing properties of Markov operators and ergodic transformations, and ergodicity of Cartesian products". *Israel J. Math.* 37 (1980), no. 4, 364. (Editors) **81i:47010b** 47A35
- Weiss, Gary The Fuglede commutativity theorem modulo the Hilbert-Schmidt class and generating functions for matrix operators. I. *Trans. Amer. Math. Soc.* 246 (1978), 193-209. (D. A. Herrero) **81b:47033** 47B15 (47B10)
- Weiss, George H. (with Bunow, Barry) How chaotic is chaos? Chaotic and other "noisy" dynamics in the frequency domain. *Math. Biosci.* 47 (1979), no. 3-4, 221-237. (Clark Robinson) **81d:58038** 58F13 (92A17)
- (with Rubin, Robert J.) Internal configurations of span-constrained random walks. *J. Statist. Phys.* 22 (1980), no. 1, 97-109. (J. Gillis) **81m:60135** 60J15 (82A05, 82A70)
- Weiss, Gleason (with Pinedo, Michael) Scheduling tasks with exponential service times on nonidentical processors to minimize various cost functions. *J. Appl. Probab.* 17 (1980), no. 1, 187-202. (Jacek Blazejewicz) **81c:68026** 68C15
- (with Ross, Sheldon M.; Shahshahani, Mehrdad) On the number of component failures in systems whose component lives are exchangeable. *Math. Oper. Res.* 5 (1980), no. 3, 358-365. (Authors' summary) **81j:90055** 90B25
- Weiss, Guido (with Coifman, Ronald R.; Cwikel, M.; Rochberg, R.; Sagher, Yoram) Complex interpolation for families of Banach spaces. *Harmonic analysis in Euclidean spaces (Proc. Sympos. Pure Math., Williams Coll., Williamstown, Mass., 1978)*, Part 2, pp. 269-282. *Proc. Sympos. Pure Math.*, XXXV, Part 2, Amer. Math. Soc., Providence, R.I., 1979. (Bernard Beauzamy) **81a:46082** 46M35
- (with Taibleson, Mitchell H.) The molecular characterization of Hardy spaces. *Harmonic analysis in Euclidean spaces (Proc. Sympos. Pure Math., Williams Coll., Williamstown, Mass., 1978)*, Part 1, pp. 281-287. *Proc. Sympos. Pure Math.*, XXXV, Part 1, Amer. Math. Soc., Providence, R.I., 1979. (David A. Stegenga) **81i:42013** 42A50 (30D55, 42B30)
- (with Coifman, Ronald R.; Rochberg, R.; Cwikel, M.; Sagher, Yoram) The complex method for interpolation of operators acting on families of Banach spaces. *Euclidean harmonic analysis (Proc. Sem., Univ. Maryland, College Park, Md., 1979)*, pp. 123-153. *Lecture Notes in Math.*, 779, Springer, Berlin, 1980. (M. Z. Borkalo) **81k:46075** 46M35 (46E30)
- Weiss, Hans-Reiner ★ Approximative und exakte Tests zur Analyse mehrdimensionaler Kontingenztafeln. (German) [Approximate and exact tests for the analysis of multidimensional contingency tables] Arbeiten zur Angewandten Statistik (Papers on Applied Statistics), 20. Physica Verlag, Würzburg, 1978. 136 pp. ISBN 3-7908-0205-0 (H. T. Amundsen) **81h:62103** 62H17
- Weiss, Howard J. The computation of optimal control limits for a queue with batch services. *Management Sci.* 25 (1979/80), no. 4, 320-328. (M. A. Fedotkin) **81m:60173** 60K25 (90B22)
- Optimal ordering policies for continuous review perishable inventory models. *Oper. Res.* 28 (1980), no. 2, 365-374. (Author's summary) **81a:90078** 90B05
- Weiss, I. (with Cupperman, S.; Dryer, M.) Higher order fluid equations for multicomponent nonequilibrium stellar (plasma) atmospheres and star clusters. *Astrophys. J.* 239 (1980), no. 1, part 1, 345-359. (From the summary) **81g:85007** 85A20 (76X05)
- Weiss, Lionel Some sequential tests reducing the maximum expected sample size. *Trabajos Estadist. Investigación Oper.* 30 (1979), no. 2, 79-91. (Dennis D. Wackerly) **81h:62146** 62L10 (62L15)
- The asymptotic sufficiency of sparse order statistics in tests of fit with nuisance parameters. *Naval Res. Logist. Quart.* 27 (1980), no. 3, 397-406. (M. Knott) **81m:62089** 62G10 (62G30)
- Weiss, M. S. (with Davies, K. T. R.; Flocard, H.; Krieger, S.) Application of the imaginary time step method to the solution of the static Hartree-Fock problem. *Nuclear Phys. A* 342 (1980), no. 1, 111-123. (Authors' summary) **81i:81115** 81G35
- tarnopolska-Weiss, Marysia See Tarnopolska-Weiss, Marysia
- Weiss, N. J. (with Beraha, Sami; Kahane, Joseph) Limits of chromatic zeros of some families of maps. *J. Combin. Theory Ser. B* 28 (1980), no. 1, 52-65. (W. T. Tutte) **81f:05076** 05C15
- Weiss, Nathan Schrödinger particle as the source of a Yang-Mills field. *Phys. Rev. D* (3) 21 (1980), no. 6, 1603-1613. (Author's summary) **81a:81060** 81E10
- Weiss, P. On the singularity of Poisson processes. *Math. Nachr.* 92 (1979), 111-115. (Friedrich Liese) **81h:60056** 60G30 (60G55)
- Weiss, Philip (with MacCamy, Richard C.) Numerical approximations for Volterra integral equations. *Volterra equations (Proc. Helsinki Sympos. Integral Equations, Oulaniemi, 1978)*, pp. 173-191. *Lecture Notes in Math.*, 737, Springer, Berlin, 1979. (Frank G. Hagin) **81c:45001** 45D05 (45L10, 65R20)
- Weiss, Richard (with de Hoog, Frank R.) On the boundary value problem for systems of ordinary differential equations with a singularity of the second kind. *SIAM J. Math. Anal.* 11 (1980), no. 1, 41-60. (I. Kiguradze) **81a:34017** 34B05
- Weiss, Richard M. An application of p -factorization methods to symmetric graphs. *Math. Proc. Cambridge Philos. Soc.* 85 (1979), no. 1, 43-48. (B. Zelinka) **81h:05059** 05C25 (20F32)
- Groups with a (B, N) -pair and locally transitive graphs. *Nagoya Math. J.* 74 (1979), 1-21. (József Pelikán) **81j:05067** 05C25 (20B25)
- Weiss, William A. R. (with Hamburger, Péter; Juhász, István) A generalization of uniform bases. *Studia Sci. Math. Hungar.* 11 (1976), no. 1-2, 201-204 (1978). (From the

- introduction) **81g:54028** 54E35
 Partitioning topological spaces. *Topology (Proc. Fourth Colloq., Budapest, 1978)*, Vol. II, pp. 1249–1255, *Colloq. Math. Soc. János Bolyai*, 23, North-Holland, Amsterdam, 1980. (Yuh-Ching Chen) **81m:54016** 54B15
 A countably paracompact nonnormal space. *Proc. Amer. Math. Soc.* 79 (1980), no. 3, 487–490. (J. E. Vaughan) **81f:54021** 54G20 (54D15)
Weinbach, Bernulf (with Stammel, Ludwig) Halberungsätze zur Gestaltabweichung ebener Figuren. *Beiträge zur Algebra und Geometrie*, 8, *Wis. Beitr. Martin-Luther-Univ. Halle-Wittenberg M* 12 (1979), 55–65. (H. W. Guggenheimer) **81g:52001** 52A10 (52A40)
Weinkopf, Victor F. ★The 1979 Bernard Gregory lectures. Lectures given at CERN, Geneva, at the Collège de France, Paris, and at the École Polytechnique, Palaiseau, Autumn 1979. With an obituary of Bernard Gregory by M. Jacob and L. Van Hove. CERN 80, 3. CERN—European Organization for Nuclear Research, Geneva, 1980. xiii+53 pp. (S. D. Chatterji) **81c:81002** 81–03 (81Gxx, 81L05, 81M05)
 See also **Pauli, Wolfgang**, **81c:01034**
Weinster, Fred B. Polynomial perturbations to the Laplacian L^p . *Nonlinear equations in abstract spaces (Proc. Internat. Sympos., Univ. Texas, Arlington, Tex., 1977)*, pp. 479–483, Academic Press, New York, 1978. (Boris Pavlov) **81j:47054** 47H15 (47H20)
 Hypercontractive estimates for semigroups. *Harmonic analysis in Euclidean spaces (Proc. Sympos. Pure Math., Williams Coll., Williamstown, Mass., 1978)*, Part 1, pp. 159–162, *Proc. Sympos. Pure Math.*, XXXV, Part 1, Amer. Math. Soc., Providence, R.I., 1979. (S. Kurepa) **81j:47033** 47D05
 Local existence and nonexistence for semilinear parabolic equations in L^p . *Indiana Univ. Math. J.* 29 (1980), no. 1, 79–102. (John M. Ball) **81c:35072** 35K55 (34G20)
 Logarithmic Sobolev inequalities and hypercontractive estimates on the circle. *J. Funct. Anal.* 37 (1980), no. 2, 218–234. (Jean-Pierre Eckmann) **81k:42007** 42A16 (46E15, 81E10)
Weissman, Ishay Estimation of tail parameters under type I censoring. *Comm. Statist. A—Theory Methods* 9 (1980), no. 11, 1165–1175. (From the summary) **81g:62055** 62F10 (62N05)
Weissman, Yitzhak (with Jortner, Joshua) The isotonic oscillator. *Phys. Lett. A* 70 (1979), no. 3, 177–179. (Authors' summary) **81i:81021** 81C05 (35P25)
Weitz, Yitzhak (with Rubinstein, Zalman) An extremal problem of the Markov-Bernstein type for lacunary polynomials. *J. Approx. Theory* 27 (1979), no. 3, 227–233. (R. Vermes) **81j:30018** 30C15 (41A17)
 On Schwartz's theorem for the motion group. (French summary) *Ann. Inst. Fourier (Grenoble)* 30 (1980), no. 1, vi, 91–107. (Carlos A. Berenstein) **81h:43007** 43A45
 On Beurling's theorem for locally compact groups. *Proc. Amer. Math. Soc.* 78 (1980), no. 2, 259–260. (V. F. Oseipov) **81j:43012** 43A45
Weitzkamp, D. P. (with Warren, W. S.; Pines, A.) Theory of selective excitation of multiple-quantum transitions. *J. Chem. Phys.* 73 (1980), no. 5, 2084–2099. (Authors' summary) **81h:81175** 81G55
Weitzman, Allen (with Piranian, George) Level sets of infinite length. *Comment. Math. Helv.* 53 (1978), no. 2, 161–164. (N. Toda) **81j:30029** 30C55
 A symmetry property of the Poincaré metric. *Bull. London Math. Soc.* 11 (1979), no. 3, 295–299. (Bruce Palka) **81h:30015** 30C20
Weitzman, Martin L. The "ratchet principle" and performance incentives. *Bell J. Econom.* 11 (1980), no. 1, 302–308. (Authors' summary) **81h:90035** 90A17
Weizsäcker, Harold Stability of long, thin axisymmetric mirror machines. *Phys. Fluids* 23 (1980), no. 5, 1046–1054. (Authors' summary) **81j:76127** 76X05
 (with Batchelor, D. B.) An eikonal expansion of the Vlasov-Maxwell equations valid near cyclotron resonance. *Phys. Fluids* 23 (1980), no. 7, 1359–1367. (Authors' summary) **81c:76093** 76X05 (82A45)
von Weizsäcker, C. F. A reconstruction of quantum theory. *Quantum theory and the structures of time and space*, Vol. 3 (Third Conf., Tutzing, 1978), pp. 7–35, Hanser, Munich, 1979. (Lawrence Sklar) **81m:81007** 81B10
 Einstein's importance to physics, philosophy, and politics. *Albert Einstein: his influence on physics, philosophy and politics*, pp. 159–168, Vieweg, Braunschweig, 1979. (See **81i:01039**) 01A70
 See also **Quantum theory and the structures of time and space**, **81j:81002a** and **v. Weizsäcker, Heinrich** (with Winkler, G.) Noncompact extremal integral representations: some probabilistic aspects. *Functional analysis: surveys and recent results, II (Proc. Second Conf. Functional Anal., Univ. Paderborn, Paderborn, 1979)*, pp. 115–148, North-Holland Math. Studies, 38, North-Holland, Amsterdam, 1980. (Peter Dodds) **81f:46017** 46A55 (60A10)
 Remark on extremal measure extensions. *Measure theory, Oberwolfach 1979 (Proc. Conf., Oberwolfach, 1979)*, pp. 79–80, *Lecture Notes in Math.*, 794, Springer, Berlin, 1980. (B. Rodríguez-Salinas) **81i:28004** 28A12
Weischer, Peter J. Symmetric products and the stable Hurewicz homomorphism. *Illinois J. Math.* 24 (1980), no. 4, 527–544. (Donald M. Davis) **81j:55020** 55S15
Weisdon, Edward J., Jr. (with Chang, Shih Chun) Coding for T-user multiple-access channels. *IEEE Trans. Inform. Theory* 25 (1979), no. 6, 684–691. (G. Dueck) **81h:94029** 94A40 (94B60)
Weiser, Gunter Haarsche Systeme von komplexen Exponentialsummen. *Arch. Math. (Basel)* 33 (1979/80), no. 4, 375–378. (Heinrich Begehr) **81c:30017** 30C15 (34A40)
Weiland, Grant V. (with Shapiro, Victor L.) Sobolev spaces, the Navier-Stokes equations and capacity. *Harmonic analysis in Euclidean spaces (Proc. Sympos. Pure Math., Williams Coll., Williamstown, Mass., 1978)*, Part 1, pp. 369–375, *Proc. Sympos. Pure Math.*, XXXV, Part 1, Amer. Math. Soc., Providence, R.I., 1979. (J. Weidmann) **81h:35083** 35Q10 (46E35)
 Absolute Abel summability and capacity. *Proc. Amer. Math. Soc.* 77 (1979), no. 2, 223–228. (W. P. Ziemer) **81f:42014** 42B05
Weinfeld, L. Carter, Jr. (with Hafez, M. M.) A finite element first-order equation formulation for the small-disturbance transonic flow problem. *Comput. Methods Appl. Mech. Engrg.* 22 (1980), no. 2, 161–186. (Authors' summary) **81d:76067** 76H05 (65N30)
 (with Dib, Ghassan M.) Post-buckling behaviour of structures using a finite element-nonlinear eigenvalue technique. *Internat. J. Numer. Methods Engrg.* 15 (1980), no. 7, 955–980. (Authors' summary) **81d:73049** 73H05 (65N30, 73K25)
Wellington, John F. (with Narula, Subhash C.) An algorithm for the minimum sum of weighted absolute errors regression. *Computations for least absolute values estimation. Comm. Statist. B—Simulation Comput.* 6 (1977), no. 4, 341–352. (See **81h:62127**) **62H12** (65U05, 90C05)
 (with Narula, Subhash C.) Linear regression using multiple-criteria. *Multiple criteria decision making theory and application (Proc. Third Conf., Hagen/Königswinter, 1979)*, pp. 266–277, *Lecture Notes in Econom. and Math. Systems*, 177, Springer, Berlin, 1980. (Burt S. Holland) **81f:62111** 62J05 (62G05)
Wellmann, J. Eine verallgemeinerte Achsenausstrahlungslösung der Wellengleichung und die daraus resultierenden Überschallfelder. (English and Russian summaries) *Z. Angew. Math. Mech.* 57 (1977), no. 9, 507–513. (Authors' summary) **81h:76034** 76J99
Wellner, Jon A. (with Hall, W. J.) Confidence bands for a survival curve from censored data. *Biometrika* 67 (1980), no. 1, 133–143. (David Pollard) **81i:62063** 62G15
Wells, Albert L., Jr. On the separation power and the completion of partial Latin squares. *J. Combin. Theory Ser. A* 27 (1979), no. 3, 342–355. (Jean M. Turgeon) **81h:05030** 05B15 (05B20)
Wells, Benjamin B., Jr. Algebras of Fourier transforms with closed restrictions. *Trans. Amer. Math. Soc.* 260 (1980), no. 2, 631–636. (I. Glicksberg) **81g:43007** 43A20 (46J10)
Wells, Charles Extension theories for monoids. *Semigroup Forum* 16 (1978), no. 1, 13–35. (From the introduction) **81f:20068** 20M10 (18C15)
 A Krohn-Rhodes theorem for categories. *J. Algebra* 64 (1980), no. 1, 37–45. (William R. Nico) **81g:18006** 18B15 (20M20)
Wells, H. G. See **Tee, Garry J.**, **81d:01019**
Wells, Mark B. Reflections on the evolution of algorithmic language. *A history of computing in the twentieth century*, pp. 275–287, Academic Press, New York, 1980. (See **81i:68002**) 68–03 (01A65, 68B05)
Wells, William R. (with Spalding, George R.) Parameter estimation and identification of large scale control systems. (Russian summary) *Systems Sci.* 5 (1979), no. 2, 143–151 (1980). (Authors' summary) **81c:93016** 93A15 (93B30)
Wellstead, P. E. ★Introduction to physical system modelling. *Academic Press [Harcourt Brace Jovanovich, Publishers], London-New York-Toronto, Ont., 1979*. ix+279 pp. ISBN 0-12-744380-0 (Bradley W. Dickinson) **81i:93015** 93A10 (00A69)
 (with Prager, D. L.) Interactive maximum likelihood estimation. *Internat. J. Control* 32 (1980), no. 6, 1005–1030. (Authors' summary) **81h:93066** 93E10
Welsh, Roy E. (with Belsley, David A.; Kuh, Edwin) ★Regression diagnostics: identifying influential data and sources of collinearity. *Wiley Series in Probability and Mathematical Statistics. John Wiley & Sons, New York-Chichester-Brisbane*, 1980. xv+292 pp. ISBN 0-471-05856-4 (Peter Schmidt) **81i:62112** 62J05 (62P20)
 See also **Parzen, Emanuel**, **81h:62053**
Welsh, Dominic (with Oxley, James G.) The Tutte polynomial and percolation. *Graph theory and related topics (Proc. Conf., Univ. Waterloo, Waterloo, Ont., 1977)*, pp. 329–339, Academic Press, New York, 1979. (Ruth Bari) **81h:05031** 05B35 (60K35)
 Colouring problems and matroids. *Surveys in combinatorics (Proc. Seventh British Combinatorial Conf., Cambridge, 1979)*, pp. 229–257, *London Math. Soc. Lecture Note Ser.*, 38, Cambridge Univ. Press, Cambridge, 1979. (Daniel Turzik) **81g:05050** 05B35 (05C15)
 (with Robinson, G. C.) The computational complexity of matroid properties. *Math. Proc. Cambridge Philos. Soc.* 87 (1980), no. 1, 29–45. (From the introduction) **81m:68035** 68C25
 (with Walton, P. N.) On the chromatic number of binary matroids. *Mathematika* 27 (1980), no. 1, 1–9. (James G. Oxley) **81m:05060** 05B35 (05C15)
Welsh, Paul J., Jr. Primitivity in mereology. I. *Notre Dame J. Formal Logic* 19 (1978), no. 1, 25–62. (Authors' introduction) **81c:03027a** 03B99 (03A05, 03E70)
 Primitivity in mereology. II. *Notre Dame J. Formal Logic* 19 (1978), no. 3, 355–385. (Authors' introduction) **81c:03027b** 03B99 (03A05, 03E70)
Welsh, Wayne (with Ojika, Takeo) A numerical method for the solution of multipoint problems for ordinary differential equations with integral constraints. *J. Math. Anal. Appl.* 72 (1979), no. 2, 500–511. (Uri Ascher) **81d:65047** 65L10
 (with Ojika, Takeo) Multipoint boundary value problems with discontinuities. I. Algorithms and applications. *J. Comput. Appl. Math.* 6 (1980), no. 2, 133–143. (Authors' summary) **81c:65053** 65L10
 (with Ojika, Takeo) Multipoint boundary value problems with discontinuities. II. Convergence of the initial value adjusting method. *J. Comput. Appl. Math.* 6 (1980), no. 3, 183–187. (Authors' summary) **81j:65097** 65L10
Wen, Guo Chun Existence theorems for continuously differentiable and homeomorphic solutions of first-order nonlinear elliptic systems. (Chinese. English summary) *Beijing Daxue Xuebao No. 2* (1979), 60–72. (Long-Yi Tsai) **81m:35028** 35F20
Wen, Shih Liang (with Pao, Young Ping) Rotation of a classical toroidal plasma. *Phys. Fluids* 23 (1980), no. 3, 636–643. (R. R. Gold) **81h:76073** 76W05 (76X05)
Wendel, J. G. An independence property of Brownian motion with drift. *Ann. Probab.* 8 (1980), no. 3, 600–601. (Frederick Stern) **81g:60063** 60J65
Wendell, Richard E. Multiple objective mathematical programming with respect to multiple decision-makers. *Oper. Res.* 28 (1980), no. 5, 1100–1111. (Authors' summary) **81j:90186** 90C31 (90A07)
 (with Rosenblum, Daniel M.) Further results on the minimization of a nonseparable objective function subject to disjoint constraints. *Oper. Res.* 28 (1980), no. 5, 1222–1226. (Authors' summary) **81i:90135** 90C08
Wendland, H. (with Klotz, B.) Pseudoeuklidische Räume im Aufbau der Geometrie aus dem Spiegelungsbegriff. *Vorträge von der Tagung Geometrie und Anwendungen (Ginsgig, 1977)*, pp. 53–69, *Weiterbildungszentrum Math. Kybernet. Rechenz.*, 28, Tech. Univ. Dresden, Dresden, 1978. (See **80d:51002**) 51F15
Wendland, Wolfgang L. Elliptische Systeme in der Ebene. *Komplexe Analysis und ihre Anwendung auf partielle Differentialgleichungen (Tagung, Martin-Luther-Universität, Halle, 1976)*. *Wis. Beitr. Martin-Luther-Univ. Halle-Wittenberg M* 27 (1977), 76–82. (From the text) **81h:35017** 35J55 (30E25)
Wendt, Werner Über eine eindimensionale lineare Integro-Differentialgleichung und deren approximative Lösung mit dem Differenzenverfahren. (Russian, English and French summaries) *Wis. Z. Humboldt-Univ. Berlin Math.-Natur. Reihe* 28 (1979), no. 4,

- 535-548. (Rolf Leis) **81k:45016** 45J05 (45L05, 65L99)
- Wene, Gregory P. A generalization of bonded algebras. *Proceedings of the Second Workshop on Lie-Admissible Formulations* (Sci. Center, Harvard Univ., Cambridge, Mass., 1979), Part B. *Hadronic J.* 3 (1979/80), no. 1, 320-326. (J. Lohmus) **81d:17001** 17A01 (81C99)
- Weng, George J. Dislocation theories of work hardening and yield surfaces of single crystals. (German summary) *Acta Mech.* 37 (1980), no. 3-4, 217-230. (Author's summary) **81g:73114** 73S05
- The yield surface of single crystals at arbitrary strain. (German summary) *Acta Mech.* 37 (1980), no. 3-4, 231-245. (Author's summary) **81g:73040** 73E05
- (with Chon, Choon T.) Impact of a finite elastic-viscoplastic bar. (French and German summaries) *Internat. J. Non-Linear Mech.* 15 (1980), no. 3, 195-209. (Authors' summary) **81h:73014** 73D05 (73E99)
- Weng, Shi Lie (with Hu, Yu Da; Qin, Shi Yuan) A method for solving the nonlinear programming problem and its applications. (Chinese. English summary) *Numer. Math. J. Chinese Univ.* 1 (1979), no. 2, 150-157. (Authors' summary) **81d:90091** 90C30 (73K40)
- Wengerodt, G. Über Modelldarstellungen von Ebenen des vierdimensionalen hyperbolischen Raumes. *Vorträge von der Tagung Geometrie und Anwendungen* (Gaussig, 1977), pp. 137-142. *Weiterbildungszentrum Math. Kybernet. Rechenrech.* 28, Tech. Univ. Dresden, Dresden, 1978. (F. Šemin) **81b:51018** 51M10
- Wenk, Carl J. (with Knapp, Charles H.) Parameter optimization in linear systems with arbitrarily constrained controller structure. *IEEE Trans. Automat. Control* 25 (1980), no. 3, 496-500. (Authors' summary) **81c:93054** 93C45
- (with Bar-Shalom, Yaakov) A multiple model adaptive dual control algorithm for stochastic systems with unknown parameters. *IEEE Trans. Automat. Control* 25 (1980), no. 4, 703-710. (Authors' summary) **81h:93096** 93E03
- Wessinger, Magnus J. ★Spherical models. With a foreword by Arthur L. Loeb. *Cambridge University Press, Cambridge-New York*, 1979. xii + 147 pp. (1 plate). ISBN 0-521-22279-6, 0-521-29432-0 (E. Jucović) **81c:51020** 51F15 (52A55)
- Wenocur, Roberto S. Rediscovery and alternate proof of Gauss's identity. *Combinatorics 79* (Proc. Colloq., Univ. Montréal, Montréal, Que., 1979), Part II. *Ann. Discrete Math.* 9 (1980), 79-82. (From the introduction) **81k:05012** 05A19 (60C05)
- Wenston, Paul R. A well-posed boundary value problem for partial differential operators of principal type. *J. Differential Equations* 37 (1980), no. 3, 303-308. (Luigi Rodino) **81k:35170** 35S15 (35G15)
- Wenstap, Fred Exploring linguistic consequences of assertions in social sciences. *Advances in fuzzy set theory and applications*, pp. 501-518, North-Holland, Amsterdam, 1979. (Author's introduction) **81h:92034** 92A90 (03B52, 68J10)
- Wentzell, Alexander D. See Ventcel', A. D.
- Wenzel, Günter Über eine Klasse von Brezelnknoten. (English summary) *Monatsh. Math.* 88 (1979), no. 1, 69-79. (O. Krötenheerd) **81d:57012** 57M25
- Wenzelberger, Helmut How to use the minimal cuts of fault tree analysis in Markov modelling. *Synthesis and analysis methods for safety and reliability studies* (Proc. NATO Adv. Study Inst., Urbino, 1978), pp. 305-312, Plenum, New York, 1980. (See **81j:93008**) 93E03
- Werbowaki, Jarosław On oscillation behavior of solutions of differential equations generated by delays. *Comment. Math. Prace Mat.* 20 (1977/78), no. 2, 485-493. (A. Elbert) **81d:34065** 34K15
- van der Werff, T. J. (with Douglas, R. J.) A model cylinder of excitable cells simulates fibrillation on the basis of inhomogeneous refractory periods. *Mathematical modelling in biology and ecology* (Proc. Sympos., Pretoria, 1979), pp. 40-55, *Lecture Notes in Biomath.* 33, Springer, Berlin, 1980. (See **81j:92001**) 92A07
- Werte, J. Confinement of fields by suitable nonlinearities. *Phys. Lett. B* 95 (1980), no. 3-4, 391-394. (Author's summary) **81i:81081** 81E99 (49F05)
- Werte, M. J. (with Verdon, J. M.) Solutions for laminar subsonic trailing edge flows at asymptotically large Reynolds numbers. *Boundary and interior layers—computational and asymptotic methods* (Proc. Conf., Trinity College, Dublin, 1980), pp. 164-178, Boole, Din Laoghaire, 1980. (See **81j:76001**) 76G99
- Werner, John Subalgebras of the disk algebra. *Colloque d'Analyse Harmonique et Complexe*, 7 pp. (not consecutively pagged), Univ. Aix-Marseille I, Marseille, 1977. (T. W. Gamelin) **81e:46035** 46J15 (30H05)
- Capacity and uniform algebras. *Harmonic analysis in Euclidean spaces* (Proc. Sympos. Pure Math., Williams Coll., Williamstown, Mass., 1978), Part 1, pp. 445-449. *Proc. Sympos. Pure Math.*, XXXV, Part 1, Amer. Math. Soc., Providence, R.I., 1979. (Anthony G. O'Farrell) **81f:31018** 31D05 (46J10)
- ★Теория потенциала. (Russian) [Potential theory] Translated from the English by V. V. Vavilov. "Mir", Moscow, 1980. 136 pp. (Editors) **81f:31001** 31-01
- On a domain equivalent to the bidisk. *Math. Ann.* 248 (1980), no. 3, 193-194. (Anne-Marie Chollet) **81g:32002** 32A07
- Werner, Bodo Über eine Beziehung zwischen komplementären und nichtkonformen finiten Elementen. (English and Russian summaries) *Z. Angew. Math. Mech.* 57 (1977), no. 9, 501-506. (Author's summary) **81h:65120** 65N30
- On complementary variational principles and hypercircle estimates with applications to obstacle problems. *Free and mixed boundary value problems* (Proc. Conf., Oberwolfach, 1978), pp. 141-152, *Methoden u. Verfahren d. Math. Phys.*, 18, Lang, Frankfurt, 1979. (J. E. Rubio) **81e:49016** 49B99 (35L67, 35R35)
- (with Voss, Heinrich) Ein Quotienteneinschließungssatz für den kritischen Parameter nichtlinearer Randwertaufgaben. *Numerical mathematics* (Sympos., Inst. Appl. Math., Univ. Hamburg, Hamburg, 1979), pp. 147-158, *Internat. Ser. Numer. Math.*, 49, Birkhäuser, Basel, 1979. (W. Börsch-Supan) **81i:65005** 65N25 (35B32, 35B50, 58E07)
- (with Glashoff, Klaus) Inverse monotonicity of monotone L -operators with applications to quasilinear and free boundary value problems. *J. Math. Anal. Appl.* 72 (1979), no. 1, 89-105. (Boro Döring) **81e:47052** 47H05 (35J65, 65J15, 65N15, 65P05)
- (with Mooney, J. W.; Voss, Heinrich) The dependence of critical parameter bounds on the monotonicity of a Newton sequence. *Numer. Math.* 33 (1979), no. 3, 291-301. (Theodore Laetsch) **81c:35049** 35J60 (47H12, 58C15, 65J15)
- (with Meyn, Klaus-Hermann) Maximum and monotonicity principles for elliptic boundary value problems in partitioned domains. *Applicable Anal.* 11 (1980/81), no. 1,
- 1-12. (J.-P. Gossez) **81k:35063** 35J65
- Werner, Hans-Joachim (with Meyer, Wilfried) A quadratically convergent multiconfiguration-self-consistent field method with simultaneous optimization of orbitals and CI coefficients. *J. Chem. Phys.* 73 (1980), no. 5, 2342-2356. (C. R. Garibotti) **81m:81081** 81G55 (81Hxx)
- Werner, Heinrich (with Burris, Stanley) Remarks on Boolean products. *Algebra Universalis* 10 (1980), no. 3, 333-344. (S. Comer) **81f:08009** 08C10 (03C60, 20G05, 94C10)
- See also Püschel, Reinhard, **81b:08001**
- Werner, Helmut (with Bestehorn, Maik; Ebert, U.; Steinhausen, D.) Some applications of computational mathematics to medical problems. *Computing methods in applied sciences and engineering* (Proc. Third Internat. Sympos., Versailles, 1977), I, pp. 377-391, *Lecture Notes in Math.*, 704, Springer, Berlin, 1979. (See **80d:65010a**) 92A07
- A reliable method for rational interpolation. *Padé approximation and its applications* (Proc. Conf., Univ. Antwerp, Antwerp, 1979), pp. 257-277, *Lecture Notes in Math.*, 765, Springer, Berlin, 1979. (Jean Timbalaro) **81h:65009** 65D05
- Ein Algorithmus zur rationalen Interpolation. (English summary) *Numerical methods of approximation theory*, Vol. 5 (Conf., Math. Res. Inst., Oberwolfach, 1979), pp. 319-337, *Internat. Ser. Numer. Math.*, 52, Birkhäuser, Basel, 1980. (D. C. Handscomb) **81f:65008** 65D05
- (with Barrar, R. B.; Loeb, H. L.) On the uniqueness of the best uniform extended totally positive nonoscillating. *J. Approx. Theory* 28 (1980), no. 1, 20-29. (Allan Pinkus) **81a:41018** 41A15
- See also Numerical methods of approximation theory, **81d:65002**
- Werner, Jochen Superlinear konvergente Verfahren der zutreffenden Richtungen. *Numerical mathematics* (Sympos., Inst. Appl. Math., Univ. Hamburg, Hamburg, 1979), pp. 177-193, *Internat. Ser. Numer. Math.*, 49, Birkhäuser, Basel, 1979. (Kaj Madsen) **81m:65102** 65K05 (49D37)
- Werner, Patricia A. (with Hubbell, Stephen P.) On measuring the intrinsic rate of increase of populations with heterogeneous life histories. *Amer. Natur.* 113 (1979), no. 2, 277-293. (Authors' summary) **81j:92033** 92A15
- Wernersson, Åke Some state estimation problems connected with discrete time Markov chains. With discussion. *Recent theoretical developments in control* (Proc. Conf., Univ. Leicester, Leicester, 1976), pp. 543-561, Academic Press, London, 1978. (From the introduction) **81m:93073** 93E10
- Wernicke, Bernd Ebene aquifinne und metrische Geometrien. *Beiträge zur Algebra und Geometrie*, 7. Wiss. Beitr. Martin-Luther-Univ. Halle-Wittenberg M 11 (1978), 39-57. (H. Lenz) **81m:51017** 51F05 (51F15)
- Weron, Aleksander (with Pellamail, Jean) Integrals related to stationary processes and cylindrical martingales. (French summary) *Ann. Inst. H. Poincaré Sect. B (N.S.)* 15 (1979), no. 2, 127-146. (S. A. Čobanjan) **81b:28010** 28B05 (60G10)
- (with Schmidt, Franz) Darstellung von stationären stochastischen Prozessen mit Werten in einem Banach-Raum durch einseitige gleitende Mittel. *Math. Nachr.* 88 (1979), 41-57. (Hannu Niemi) **81c:60046** 60G10 (60G25)
- Second-order stochastic processes and the dilation theory in Banach spaces. *Ann. Inst. H. Poincaré Sect. B (N.S.)* 16 (1980), no. 1, 29-38. (J. Bulatović) **81k:60045** 60G12 (47A20)
- Weron, K. Thermodynamic properties of electrons in small metal particles. *Acta Phys. Polon. A* 57 (1980), no. 3, 323-333. (Author's summary) **81g:82068** 82A65
- de Werra, Dominique Color-feasible sequences of almost bipartite graphs. (French summary) *Problèmes combinatoires et théorie des graphes* (Colloq. Internat. CNRS, Univ. Orsay, Orsay, 1976), pp. 427-429, *Colloques Internat. CNRS*, 260, CNRS, Paris, 1978. (Paul C. Kainen) **81d:05063** 05C65 (05C15)
- On line-perfect graphs. *Math. Programming* 15 (1978), no. 2, 236-238. (Author's summary) **81a:05052** 05C15 (68E10)
- Optimization in edge chromatic scheduling. *Survey of mathematical programming* (Proc. Ninth Internat. Math. Programming Sympos., Budapest, 1976), Vol. 2, pp. 379-382, North-Holland, Amsterdam, 1979. (J. R. Griggs) **81i:05070** 05C15 (90B35)
- On a class of hypergraphs occurring in chromatic scheduling. *Cahiers Centre Études Rech. Opér.* 21 (1979), no. 3, 239-245. (Colin J. H. McDiarmid) **81f:05083** 05C15 (05C65, 90B35)
- Regular and canonical colorings. *Discrete Math.* 27 (1979), no. 3, 309-316. (R. J. Wilson) **81k:05049** 05C15 (05C65)
- (with Silver, Edward A.; Valqui Vidal, René Victor) A tutorial on heuristic methods. *European J. Oper. Res.* 5 (1980), no. 3, 153-162. (K. G. Murty) **81k:90109** 90C50
- On some characterisations of totally unimodular matrices. *Math. Programming* 28 (1981), no. 1, 14-21. (Thomas H. Foregger) **81m:15019** 15A57 (05C50, 90C10)
- See also Rochat, Jean-Claude, **81j:92001**
- Werschulz, Arthur G. Computational complexity of one-step methods for systems of differential equations. *Math. Comp.* 34 (1980), no. 149, 155-174. (Author's summary) **81a:65069** 65L05 (34A50, 68C25)
- (with Aziz, A. K.; Schneider, Manfred) A finite element method for the Tricomi problem. *Numer. Math.* 35 (1980), no. 1, 13-20. (O. Widlund) **81i:65069** 65M05 (65M10, 65M15)
- Wersinger, J.-M. (with Finn, John M.; Ott, Edward) Bifurcation and "strange" behavior in instability saturation by nonlinear three-wave mode coupling. *Phys. Fluids* 23 (1980), no. 6, 1142-1154. (Authors' summary) **81d:76053** 76E30 (76B15)
- Werthelm, M. S. Factorization of the direct correlation function. I. Basic results. *J. Chem. Phys.* 73 (1980), no. 3, 1398-1405. (Author's summary) **81g:82059** 82A50
- Wertheimer, D. (with Sterboul, François) Comment construire un graphe PERT minimal. (English summary) *Combinatorics 79* (Proc. Colloq., Univ. Montréal, Montréal, Qué., 1979), Part II. *Ann. Discrete Math.* 9 (1980), 147-154. (Authors' summary) **81k:06053** 90B35
- Wertz, Wolfgang (with Schneider, Barbara) Statistical density estimation: a bibliography. (French summary) *Internat. Statist. Rev.* 47 (1979), no. 2, 155-175. (A. N. Philippou) **81m:62072** 62G05
- Über ein nichtparametrisches Schätzproblem. (English summary) *Metrika* 26 (1979), no. 3, 157-167. (Margaret P. Gessaman) **81d:62036** 62G05
- van Wesep, Robert A. See Van Wesep, Robert A.

- Wojcik, Zbigniew The acceleration wave and the wave of strong discontinuity in a nonlinear elastic medium. (Polish) *Problems of the thermomechanics of elastic bodies* (Polish), pp. 229-257, Ossolineum, Wrocław, 1978. (See 81f:73001) 73D99
- Wojcik, G. O. (with Drezner, Z.) The expected value of perfect information in facility location. *Oper. Res.* 28 (1980), no. 2, 395-402. (Authors' summary) 81a:90075 90B05 (90A05)
- (with Drezner, Z.) Optimal location of a facility relative to area demands. *Naval Res. Logist. Quart.* 27 (1980), no. 2, 199-206. (Authors' summary) 81d:90039 90B05
- Wong, P. (with Sonneveld, P.) Numerical experiments with a multiple grid and a preconditioned Lanczos type method. *Approximation methods for Navier-Stokes problems* (Proc. Sympos., Univ. Paderborn, Paderborn, 1979), pp. 543-562, *Lecture Notes in Math.*, 771, Springer, Berlin, 1980. (Authors' introduction) 81b:65117 65P05 (65N05)
- The rate of convergence of a multiple grid method. *Numerical analysis* (Proc. 8th Biennial Conf., Univ. Dundee, Dundee, 1979), pp. 164-184, *Lecture Notes in Math.*, 773, Springer, Berlin, 1980. (Steven M. Serbin) 81j:65120 65N20
- Wonnemacher, T. C. (with Muzio, J. C.) Generalized finite Post algebras. *Proceedings of the Eighth International Symposium on Multiple-Valued Logic* (Rosemont, Ill., 1978), pp. 235-241, IEEE, Long Beach, Calif., 1978. (Michitaka Kameyama) 81g:03079 00G20
- Woods, Jaap (with van Nunen, J. A. E. E.) A note on dynamic programming with unbounded rewards. *Management Sci.* 24 (1977/78), no. 5, 576-580. (From the text) 81i:90202 90C40 (90C39)
- (with Groenewegen, Lucas Petrus Jozef) On equilibrium strategies in noncooperative dynamic games. *Game theory and related topics* (Proc. Sem., Bonn and Hagen, 1978), pp. 47-57, North-Holland, Amsterdam, 1979. (Edwin H. Neave) 81b:90162 90D10
- (with van Nunen, Jo.) Successive approximations for Markov decision processes and Markov games with unbounded rewards. (German and Russian summaries) *Math. Operationsforsch. Statist. Ser. Optim.* 10 (1979), no. 3, 431-455. (Seiichi Iwamoto) 81f:90114 90C40 (90C39)
- Wosny, Rüdiger Verselle Deformationen holomorpher Vektorraumbündel auf streng 1-konvexen komplexen Mannigfaltigkeiten. *Schr. Math. Inst. Münster* (2) No. 15 (1978), iii + 44 pp. (K. Wollhardt) 81c:32026 32G05 (32F30, 32L05)
- West, Douglas B. A symmetric chain decomposition of $L(4, n)$. *European J. Combin.* 1 (1980), no. 4, 379-383. (R. W. Quackenbush) 81m:06007 06A10 (05B99)
- (with Griggs, Jerrold R.) Extremal values of the interval number of a graph. *SIAM J. Algebraic Discrete Methods* 1 (1980), no. 1, 1-7. (William T. Trotter, Jr.) 81b:05083a 05C35
- West, J. E. (with Wong, R. Y. T.) Based-free actions of finite groups on Hilbert cubes with absolute retract orbit spaces are conjugate. *Geometric topology* (Proc. Georgia Topology Conf., Athens, Ga., 1977), pp. 655-672, Academic Press, New York, 1979. (B. L. Brechner) 81f:57043 57S25 (57S17)
- Hilbert cube manifolds—meeting ground of geometric topology and absolute neighborhood retracts. *Proceedings of the International Congress of Mathematicians* (Helsinki, 1978), pp. 497-503, Acad. Sci. Fennica, Helsinki, 1980. (Ross Geoghegan) 81c:57012 57N20
- West, Karen L. (with Beard, Jacob T. B., Jr.; O'Connell, James R., Jr.) Perfect polynomials over GF(q). (Italian summary) *Atti Acad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur.* (8) 62 (1977), 283-291. (From the introduction) 81i:12022 12C05
- West, P. C. (with Stelle, K. S.) Algebraic understanding of constraints. *Supergravity* (Proc. Workshop, Stony Brook, N.Y., 1979), pp. 133-142, North-Holland, Amsterdam, 1979. (See 81g:83001) 81G20 (49C10, 53B05, 83E99)
- (with Sohnius, Martin F.; Stelle, K. S.) Off-mass-shell formulation of extended supersymmetric gauge theories. *Phys. Lett. B* 92 (1980), no. 1-2, 123-127. (Authors' summary) 81g:81107 81G25
- (with Cremmer, E.; Ferrara, S.; Stelle, K. S.) Off-shell $N=8$ supersymmetry with central charges. *Phys. Lett. B* 94 (1980), no. 3, 349-354. (Authors' summary) 81g:83058 83E99 (81G25)
- (with Stelle, K. S.) Spontaneously broken de Sitter symmetry and the gravitational holonomy group. *Phys. Rev. D* (3) 21 (1980), no. 6, 1466-1488. (Marcos D. Maia) 81c:83038 83E99 (53C05)
- West, T. T. (with Murphy, G. J.) Spectral radius formulae. *Proc. Edinburgh Math. Soc.* (2) 22 (1979), no. 3, 271-275. (T. W. Palmer) 81a:46054 46H20
- (with Murphy, G. J.) Removing the interior of the spectrum. *Comment. Math. Univ. Carolin.* 21 (1980), no. 3, 421-431. (Balmohan V. Limaye) 81m:46069 46J05 (47C05)
- (with Murphy, G. J.) Decomposition algebras of Riesz operators. *Glasgow Math. J.* 21 (1980), no. 1, 75-79. (Jaroslav Zemánek) 81a:47023 47B05 (47C05)
- Westcott, B. S. (with Brickell, F.) The ray geometry of offset dual reflector antenna systems. *Optica Acta* 27 (1980), no. 4, 449-460. (G. S. Agarwal) 81g:78035 78A50 (53C80, 78A05)
- Westcott, Mark (with Isham, Valerie) A self-correcting point process. *Stochastic Process. Appl.* 8 (1978/79), no. 3, 335-347. (M. Zähle) 81a:60065 60G55
- (with Gates, David J.) Further bounds for the distribution of minimum interpoint distance on a sphere. *Biometrika* 67 (1980), no. 2, 466-469. (Vangalur S. Alagar) 81m:60018 60D05 (92A07)
- Westendorf, Christian-Michael Reaktionssysteme und rekursive Klassifikation. *Wiss. Z. Tech. Univ. Dresden* 28 (1979), no. 2, 409-416. (Author's summary) 81a:93006 93A10 (90C50)
- Westenhoelz, Cornelius Topological and Noether-conservation laws. *Ann. Inst. H. Poincaré Sect. A (N.S.)* 30 (1979), no. 4, 353-367. (Vadim Komkov) 81a:49023 49H05 (58A25, 81C99)
- On the mass spectrum of Higgs particles. *Ann. Inst. H. Poincaré Sect. A (N.S.)* 32 (1980), no. 2, 161-173. (Author's summary) 81h:81056 81D20 (58C28)
- Sur le rapport de masse muon-électron. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 16, B397-B400. (Jacques P. Leveille) 81g:81101 81G15
- Westerberg, A. W. (with Berna, T. J.) LASCALA—a language for large scale linear algebra. *Sparse Matrix Proceedings 1978* (Sympos. Sparse Matrix Comput., Knoxville, Tenn., 1978), pp. 90-106, SIAM, Philadelphia, Pa., 1979. (G. Opfer) 81h:65042 65F99 (15A99, 90C20)
- Westermann, L. R. J. In memoriam Prof. Dr. J. Ridder, 1894-1977. 14th Dutch Mathematical Congress (Vrije Univ., Amsterdam, 1978). *Nieuw Arch. Wisk.* (3) 27 (1979), no. 1, 1-12. (Editors) 81m:01082 01A70
- Westfall, Richard S. Newton's marvelous years of discovery and their aftermath: myth versus manuscript. *Isis* 71 (1980), no. 256, 109-121. (F. V. Pohle) 81a:01043 01A70 (01A45)
- Westlund, Anders (with Brännäs, Kurt) On the recursive estimation of stochastic and time-varying parameters in econometric systems. *Optimization techniques* (Proc. Ninth IFIP Conf., Warsaw, 1979), Part 2, pp. 414-422, *Lecture Notes in Control and Information Sci.*, 23, Springer, Berlin, 1980. (Authors' summary) 81m:62192 62P20
- Weston, V. H. Inverse problem for the reduced wave equation with fixed incident field. *J. Math. Phys.* 21 (1980), no. 4, 758-764. (J. Wiesner) 81k:35041 35J05 (35R30)
- Stability effects of an external conducting open sheet on magnetically confined plasmas. *Phys. Fluids* 23 (1980), no. 7, 1388-1395. (Author's summary) 81d:76128 76X05
- Westphal, K. (with Goller, M.) Relativistic free-fall motion of a point charge in a weak gravitational field. *Lett. Nuovo Cimento* (2) 27 (1980), no. 6, 161-168. (George Leibbrandt) 81g:83009 83C10
- (with Hoyler, H.) Gravitational bremsstrahlung in post-linear fast-motion approximation. *Lett. Nuovo Cimento* (2) 27 (1980), no. 17, 581-585. (From the text) 81c:83019 83C30
- Westphal, U. (with Berens, H.) On the best co-approximation in a Hilbert space. *Quantitative approximation* (Proc. Internat. Sympos., Bonn, 1979), pp. 7-10, Academic Press, New York, 1980. (Pier Luigi Papini) 81m:41040 41A65 (41A28, 46C10)
- Westreich, David (with Cahlon, Baruch) Complete continuity of integro-differential operators with discontinuous kernels and collectively compact approximations. *J. Math. Anal. Appl.* 71 (1979), no. 2, 313-332. (P. M. Anselone) 81c:45020 45L05 (45D05, 45J05, 47G05)
- Numerical solution of the eigenvalue problem for discontinuous linear ordinary differential equations. *J. Inst. Math. Appl.* 25 (1980), no. 2, 147-160. (Roman Andruszkiewicz) 81h:65009 65L15
- Westrick, R. The maximal length of real trivectors of rank seven. *Linear and Multilinear Algebra* 9 (1980), no. 1, 1-4. (Author's summary) 81m:15024 15A75
- de Wet, T. (with van Wyk, J. W. J.) Some large sample properties of Hogg's adaptive trimmed means. *South African Statist. J.* 13 (1979), no. 1, 53-69. (Jon A. Wellner) 81c:62034 62F35 (62E20, 62G30)
- Cramér-von Mises tests for independence. *J. Multivariate Anal.* 10 (1980), no. 1, 38-50. (Gavin G. Gregory) 81h:62083 62G10 (62E20)
- Wetherill, G. Barrie (with Kollerström, Julian) The asymptotic theory of sampling inspection. *Proceedings in Operations Research, 8* (Seventh Annual Meeting, Deutsch. Gesellsch. Operations Res., Freie Univ. Berlin, Berlin, 1978), pp. 211-217, Physica, Würzburg, 1979. (W. Uhlmann) 81h:62183 62N10
- (with Kollerström, Julian) SPRT's for the normal correlation coefficient. *J. Amer. Statist. Assoc.* 74 (1979), no. 368, 815-821. (B. K. Ghosh) 81c:62092 62L10
- (with Kollerström, Julian) Sampling inspection simplified. *J. Roy. Statist. Soc. Ser. A* 142 (1979), no. 1, 1-32. (S. Blumenthal) 81g:62108 62N10
- (with Kollerström, Julian) Corrigenda: "Sampling inspection simplified". *J. Roy. Statist. Soc. Ser. A* 142 (1979), no. 3, 404. (Editors) 81g:62108 62N10
- (with Bravo, P. C.) The matching of sampling plans and the design of double sampling plans. *J. Roy. Statist. Soc. Ser. A* 143 (1980), no. 1, 49-67. (Authors' summary) 81a:62100 62N10
- Wets, Roger J.-B. (with Salinetti, Gabriella) Convergence of sequences of closed sets. The Proceedings of the 1979 Topology Conference (Ohio Univ., Athens, Ohio, 1979). *Topology Proc.* 4 (1979), no. 1, 149-158 (1980). (D. E. Wulbert) 81f:54015 54B20
- (with Salinetti, Gabriella) Addendum: "On the convergence of convex sets in finite dimensions" (SIAM Rev. 21 (1979), no. 1, 18-33; MR 80h:52007). *SIAM Rev.* 22 (1980), no. 1, 86. (Editors) 81g:52006 52A20 (90C25)
- Wette, Eduard W. In memory of Kurt Gödel. *Internat. Logic Rev.* No. 17-18 (1978), 155-158. (Editors) 81a:01044 01A70
- Wette, R. (with Rice, John; Reich, T.; Cloninger, C. R.) An approximation to the multivariate normal integral: its application to multifactorial qualitative traits. (French summary) *Biometrics* 35 (1979), no. 2, 451-459. (Authors' summary) 81h:62181 62P10 (62H10)
- Wetterling, Wolfgang H -Mengen und Minimalbedingungen bei Approximationsproblemen. (English summary) *Numerical mathematics* (Sympos., Inst. Appl. Math., Univ. Hamburg, Hamburg, 1979), pp. 195-204, *Internat. Ser. Numer. Math.*, 49, Birkhäuser, Basel, 1979. (C. Dieckhoff) 81f:41032 41A50 (65D99)
- Wetterstein, John R. (with Agassi, Joseph) Stegmüller squared. *Z. Allgemeine Wissenschaftstheorie* 11 (1980), no. 1, 86-94. (Mario Bunge) 81h:00005 00A25
- Wetzell, David E. (with Tong, Y. L.) On the behaviour of the probability function for selecting the best normal population. *Biometrika* 66 (1979), no. 1, 174-176. (E. J. Dudewicz) 81a:62022 62F07
- Wexler, A. (with McDonald, B. H.) Mutually constrained partial differential and integral equation field formulations. *Finite elements in electrical and magnetic field problems*, pp. 161-190, Wiley, Chichester, 1980. (R. C. MacCamy) 81m:65106 65N99
- Wexler, Kenneth (with Batchelder, William H.) Suppes' work in the foundations of psychology. *Patrick Suppes*, pp. 149-186, *Profiles*, 1, Reidel, Dordrecht, 1979. (See 80m:81040) 92A25 (01A70)
- Wexler-Kreindler, Elena Polynômes de Ore, séries formelles tordues et anneaux filtrés complets héréditaires. (English summary) *Comm. Algebra* 8 (1980), no. 4, 339-371. (Jean-Marie Goursaud) 81m:16008 16A05
- Weyers, Jacques See Hadron structure and lepton-hadron interactions. 81a:81002
- Weybrauch, Richard W. (with Aiello, L.; Aiello, M.) PASCAL in LCF: semantics and examples of proof. *Theoret. Comput. Sci.* 5 (1977/78), no. 2, 135-177. (Authors' summary) 81c:68010 68B10
- Prolegomena to a theory of mechanized formal reasoning. Special issue on nonmonotonic logic. *Artificial Intelligence* 13 (1980), no. 1-2, 133-170. (Author's summary) 81j:68114 68G15 (03B35)

- Weyland, Nicholas. Remarks on zeros of H^p functions in balls. *Harmonic analysis in Euclidean spaces (Proc. Sympos. Pure Math., Williams Coll., Williamstown, Mass., 1978), Part 2*, pp. 69–71. *Proc. Sympos. Pure Math., XXXV, Part 2, Amer. Math. Soc., Providence, R.I., 1979.* (Jacques Vauthier) **81c:32019** 32A35
- Weymark, John A. On Pareto-improving price changes. *J. Econom. Theory* **19** (1978), no. 2, 338–346. (Author's introduction) **81i:90036** 90A12
- Optimal taxation theory and excess demand functions. *Econom. Lett.* **2** (1979), no. 2, 111–113. (From the text) **81f:90022** 90A10
- (with Donaldson, David) A single-parameter generalization of the Gini indices of inequality. *J. Econom. Theory* **22** (1980), no. 1, 67–86. (From the introduction) **81a:90072** 90A99
- Weyrich, Karl-Helmut (with Siems, Rolf) Phase transitions in 2-dimensional systems of migrating orientable lattice defects. *Z. Phys. B* **34** (1979), no. 1, 85–96. (Authors' summary) **81d:82068** 82A67 (82A60)
- Weyuker, Elaine J. The applicability of program schema results to programs. *Internat. J. Comput. Inform. Sci.* **8** (1979), no. 5, 387–403. (H. Jürgensen) **81d:68026** 68B10 (03D80)
- Translatability and decidability questions for restricted classes of program schemas. *SIAM J. Comput.* **8** (1979), no. 4, 587–598. (M. B. Trahtenbrot) **81i:68028** 68B10
- (with Ostrand, Thomas J.) Theories of program testing and the application of revealing subdomains. *IEEE Trans. Software Engrg.* **6** (1980), no. 3, 236–246. (Authors' summary) **81e:68017** 68B10
- Wharton, R. M. (with Srinivasan, R.) Sequential estimation of quantal response curves. *Proceedings of the Twenty-Fourth Conference on the Design of Experiments (Math. Res. Center, Univ. Wisconsin, Madison, Wis., 1978)*, pp. 229–240. *ARO Rep.* **79**, 2. U. S. Army Res. Office, Research Triangle Park, N.C., 1979. (Authors' summary) **81k:62145** 62P10 (62L12)
- Wheeden, Richard L. (with Kurtz, Douglas S.) Results on weighted norm inequalities for multipliers. *Trans. Amer. Math. Soc.* **255** (1979), 343–362. (Authors' summary) **81j:42021** 42A45 (42B20)
- Wheeler, John Archibald. The black hole: an imaginary conversation with Albert Einstein. *Albert Einstein: his influence on physics, philosophy and politics*, pp. 51–56. Vieweg, Braunschweig, 1979. (See **81f:01039**) **83F05** (01A70)
- Mercer Street and other memories. *Albert Einstein: his influence on physics, philosophy and politics*, pp. 201–211. Vieweg, Braunschweig, 1979. (See **81f:01039**) 01A70
- Memoir. *Einstein*, pp. 21–22. *Harvard Univ. Press, Cambridge, Mass.*, 1979. (See **81c:01053**) 01A70
- Wheeler, M. W. L. (with Ross, G.; Fiddy, M. A.; Nieto-Vesperinas, M.) The phase problem in scattering phenomena: the zeros of entire functions and their significance. *Proc. Roy. Soc. London Ser. A* **360** (1978), no. 1700, 25–45. (Authors' summary) **81d:78028** 78A45
- Wheeler, Mary Farnett (with Darlow, Bruce L.) Interior penalty Galerkin procedures for miscible displacement problems in porous media. *Computational methods in nonlinear mechanics (Proc. Second Internat. Conf., Univ. Texas, Austin, Tex., 1979)*, pp. 485–506. *North-Holland, Amsterdam*, 1980. (Jaroslav Jeleš) **81m:76051** 76S05 (49D15)
- Wheeler, Robert E. Quantile estimators of Johnson curve parameters. *Biometrika* **67** (1980), no. 3, 725–728. (Author's summary) **81m:62051** 62F10
- Wheeler, Robert F. Topological measure theory for completely regular spaces and their projective covers. *Pacific J. Math.* **82** (1979), no. 2, 565–584. (J. D. Knowles) **81d:28015** 28C15
- Wheeler, Robert L. Asymptotic behavior of solutions of linear Volterra integro-differential equations in Hilbert space. *Volterra equations (Proc. Helsinki Sympos. Integral Equations, Otaniemi, 1978)*, pp. 304–314. *Lecture Notes in Math.* **737**, Springer, Berlin, 1979. (J. A. Nohel) **81d:45018** 45K05 (45D05, 45M05, 73B99)
- (with Jordan, G. S.) Rates of decay of resolvents of Volterra equations with certain nonintegrable kernels. *J. Integral Equations* **2** (1980), no. 2, 103–110. (Gustaf Gripenberg) **81d:45003** 45D05 (45M10)
- (with Jordan, G. S.; Madych, W. R.) Linear convolution integral equations with asymptotically almost periodic solutions. *Proc. Amer. Math. Soc.* **78** (1980), no. 3, 337–341. (N. K. Karapetjan) **81a:45006** 45E10
- (with Jordan, G. S.) Structure of resolvents of Volterra integral and integro-differential systems. *SIAM J. Math. Anal.* **11** (1980), no. 1, 119–132. (Gustaf Gripenberg) **81h:45002** 45D05 (45M05)
- (with Jordan, G. S.) Weighted L^1 -remainder theorems for resolvents of Volterra equations. *SIAM J. Math. Anal.* **11** (1980), no. 5, 885–900. (Gustaf Gripenberg) **81j:45003** 45D05 (45M05)
- Wheeler, William H. Model complete theories of pseudo-algebraically closed fields. *Ann. Math. Logic* **17** (1979), no. 3, 205–226. (Sauro Tulipani) **81c:03024** 03C60 (12L99)
- (with Ewing, John; Gustafson, William H.; Halmos, P. R.; Moolgavkar, S. H.; Ziemer, W. P.) American mathematics from 1940 to the day before yesterday. (Czech) Translated from the English by Jifi Vanžura. *Pokroky Mat. Fyz. Astronom.* **24** (1979), no. 5, 258–267. (Editors) **81b:01021** 01A65
- (with Ewing, John; Gustafson, William H.; Halmos, P. R.; Moolgavkar, S. H.; Ziemer, W. P.) American mathematics from 1940 to the day before yesterday. (Czech) Translated from the English by Jifi Vanžura. *Pokroky Mat. Fyz. Astronom.* **24** (1979), no. 6, 326–335. (Editors) **81j:01034** 01A65
- Model theory of strictly upper triangular matrix rings. *J. Symbolic Logic* **45** (1980), no. 3, 455–463. (Carlo Toffaloni) **81j:03055** 03C60 (16A42)
- Whelan, C. T. Some remarks on the commutation relations for angle-angular momentum variables in quantum mechanics. *J. Phys. A* **13** (1980), no. 6, L181–L183. (Author's summary) **81e:81055** 81D05 (81C10)
- Whinston, Andrew B. (with McAfee, R. Preston) A formal model of problem solving. *Internat. J. Policy Anal. Inform. Systems* **4** (1980), no. 3, 285–303. (Authors' summary) **81k:68073** 68G20
- See also Quantitative planning and control, **81b:90002**
- Whitcomb, David K. (with Cohen, Kalman J.; Maier, Steven F.; Schwartz, Robert A.) On the existence of serial correlation in an efficient securities market. *Portfolio theory, 25 years after*, pp. 151–168. *Studies in the Management Sci.*, **11**, North-Holland, Amsterdam, 1979. (See **80k:90001**) 90A09
- White, Albert G., Jr. (with Diminnie, Charles R.) Strict convexity conditions for seminorms. *Math. Japon.* **24** (1979/80), no. 5, 489–493. (Roy M. Rakestraw) **81g:46014** 46B05 (52A05)
- (with Diminnie, Charles R.; Gähler, Siegfried) Remarks on strictly convex and strictly 2-convex 2-normed spaces. *Math. Nachr.* **88** (1979), 363–372. (P. K. Subramanian) **81h:46014** 46B05 (46C05)
- White, Arthur T. (with Beineke, Lowell W.) Topological graph theory. *Selected topics in graph theory*, pp. 15–49. *Academic Press, London*, 1978. (See **81e:05059**) 05C10
- The proof of the Heawood conjecture. *Selected topics in graph theory*, pp. 51–81. *Academic Press, London*, 1978. (See **81e:05059**) 05C10
- Colouring maps on surfaces. *Bull. Inst. Math. Appl.* **16** (1980), no. 1, 20–23. (Editors) **81h:05049** 05C15 (57M15)
- (with Jungerman, Mark) On the genus of finite abelian groups. *European J. Combin.* **1** (1980), no. 3, 243–251. (Jonathan L. Gross) **81m:05077** 05C25 (05C10, 20F32)
- White, Brian. The structure of minimizing hypersurfaces mod 4. *Invent. Math.* **53** (1979), no. 1, 45–58. (João Lucas Marques Barbosa) **81h:49018** 49F22 (58E12)
- White, Chelsea C., III. Optimal inspection and repair of a production process subject to deterioration. *J. Oper. Res. Soc.* **29** (1978), no. 3, 235–243. (Author's summary) **81h:90067** 90B25
- Monotone control laws for noisy, countable-state Markov chains. *European J. Oper. Res.* **5** (1980), no. 2, 124–132. (From the summary) **81g:93134** 93E20
- White, D. J. Finite state approximations for denumerable-state infinite horizon contracted Markov decision processes: the policy space method. *J. Math. Anal. Appl.* **72** (1979), no. 2, 512–523. (Joseph D. Cole) **81j:90130** 90C40
- Multi-objective interactive programming. *J. Oper. Res. Soc.* **31** (1980), no. 6, 517–523. (Author's summary) **81g:90062** 90C08
- White, David L. (with Hodge, Philip G., Jr.) Computation of nonunique solutions of elastic-plastic trusses. *Comput. & Structures* **12** (1980), no. 5, 769–774. (Authors' summary) **81h:73052** 73K25 (65N30)
- White, Dennis E. Multilinear techniques in Pólya enumeration theory. *Linear and Multilinear Algebra* **7** (1979), no. 4, 299–315. (Donald Bean) **81e:05020** 05A15
- Applications of a binomial-type identity. *Linear and Multilinear Algebra* **8** (1979/80), no. 4, 341–345. (S. G. Williamson) **81e:05021** 05A15 (05A19)
- (with Ikeda, Masao; Šiljak, D. D.) Suboptimal decentralized control of system with overlapping information sets. *Thirteenth Asilomar Conference on Circuits, Systems and Computers (Pacific Grove, Calif., 1979)*, pp. 187–192. *IEEE, New York*, 1980. (See **81m:93004**) 93C05 (94A05)
- Monotonicity and unimodality of the pattern inventory. *Adv. in Math.* **38** (1980), no. 1, 101–108. (J. Désarménien) **81m:05017** 05A17 (20C30)
- (with Joichi, J. T.) Gray codes in graphs of subsets. *Discrete Math.* **31** (1980), no. 1, 29–41. (G. Berman) **81h:05096** 05C45 (94A29)
- A Pólya interpretation of the Schur function. *J. Combin. Theory Ser. A* **28** (1980), no. 3, 272–281. (Dennis White) **81e:05018** 05A19 (20C30)
- (with Joichi, J. T.; Williamson, S. G.) Combinatorial group theory. *SIAM J. Comput.* **9** (1980), no. 1, 130–141. (Authors' summary) **81g:68050** 68C05 (94B25)
- White, Halbert. Nonlinear regression on cross-section data. *Econometrica* **48** (1980), no. 3, 721–746. (Hans-Peter Höschel) **81f:62106** 62J02 (62F12)
- A heteroskedasticity-consistent covariance matrix estimator and a direct test for heteroskedasticity. *Econometrica* **48** (1980), no. 4, 817–838. (Norbert Christopeit) **81k:62097** 62J05 (62G10)
- Using least squares to approximate unknown regression functions. *Internat. Econom. Rev.* **21** (1980), no. 1, 149–170. (V. K. Srivastava) **81g:62111** 62J02 (62P20)
- (with MacDonald, Glenn M.) Some large-sample tests for nonnormality in the linear regression model. With comments by Sanford Weisberg. *J. Amer. Statist. Assoc.* **75** (1980), no. 369, 16–31. (Mir Masoom Ali) **81e:62077** 62J05 (62F05)
- White, James W. A nonmapped complex variable method for the computation of unseparated airfoil flows. *Comput. & Fluids* **8** (1980), no. 3, 291–303. (Author's summary) **81h:76006** 76B05 (65E05, 65R20)
- White, K. Preston, Jr. Technique fixation and the Routh-Hurwitz criterion. *IEEE Trans. Automat. Control* **24** (1979), no. 6, 987–988. (Author's summary) **81a:93007** 93A10
- White, L. W. Control of a pseudoparabolic initial-value problem to a target function. *SIAM J. Control Optim.* **17** (1979), no. 5, 587–595. (M. B. Suryanarayana) **81a:93022** 93B05
- Controllability properties of pseudoparabolic boundary control problems. *SIAM J. Control Optim.* **18** (1980), no. 5, 534–539. (D. L. Colton) **81h:93042** 93C20 (35K70)
- White, Lee J. (with Srihar, Sargur N.; Snabb, Thomas) An algorithm for determining identity of nearest-neighbor and potential function decision rules. *Pattern Recognition* **12** (1980), no. 5, 293–299. (Authors' summary) **81m:68075** 68G10
- White, R. B. (with Rechester, A. B.; Rosenbluth, M. N.) Statistical description of stochastic orbits in a tokamak. *J. Physique* **41** (1980), no. 4 *Colloq. C-3*, C3-351–C3-358. (Authors' summary) **81f:76055** 76X05 (58F13)
- (with Rechester, A. B.) Calculation of turbulent diffusion for the Chirikov-Taylor model. *Phys. Rev. Lett.* **44** (1980), no. 24, 1586–1589. (Authors' summary) **81f:82026** 82A45 (60K35)
- White, R. E. A semilinear boundary value problem with nonincreasing nonlinear terms. *Nonlinear Anal.* **4** (1980), no. 1, 123–137. (R. Kannan) **81h:35064** 35J65 (47H15)
- Value set at $x \in \Omega$ for an arbitrary distribution with applications to local extrema of $f \in C(\Omega)$ and a maximum principle for ordinary differential equations. *SIAM J. Math. Anal.* **11** (1980), no. 1, 61–72. (R. A. Struble) **81d:46049** 46F99 (34G99)
- White, Richard B. The consistency of the axiom of comprehension in the infinite-valued predicate logic of Łukasiewicz. *J. Philos. Logic* **8** (1979), no. 4, 509–534. (Stanisław J. Surma) **81h:03059** 03E70 (03B50, 03F05)
- Whitehead, Earl Glen, Jr. (with Chao, Chong Yun) Chromaticity of self-complementary graphs. *Arch. Math. (Basel)* **32** (1979), no. 3, 295–304. (Joan Hutchinson) **81e:05089** 05C15
- Four-discordant permutations. *J. Austral. Math. Soc. Ser. A* **28** (1979), no. 3, 369–377. (C. L. Parihar) **81e:05011** 05A05 (10A40)
- Whitehead, Jennifer. Subnormality and ascendancy in soluble groups of finite rank. *Arch. Math. (Basel)* **34** (1980), no. 1, 10–14. (D. J. S. Robinson) **81g:20073** 20F16 (20E19)

- Whiteman, Albert Loom (with Seberry, Jennifer) Complex weighing matrices and orthogonal designs. *Art. Combin.* 9 (1980), 149–162. (Peter Eades) **81h:05036** 05B30 (05B15)
- Whiteman, J. R. Numerical methods for elliptic problems containing boundary singularities. *Proceedings of the Fourth Symposium on Basic Problems of Numerical Mathematics (Pilsen, 1978)*, pp. 173–181, Charles Univ., Prague, 1978. (Kristian Witsch) **81h:65121** 65N30
- (with Akin, J. E.) Finite elements, singularities and fracture. *Mathematics of finite elements and applications, III (Proc. Third MAFELAP Conf., Brunel Univ., Uxbridge, 1978)*, pp. 35–54, Academic Press, London, 1979. (From the introduction) **81d:65067** 65N30 (35B30, 73M05)
- See also Survey of numerical methods for partial differential equations, **81i:65002**
- Whitfield, D. T. Kepler, Newton and Flamsteed on refraction through a "regular air": the mathematical and the practical. Special issue dedicated to Olaf Pedersen on his sixtieth birthday. *Centaurus* 24 (1980), 288–315. (William R. Shea) **81m:01021** 01A45 (85–03)
- See also Harrison, John, **81b:01022**
- Whitfield, S. H. (with Chivalt, V.; Graham, Ronald L.; Perold, André F.) Combinatorial designs related to the strong perfect graph conjecture. *Discrete Math.* 26 (1979), no. 2, 83–92. (László Lovász) **81b:05044** 05C15 (05B10, 05C50)
- Collineations of projective planes of order 10. I, II. *J. Combin. Theory Ser. A* 26 (1979), no. 3, 249–268, 269–277. (D. A. Foulser) **81b:51010** 51E15 (05B25, 51A35)
- Whitfield, George (with Shaw, Peter B.) Breakdown of perturbation theory for the deformation potential polaron. *Phys. Rev. B* (3) 21 (1980), no. 10, 4349–4356. (Authors' summary) **81e:82024** 82A55 (81C12)
- Whitman, G. B. ★ Lectures on wave propagation. Tata Institute of Fundamental Research Lectures on Mathematics and Physics, 61. Published for the Tata Institute of Fundamental Research, Bombay; by Springer-Verlag, Berlin-New York, 1979. v + 148 pp. ISBN 3-540-08945-4 (K. K. Puri) **81h:76010** 76B15 (35L05, 35Q20, 76–02)
- Whitney, Robert Normal and quasnormal composition operators. *Proc. Amer. Math. Soc.* 76 (1978), no. 2, 114–118. (Eric Nordgren) **81c:47033** 47B38 (47B15)
- (with Warner, C. R.) Ideals of finite codimension in $C[0,1]$ and $L^1(\mathbb{R})$. *Proc. Amer. Math. Soc.* 76 (1979), no. 2, 263–267. (D. R. Wilken) **81b:46070** 46J10 (43A20)
- Whitman, A. P. (with Pierce, J. F.) Topological properties of the manifolds of configurations for several simple deformable bodies. *Arch. Rational Mech. Anal.* 74 (1980), no. 2, 101–113. (Robert Connelly) **81g:73058** 73G05 (51F99, 57Q99, 57S05, 58D10)
- Whitman, David (with Glover, Fred; Klingman, Darwin; Mote, John) An extended abstract of an indepth algorithmic and computational study for maximum flow problems. *Discrete Appl. Math.* 2 (1980), no. 3, 251–254. (Editors) **81j:90047** 90B10 (90C35)
- (with Armstrong, Ronald D.; Klingman, Darwin) Implementation and analysis of a variant of the dual method for the capacitated transshipment problem. *European J. Oper. Res.* 4 (1980), no. 6, 403–420. (Authors' summary) **81e:90038** 90B10 (90C35)
- Whitman, P. N. (with Goodson, G. R.) Approximation and the spectral multiplicity of special automorphisms. *Z. Wahrsch. Verw. Gebiete* 49 (1979), no. 2, 155–162. (Authors' summary) **81m:28016** 28D05
- Whitman, Patrick G. (with Mateos, John J.) New method for extracting static equilibrium configurations in general relativity. *Phys. Rev. D* (3) 22 (1980), no. 6, 1270–1275. (Authors' summary) **81h:83012** 83C20 (85A15)
- Whitt, Lee B. Isometric homotopy and codimension-two isometric immersions of the n -sphere into Euclidean space. *J. Differential Geom.* 14 (1979), no. 2, 295–302. (I. Vaisman) **81k:53055** 53C42
- (with Johnson, David L.) Totally geodesic foliations on 3-manifolds. *Proc. Amer. Math. Soc.* 76 (1979), no. 2, 355–357. (Connor Lazarov) **81h:57020** 57R30
- Whitt, Ward Approximations of dynamic programs. I. *Math. Oper. Res.* 3 (1978), no. 3, 231–243. (M. A. Wolfe) **81j:90131a** 90C40
- A priori bounds for approximations of Markov programs. *J. Math. Anal. Appl.* 71 (1979), no. 1, 297–302. (E. I. Kistiuri) **81b:90008** 90A05 (90C40)
- Comparing probability measures on a set with an intransitive preference relation. *Management Sci.* 25 (1979/80), no. 6, 505–511. (Author's summary) **81b:90011** 90A06
- Approximations of dynamic programs. II. *Math. Oper. Res.* 4 (1979), no. 2, 179–185. (M. A. Wolfe) **81j:90131b** 90C40
- Uniform conditional stochastic order. *J. Appl. Probab.* 17 (1980), no. 1, 112–123. (George L. O'Brien) **81b:60012** 60B99
- Some useful functions for functional limit theorems. *Math. Oper. Res.* 5 (1980), no. 1, 67–85. (Richard F. Serfozo) **81e:60035** 60F17 (60B10)
- Representation and approximation of noncooperative sequential games. *SIAM J. Control Optim.* 18 (1980), no. 1, 33–48. (Jaap Wessels) **81h:90178** 90D15 (90C40, 93E05)
- Whittaker, J. M. Dynamics with variable masses. *Proc. Roy. Soc. London Ser. A* 372 (1980), no. 1751, 485–487. (George Contopoulos) **81k:70008** 70F10 (70P05, 85A05)
- Whitmore, James K. See Aschbacher, Michael, **81e:20021**
- Whitten, Betty Jones (with Cohen, A. Clifford) Estimation in the three-parameter lognormal distribution. *J. Amer. Statist. Assoc.* 75 (1980), no. 370, 399–404. (Authors' summary) **81f:62050** 62F10
- Whittington, S. G. (with Wilker, J. B.) Extension of a theorem on supermultiplicative functions. *J. Phys. A* 12 (1979), no. 10, L245–L247. (Thu Pham-Gia) **81e:26019** 26D20 (40A05)
- (with Gaunt, D. S.; Martin, J. L.; Ord, G.; Torrie, G. M.) Restricted valence site animals on the simple cubic lattice. *J. Phys. A* 13 (1980), no. 5, 1791–1797. (C. A. Hurst) **81g:82073** 82A67
- (with Ord, G.) Lattice decorations and pseudocontinuum percolation. *J. Phys. A* 13 (1980), no. 9, L307–L310. (Authors' summary) **81d:82036** 82A42 (60K35)
- Whittle, P. Stability and characterisation conditions in negative programming. *J. Appl. Probab.* 17 (1980), no. 3, 635–645. (K. Hinderer) **81j:90126** 90C39 (90C40)
- Whyburn, Lucille A visit with E. H. Moore. The Proceedings of the 1979 Topology Conference (Ohio Univ., Athens, Ohio, 1979). *Topology Proc.* 4 (1979), no. 1, 279–283 (1980). (F. Burton Jones) **81m:01083** 01A70 (01A99)
- Wilberg, D. M. (with Brovko, O.) Some factors affecting the rate of convergence during on-line parameter identification. *Optimization techniques (Proc. Ninth IFIP Conf., Warsaw, 1979), Part 1*, pp. 555–563. *Lecture Notes in Control and Information Sci.* 22, Springer, Berlin, 1980. (See **81j:49001a**) 93Exx
- Wilczok, Bruno J. (with Goldstein, Jerome A.) On the Benjamin-Bona-Mahony equation in higher dimensions. *Nonlinear Anal.* 4 (1980), no. 4, 665–675. (Gustavo Perla Menzala) **81i:35147** 35Q20 (35Q99, 76B15)
- Wick, Alala (with Duret, Gilles; Zepp, Gérard) Résonateur ouvert en géométrie sphérique. (English summary) *Canad. J. Phys.* 58 (1980), no. 1, 80–86. (Authors' summary) **81g:78002** 78A05
- Wick, Brian D. A projective characterization for SKT-modules. *Proc. Amer. Math. Soc.* 80 (1980), no. 1, 39–43. (L. Fuchs) **81j:20075b** 20K25
- A classification theorem for SKT-modules. *Proc. Amer. Math. Soc.* 80 (1980), no. 1, 44–46. (L. Fuchs) **81j:20075a** 20K25
- Wick, J. Über eine Verallgemeinerung des Begriffs "Charakteristik" bei partiellen Differentialgleichungen erster Ordnung. (English summary) *Math. Methods Appl. Sci.* 1 (1979), no. 3, 383–417. (A. Haimovici) **81a:35007** 35A30 (35F99)
- Wicks, H. H. (with Worrell, J. M., Jr.) A covering property which implies isocompactness. II. The Proceedings of the 1979 Topology Conference (Ohio Univ., Athens, Ohio, 1979). *Topology Proc.* 4 (1979), no. 1, 213–224 (1980). (S. Broverman) **81j:54036b** 54D20 (54D30)
- (with Worrell, J. M., Jr.) The development of generalized base of countable order theory. *Surveys in general topology*, pp. 495–557, Academic Press, New York, 1980. (Gary Gruenhage) **81b:54028** 54E30
- (with Worrell, J. M., Jr.) A covering property which implies isocompactness. I. *Proc. Amer. Math. Soc.* 79 (1980), no. 2, 331–334. (S. Broverman) **81j:54036a** 54D20 (54D30)
- Wickel, W. Ein Integralgleichungssystem zur Neumannschen Randwertaufgabe für eine Gleichung 4. Ordnung. *Z. Angew. Math. Mech.* 58 (1978), no. 7, T401–T403. (L. E. Payne) **81g:35019** 35J05 (45F15, 73K10)
- Wickles, W. J. (with Vinsonhaler, C.) Injective hulls of torsion-free abelian groups as modules over their endomorphism rings. *J. Algebra* 58 (1979), no. 1, 64–69. (Fred Richman) **81h:20036** 20K15 (20K30)
- T as an \mathfrak{S} submodule of G . *Pacific J. Math.* 83 (1979), no. 2, 555–564. (L. Bican) **81f:16039** 16A53
- Wickstead, Anthony Isolated points of the approximate point spectrum of certain lattice homomorphisms on $C_b(X)$. *Quaestiones Math.* 3 (1978/79), no. 4, 249–279. (A. V. Buhvalov) **81b:47050** 47B55
- Extensions of orthomorphisms. *J. Austral. Math. Soc. Ser. A* 29 (1980), no. 1, 87–98. (S. J. Bernau) **81h:47049** 47B55 (46A40)
- Wickwire, Kenneth H. The Poisson disorder problem for large intensities. *Internat. J. Systems Sci.* 10 (1979), no. 12, 1353–1358. (M. A. Maher) **81d:62084** 62L15 (93E25)
- Widder, F. (with Mitter, Heinrich) Classical solutions of σ models. *J. Phys. A* 13 (1980), no. 10, 3275–3286. (From the introduction) **81i:81062** 81E10
- Widholm, William B. Geometric interpretation of generalized Lagrangian multiplier search procedures in the payoff space. *Oper. Res.* 28 (1980), no. 3, part 2, 822–827. (Author's summary) **81d:90095** 90C30
- Widiger, A. A general decomposition theorem for Artinian rings. *Studia Sci. Math. Hungar.* 12 (1977), no. 1–2, 29–36 (1980). (William H. Gustafson) **81f:16022** 16A35 (16A48)
- Which left Artinian rings are right Artinian? *Math. Nachr.* 91 (1979), 181–182. (T. S. Raviarankar) **81g:16020** 16A35
- Widjaja, Herman Die optimale Zerlegung von Netzen und die Optimierung des Prozessverhaltens im Adreßraum. (English summary) Dissertation, Friedrich Alexander Universität, Erlangen, 1979. *Arbeitsber. Inst. Math. Mach. Datenverarb. (Inform.)* 12 (1979/80), no. 8, iii + 236 pp. (I. Kaufmann) **81i:68043** 68B20 (68E10)
- Widman, Kjell-Ove (with Hildebrandt, Stefan) Variational inequalities for vector-valued functions. *J. Reine Angew. Math.* 309 (1979), 191–220. (H. Marcinkowska) **81i:35023** 35A15 (35G20, 35R45)
- (with Hildebrandt, Stefan) Sätze vom Liouvilleschen Typ für quasilineare elliptische Gleichungen und Systeme. *Nachr. Akad. Wiss. Göttingen Math.-Phys. Kl. II* 1979, no. 4, 41–59. (Helmut Kaul) **81f:35036** 35J25 (58E20, 58G30)
- Widmalm, M. K. (with Mallya, R. V.) Economic batch quantities for manufactured parts. *J. Oper. Res. Soc.* 31 (1980), no. 10, 875–882. (Authors' summary) **81h:90071** 90B30 (90B05)
- Widnall, Sheila E. (with Tsai, Chon Yin) Examination of group-velocity criterion for breakdown of vortex flow in a divergent duct. *Phys. Fluids* 23 (1980), no. 5, 864–870. (Authors' summary) **81g:76030** 76C05
- Widom, Allan (with Clark, T. D.) Quantum electrodynamic circuit interpretation of the thermal Nyquist noise theorem in the $\omega \gg (k_B T/\hbar)$ limit. *J. Phys. A* 13 (1980), no. 9, L335–L338. (Authors' summary) **81h:81206** 81L05 (78A55, 94C05)
- Quantum electrodynamic dynamics of a Josephson-junction capacitor. *Phys. Rev. B* (3) 21 (1980), no. 11, 5166–5171. (Author's summary) **81d:81139** 81L05
- Widom, Harold Families of pseudodifferential operators. *Topics in functional analysis (essays dedicated to M. G. Krein on the occasion of his 70th birthday)*, pp. 345–395, *Advances in Math., Suppl. Studies*, 3, Academic Press, New York, 1978. (M. S. Agranović) **81e:58062** 58G15 (35S05, 58G25)
- Szegő's theorem and a complete symbolic calculus for pseudodifferential operators. *Seminar on Singularities of Solutions of Linear Partial Differential Equations (Inst. Adv. Study, Princeton, N.J., 1977/78)*, pp. 261–283, *Ann. of Math. Studies*, 91, Princeton Univ. Press, Princeton, N.J., 1979. (P. Günther) **81h:58043** 58G15 (35S05, 47G05, 58G25)
- A complete symbolic calculus for pseudodifferential operators. (French summary) *Bull. Sci. Math. (2)* 104 (1980), no. 1, 19–63. (M. S. Agranović) **81m:58078** 58G15 (35S05, 47G05)
- (with Landau, Henry J.) Eigenvalue distribution of time and frequency limiting. *J. Math. Anal. Appl.* 77 (1980), no. 2, 469–481. (T. Sasaki) **81m:45023** 45P05 (49C15)
- Wiener, John André (with Schneider, Rolf) Random polytopes in a convex body. *Z. Wahrsch. Verw. Gebiete* 52 (1980), no. 1, 69–73. (Adrian Baddeley) **81f:52008** 52A22 (60D05)

- Wiesand, H. S. (with Sinha, Bimal Kumar) Union-intersection test for the mean vector when the covariance matrix is totally reducible. *J. Amer. Statist. Assoc.* **74** (1979), no. 366, part 1, 340-343. (Dennis L. Young) **81a:62044** 62H15
(with Ghosh, J. K.; Sinha, Bimal Kumar) Second order efficiency of the MLE with respect to any bounded bowl-shaped loss function. *Ann. Statist.* **8** (1980), no. 3, 506-521. (Masafumi Akahira) **81g:62057** 62F12 (62B10)
- Wiedlow-Wiechers, J. See Ludlow-Wiechers, J.
- Wienkiewicz-Wiechno, E. See Stankiewicz-Wiechno, E.
- Więkowski, Andrzej On some systems of Diophantine equations including the algebraic sum of triangular numbers. *Fibonacci Quart.* **18** (1980), no. 2, 165-170. (David Lee Hilliker) **81h:10020** 10A40 (10A35)
- Wieczorek, Andrzej Elementary proof of the measurable utility theorem. *Game theory and related topics (Proc. Sem., Bonn and Hagen, 1978)*, pp. 253-264, North-Holland, Amsterdam, 1979. (Robert M. Anderson) **81h:90167** 90D10 (28C15, 90A08)
- Wieczorek, E. (with Geyer, B.; Matveev, V. A.; Robaschik, D.) Analytical properties of conformal invariant four-point functions. *Rep. Math. Phys.* **10** (1976), no. 2, 203-211. (Charles L. Hammer) **81i:81051** 81E05
(with Geyer, B.; Robaschik, D.) Field-theoretic description of deep inelastic scattering. (Russian. English summary) *Fiz. Elementar. Častic i Atom. Jdra* **11** (1980), no. 1, 132-181. (Authors' summary) **81a:81083** 81F20
- Wieczorkiewicz, Jan K. Some explicit estimates for the Dedekind zeta functions. *Funct. Approx. Comment. Math.* **7** (1979), 9-12. (Gilles Lachaud) **81d:10032** 10H10 (12A70)
- Wiedemann, Juraj (with Ružička, Peter) On the lower bound for minimum comparison selection. (Slovak summary) *Apl. Mat.* **23** (1978), no. 1, 1-8. (Authors' summary) **81f:68072** 68E05 (68C25)
- The complexity of lexicographic sorting and searching. *Mathematical foundations of computer science, 1979 (Proc. Eighth Sympos., Olomouc, 1979)*, pp. 517-522, Lecture Notes in Comput. Sci., **74**, Springer, Berlin, 1979. (From the introduction) **81d:68080** 68E05 (68C25)
(with Ružička, Peter) On the conjecture relating minimax and minimean complexity norms. (Slovak and Russian summaries) *Apl. Mat.* **24** (1979), no. 5, 321-325. (Jaroslav Morávek) **81h:68055** 68C25
- Wiedmer, E. Computing with infinite objects. *Theoret. Comput. Sci.* **10** (1980), no. 2, 133-155. (Peter W. Day) **81e:68039** 68C40 (03D10)
- Wiegand, Roger Rings of bounded module type. *Module theory (Proc. Special Session, Amer. Math. Soc., Univ. Washington, Seattle, Wash., 1977)*, pp. 143-150, Lecture Notes in Math., **700**, Springer, Berlin, 1979. (Kwangil Koh) **81e:13007** 13C05
- Wiegandt, R. (with Anderson, Tim) Weakly homomorphically closed semisimple classes. *Acta Math. Acad. Sci. Hungar.* **34** (1979), no. 3-4, 329-336 (1980). (E. M. Patterson) **81e:17007** 17A65 (16A21)
- Wiegel, F. W. Rotational friction coefficient of a permeable cylinder in a viscous fluid. *Phys. Lett. A* **70** (1979), no. 2, 112-113. (Author's summary) **81f:76033** 76S05
- Wiegmann, Klaus Werner Some remarks on a quotient theorem by Andreotti-Stoll. *Rev. Roumaine Math. Pures Appl.* **23** (1978), no. 6, 965-971. (From the text) **81f:32012** 32C20
- Wiegold, James (with Brunner, A. M.; Burns, Robert G.) On the number of quotients, of one kind or another, of the modular group. *Math. Sci.* **4** (1979), no. 2, 93-98. (Joseph B. Dennis, Jr.) **81e:20056** 20H10 (10D07)
- Wieland, R. (with Freivalds, Rüdiger) Inductive inference with additional information. (Russian and German summaries) *Elektron. Informatsionnaya. Kibernet.* **15** (1979), no. 4, 179-185. (George Tourlakis) **81e:03036** 03D20 (03D05, 68C30)
- Wieland, R. M. (with Emmert, G. A.; Mense, A. T.; Davidson, J. N.) Electric sheath and presheath in a collisionless, finite ion temperature plasma. *Phys. Fluids* **23** (1980), no. 4, 803-812. (L. F. Oster) **81h:76061** 76W05 (45J05, 76X05)
- Wielandt, Helmut Über das Erzeugnis paarweise kosubnormaler Untergruppen. *Arch. Math. (Basel)* **35** (1980), no. 1-2, 1-7. (R. Schmidt) **81k:20035** 20D35
- van de Wiele, J. P. See Van de Wiele, J. P.
- Wielgeoz, C. (with Flanchec, Annick) Algèbre de l'analyse dimensionnelle. (English and Russian summaries) *Studia Geotech. Mech.* **1** (1979), no. 2, 3-17. (S. Drobot) **81j:00023** 00A69 (15A99, 93A99)
Sur une anomalie de la méthode des éléments finis. (English and Russian summaries) *Studia Geotech. Mech.* **1** (1979), no. 2, 29-37. (A. D. Wood) **81d:73062** 73K15 (73K25)
- Wiener, Joseph Generalized-function solutions of linear systems. *J. Differential Equations* **38** (1980), no. 2, 301-315. (Frederick A. Howes) **81m:34106** 34K15 (46F10)
- Wiener, Klaus Über die Eindeutigkeit von Lösungen linearer Volterra'scher Integralgleichungen. *Wis. Z. Martin-Luther-Universität Halle-Wittenberg Math.-Natur. Reihe* **29** (1980), no. 1, 59-60. (A. Corduneanu) **81i:45006** 45D05
- Wiener, Norbert ★Collected works with commentaries. Vol. II. Generalized harmonic analysis and Tauberian theory; classical harmonic and complex analysis. Edited by Pesi Rustom Masani. Mathematicians of Our Time, **15**. MIT Press, Cambridge, Mass.-London, 1979. xiii + 969 pp. ISBN 0-262-23092-5 (R. A. Askey) **81d:01029** 01A75
- Wienke, B. R. Order derivatives of Bessel functions. *Bull. Calcutta Math. Soc.* **69** (1977), no. 6, 389-392. (B. M. Agrawal) **81b:33011** 33A40
- Wierenga, Edward Fodor on Davidson on action sentences. *Synthese* **44** (1980), no. 3, 347-359. (Author's introduction) **81g:03032** 03B99 (03A05)
- Wierman, John C. Weak moment conditions for time coordinates in first-passage percolation models. *J. Appl. Probab.* **17** (1980), no. 4, 968-978. (G. R. Grimmett) **81k:60105** 60K35 (60F15, 82A42)
(with Gray, Lawrence F.; Smythe, R. T.) Lower bounds for the critical probability in percolation models with oriented bonds. *J. Appl. Probab.* **17** (1980), no. 4, 979-986. (G. R. Grimmett) **81k:60104** 60K35 (82A42)
- Wierzbny, Gregory M. (with Brown, David P.) Linearly variable networks. I. Analysis. *J. Franklin Inst.* **309** (1980), no. 4, 227-239. (Authors' summary) **81j:94042a** 94C05
(with Brown, David P.) Linearly variable networks. II. Synthesis. *J. Franklin Inst.* **309** (1980), no. 6, 439-456. (Authors' summary) **81j:94042b** 94C05
- Wierzbicki, Andrzej P. The use of reference objectives in multiobjective optimization. *Multiple criteria decision making theory and application (Proc. Third Conf., Hagen/Königswinter, 1979)*, pp. 468-486, Lecture Notes in Econom. and Math. Systems,
- 177, Springer, Berlin, 1980. (Andrzej Wieczorek) **81j:90118** 90C31
- Wierzbowska, Teresa (with Cwik, Jan; Kowalczyk, Teresa; Kowalski, Adam; Pieszczyńska, Elżbieta; Szczesny, Wiesław) Monotone dependence function: background, new results and applications. *Mathematical statistics and probability theory (Proc. Sixth Internat. Conf., Włda, 1978)*, pp. 111-121, Lecture Notes in Statist., **2**, Springer, New York, 1980. (Jiri Anděl) **81i:62100** 62H20
- Wiglas, Witold Locally bounded topologies on fields and rings. *Mitt. Math. Ges. Hamburg* **10**, no. 6, 481-508 (1978). (V. N. Viziut) **81e:12039** 12J20
- Wiesmeth, Hans (with Kalman, Peter J.; Lin, Kuan Pin) Equilibrium theory in Veblen-Scitovsky economies. Local uniqueness, stability and existence. *J. Math. Econom.* **6** (1979), no. 3, 263-276. (Yves Balasko) **81h:90032** 90A14 (58F40)
- Engelbrecht-Wiggans, Richard See Engelbrecht-Wiggans, Richard
- Wiggins, Alvin D. (with Ury, Hans K.) Distribution-free confidence bounds for $\Pr\{Y(x) < Y(y)\}$ when $F(x)$ and $G(y) = F(x - \theta)$ are continuous and symmetric. *Comm. Statist. A—Theory Methods* **8** (1979), no. 12, 1247-1253. (Z. Govindarajulu) **81k:62065** 62G15
- Wiggins, Kenneth L. Best L_p approximate solutions of nonlinear integro-differential equations. *J. Approx. Theory* **26** (1979), no. 4, 329-339. (Christopher T. H. Baker) **81h:45025** 45L05 (41A30, 45J05, 65R20)
- Wigner, D. Two notes on frames. *J. Austral. Math. Soc. Ser. A* **28** (1979), no. 3, 257-268. (H. A. Priestley) **81d:06016** 06D99 (18B35, 54F05)
- Wigner, Eugene P. Memoir. *Einstein, p. 33*, Harvard Univ. Press, Cambridge, Mass., 1979. (See **81k:01053**) 01A70
- Wijn-Nielsen, A. C. (with Källén, E.) Nonlinear, low order interactions. (Russian summary) *Telhus* **32** (1980), no. 5, 393-409. (J. S. Joel) **81k:36066** 86A10 (34C05, 58C28, 76E20, 80A25, 86A35)
- Wita, P. J. (with Paczyński, B.) Thick accretion disks and supercritical luminosities. *Astronom. and Astrophys.* **88** (1980), no. 1-2, 23-31. (Authors' summary) **81k:85010** 85A40 (85A20)
(with Lerche, I.) Soliton solutions and their stability for the flow of relativistic fluids through channels. *Astrophys. and Space Sci.* **68** (1980), no. 1, 207-219. (Ilija Lukežević) **81h:76077** 76Y05 (76B25)
- van Wijngaarden, L. (with Disselhorst, J. H. M.) Flow in the exit of open pipes during acoustic resonance. *J. Fluid Mech.* **99** (1980), no. 2, 293-319. (Authors' summary) **81g:76087** 76Q05
- Wijman, Robert A. Stopping time of invariant sequential probability ratio tests. *Developments in statistics, Vol. 2*, pp. 235-314, Academic Press, New York, 1979. (B. K. Ghosh) **81k:62114** 62L10 (62F03, 62G10)
Smallest simultaneous confidence sets with applications in multivariate analysis. *Multivariate analysis, V (Proc. Fifth Internat. Sympos., Univ. Pittsburgh, Pittsburgh, Pa., 1978)*, pp. 483-498, North-Holland, Amsterdam, 1980. (C. G. Khatri) **81g:62067** 62F25 (62H12)
- Wikström, Å. Optimal search trees and length restricted codes. *BIT* **19** (1979), no. 4, 518-524. (Author's summary) **81a:68075** 68E10
- Wilansky, Albert ★Modern methods in topological vector spaces. McGraw-Hill International Book Co., New York, 1978. xiii + 298 pp. ISBN 0-07-070180-6 (D. J. H. Garling) **81d:46001** 46-01 (46Axx)
The μ property of FK spaces. Special issue dedicated to Władysław Orlicz on the occasion of his seventy-fifth birthday. *Comment. Math. Special Issue* **1** (1978), 371-380. (C. G. Lascarides (Zbl 395:46011)) **81k:46009** 40C05 (46A45)
(with Snyder, A. K.) The Mazur-Orlicz bounded consistency theorem. *Proc. Amer. Math. Soc.* **80** (1980), no. 2, 374-375. (E. Jürimäe) **81g:40004** 40H05
- Wilcox, Calvin H. Electromagnetic signal propagation in crystals. *Applicable Anal.* **8** (1978/79), no. 1, 83-94. (Maurice Boux) **81f:78006** 78A25 (35Q20)
Sonar echo analysis. *Math. Methods Appl. Sci.* **1** (1979), no. 1, 70-88. (Maurice Boux) **81e:76066** 76Q05
Positive temperatures with prescribed initial heat distributions. *Amer. Math. Monthly* **87** (1980), no. 3, 183-186. (D. T. Haimo) **81k:35077** 35K05 (35C15, 80A20)
- Wilcox, David L. (with MacCluer, Jean Walters) Coevolution in predator-prey systems: a saturation-kinetic model. *Amer. Natur.* **113** (1979), no. 2, 163-183. (Authors' summary) **81j:92050** 92A17
- Wilczyński, Bogdan (with Wittbrodt, Edmund) Algorithm for reducing stiffness and mass matrices in the stiff finite element method. (Polish. English and Russian summaries) *Mechanics and computers, Vol. 2 (Polish)*, pp. 131-140, PWN, Warsaw, 1980. (See **81m:73008**) 65N30
- Wild, Walter J. (with Kerns, Robert M.) Surface geometry of a black hole in a magnetic field. *Phys. Rev. D* **3** (21) (1980), no. 2, 332-335. (Andrew King) **81f:83028** 83C40
- Wilde, Douglas J. (with Beightler, Charles S.; Phillips, Don T.) ★Foundations of optimization. Second edition. Prentice-Hall International Series in Industrial and Systems Engineering. Prentice-Hall, Inc., Englewood Cliffs, N.J., 1979. xvii + 487 pp. ISBN 0-13-330332-2 (Albert Buckley) **81f:90001** 90-01
- Wilde, I. F. (with Landau, L. J.) On the Bose-Einstein condensation of an ideal gas. *Comm. Math. Phys.* **70** (1979), no. 1, 43-51. (F. Rocca) **81h:82016** 82A15 (81Hxx)
- de Wilde, Marc See De Wilde, Marc
- Wildeboer, G. (with Plath, P. J.) Eulersche Polynomformel und Gibbs'sche Phasenregel. Proceedings of Bremer Konferenz zur Chemie (Univ. Bremen, Bremen, 1978), Part II. *Math. Nachr.* **7** (1979), 163-175. (From the text) **81h:80001** 80A10 (52A25)
- Wildenauer, P. Auswirkungen von Rundungen und Näherungen bei einer Klasse iterativer Verfahren. (English and Russian summaries) *Z. Angew. Math. Mech.* **59** (1979), no. 8, 355-360. (Kurt Georg) **81d:65020** 65G05 (58C15, 65H10)
- Wildenberg, Gerald (with Tepper, David E.) Some infinite free boundary problems. *Trans. Amer. Math. Soc.* **248** (1979), no. 1, 135-144. (Tadashi Murawaza) **81e:31005** 31A25
- Wildenhain, Günther Ergebnisse und offene Probleme zur Potentialtheorie elliptischer Differentialgleichungen beliebiger Ordnung. *Elliptische Differentialgleichungen (Meeting, Rostock, 1977)*, pp. 265-279, Wilhelm-Pieck-Universität, Rostock, 1978. (From the introduction) **81k:35057** 35J40 (31B35)
- Wilder, Raymond L. ★Introduction to the foundations of mathematics. Reprint of the second edition. Robert E. Krieger Publishing Co., Inc., Huntington, N.Y., 1980. xvi + 327 pp. ISBN 0-89874-170-X (Editors) **81j:03002** 03-01 (00A05)
Correction and addendum to: "Evolution of the topological concept of 'connected'"

- [Amer. Math. Monthly 85 (1978), no. 9, 720-726; MR 80f:01019a]. *Amer. Math. Monthly* 87 (1980), no. 1, 31-32. (Editors) **81f:01023** 01A60 (54-03)
- See also **Brumfiel, Gregory W.** **81k:57038**
- Wilgrube, Eckhard** (with Krötenheerdt, Otto) Über verknottete Polygone mit kongruenten Strecken und kongruenten Winkeln. *Beiträge Algebra Geom.* No. 9 (1980), 171-179. (H. S. M. Coxeter) **81k:51016** 51N20 (57M25)
- Wilts, L.** (with Henley, E. M.; Mårtensson, A.-M.) A variational approach to two-body correlations in atoms. *J. Phys. B* 13 (1980), no. 12, 2335-2348. (Authors' summary) **81e:81161** 81G45
- Wiley, J. C.** (with Hinton, F. L.) Steady-state response of the electron distribution function to an applied electric field. *Phys. Fluids* 23 (1980), no. 5, 921-930. (Authors' summary) **81d:76129** 76X05 (82A45)
- Wilhelm, H. E.** Variational principles and canonical theory for many-component plasmas with self-consistent field. *Phys. Fluids* 23 (1980), no. 5, 934-938. (Author's summary) **81d:76130** 76X05
- (with Hong, S. H.) Stress relaxation waves in fluids. *Phys. Rev. A* (3) 22 (1980), no. 3, 1266-1271. (Authors' summary) **81g:76003** 76A10 (76D05, 76N10)
- Wilhelm, Jochen** Multiperiod portfolio selection and capital asset pricing. *Multiple criteria decision making theory and application* (Proc. Third Conf., Hagen/Königswinter, 1979), pp. 487-510. *Lecture Notes in Econom. and Math. Systems*, 177, Springer, Berlin, 1980. (Giovanni M. Zambono) **81m:90023** 90A09
- Wilhelm, Marek** Relations among some closed graph and open mapping theorems. *Colloq. Math.* 42 (1979), 387-394. (S. A. Naimpally) **81c:54017** 54C10 (46A30)
- On closed graph theorems in topological spaces and groups. *Fund. Math.* 104 (1979), no. 2, 85-95. (Richard A. Alo) **81b:54012** 54C05 (46A30)
- Topological versions of the closed graph and open mapping theorems. *Topology* (Proc. Fourth Colloq., Budapest, 1978), Vol. II, pp. 1257-1260. *Colloq. Math. Soc. János Bolyai*, 23, North-Holland, Amsterdam, 1980. (N. Adasch) **81m:54027** 54C99 (46A30)
- Completeness of l -groups and of l -seminorms. *Comment. Math. Prace Mat.* 21 (1980), no. 1, 271-281. (From the introduction) **81c:06023** 06F20
- Wilke, Gerhard** Eine Kennzeichnung topologischer Räume durch Hüllenalgebren. *Arch. Math. (Basel)* 34 (1980), no. 3, 276-282. (W. A. Feldman) **81k:54071** 54H12 (06D05, 54D10)
- Wilke, Jürgen** ★Bibliographie zu Verfahren der multivariaten Statistik, der mehrdimensionalen Klassifikation und ihre Anwendungen in Natur- und Gesellschaftswissenschaften 1901-1975. I, II. With an introduction in German, Russian, English and French. *Akademie-Verlag, Berlin*, 1978. 1123 pp. (Editors) **81k:62083** 62H25 (62H30)
- See also **Wussing, Hans** **81g:01001**
- Wilken, Donald** (with Brickman, Louis) Subordination and insuperable elements. *Complex analysis* (Proc. S.U.N.Y. Conf., Brockport, N.Y., 1976), pp. 37-47. *Lecture Notes in Pure and Appl. Math.*, 36, Dekker, New York, 1978. (F. Holland) **81d:30041** 30C80
- (with Feng, J.) A remark on convex and starlike functions. *J. London Math. Soc.* (2) 21 (1980), no. 2, 287-290. (M. S. Robertson) **81f:30016** 30C45
- Wilker, J. B.** (with Whittington, S. G.) Extension of a theorem on supermultiplicative functions. *J. Phys. A* 12 (1979), no. 10, L245-L247. (Thu Pham-Gia) **81c:26019** 26D20 (40A05)
- Wilker, Peter** Die irreduziblen Zahlen des Bereichs $\mathbb{Z}[\sqrt{-5}]$. *Elem. Math.* 34 (1979), no. 4, 75-82. (L. Skula) **81g:12004** 12A15 (10A25)
- An efficient algorithmic solution of the Diophantine equation $u^2 + 5v^2 = m$. *Math. Comp.* 35 (1980), no. 152, 1347-1352. (R. P. Brent) **81m:10021** 10B05 (10-04, 19A25)
- Wilkinson, Clarence** (with Adams, John Frank) Finite H -spaces and algebras over the Steenrod algebra. *Ann. of Math.* (2) 111 (1980), no. 1, 95-143. (Joseph Neisendorfer) **81k:55006** 55P45 (57T25)
- Errata: "Applications of minimal simplicial groups" [Topology 15 (1976), no. 2, 111-130; MR 53 #6551]. *Topology* 19 (1980), no. 1, 99. (Editors) **81d:55016** 55Q05 (14F35)
- Wilkes, J. M.** (with Zund, Joseph D.) Maxwell's equations and Méray's theorem. *Tensor (N.S.)* 34 (1980), no. 1, 58-62. (Gérard A. Maugin) **81c:78017** 78A25 (53B50, 83C50)
- Wilkes, M. V.** (with Lawson, J. Douglas; Morris, J. Li.) On the exact solution of linear constant coefficient parabolic partial differential equations using (1, 1) Padé approximations. *Utilitas Math.* 16 (1979), 189-196. (J. R. Cannon) **81c:65050** 65N10
- Early programming developments in Cambridge. *A history of computing in the twentieth century*, pp. 497-501. *Academic Press, New York*, 1980. (See **81f:68002**) 68-03 (01A65)
- Wilkes, N. S.** On the stability of multipolar elastic materials. *Stochastica* 3 (1979), no. 2, 79-95. (D. Işcan) **81k:73004** 73B25 (73H99)
- Continuous dependence and instability in linear thermoelasticity. *SIAM J. Math. Anal.* 11 (1980), no. 2, 292-299. (Howard A. Levine) **81d:73104** 73U05 (35K60)
- Wilkie, A. J.** Some results and problems on weak systems of arithmetic. *Logic Colloquium '77* (Proc. Conf., Wrocław, 1977), pp. 285-296. *Studies in Logic and Foundations of Math.*, 96, North-Holland, Amsterdam, 1978. (R. Parikh) **81c:03050** 03F30
- Wilkins, Daniel** Does black-hole entropy make sense? *Gen. Relativity Gravitation* 11 (1979), no. 1, 45-58. (C. J. S. Clarke) **81c:83033** 83C99 (80A10)
- On the equilibrium of a black hole in a radiation-filled cavity. *Gen. Relativity Gravitation* 11 (1979), no. 1, 59-70. (C. J. S. Clarke) **81c:83034** 83C99 (80A10)
- Wilkins, Ernest, Jr.** See **Wilkins, J. Ernest, Jr.**
- Wilkins, G. A.** (with Davies, M. E.; Abalakin, V. K.; Cross, C. A.; Duncombe, R. L.; Masursky, H.; Morando, B.; Owen, T. C.; Seidelmann, P. K.; Sinclair, A. T.; Tjufin, Y. S.) Report of the IAU Working Group on Cartographic Coordinates and Rotational Elements of the Planets and Satellites. *Celestial Mech.* 22 (1980), no. 3, 205-230. (Authors' summary) **81j:70009** 70F15
- Wilkins, J. Ernest, Jr.** Minimum mass thin fins for space radiators. *Black mathematicians and their works*, pp. 241-253 (1 plate). *Dorrance, Ardmore, Pa.*, 1980. (See **81c:00004**) 80A20
- Wilkins, Mark L.** Use of artificial viscosity in multidimensional fluid dynamic calculations. *J. Comput. Phys.* 36 (1980), no. 3, 281-303. (Author's summary) **81f:76032** 76L05
- Wilkinson, David** (with Creamer, Dennis B.; Thacker, H. B.) Gelfand-Levitan method for operator fields. *Phys. Rev. D* (3) 21 (1980), no. 6, 1523-1528. (Authors' summary) **81a:81084** 81F30 (35P25)
- Wilkinson, Graham N.** Robust methods—are they sound? *Interactive statistics* (Proc. Appl. Statist. Conf., Macquarie Univ., Sydney, 1979), pp. 91-102. *North-Holland, Amsterdam*, 1979. (See **81f:62003**) 62F35
- Robust inference—the Fisherian approach. *Robustness in statistics* (Proc. Workshop, Army Res. Office, Research Triangle Park, N.C., 1978), pp. xvi, 259-290. *Academic Press, New York*, 1979. (See **81c:62032**) 62F35
- See also **Robustness in statistics**, **81c:62032**
- Wilkinson, J. H.** Kronecker's canonical form and the QZ algorithm. *Linear Algebra Appl.* 28 (1979), 285-303. (I. Eneacu) **81a:15015** 15A21 (65F15)
- Turing's work at the National Physical Laboratory and the construction of pilot ACE, DEUCE, and ACE. *A history of computing in the twentieth century*, pp. 101-114. *Academic Press, New York*, 1980. (See **81f:68002**) 01A70 (01A60, 68-03)
- Wilkinson, K. M.** (with Richardson, S. T.) Stopping time transformations and towers. *Z. Wahrsch. Verw. Gebiete* 48 (1979), no. 3, 259-284. (Alan Salek) **81a:28020** 28D05
- Will, Clifford M.** The confrontation between gravitation theory and experiment. *General relativity*, pp. 24-89. *Cambridge Univ. Press, Cambridge*, 1979. (See **81c:83002**) 83B05 (83C25)
- (with Walker, Martin) Relativistic Kepler problem. I. Behavior is the distant past of orbits with gravitational radiation damping. *Phys. Rev. D* (3) 19 (1979), no. 12, 3483-3494. (Authors' summary) **81d:83027a** 83C35 (83F05)
- (with Walker, Martin) Relativistic Kepler problem. II. Asymptotic behavior of the field in the infinite past. *Phys. Rev. D* (3) 19 (1979), no. 12, 3495-3508. (Authors' summary) **81d:83027b** 83C35 (83F05)
- Willmann, K.-D.** Dynamik nichtlinearer Massenwirkungskinetiken. *Proceedings of Bremer Konferenz zur Chemie* (Univ. Bremen, Bremen, 1978), Part II. *Match No. 7* (1979), 177-193. (N. D. Sengupta) **81k:00005** 80A30 (58F10, 92A40)
- Wille, S. Ø.** A finite element solution of the Navier-Stokes equations for two-dimensional and axisymmetric flow. *MIC—Modeling Identification Control* 1 (1980), no. 2, 105-117. (Joseph Oliger) **81c:76031** 76D05 (65N30)
- Willem, Michel** (with Mawhin, Jean) Compact perturbations of some nonlinear Hammerstein equations. *Riv. Mat. Univ. Parma* (4) 5 (1979), part 1, 199-213 (1980). (J. Kolomý) **81k:45012** 45G10 (47H15)
- On a result of Rothe about the Cesari index and A -proper mappings. (Italian summary) *Boll. Un. Mat. Ital.* A (5) 17 (1980), no. 1, 178-182. (Thomas S. Angell) **81a:47062** 47H15
- Williams, J. L.** Optimal state reconstruction algorithms for linear discrete-time systems. *Internat. J. Control* 31 (1980), no. 3, 495-506. (Author's summary) **81k:93046** 93C55 (49E15)
- Williams, Jan C.** Time reversibility in deterministic and stochastic dynamical systems. *Recent developments in variable structure systems, economics and biology* (Proc. US-Italy Sem., Taormina, 1977), pp. 318-326. *Lecture Notes in Econom. and Math. Systems*, 162, Springer, Berlin, 1978. (G. S. Ladde) **81m:93006** 93A10 (58F15)
- Some remarks on the concept of information state. *Analysis and optimization of stochastic systems* (Proc. Internat. Conf., Univ. Oxford, Oxford, 1978), pp. 285-295. *Academic Press, London*, 1980. (I. Vajda) **81m:93067** 93E03 (93E20)
- Almost $A(\text{mod } \mathfrak{B})$ -invariant subspaces. *Systems analysis* (Conf., Bordeaux, 1978), pp. 239-248. *Astérisque*, 75/76, Soc. Math. France, Paris, 1980. (Author's summary) **81k:93059** 93C45 (93C05)
- (with Fuhrmann, Paul A.) A study of (A, B) -invariant subspaces via polynomial models. *Internat. J. Control* 31 (1980), no. 3, 467-494. (Edward W. Kamen) **81k:93010** 93B25
- Topological classification and structural stability of linear systems. *J. Differential Equations* 35 (1980), no. 3, 306-318. (S. P. Bhattacharyya) **81k:93007** 93B05 (58F10)
- Williams, Wolfgang** On the projectives of a group algebra. *Math. Z.* 171 (1980), no. 2, 163-174. (Hans Opolka) **81g:20007** 20C05 (20C20)
- Willensberg, H. J.** Multigroup representation of fusion product orbits in a plasma column. *J. Comput. Phys.* 34 (1980), no. 3, 330-347. (Rishi Ram Sharma) **81k:76094** 76X05
- Willett, Michael** (with Levine, Jack) The two-message problem in cipher text autokey. I. *Cryptologia* 3 (1979), no. 3, 177-186. (James W. Snively, Jr.) **81k:94052a** 94B99
- (with Levine, Jack) The two-message problem in cipher text autokey. II. *Cryptologia* 3 (1979), no. 4, 220-231. (James W. Snively, Jr.) **81k:94052b** 94B99
- Arithmetic in a finite field. *Math. Comp.* 35 (1980), no. 152, 1353-1359. (J. C. Lagarias) **81k:12003** 12-04 (68C20)
- Williams, B. B.** (with Gillespie, A. A.) Fixed point theorem for nonexpansive mappings on Banach spaces with uniformly normal structure. *Applicable Anal.* 9 (1979), no. 2, 121-124. (P. M. Fitzpatrick) **81k:47068** 47H09 (47H10)
- (with Gillespie, A. A.) Some theorems on fixed points in Lipschitz- and Kannan-type mappings. *J. Math. Anal. Appl.* 74 (1980), no. 2, 382-387. (V. Lakshmikantham) **81c:47045** 47H10
- Williams, B. J.** (with Harvey, H. R.) Aztec arithmetic: positional notation and area calculation. *Science* 210 (1980), no. 4469, 499-505. (M. P. Closs) **81k:01002** 01A10
- Williams, Bruce** (with Taylor, Laurence) Local surgery: foundations and applications. *Algebraic topology, Aarhus 1978* (Proc. Sympos., Univ. Aarhus, Aarhus, 1978), pp. 673-695. *Lecture Notes in Math.*, 763, Springer, Berlin, 1979. (Frank Quinn) **81d:57024** 57R65 (57R40)
- (with Taylor, Laurence) Surgery spaces: formulae and structure. *Algebraic topology, Waterloo, 1978* (Proc. Conf., Univ. Waterloo, Waterloo, Ont., 1978), pp. 170-195. *Lecture Notes in Math.*, 741, Springer, Berlin, 1979. (Ian Hambleton) **81k:57034** 57E67
- Hopf invariants, localization and embeddings of Poincaré complexes. *Pacific J. Math.* 84 (1979), no. 1, 217-224. (Frederick Cohen) **81c:57023** 57P10 (55P40)
- Williams, C. J. F.** Misinterpretations of quantifiers. *Mind* 89 (1980), no. 355, 420-422. (Charles F. Kielkopf) **81k:03012** 03A05 (03B10)
- Nash-Williams, C. St. J. A.** See **Nash-Williams, C. St. J. A.**
- Williams, David E.** (with Morito, Susumu; Salkin, Harvey M.) Two backtrack algorithms for the radio frequency intermodulation problem. *Appl. Math. Optim.* 6 (1980), no. 3, 221-240. (Authors' summary) **81d:94008** 94A14 (90C10)
- Williams, Floyd L.** Lie algebra cohomology of infinite-dimensional modules. *Adv. in Math.*

- 35 (1980), no. 1, 19–29. (Jonko Mickelson) **81f:17010** 17B56 (17B10, 22E46)
- Williams, H. C. A modification of the RSA public-key encryption procedure. *IEEE Trans. Inform. Theory* 26 (1980), no. 6, 726–729. (Author's summary) **81k:94041** 94B99 (10A25)
- Some results concerning the nearest integer continued fraction expansion of \sqrt{D} . *J. Reine Angew. Math.* 315 (1980), 1–15. (Péter Kiss) **81f:10015** 10A32 (10B05)
- (with Cormack, G. V.; Seah, E.) Calculation of the regulator of a pure cubic field. *Math. Comp.* 34 (1980), no. 156, 567–611. (J. C. Lagarias) **81d:12003** 12A45 (12A30, 12A50)
- (with Cormack, G. V.) Some very large primes of the form $k \cdot 2^n + 1$. *Math. Comp.* 35 (1980), no. 152, 1419–1421. (T. M. Apostol) **81i:10011** 10A25
- See also Proceedings: Manitoba Conference on Numerical Mathematics and Computing. **81j:65011**
- Williams, H. C. W. L. (with Ortuzar, J. D.) Random utility theory and the structure of travel choice models. *Bull. Inst. Math. Appl.* 15 (1979), no. 11–12, 294–297. (F. Beichtel) **81i:90025** 90A10 (90B20)
- Williams, H. T. (with Turner, E. F.) Geometrical optics of planar interfaces. *Virginia J. Sci.* 30 (1979), no. 3–4, 128–131. (Authors' summary) **81f:79001** 78A05
- Williams, J. G. See Williams, James Gordon
- Williams, J. J. (with Chew, K. H.; Shivakumar, P. N.) Error bounds for the truncation of infinite linear differential systems. *J. Inst. Math. Appl.* 25 (1980), no. 1, 37–51. (Uri Ascher) **81a:34012** 34A45 (34A35, 34G10)
- Williams, J. P. On a boundedness condition for operators with a singleton spectrum. *Proc. Amer. Math. Soc.* 78 (1980), no. 1, 30–32. (Yasuo Watatani) **81k:47008** 47A30 (47A65)
- Williams, J. S. See Williams, James S.
- Williams, Jack See Survey of numerical methods for partial differential equations. **81i:65062**
- Keeton-Williams, James See Keeton-Williams, James
- Williams, James C., III Mathematical criterion for unsteady boundary-layer separation. *AIAA J.* 18 (1980), no. 3, 335–337. (From the introduction) **81b:76027** 76D15
- (with Rhyne, T. B.) Boundary layer development on a wedge impulsively set into motion. *SIAM J. Appl. Math.* 38 (1980), no. 2, 215–224. (C. R. Illingworth) **81b:76025** 76D10
- Williams, James Gordon An approximate solution for an elliptical crack in a thick-walled cylinder. *Internat. J. Fracture* 16 (1980), no. 3, R127–R132. (From the text) **81c:73003** 73M05
- Williams, James S. A definition for the common-factor analysis model and the elimination of problems of factor score indeterminacy. *Psychometrika* 43 (1978), no. 3, 293–306. (Author's summary) **81k:62004** 62H25
- A synthetic basis for a comprehensive factor-analysis theory. *Biometrics* 35 (1979), no. 4, 719–733. (Jacques Dauxois) **81f:62097** 62H25
- Williams, Janet (with Moran, Siegfried) Completions of certain nilpotent groups. *J. Austral. Math. Soc. Ser. A* 28 (1979), no. 4, 461–470. (H. Heineken) **81d:20028** 20F18 (20E22)
- Williams, Jeffrey George (with Antonelli, P. L.) Kinks and cobordism. *Internat. J. Theoret. Phys.* 18 (1979), no. 11, 779–789 (1980). (George S. Whiston) **81f:83029** 83C99 (57R90)
- (with Shastri, Anant R.; Zwegrowski, Peter) Kinks in general relativity. *Internat. J. Theoret. Phys.* 19 (1980), no. 1, 1–23. (George S. Whiston) **81k:83035** 83C99
- See also Combinatorics, representation theory and statistical methods in groups. **81h:05003**
- Williams, Kenneth S. On Eisenstein's supplement to the law of cubic reciprocity. *Bull. Calcutta Math. Soc.* 69 (1977), no. 6, 311–314. (Ezra Brown) **81f:10007** 10A15 (12A25)
- The class number of $\mathbb{Q}(\sqrt{-p})$ modulo 4, for $p \equiv 3 \pmod{4}$ a prime. *Pacific J. Math.* 83 (1979), no. 2, 565–570. (S. A. Stepanov) **81c:12005** 12A25 (12A50)
- (with Buell, Duncan A.) An octic reciprocity law of Scholz type. *Proc. Amer. Math. Soc.* 77 (1979), no. 3, 315–318. (Ezra Brown) **81a:10006** 10A15 (12A45)
- (with Leonard, Philip A.) The quadratic and quartic character of certain quadratic units. II. *Rocky Mountain J. Math.* 9 (1979), no. 4, 683–692. (Charles J. Parry) **81b:12006** 12A45 (12A25)
- (with Leonard, Philip A.) The quartic characters of certain quadratic units. *J. Number Theory* 12 (1980), no. 1, 106–109. (Charles J. Parry) **81k:12011** 12A45 (12A25)
- (with Hudson, Richard H.) On the least quadratic nonresidue of a prime $p \equiv 3 \pmod{4}$. *J. Reine Angew. Math.* 318 (1980), 106–109. (T. M. Apostol) **81g:10007** 10A15
- On the evaluation of $(e_{\frac{p-1}{2}})_p$. *Rocky Mountain J. Math.* 10 (1980), no. 3, 559–573. (Ezra Brown) **81m:12010** 12A45
- Williams, L. R. Equality of essential spectra of quasisimilar quasinormal operators. *J. Operator Theory* 3 (1980), no. 1, 57–69. (John B. Conway) **81c:47026** 47B20 (47A10, 47A65)
- Equality of essential spectra of certain quasisimilar seminormal operators. *Proc. Amer. Math. Soc.* 78 (1980), no. 2, 203–209. (John B. Conway) **81c:47027** 47B20 (47A10, 47A65)
- Williams, Lloyd K. Some Abel equations. *Black mathematicians and their works*, pp. 255–257 (1 plate), Dorrance, Ardmore, Pa., 1980. (John R. Graef) **81g:34004** 34A05
- Williams, M. H. Unsteady thin airfoil theory for transonic flows with embedded shocks. *AIAA J.* 18 (1980), no. 6, 615–624. (Author's summary) **81g:76009** 76H05 (76L05)
- The inversion of singular integral equations by expansion in Jacobi polynomials. *J. Inst. Math. Appl.* 25 (1980), no. 4, 413–426. (T. Sasakawa) **81k:45012** 45E99 (65R20)
- Williams, M. M. R. On two integro-differential equations arising in particle transport theory. *J. Phys. A* 13 (1980), no. 2, 675–688. (M. Drăganu) **81c:82034** 82A70 (44A10, 45K05)
- Some exact solutions in energy dependent transport theory. *Phys. Scripta* 21 (1980), no. 1, 5–11. (Author's summary) **81a:82064** 82A70
- Williams, Nick Universe developable spaces. *Houston J. Math.* 5 (1979), no. 3, 445–450. (R. J. Koch) **81j:54052** 54F05
- Williams, P. G. (with Pearson, R. A.) Dependence of numerical results on truncation errors. *Numerical simulation of fluid motion (Proc. Internat. Conf. Numerical Simulation of Fluid Dynamic Systems, Monash Univ., Melbourne, 1976)*, pp. 493–502, North-Holland, Amsterdam, 1978. (See **81a:76005** 76–04 (65P05))
- Williams, Peter Glyn (with Arik, Metin) Spinning solutions of classical Yang-Mills theory. *Z. Phys. C* 3 (1980), no. 4, 377–385. (Authors' summary) **81a:81046** 81E10
- Williams, R. J. Sufficient conditions for Nash equilibria in N -person games over reflexive Banach spaces. *J. Optim. Theory Appl.* 30 (1980), no. 3, 383–394. (Author's summary) **81a:90169** 90D25 (90D12)
- Williams, Sarah (with Gray, William J.) Common fixed points of commuting mappings of λ -dendroids. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math.* 27 (1979), no. 7–8, 599–604 (1980). (K. Sieklucki) **81j:54070** 54H25 (54F50)
- Williams, Scott W. Boxes of compact ordinals. *Proceedings of the 1977 Topology Conference (Louisiana State Univ., Baton Rouge, La., 1977)*, II. *Topology Proc.* 2 (1977), no. 2, 631–642 (1978). (William G. Fleissner) **81f:54002** 54B10 (03E55)
- outes-Williams, Sheila See Outes-Williams, Sheila
- Williams, Vernon On a theorem of M. A. Krasnoselski. *Bull. Math. Soc. Sci. Math. R. S. Roumanie (N.S.)* 24(72) (1980), no. 1, 87–92. (H. Triebel) **81g:46105** 46M35 (46E30)
- Williams, William O. A formal description of representation theorems for constitutive functions. *Arch. Rational Mech. Anal.* 74 (1980), no. 2, 115–141. (C.-C. Wang) **81k:73005** 73B05
- (with Gurtin, Morton E.; Suliciu, Ion) On rate-type constitutive equations and the energy of viscoelastic and viscoplastic materials. *Internat. J. Solids and Structures* 16 (1980), no. 7, 607–617. (Authors' summary) **81d:73035** 73E99 (73B05, 73F99)
- Williamson, J. H. Low-storage Runge-Kutta schemes. *J. Comput. Phys.* 35 (1980), no. 1, 48–56. (Author's summary) **81a:65070** 65L05
- Williamson, Jack (with Hellerstein, Simon) Reality of the zeros of derivatives of a meromorphic function. *Complex analysis Joensuu 1978 (Proc. Colloq., Univ. Joensuu, Joensuu, 1978)*, pp. 153–157, *Lecture Notes in Math.*, 747, Springer, Berlin, 1979. (Günter Frank) **81m:30028** 30D35 (30D15)
- (with Hellerstein, Simon) The zeros of the second derivative of the reciprocal of an entire function. *Trans. Amer. Math. Soc.* 263 (1981), no. 2, 501–513. (Fred Grom) **81k:30036** 30D30
- Williamson, S. G. (with Joichi, J. T.; White, Dennis E.) Combinatorial Gray codes. *SIAM J. Comput.* 9 (1980), no. 1, 130–141. (Authors' summary) **81g:68050** 68C05 (94B25)
- Willie, Randall R. A theorem concerning cyclic directed graphs with applications to network reliability. *Networks* 10 (1980), no. 1, 71–78. (Dean Sturtevant) **81c:90045** 90B15 (94C15)
- Willford, W. O. (with Carter, Michael C.; Field, Janet E.) A further look at the Bayesian approach to calibration. *J. Statist. Comput. Simulation* 9 (1979), no. 1, 47–67. (Lyle D. Broemeling) **81b:62043** 62F15
- Willis, J. R. (with Bedding, R. J.) Transient elastodynamic fields in anisotropic plates and layers. *Modern problems in elastic wave propagation (Proc. IUTAM Symp., Northwestern Univ., Evanston, Ill., 1977)*, pp. 347–371, Wiley, New York, 1978. (See **80d:73008** 73D99)
- A polarization approach to the scattering of elastic waves. I. Scattering by a single inclusion. *J. Mech. Phys. Solids* 28 (1980), no. 5–6, 287–305. (Author's summary) **81k:73019a** 73D25 (73C40)
- A polarization approach to the scattering of elastic waves. II. Multiple scattering from inclusions. *J. Mech. Phys. Solids* 28 (1980), no. 5–6, 307–327. (Author's summary) **81k:73019b** 73D25 (73C40)
- Willmore, Tom J. Mean-value theorems in Riemannian geometry. *Contributions to geometry (Proc. Geom. Symp., Siegen, 1978)*, pp. 281–287, Birkhäuser, Basel, 1979. (J. Ferrand) **81d:53033** 53C20 (58E20)
- Willmott, Richard Uniform spaces as nice images of nice uniform and metric spaces. *Canad. Math. Bull.* 23 (1980), no. 1, 1–9. (Svetlana Buzás) **81j:54045** 54E15 (54A25)
- Wilner, Barry E. (with Mahar, Thomas J.) Extrema of functions of eigenvalues. *J. Math. Anal. Appl.* 72 (1979), no. 2, 730–739. (Walter Eberhard) **81c:34019** 34B25
- (with Mahar, Thomas J.) Sturm-Liouville eigenvalue problems in which the squares of the eigenfunctions are linearly dependent. *Comm. Pure Appl. Math.* 33 (1980), no. 4, 567–578. (Walter Eberhard) **81h:34029** 34B25
- Willmott, M. Ein Beitrag zur Ullam-Vermutung. *Arch. Math. (Basel)* 34 (1980), no. 2, 181–184. (W. Dörfler) **81k:05103** 05C60 (05C25)
- Willoughby, Ralph A. (with Cullum, Jane) Fast modal analysis of large, sparse but unstructured symmetric matrices. *Proceedings of the 1978 IEEE Conference on Decision and Control including the 17th Symposium on Adaptive Processes (San Diego, Calif., 1979)*, pp. 45–53, IEEE, New York, 1979. (Authors' summary) **81b:65032** 65F15
- (with Cullum, Jane) Lanczos and the computation in specified intervals of the spectrum of large, sparse real symmetric matrices. *Sparse Matrix Proceedings 1978 (Symp. Sparse Matrix Comput., Knoxville, Tenn., 1978)*, pp. 220–255, SIAM, Philadelphia, Pa., 1979. (M. Lotkin) **81m:15007** 15A18 (65F15)
- (with Cullum, Jane) Computing eigenvectors (and eigenvalues) of large, symmetric matrices using Lanczos tridiagonalization. *Numerical analysis (Proc. 8th Biennial Conf. Univ. Dundee, Dundee, 1979)*, pp. 46–63, *Lecture Notes in Math.*, 773, Springer, Berlin, 1980. (H. R. Schwarz) **81k:65032** 65F15
- (with Cullum, Jane) The Lanczos phenomenon—an interpretation based upon conjugate gradient optimization. *Linear Algebra Appl.* 29 (1980), 63–90. (Norihiko Adachi) **81d:65017** 65F15 (65F25)
- Wills, Jörg M. (with Schulz, Christoph) Minimale Möbiusbänder und kleinste Kleinsche Flaschen. *Mitt. Math. Ges. Hamburg* 10, no. 6, 471–480 (1978). (Udo Pachner) **81c:52017** 52A45 (05B40)
- (with Betke, Ulrich) Stetige und diskrete Funktionale konvexer Körper. *Contributions to geometry (Proc. Geom. Symp., Siegen, 1978)*, pp. 226–237, Birkhäuser, Basel, 1979. (Eckehard Krätzl) **81m:10062** 10E05 (52–02)
- (with Schulz, Christoph) Kleinste kleinsche Flaschen mit Rand. *Geom. Dedicata* 8 (1979), no. 4, 395–406. (H. B. Griffiths) **81c:57003** 57M20 (52A25)
- See also Contributions to geometry. **81b:52002**
- Willky, Alan S. (with Kam, Pooi Yuen) Estimation and control for a sensor moving along a one-dimensional track. *Internat. J. Control* 31 (1980), no. 6, 1147–1159. (Authors' summary) **81d:93061** 93E10

- Wilson, Alan N., Jr. (with Navid, Nasrollah) A theory and an algorithm for analog circuit fault diagnosis. Special issue on automatic analog fault diagnosis. *IEEE Trans. Circuits and Systems* 26 (1979), no. 7, 440-457. (Yilmaz Tokad) **81a:94048** 94C05
- On the topology of FET circuits and the uniqueness of their dc operating points. *IEEE Trans. Circuits and Systems* 27 (1980), no. 11, 1045-1051. (Author's summary) **81j:94043** 94C05
- Wilson, Stephen J. A semigroup on the space of compact convex bodies. *SIAM J. Math. Anal.* 11 (1980), no. 3, 448-457. (Peter Gruber) **81f:52007** 52A20 (52A99, 52A60)
- Wilmes, Gerhard (with Nessel, Rolf Joachim) ★Über Ungleichungen vom Bernstein-Nikol'skii-Riesz-Typ in Banach Räumen. (German) [On inequalities of the Bernstein-Nikol'skii-Riesz type in Banach spaces] *Forschungsberichte des Landes Nordrhein-Westfalen* [Research Reports of the State of North Rhine-Westphalia] 2841. Westdeutscher Verlag, Opladen, 1979. 89 pp. ISBN 3-531-02841-3 (J. Horváth) **81h:41032** 41A17 (42B15, 47B40)
- Some inequalities for Riesz potentials of trigonometric polynomials of several variables. *Harmonic analysis in Euclidean spaces* (Proc. Sympos. Pure Math., Williams Coll., Williamstown, Mass., 1978), Part 1, pp. 175-182. *Proc. Sympos. Pure Math.*, XXXV, Part 1, Amer. Math. Soc., Providence, R.I., 1979. (Walter Trebels) **81h:42004** 42A05 (42A10, 46E35)
- (with Bleimann, G.; Stark, Eberhard L.) A construction of processes of best approximation. Special issue dedicated to George Alexits on the occasion of his 80th birthday. *Acta Math. Acad. Sci. Hungar.* 33 (1979), no. 1-2, 7-17. (Jean Trzmiłbali) **81g:42003** 42A10
- On Riesz-type inequalities and K -functionals related to Riesz potentials in \mathbb{R}^N . *Numer. Funct. Anal. Optim.* 1 (1979), no. 1, 57-77. (Walter Trebels) **81i:42001** 42A05 (26A15, 46E30)
- Wilson, Alan Geoffrey (with Kirkby, Michael John, III) ★Mathematics for geographers and planners. Second edition. Contemporary Problems in Geography. The Clarendon Press, Oxford University Press, New York, 1980. xv + 408 pp. ISBN 0-19-874114-6, 0-19-874115-4 (E. Kreyszig) **81i:00003** 00A06 (90-01, 92-01)
- Wilson, Charles The nature of equilibrium in markets with adverse selection. *Bell J. Econom.* 11 (1980), no. 1, 108-130. (Kazuo Sato) **81h:90034** 90A14
- Wilson, D. A. (with Mishra, R. N.) A new algorithm for optimal reduction of multivariable systems. *Internat. J. Control* 31 (1980), no. 3, 443-466. (Authors' summary) **81f:93047** 93C35
- Wilson, Edward L. Solution of sparse stiffness matrices for structural systems. *Sparse Matrix Proceedings 1978* (Sympos. Sparse Matrix Comput., Knoxville, Tenn., 1978), pp. 1-24. SIAM, Philadelphia, Pa., 1979. (D. P. Rafković) **81i:73012** 73K30 (15A24, 73K25)
- Wilson, F. Wesley, Jr. Coleman's conjecture on topological hyperbolicity. *Global theory of dynamical systems* (Proc. Internat. Conf., Northwestern Univ., Evanston, Ill., 1979), pp. 458-470. *Lecture Notes in Math.*, 819, Springer, Berlin, 1980. (Dean A. Neumann) **81m:58069** 58F25 (58F15)
- Special structure for C^* monotone Lyapunov functions. *J. Differential Equations* 36 (1980), no. 1, 1-11. (C. S. Coleman) **81j:58066** 58F15 (58F18)
- A uniform continuity condition which is equivalent to Coleman's conjecture. *J. Differential Equations* 36 (1980), no. 1, 12-19. (C. S. Coleman) **81j:58065** 58F15 (34C30, 58F25)
- Wilson, George Hamiltonian and algebro-geometric integrals of stationary equations of KdV type. *Muh. Proc. Cambridge Philos. Soc.* 87 (1980), no. 2, 295-305. (A. M. Vinogradov) **81h:58022** 58F07 (35Q20)
- Wilson, J. H. Solution of integral equation important in signal processing of radar and sonar hydrophone array outputs. *SIAM J. Appl. Math.* 39 (1980), no. 1, 1-7. (G. A. Nariboli) **81j:76075** 76Q05 (45B05, 78A40)
- Wilson, James R. A numerical method for relativistic hydrodynamics. *Sources of gravitational radiation* (Proc. Workshop, Battelle Seattle Res. Center, Seattle, Wash., 1978), pp. 423-445. Cambridge Univ. Press, Cambridge, 1979. (See **81j:83017**) **76Y05** (65P05)
- Proof of the antithetic-variates theorem for unbounded functions. *Math. Proc. Cambridge Philos. Soc.* 86 (1979), no. 3, 477-479. (Artenio De Matteis) **81e:65007** 65C05
- (with Norman, Michael L.; Barton, Robert T.) A new calculation on rotating protostar collapse. *Astrophys. J.* 239 (1980), no. 3, part 1, 968-981. (Authors' summary) **81h:85007** 85A15
- Wilson, John S. (with Lennox, John C.) On products of subgroups in polycyclic groups. *Arch. Math. (Basel)* 33 (1979/80), no. 4, 305-309. (B. Hartley) **81e:20036** 20E22
- Embedding theorems for residually finite groups. *Math. Z.* 174 (1980), no. 2, 149-157. (Kenneth K. Hickin) **81m:20041** 20E26
- Wilson, L. B. (with Page, E. S.) ★An introduction to computational combinatorics. Cambridge Computer Science Texts, 9. Cambridge University Press, Cambridge-New York, 1979. vi + 218 pp. ISBN 0-521-22427-6, 0-521-29492-4 (Rudolf Forman) **81d:68001** 68-01 (05-01, 39A10, 68E10, 90B40, 90C39)
- The use of recurrence relations in computing. Combinatorial optimization, II (Proc. Conf., Univ. East Anglia, Norwich, 1979). *Math. Programming Stud.* No. 13 (1980), 26-34. (Authors' summary) **81m:68031** 68C05 (10A35, 39A10)
- Wilson, Leslie C. Nonopenness of the set of Thom-Boardman maps. *Pacific J. Math.* 84 (1979), no. 1, 225-232. (Leslie Lander) **81i:58016** 58C27 (57R45)
- Corrections to: "Nonopenness of the set of Thom-Boardman maps". *Pacific J. Math.* 85 (1979), no. 2, 501-502. (Editors) **81i:58016** 58C27 (57R45)
- (with Bleeker, David D.) Splitting the spectrum of a Riemannian manifold. *SIAM J. Math. Anal.* 11 (1980), no. 5, 813-818. (R. S. Millman) **81j:58077** 58G25 (53C05)
- Wilson, Manissa J. Dobree Artificial perception in adaptive arrays. *IEEE Trans. Systems Man Cybernet.* 10 (1980), no. 1, 25-32. (Author's summary) **81a:68094** 68G05 (68D27)
- Wilson, Margaret D. Leibniz: self-consciousness and immortality in the Paris notes and after (summary). *Leibniz in Paris* (1672-1676) (Sympos. G. W. Leibniz Soc./CNRS, Chantilly, 1976), Vol. II (French), pp. 149-150. *Studia Leibnitiana Suppl.*, XVIII, Steiner, Wiesbaden, 1978. (See **81m:01022b**) 01A45
- Wilson, N. W. (with Srivastava, P. K.) Buoyancy effects on heat and momentum transfer during the melting of a horizontal ice sheet above fresh water flowing at laminar Reynolds numbers. *Boundary and interior layers—computational and asymptotic methods* (Proc. Conf., Trinity College, Dublin, 1980), pp. 421-425. Boole, Dún Laoghaire, 1980. (See **81j:76001**) 76R99
- Wilson, R. G. See Wilson, Richard G.
- Wilson, Raj (with Barut, Asim Orhan; Schneider, C. K. E.) Quantum theory of infinite composite fields. *J. Math. Phys.* 20 (1979), no. 11, 2244-2256. (N. Mukunda) **81a:81034** 81C40 (58F06)
- (with Schneider, C. K. E.) Ladder operators of group matrix elements. *J. Math. Phys.* 20 (1979), no. 12, 2380-2390. (Mineo Ikeda) **81f:22040** 22E70 (33A75)
- Wilson, Richard G. (with Meyer, P. R.) Cardinal functions on topological spaces satisfying order conditions. *Topology* (Proc. Fourth Colloq., Budapest, 1978), Vol. II, pp. 839-847. *Colloq. Math. Soc. János Bolyai*, 23, North-Holland, Amsterdam, 1980. (O. T. Alas) **81m:54013** 54A25
- (with Neumann Lara, Victor) The epireflective hull of the category of T_1 dispersed spaces. *Proc. Amer. Math. Soc.* 80 (1980), no. 2, 306-310. (Andreas Blass) **81g:54008** 54B30 (54B15)
- Wilson, Robert Lee (with Taft, Earl J.) There exist finite-dimensional Hopf algebras with antipodes of arbitrary even order. *J. Algebra* 62 (1980), no. 2, 283-291. (David E. Radford) **81d:16008** 16A24
- Simple Lie algebras of type S . *J. Algebra* 62 (1980), no. 2, 292-298. (E. W. Wallace) **81c:17019** 17B50 (17B20)
- Wilson, Robin J. (with Woodall, D. R.) The Appel-Haken proof of the four-color theorem. *Selected topics in graph theory*, pp. 83-101. Academic Press, London, 1978. (See **81e:05059**) 05C15
- (with Fiorini, Stanley) Edge-colorings of graphs. *Selected topics in graph theory*, pp. 103-126. Academic Press, London, 1978. (See **81e:05059**) 05C15
- (with Schwenk, Allen J.) On the eigenvalues of a graph. *Selected topics in graph theory*, pp. 307-336. Academic Press, London, 1978. (See **81e:05059**) 05C50
- Map-colouring problems. *Bull. Inst. Math. Appl.* 16 (1980), no. 1, 16-19. (Editors) **81a:05053** 05C15
- See also *Selected topics in graph theory*, **81e:05059**; *Graph theory and combinatorics*, **81h:05004** and *Applications of graph theory*, **81h:05050**
- Wilson, Rodney K. (with Aifantis, Elias C.) A coupled diffusion-deformation theory. *Proceedings of the 16th Midwestern Mechanics Conference* (Kansas State Univ., Manhattan, Kan., 1979), pp. 255-260. *Develop. in Mech.*, 10, Kansas St. Univ., Manhattan, Kan., 1979. (See **81m:73010**) 76R99
- Wilson, Roland The probability distribution of the sum of N sampled baseband outputs of a product detector whose inputs are equal power coherent narrow-band signals in a Gaussian channel. *IEEE Trans. Comm.* 27 (1979), no. 5, 796-801. (Author's summary) **81i:94008** 94A12
- Wilson, S. J. (with Sen, K. K.) Light scattering by an optically thin inhomogeneous, spherically-symmetric planetary atmosphere: brightness at the zenith near the terminator. *Astrophys. and Space Sci.* 71 (1980), no. 2, 405-410. (Authors' summary) **81h:78024** 78A45 (85A99)
- Wilson, S. R. A note on the correct definition of additive deviation and dominance deviation. *Ann. Human Genetics* 44 (1980/81), no. 1, 113-115. (Jon Stene) **81j:92027** 92A10
- Some comments on: "On the probabilities of obtaining negative estimates of genetic variance components" [Biometrical J. 20 (1978), no. 1, 69-79; MR 58 #18931] by W. Y. Tan and S. P. Wong. *Biometrical J.* 22 (1980), no. 1, 89-90. (Editors) **81j:62140** 62J10 (62P10)
- Wilson, Stephen E. Operators over regular maps. *Pacific J. Math.* 81 (1979), no. 2, 559-568. (Jonathan L. Gross) **81a:57004** 57M15 (05C10)
- Wilson, Stephen M. J. Generators by inflation. *Séminaire de Théorie des Nombres*, 1978-1979, Exp. No. 3, 9 pp., CNRS, Talence, 1979. (Chih-Han Sah) **81b:20011** 20C05 (18F25, 20J06)
- A counterexample in the Galois module structure of wild extensions of the rational field. *Séminaire Delange-Pisot-Poitou*, 20e année: 1978/1979. *Théorie des nombres*, Fasc. 2 (French), Exp. No. 33, 1 p., Secrétariat Math., Paris, 1980. (Editors) **81m:12015** 12A57
- Wilson, Thomas C. (with Shortt, Joseph) An $O(\log n)$ algorithm for computing general order- k Fibonacci numbers. *Inform. Process. Lett.* 10 (1980), no. 2, 68-75. (From the introduction) **81a:68053** 68C25 (10A35)
- Wilson, W. B. Internal gauge symmetries and the gravitational field. *Gen. Relativity Gravitation* 12 (1980), no. 1, 51-55. (Authors' summary) **81d:81059** 81E10 (49H05, 83D05)
- (with Swamy, N. V. V. J.) Note on Bäcklund transformations, Dirac factorization and the sine-Gordon equation. (Italian summary) *Nuovo Cimento A* (11) 56 (1980), no. 1, 44-50. (H. Rund) **81i:35152** 35Q20 (78A40, 81C05)
- Wilson, W. Stephen (with Ravenel, Douglas C.) The Morava K -theories of Eilenberg-Mac Lane spaces and the Conner-Floyd conjecture. *Amer. J. Math.* 102 (1980), no. 4, 691-748. (J. F. Adams) **81i:55005** 55N20 (55P20, 55T20, 57R85)
- Wilson, Weldon James Generalized phase factors and the interaction of Dirac particles. *Phys. Lett. A* 75 (1979/80), no. 3, 156-158. (Author's summary) **81k:81041** 81C99
- (with Suura, H.; Young, Bing Lin) Relativistic wave equation and heavy quarkonium spectra. *Phys. Rev. D* (3) 21 (1980), no. 11, 3204-3211. (Authors' summary) **81g:81098** 81G05
- Wilson, J. W. (with Schaeffer, L. R.; Thomson, Robin) Simultaneous estimation of variance and covariance components from multitrait mixed model equations (French summary) *Biometrics* 34 (1978), no. 2, 199-208. (R. Zmylony) **81a:62066** 62J05
- von Wilcki, Ingeborg See Leibniz in Paris, **81m:01022b**
- Wimmer, H. K. The equation $(g(x))_x \cdot Ax - Bg(x) = h(x)$. *J. Math. Anal. Appl.* 67 (1979), no. 1, 198-204. (T. G. Proctor) **81j:34078** 34C30
- Two linear equations in formal power series. *Linear Algebra Appl.* 29 (1980), 465-469. (V. M. Popov) **81j:34099** 34D99
- Wimp, Jet (with Colton, David) Remarks on the representation of zero by solutions of differential equations. *Proc. Amer. Math. Soc.* 74 (1979), no. 2, 232-234. (C. F. Dunkl) **81h:34035** 34B25 (33A40)
- Windisch, Günther Zur Zeitschrittweitenwahl bei Differenzmethoden für quasilineare Wärmeleitprobleme. *Wiss. Z. Tech. Hochsch. Karl-Marx-Stadt* 21 (1979), no. 5,

- 619-625. (Author's summary) **81g:65127** 65N05
(with Weinelt, Wilfried) Numerische Lösung der Wärmeleitungsgleichung mit nichtlinearem Anteil für Rechteckgebiete durch Differenzenmethoden. *Beiträge Numer. Math.* **8** (1980), 177-180. (A. O. Garder) **81g:65138b** 65N10
- Wineman, A. (with Rajagopal, K. R.) On constitutive equations for branching of response with selectivity. (French and German summaries) *Internat. J. Non-Linear Mech.* **15** (1980), no. 2, 83-91. (Authors' summary) **81e:73006** 73B05
- Wing, Omar (with Huang, John W.) A computation model of parallel solution of linear equations. *IEEE Trans. Comput.* **29** (1980), no. 7, 632-638. (Authors' summary) **81f:68041** 68B20
- Winkler, T. Zeros of entire functions. *Zeszyty Nauk. Univ. Jagielloń. Prace Mat.* **20** (1979), 95-99. (Lawrence Gruman) **81g:32004** 32A15
- Winkour, J. (with Tod, K. P.) Singularities at real points of X -space. *Gen. Relativity Gravitation* **12** (1980), no. 2, 99-108. (Garry Ludwig) **81h:83016** 83C30 (53C80)
- Winkelbauer, Karel On the asymptotic properties of discrete channels decomposable into stable components. *Proceedings of the Second Prague Symposium on Asymptotic Statistics (Hradec Králové, 1978)*, pp. 327-340, North-Holland, Amsterdam, 1979. (From the introduction) **81f:94018** 94A40
- Winkelmann, James R. (with Kokotović, Petar V.; Allemong, John J.; Chow, Joe H.) Singular perturbation and iterative separation of time scales. *Automatica—J. IFAC* **16** (1980), no. 1, 23-33. (Authors' summary) **81g:93042** 93C10
(with Chow, Joe H.; Allemong, John J.; Kokotović, Petar V.) Multi-time-scale analysis of a power system. *Automatica—J. IFAC* **16** (1980), no. 1, 35-43. (Authors' summary) **81g:93008** 93A15
- Winkler, G. (with V. Weizsäcker, Heinrich) Noncompact extremal integral representations: some probabilistic aspects. *Functional analysis: surveys and recent results, II (Proc. Second Conf. Functional Anal., Univ. Paderborn, Paderborn, 1979)*, pp. 115-148, North-Holland Math. Studies, **38**, North-Holland, Amsterdam, 1980. (Peter Dodds) **81f:46017** 46A55 (60A10)
- Winkler, Robert L. (with Brooks, Daniel G.) Competitive bidding with dependent value estimates. *Oper. Res.* **28** (1980), no. 3, part 1, 603-613. (Authors' summary) **81d:90005** 90A05
- Winkmann, K. (with Meyer, Albert R.) The fundamental theorem of complexity theory (preliminary version). *Foundations of computer science, III (Third Adv. Course, Amsterdam, 1978)*, Part 1, pp. 97-112, Math. Centre Tracts, **108**, Math. Centrum, Amsterdam, 1979. (From the introduction) **81h:68053** 68C25 (03D15)
(with Rivest, Ronald L.; Meyer, Albert R.; Kleitman, Daniel J.) Coping with errors in binary search procedures. *J. Comput. System Sci.* **20** (1980), no. 3, 396-404. (Authors' summary) **81f:68092** 68E05 (68C25)
- zjawia-Winkowska, Zofia See Zjawia-Winkowska, Zofia
- Winkowski, Józef (with Maggiori-Schettini, Andrea) Processes in structures. *Graph-grammars and their application to computer science and biology (Internat. Workshop, Bad Honnef, 1978)*, pp. 317-330, *Lecture Notes in Comput. Sci.*, **73**, Springer, Berlin, 1979. (From the introduction) **81e:68056** 68C40 (68B20)
- An algebraic approach to concurrence. *Mathematical foundations of computer science, 1979 (Proc. Eighth Symp., Olomouc, 1979)*, pp. 523-532, *Lecture Notes in Comput. Sci.*, **74**, Springer, Berlin, 1979. (See **81e:68044**) 68B10
(with Maggiori-Schettini, Andrea; Wedde, Horst) Modeling a solution for a control problem in distributed systems by restrictions. *Semantics of concurrent computation (Proc. Internat. Symp., Eötvös, 1979)*, pp. 226-248, *Lecture Notes in Comput. Sci.*, **70**, Springer, Berlin, 1979. (Authors' summary) **81f:68036** 68B20
Behaviours of concurrent systems. *Theoret. Comput. Sci.* **12** (1980), no. 1, 39-60. (Authors' summary) **81f:68042** 68B20
- Winley, Graham (with Tognetti, Keith) Stochastic growth models with logistic mean population. *J. Theoret. Biol.* **82** (1980), no. 1, 167-169. (T. G. Hallam) **81f:92033** 92A17 (92A15)
(with Tognetti, Keith) The growth of a column of age and position dependent cells. *Math. Biosci.* **50** (1980), no. 1-2, 59-74. (Authors' summary) **81d:92017** 92A15
- Winograd, Samuel Complexity of computations. *ACM 78 (Proc. Annual Conf., Assoc. Comput. Mach., Washington, D.C., 1978)*, pp. 138-141, *ACM*, New York, 1978. (From the introduction) **81e:68053** 68C25
★Arithmetic complexity of computations. CBMS-NSF Regional Conference Series in Applied Mathematics, **33**, Society for Industrial and Applied Mathematics (SIAM), Philadelphia, Pa., 1980. iii+93 pp. ISBN 0-89871-163-0 (H. F. de Groote) **81k:68039** 68C25 (68-02)
- Winogradski, Judith ★Les méthodes tensorielles de la physique. (French) [Tensorial methods of physics] Calcul tensoriel dans un continuum amorphe. [Tensor calculus in an amorphous continuum] Masson, Paris, 1979. viii+219 pp. ISBN 2-225-49269-7 (A. P. Stone) **81i:53015** 53A45
- Winkel, Glynn (with Nielsen, Mogens; Plotkin, Gordon) Petri nets, event structures and domains. *Semantics of concurrent computation (Proc. Internat. Symp., Eötvös, 1979)*, pp. 266-284, *Lecture Notes in Comput. Sci.*, **70**, Springer, Berlin, 1979. (Authors' introduction) **81g:68043** 68B20
- Winkow, Alicia Browner There are 2^n nonhomeomorphic continua in $\beta\mathbb{R}^n - \mathbb{R}^n$. *Pacific J. Math.* **84** (1979), no. 1, 233-239. (Allan Calder) **81a:54025** 54D40 (54F15, 54F43)
- Winnor, N. K. (with Christiansen, J. P.) A numerical model for laser targets. *J. Comput. Phys.* **35** (1980), no. 3, 291-318. (Authors' summary) **81h:76074** 76X05
- Winston, K. J. (with Kleitman, Daniel J.) The asymptotic number of lattices. Combinatorial mathematics, optimal designs and their applications (Proc. Sympos. Combin. Math. and Optimal Design, Colorado State Univ., Fort Collins, Colo., 1978). *Ann. Discrete Math.* **6** (1980), 243-249. (R. W. Quackenbush) **81m:06016** 06B99 (05A15)
- Wintensberger, Jean-Pierre Extensions abéliennes et groupes d'automorphismes de corps locaux. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **290** (1980), no. 5, A201-A203. (From the text and from the summary) **81c:12026** 12B15
- Winter, B. B. (with Földes, Antónia; Rejtő, L.) Strong consistency properties of nonparametric estimators for randomly censored data. The product-limit estimator, estimation of density and failure rate. *Transactions of the Eighth Prague Conference on Information Theory, Statistical Decision Functions, Random Processes (Prague, 1978)*, Vol. C, pp. 105-121, Reidel, Dordrecht, 1979. (A. P. Basu) **81g:62164** 62N05 (62G05)
- An alternate development of conditioning. *Statist. Neerlandica* **33** (1979), no. 4, 197-212. (R. M. Dudley) **81c:60002** 60A10
- Winter, David J. Cartan decompositions and Engel subalgebra triangulability. *J. Algebra* **62** (1980), no. 2, 400-417. (Robert Lee Wilson) **81e:17005** 17B05 (17B20)
- Winter, Jeffrey L. The matrix equation $X^n = A$. *J. Algebra* **67** (1980), no. 1, 82-87. (George P. Barker) **81k:15022** 15A24
(with Friedman, Moshe) An asymptotic solution of inventory lot-size models with homogeneous time-dependent demand functions. *SIAM J. Algebraic Discrete Methods* **1** (1980), no. 3, 300-314. (N. U. Prabhu) **81f:90063** 90B05 (60K30)
- Winterbottom, Alan Asymptotic expansions to improve large sample confidence intervals for system reliability. *Biometrika* **67** (1980), no. 2, 351-357. (William E. Thompson) **81k:62141** 62N05 (41A60)
- Estimation for the bivariate normal correlation coefficient using asymptotic expansions. *Comm. Statist. B—Simulation Comput.* **9** (1980), no. 6, 599-609. (Authors' summary) **81m:62093** 62H12 (62E20, 62F25)
- Winternitz, P. (with Patera, J.; Zassenhaus, Hans) On the maximal abelian subgroups of the quadratic classical algebraic groups. *C. R. Math. Rep. Acad. Sci. Canada* **2** (1980), no. 5, 237-242. (Editors) **81i:20052** 20G20
(with Moshinsky, M.) Quadratic Hamiltonians in phase space and their eigenstates. *J. Math. Phys.* **21** (1980), no. 7, 1667-1682. (Ernest G. Kalnins) **81f:81014** 81C05 (22E70, 35J10)
(with Daumens, M.) Discrete two-variable expansions of scattering amplitudes for particles with spin. *Phys. Rev. D* **3** (1980), no. 7, 1919-1927. (A. Corciovi) **81h:81121** 81F20
- Winters, Gay B. Deformations of fibers of curves over $k[[t]]$. *Amer. J. Math.* **101** (1979), no. 5, 1007-1023. (Jonathan M. Wahl) **81f:14005** 14D15 (14B07)
- Wintgen, Peter Über die totale Abkürzungsmenge verknoteter Sphären. *Beiträge Algebra Geom.* **9** (1980), 131-147. (K. Lamotte) **81j:57013** 57Q45 (53C40)
- Wintner, Ragnar (with Lyche, T.) A stable recurrence relation for trigonometric B-splines. *J. Approx. Theory* **25** (1979), no. 3, 266-279. (Jean Tzimbario) **81c:42007** 42A10 (41A15)
- A conservative finite element method for the Korteweg-de Vries equation. *Math. Comp.* **34** (1980), no. 149, 23-43. (Stephen W. Brady) **81a:65108** 65N30 (35Q20)
- Some superlinear convergence results for the conjugate gradient method. *SIAM J. Numer. Anal.* **17** (1980), no. 1, 14-17. (Erich Bohl) **81k:65060** 65J10
- A stable finite element method for initial-boundary value problems for first-order hyperbolic systems. *Math. Comp.* **36** (1981), no. 153, 65-86. (Authors' summary) **81m:65181** 65N30
- Wiring, M. (with von Eye, A.) An attempt for a mathematical foundation and evaluation of MACS, a method for multidimensional automata cluster detection. (German and Russian summaries) *Biometrical J.* **20** (1978), no. 7-8, 655-666. (A. Aiello) **81a:62050** 62H30 (68G10)
(with Broy, M.; Dosch, W.; Partsch, H.; Pepper, P.) Existential quantifiers in abstract data types. *Automata, languages and programming (Sixth Colloq., Graz, 1979)*, pp. 73-87, *Lecture Notes in Comput. Sci.*, **71**, Springer, Berlin, 1979. (Authors' summary) **81d:68028** 68B15
(with Broy, M.; Partsch, H.; Pepper, P.) Semantic relations in programming languages. *Information processing 80 (Proc. IFIP Congr., Tokyo/Melbourne, 1980)*, pp. 101-106, *IFIP Congress Ser.*, **8**, North-Holland, Amsterdam, 1980. (See **81i:68009**) 68B10
(with Broy, M.) Abstract data types as lattices of finitely generated models. *Mathematical foundations of computer science, 1980 (Proc. Ninth Symp., Rydzyn, 1980)*, pp. 673-685, *Lecture Notes in Comput. Sci.*, **88**, Springer, Berlin, 1980. (See **81k:68003**) 68B15
- Wirth, Andrew (with Bedingfield, Susan E.) Norm and order properties of Banach lattices. *J. Austral. Math. Soc. Ser. A* **29** (1980), no. 3, 331-336. (C. D. Aliprantis) **81f:46028** 46B30 (46A40)
- Wirth, M. C. (with Shang, J. S.; Buning, P. G.; Hankey, W. L.) Performance of a vectorized three-dimensional Navier-Stokes code on the CRAY-1 computer. *AIAA J.* **18** (1980), no. 9, 1073-1079. (From the summary) **81f:76037** 76D05 (65V05, 76L05)
- Wisbauer, Robert F -semiperfekte und perfekte Moduln in $\mathcal{O}[M]$. *Math. Z.* **173** (1980), no. 3, 229-234. (J. Hausen) **81m:13009** 13C13 (13C10)
- Wischniewsky, Manfred Bernd (with Porst, Hans-Eberhard) Existence and applications of monoidally closed structures in topological categories. *Categorical topology (Proc. Internat. Conf., Free Univ. Berlin, Berlin, 1978)*, pp. 277-292, *Lecture Notes in Math.*, **719**, Springer, Berlin, 1979. (Bodo Pareigis) **81h:18003** 18D20
On the equivalence of concepts in system theory. I. Applications of Kan-extensions over V -categories. *Fundamentals of computation theory (Proc. Conf. Algebraic, Axiom. and Categorical Methods in Comput. Theory, Berlin/Wendisch-Rietz, 1979)*, pp. 523-536, *Math. Research*, **2**, Akademie-Verlag, Berlin, 1979. (Jiří Adámek) **81e:18011** 18D20 (18B20, 68D30)
- A generalized duality theorem for structure functors. *Structure of topological categories (Proc. Conf., Univ. Bremen, Bremen, 1978)*, pp. 195-221, *Mathematik—Arbeitspapiere*, **18**, Univ. Bremen, Bremen, 1979. (Editors) **81d:18002** 18A22 (54B30)
- Structure functors. Representation and existence theorems. *Structure of topological categories (Proc. Conf., Univ. Bremen, Bremen, 1978)*, pp. 222-240, *Mathematik—Arbeitspapiere*, **18**, Univ. Bremen, Bremen, 1979. (From the introduction) **81d:18008** 18A40
(with Tholen, Walter) Structure functors. External characterizations. *Structure of topological categories (Proc. Conf., Univ. Bremen, Bremen, 1978)*, pp. 241-252, *Mathematik—Arbeitspapiere*, **18**, Univ. Bremen, Bremen, 1979. (From the introduction) **81f:18011** 18A99 (18D99, 54B30)
- Topologically-algebraic structure functors \equiv full reflective or coreflective restrictions of semitopological functors. *Cahiers Topologie Géom. Différentielle* **20** (1979), no. 3, 311-330. (J. Sonner) **81g:18007** 18B30 (54B30)
- A generalized duality theorem for structure functors. *Cahiers Topologie Géom. Différentielle* **21** (1980), no. 2, 191-224. (Walter Tholen) **81f:18012** 18A99 (18A40)
(with Street, Ross; Tholen, Walter; Wolff, Harvey) Semitopological functors. III. Lifting of monads and adjoint functors. *J. Pure Appl. Algebra* **16** (1980), no. 3, 299-314

- (M. Hulek) **81g:19003** 18A40
See also *Structure of topological categories*, **81a:18001**
- Wise, Gary L. (with Halverson, Don R.) Discrete-time detection in q -mixing noise. *IEEE Trans. Inform. Theory* **26** (1980), no. 2, 189–198. (Authors' summary) **81c:94006** 94A12
The effect of a zero memory nonlinearity on the bandlimitedness of contaminated Gaussian inputs. *IEEE Trans. Inform. Theory* **26** (1980), no. 3, 345–347. (Authors' summary) **81h:94008** 94A05
(with Halverson, Don R.) A detection scheme for dependent noise processes. *J. Franklin Inst.* **309** (1980), no. 5, 287–300. (Authors' summary) **81d:94006** 94A12 (93E10)
(with Devroye, Luc P.) Detection of abnormal behavior via nonparametric estimation of the support. *SIAM J. Appl. Math.* **38** (1980), no. 3, 480–488. (Paul Deheuvels) **81k:62050** 62G05 (62G10)
- Wise, Mark B. (with Trainor, Lynn E. H.) ★From physical concept to mathematical structure: an introduction to theoretical physics. Mathematical Expositions, 22. University of Toronto Press, Toronto, Ont.-Buffalo, N.Y.-London, 1979. xviii + 399 pp. ISBN 0-8020-5432-3 (D. ter Haar) **81h:00011** 00A69
- Wihart, David (with Olsson, Geert Jan) Discontinuous Stachelberg solutions. *Internat. J. Systems Sci.* **10** (1979), no. 12, 1359–1368. (Authors' summary) **81h:90186** 90D25
See also *Computat* **1980**, **81j:62007**
- Wimmer, R. J. (with Jordan, J. H.; Walch, Ray) Triangles with integer sides. *Amer. Math. Monthly* **86** (1979), no. 8, 686–689. (Heiko Harborth) **81f:05013** 05A15 (10A21, 52A37)
- Winiarski, Henryk On solving the system of n first-order ordinary linear differential equations (and the estimation of the solution). *Fasc. Math.* **10** (1978), 29–45. (Roger T. Lewis) **81j:34008** 34A05 (34D05)
- Winkott, B. (with Gruber, Ch.) Surface tension and phase transition for lattice systems. II. *Helv. Phys. Acta* **52** (1979), no. 5–6, 597–620 (1980). (Authors' summary) **81g:82074** 82A67 (82A25)
- Wisniewski, Johannes W. (with Specht, Bernhard) Inclusion of hybrid deformation elements in the class of simple deformation models. *Internat. J. Numer. Methods Engrg.* **15** (1980), no. 6, 853–866. (Authors' summary) **81f:73041** 73K25
- Witkowski, Elena Paths in powers of graph. (Czech summary) *Časopis Pěst. Mat.* **105** (1980), no. 3, 292–301, 316. (Linda Lesniak-Foster) **81h:05068** 05C38
- de Wit, B. (with Berends, F. A.; van Holten, J. W.; van Nieuwenhuizen, P.) On field theory for massive and massless spin- $\frac{1}{2}$ particles. *Nuclear Phys. B* **154** (1979), no. 2, 261–282. (Ju. M. Širokov) **81d:81068** 81E99 (81G25)
(with van Holten, J. W.; van Proeyen, A.) Transformation rules of $N=2$ supergravity multiplets. *Nuclear Phys. B* **167** (1980), no. 1–2, 186–204. (H. S. Green) **81g:81076** 81E99 (81G25)
(with de Roo, M.; van Holten, J. W.; van Proeyen, A.) Chiral superfields in $N=2$ supergravity. *Nuclear Phys. B* **173** (1980), no. 1, 175–188. (Authors' summary) **81j:83046** 83E99
(with van Holten, J. W.; van Proeyen, A.) Central charges and conformal supergravity. *Phys. Lett. B* **95** (1980), no. 1, 51–55. (Authors' summary) **81g:83063** 83E99
- Witczyńska, Danuta Pappus' configuration in the projective space P^n . *Demonstratio Math.* **12** (1979), no. 3, 593–598. (J. W. Freeman) **81h:51003** 51A20
- Witczyński, Krzysztof On some properties of cyclic collineations in the n -dimensional projective space. *Demonstratio Math.* **12** (1979), no. 3, 769–783. (Dov Avishalom) **81a:51002** 51N15 (51N15)
- Witkowski, Lech On coalgebras and linearly topological rings. *Colloq. Math.* **40** (1978/79), no. 2, 207–218. (Richard K. Molnar) **81c:16057** 16A80 (16A21)
- Witowski, P. (with Heyvaerts, Jean; Lasry, Jean-Michel; Schatzman, Michelle) Solar flares: a nonlinear eigenvalue problem in an unbounded domain. *Bifurcation and nonlinear eigenvalue problems* (Proc., Session, Univ. Paris XIII, Villetaneuse, 1978), pp. 160–191. *Lecture Notes in Math.*, 782, Springer, Berlin, 1980. (Authors' summary) **81f:85001** 85A20 (35B32, 65P05)
- Witach, K. J. Ein schiefes Randwertproblem zu einer elliptischen Differentialgleichung zweiter Ordnung mit einer expliziten L_2 -Abschätzung für die zweiten Ableitungen der Lösung. (English summary) *Math. Methods Appl. Sci.* **1** (1979), no. 2, 214–240. (M. H. Protter) **81h:35056** 35J25 (35Q20)
- Witcheł, W. The semiclassical and the quasiclassical partition function of a quartic anharmonic oscillator. *Chem. Phys.* **50** (1980), no. 2, 265–271. (Author's summary) **81i:82018** 82A15
A statistical variation-perturbation method for the partition function of anharmonic oscillators. *Phys. Lett. A* **77** (1980), no. 2–3, 107–111. (Author's summary) **81g:82016** 82A15
- Witsenhausen, Hans S. Informational aspects of stochastic control. *Analysis and optimisation of stochastic systems* (Proc. Internat. Conf., Univ. Oxford, Oxford, 1978), pp. 273–284, Academic Press, London, 1980. (Author's introduction) **81m:94011** 94A15 (93E20)
On intersections of interval graphs. *Discrete Math.* **31** (1980), no. 2, 211–216. (Takashi Hamada) **81i:05122** 05C99 (05C65)
Some aspects of convexity useful in information theory. *IEEE Trans. Inform. Theory* **26** (1980), no. 3, 265–271. (Author's summary) **81h:94016** 94A15
Indirect rate distortion problems. *IEEE Trans. Inform. Theory* **26** (1980), no. 5, 518–521. (Author's summary) **81g:94023** 94A34
(with Beneš, V. E.; Shepp, L. A.) Some solvable stochastic control problems. *Stochastics* **4**, no. 1, 39–83 (1980/81). (H.-J. Engelbert) **81m:93084** 93E20
- Witbrodt, Edmund Calculating the dynamics of a system, which is moving in the plane, and which is modelled by means of the stiff finite element method. (Polish. English and Russian summaries) *Mechanics and computers*, Vol. 2 (Polish), pp. 97–119, PWN, Warsaw, 1980. (See **81m:73008**) 73K25 (65N30)
(with Wilczyński, Bogdan) Algorithm for reducing stiffness and mass matrices in the stiff finite element method. (Polish. English and Russian summaries) *Mechanics and computers*, Vol. 2 (Polish), pp. 131–140, PWN, Warsaw, 1980. (See **81m:73008**) 65N30
- Witek, G. Intensität von Schallfeldern bewegter Punktstrahler. (English and French summaries) *Acustica* **45** (1980), no. 4, 316–321. (Author's summary) **81h:76047** 76Q05
- Witten, Edward Some comments on the recent twistor space constructions. *Complex manifold techniques in theoretical physics* (Proc. Workshop, Lawrence, Kan., 1978), pp. 207–218, Res. Notes in Math., 32, Pitman, San Francisco, Calif., 1979. (Nicholas M. J. Woodhouse) **81h:81077** 81E10 (14F05, 53C05)
(with Goldschmidt, Y. Y.) Conservation laws in some two-dimensional models. *Phys. Lett. B* **91** (1980), no. 3–4, 392–396. (Authors' summary) **81b:81024** 81E99 (53C10)
(with Weinberg, Steven) Limits of massless particles. *Phys. Lett. B* **96** (1980), no. 1–2, 59–62. (Authors' summary) **81h:81094** 81E99
(with Coleman, Sidney) Chiral-symmetry breakdown in large- N chromodynamics. *Phys. Rev. Lett.* **45** (1980), no. 2, 100–102. (Authors' summary) **81d:81101** 81G05 (58G25)
- Witten, T. A., Jr. (with Schäfer, Lothar) Renormalized field theory of polymer solutions: extension to general polydispersity. (French summary) *J. Physique* **41** (1980), no. 6, 459–473. (Authors' summary) **81d:82040** 82A42 (81E15)
- Wittenmark, B. (with Ljung, Lennart) On a stabilizing property of adaptive regulators. Identification and system parameter estimation (Proc. Fourth IFAC Symp., Tbilisi, 1976), Part 3, pp. 1815–1823, North-Holland, Amsterdam, 1978. (See **80d:93010e**) 93C40
- Wittgenstein, Ludwig ★Wittgenstein's lectures. Cambridge, 1932–1935. From the notes of Alice Ambrose and Margaret Macdonald. Edited and with a preface by Alice Ambrose. Rowman and Littlefield, Totowa, N.J., 1979. xi + 225 pp. ISBN 0-8476-6151-2 (I. Grattan-Guinness) **81a:00019b** 00A25 (03A05)
★Wittgenstein's lectures. Cambridge, 1930–1932. From the notes of John King and Desmond Lee. Edited and with an introduction by Desmond Lee. Rowman and Littlefield, Totowa, N.J., 1980. xvii + 124 pp. ISBN 0-8476-6201-2 (I. Grattan-Guinness) **81a:00019a** 00A25 (03A05)
See also *Barker, Peter*, **81m:01027**
- Witting, H. (with Bönner, N.; Müller-Funk, U.) A Chernoff-Savage theorem for correlation rank statistics with applications to sequential testing. *Asymptotic theory of statistical tests and estimation* (Proc. Adv. Internat. Symp., Univ. North Carolina, Chapel Hill, N.C., 1979), pp. 85–125, Academic Press, New York, 1980. (I. R. Savage) **81f:62073** 62G10 (62L10)
- Witke, W. See *Numerical methods in geomechanics*, **81m:73009**
- Wittman, Donald Power in electoral games. *Foundations and applications of decision theory* (Papers, Internat. Workshop, Univ. Western Ontario, London, Ont., 1975), Vol. II, pp. 185–206, Univ. Western Ontario Series in Philos. Sci., 13, Reidel, Dordrecht, 1978. (Marc Hallin) **81i:90232** 90D35 (62C99, 90A08)
- Witstock, Gerd Matrix order and W^* -algebras in the operational approach to statistical physical systems. *Comm. Math. Phys.* **74** (1980), no. 1, 61–70. (P. R. Chernoff) **81j:81006** 81B99 (46L60, 82A15)
- Witzgall, Christoph On one-row linear programs. *Extremal methods and systems analysis* (Internat. Symp., Univ. Texas, Austin, Tex., 1977), pp. 384–414, *Lecture Notes in Econ. and Math. Systems*, 174, Springer, Berlin, 1980. (K. G. Murty) **81e:90063** 90C05
(with Shier, D. R.) Arc tolerances in shortest path and network flow problems. *Networks* **10** (1980), no. 4, 277–291. (Authors' summary) **81h:90034** 90B10
- Wiweger, Antoni (with Semadeni, Zbigniew) ★Einführung in die Theorie der Kategorien und Funktoren. (German) [Introduction to the theory of categories and functors] Translated from the second Polish edition by E. Buchsteiner-Kiesling. With English, French and Russian summaries. Teubner-Texte zur Mathematik, BSB B. G. Teubner Verlagsgesellschaft, Leipzig, 1979. 319 pp. (Editors) **81i:18001** 18–01
- Wixom, J. A. (with Nielson, Gregory M.; Thomas, D. H.) Interpolation in triangles. *Bull. Austral. Math. Soc.* **20** (1979), no. 1, 115–130. (T. J. Rivlin) **81j:65026** 65D05 (65D10)
- Włodarczyk, E. (with Kasiak, M.) Reflection of concentric spherical stress wave in elastic medium. (Polish and Russian summaries) *J. Tech. Phys.* **21** (1980), no. 1, 97–110. (From the introduction) **81h:73018** 73D15 (76L05)
- Włodarczyk, Kazimierz Inequalities of Grunsky-Nehari type for pairs of vector functions. *Ann. Polon. Math.* **37** (1980), no. 2, 179–198. (W. E. Kirwan) **81h:30019** 30C50
- Wnuk, Barbara Representation of the fundamental Sylow p -subgroups of permutation groups by the algebras defined on the sequences. (Polish summary) *Zeszyty Nauk. Wyz. Szkoły Ped. w Opolu Mat.* **21** (1980), Algebra, Dydak. Mat., Geom. Zastos. Mat., 15–22. (Editors) **81m:20008** 20B35
On symmetry groups of algebraic operations. (Polish. English summary) *Zeszyty Nauk. Wyz. Szkoły Ped. w Opolu Mat.* **21** (1980), Algebra, Dydak. Mat., Geom. Zastos. Mat., 23–27. (Author's summary) **81m:08008** 08A35 (20B99)
- Wnuk, Witold The converse of Ljapunov convexity theorem. *Comment. Math. Prace Mat.* **21** (1980), no. 2, 389–390. (N. Dinucleanu) **81i:28013** 28B05
- Wode, Dieter Die Orthopol-Bijektion zwischen dem Feuerbachkreis und dem Büschel der Geraden durch den Umkreismittelpunkt eines Dreiecks. *Mitt. Math. Ges. Hamburg* **10**, no. 7, 587–617 (1979). (J. Hoschek) **81g:51010** 51M15 (51N25)
- Wódkiewicz, K. Non-Markovian resonance fluorescence. *Phys. Lett. A* **73** (1979), no. 2, 94–96. (Author's summary) **81m:81093** 81K05
Resonance fluorescence and spontaneous emission as tests of QED. *Foundations of radiation theory and quantum electrodynamics*, pp. 109–117, Plenum, New York, 1980. (See **81i:81002**) 81K05
- Wofsy, Carla Lipow Analysis of a molecular signal for cell function in allergic reactions. *Math. Biosci.* **49** (1980), no. 1–2, 69–86. (Author's summary) **81i:92006** 92A07
- Wöhl, Kai Zur Komplexität der Presburger Arithmetik und des Äquivalenzproblems einfacher Programme. *Theoretical computer science* (Fourth GI Conf., Aachen, 1979), pp. 310–318, *Lecture Notes in Comput. Sci.*, 67, Springer, Berlin, 1979. (Lutz Priese) **81h:03015** 03B25 (68C25)
- Wolowid, I. P. (with Taylor, Laurence; Perry, J. N.) The negative binomial as a dynamic ecological model for aggregation, and the density dependence of k . *J. Animal Ecology* **48** (1979), no. 1, 289–304. (Authors' summary) **81m:92056** 92A17 (62P10)
- Wójcicki, Ryszard Set-theoretic representations of empirical phenomena. With discussion. *Problems in logic and ontology* (Colloq., Inst. Wissenschaftstheorie, Salzburg, 1973),

- pp. 243-249, 298-304, *Akad. Druck- und Verlagsanstalt, Graz*, 1977. (Lawrence Sklar) **81d:03009** 03A05 (03B99)
- More about referential matrices. *Polish Acad. Sci. Inst. Philos. Sociol. Bull. Sect. Logic* 9 (1980), no. 2, 93-95. (Editors) **81h:03064** 03B99
- Wojciechowska, Agnieszka** ★Elementy logiki i teorii mnogości. (Polish) [Elements of logic and set theory] Państwowe Wydawnictwo Naukowe (PWN), Warsaw, 1979. 200 pp. ISBN 83-01-00756-7 (Vadim Komkov) **81h:04002** 04-01 (03-01)
- Noninductive proof of principles that are equivalent to the axiom of choice. (Polish) *Wiadom. Mat.* (2) 22, no. 1, 125-133 (1979). (Stanisław J. Surma) **81d:04005** 04A25 (01A60)
- Wojciechowski, Jacek** Automatic decomposition of graph in topological analysis of electrical network. *Proceedings of the Fourth International Symposium on Network Theory (Ljubljana, 1979)*, pp. 147-153, Georgi, St.-Saphorin, 1979. (Author's summary) **81c:94061** 94C15
- Wojcik, A. S.** (with Yang, T. C.) Parallel and serial decompositions of multivalued sequential machines. *Proceedings of the Eighth International Symposium on Multiple-Valued Logic (Rosemont, Ill., 1978)*, pp. 179-186, IEEE, Long Beach, Calif., 1978. (Authors' summary) **81d:68064** 68D15 (94C10)
- Wojcik, Zdzisław Marcin** A cybernetic model of natural language. (Polish. English and Russian summaries) *Postępy Cybernet.* 3 (1980), no. 1, 85-108. (Author's summary) **81i:00009** 00A25 (62G10)
- Wojda, A. Paweł** (with Skupień, Zdzisław) Extremal non-(p, q)-Hamiltonian graphs. *Studia Sci. Math. Hungar.* 10 (1975), no. 3-4, 323-328 (1978). (Editors) **81k:05073** 05C45
- On a class of Hamiltonian-type notions. (French summary) *Problèmes combinatoires et théorie des graphes (Colloq. Internat. CNRS, Univ. Orsay, Orsay, 1976)*, pp. 431-434, Colloques Internat. CNRS, 260, CNRS, Paris, 1978. (S. F. Kapoor) **81e:05096** 05C45 (05C38)
- Wojnar, Ryszard** Stress equations of motion for Uflyand-Mindlin plate. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Tech.* 27 (1979), no. 8-9, 731-740 (1980). (L. P. Lebedev) **81k:73040** 73K10 (49H05)
- Wojtas, Mieczysław** A note on mutually orthogonal Latin squares. (Polish and Russian summaries) *Prace Nauk. Inst. Mat. Politech. Wrocław. Ser. Stud. Materialy No. 14 Analiza Dyskretna* (1980), 11-14. (Joseph Arkin) **81k:05022** 05B15 (62K10)
- Wojtecki, Leszek** (with Kociński, Jerzy) ★Critical scattering theory. An introduction. Phase Transition Phenomena, I. Elsevier Scientific Publishing Co., Amsterdam-New York; PWN—Polish Scientific Publishers, Warsaw, 1978. x+227 pp. ISBN 0-444-99795-4 (Editors) **81c:82001** 82-02
- Wojtkowiak, Zdzisław** On fibrations which are also cofibrations. *Quart. J. Math. Oxford Ser. (2)* 30 (1979), no. 120, 505-512. (Harvey Margolis) **81e:55012** 55P05 (55R05)
- Wolf, D.** Approximation of the invariant probability measure of an infinite stochastic matrix. *Adv. in Appl. Probab.* 12 (1980), no. 3, 710-726. (R. L. Tweedie) **81j:60078** 60J10 (60K25)
- Wolf, Edwin** Smoothness properties of functions in $R^2(X)$ at certain boundary points. *Internat. J. Math. Math. Sci.* 2 (1979), no. 3, 415-426. (L. I. Hedberg) **81a:46031** 46E20 (30C15)
- Wolf, Gerhard** (with Schmidt, Dieter) A method of generating integral relations by the simultaneous separability of generalized Schrödinger equations. *SIAM J. Math. Anal.* 10 (1979), no. 4, 823-838. (Ernest G. Kalnins) **81c:35019** 35C99 (33A99, 34A99)
- Wolf, Jack K.** (with Wyner, Aaron D.; Ziv, Jacob) Source coding for multiple descriptions. *Bell System Tech. J.* 59 (1980), no. 8, 1417-1426. (Authors' summary) **81h:94015** 94A29
- (with Chang, Shih Chun) A simple derivation of the MacWilliams identity for linear codes. *IEEE Trans. Inform. Theory* 26 (1980), no. 4, 476-477. (Authors' summary) **81g:94028** 94B05
- Wolf, Joseph A.** (with Lipsman, Ronald L.) The Plancherel formula for parabolic subgroups of the classical groups. *J. Analyse Math.* 34 (1978), 120-161 (1979). (Johan F. Aarnes) **81i:22022** 22E46
- Classification and Fourier inversion for parabolic subgroups with square integrable nilradical. *Mem. Amer. Math. Soc.* 22 (1979), no. 225, iii+166 pp. (Juan Tirao) **81a:22010** 22E45
- Wolf, K. R.** (with Steinberg, Stanley) Groups of integral transforms generated by Lie algebras of second- and higher-order differential operators. (Italian and Russian summaries) *Nuovo Cimento A* (11) 53 (1979), no. 2, 149-177. (Carl Wulman) **81c:22032** 22E70 (81C99)
- Wolf, Ralph J.** (with Hase, William L.) Quasiperiodic trajectories for a multidimensional anharmonic classical Hamiltonian excited above the unimolecular threshold. *J. Chem. Phys.* 73 (1980), no. 8, 3779-3790. (T. W. Barrett) **81j:81072** 81G55 (58F05, 80A30)
- Wolf, Thomas R.** Character correspondences induced by subgroups of operator groups. *J. Algebra* 57 (1979), no. 2, 502-521. (Peter Landrock) **81h:20010** 20C15
- Wolfe, Douglas A.** (with Fligner, Michael A.) Nonparametric prediction intervals for a future sample median. *J. Amer. Statist. Assoc.* 74 (1979), no. 366, part 1, 453-456. (Yves Lepage) **81a:62037** 62G15
- (with Costello, P.) Partially sequential treatments versus control multiple comparisons. *Biometrika* 67 (1980), no. 2, 403-412. (H. L. Harter) **81j:62141** 62J15 (62G10)
- (with Orban, John) Distribution-free partially sequential placement procedures. *Comm. Statist. A—Theory Methods* 9 (1980), no. 9, 883-904. (Nanak Chand) **81g:62138** 62L10 (62G10)
- (with Randles, Ronald H.; Fligner, Michael A.; Policello, George E., II) An asymptotically distribution-free test for symmetry versus asymmetry. *J. Amer. Statist. Assoc.* 75 (1980), no. 369, 168-172. (R. Ponnappalli) **81d:62040** 62G10
- Wolfe, Jerry M.** Convergence of discrete rational approximations. *J. Approx. Theory* 27 (1979), no. 3, 271-277. (D. J. Leeming) **81f:41018** 41A20
- Wolfe, John** (with Johnson, Jerry) Norm attaining operators. *Studia Math.* 65 (1979), no. 1, 7-19. (J. Diestel) **81a:47021** 47B05 (47D15)
- Wolfe, Michael Anthony** ★Numerical methods for unconstrained optimization. An introduction. *Van Nostrand Reinhold Co., New York-Toronto, Ont.-London*, 1978. viii+312 pp. ISBN 0-442-30214-2 (Jon W. Tolle) **81e:65030** 65K10 (90C30)
- A modification of Krawczyk's algorithm. *SIAM J. Numer. Anal.* 17 (1980), no. 3, 376-379. (W. Niethammer) **81k:65056** 65H10 (65G10)
- Wolfe, Peter** On diffracted wave fronts. *Proc. Roy. Soc. Edinburgh Sect. A* 84 (1979), no. 1-2, 35-54. (A. Ishimaru) **81d:78029** 78A45 (35C39)
- An integral operator arising in potential theory. *Applicable Anal.* 10 (1980), no. 1, 71-80. (J. Vesely) **81c:31014** 31B20
- An integral operator connected with the Helmholtz equation. *J. Funct. Anal.* 36 (1980), no. 1, 105-113. (D. L. Colton) **81d:45001** 45A05 (35J05, 47G05, 78A45)
- Wolfe, Philip** Sufficient minimization of piecewise-linear univariate functions. *Nonmonotonic optimization (Proc. IIASA Workshop, Laxenburg, 1977)*, pp. 127-130, IIASA Proc. Ser. 3, Pergamon, Oxford, 1978. (See **80d:49002**) 65K05
- Some references for the ellipsoid algorithm. *Management Sci.* 26 (1980), no. 8, 747-749. (Editors) **81i:90127** 90C05
- The "ellipsoid algorithm". *Science* 208 (1980), no. 4441, 240-242. (Editors) **81a:90110** 90C05
- Wolfe, Robert J.** Periodic solutions of a singularly perturbed differential system with applications to the Belousov-Zhabotinskii reaction. *J. Math. Anal. Appl.* 68 (1979), no. 2, 488-508. (L. Reizigs) **81j:34105** 34E15 (34C25)
- Wolfe, Stephen James** Mixtures of infinitely divisible distribution functions. *Analytic function methods in probability theory (Proc. Colloq. Methods of Complex Anal. in the Theory of Probab. and Statist., Koszuth L. Univ. Debrecen, Debrecen, 1977)*, pp. 359-367, Colloq. Math. Soc. János Bolyai, 21, North-Holland, Amsterdam, 1979. (Barthel W. Huff) **81b:60017** 60E07
- A characterization of Lévy probability distribution functions on Euclidean spaces. *J. Multivariate Anal.* 10 (1980), no. 3, 379-384. (D. N. Shanbhag) **81m:60025** 60E07 (60F05)
- v. Wolfersdorf, L.** (with Wolska-Bochenek, J.) A conjugacy problem of potential theory arising in calculus of variations. *Demonstratio Math.* 11 (1978), no. 3, 721-733. (Hélène Airault) **81c:31003** 31A25
- Necessary optimality conditions for optimal control problems with elliptic systems in the plane. *Optimization techniques (Proc. Ninth IFIP Conf., Warsaw, 1979), Part I*, pp. 455-464, *Lecture Notes in Control and Information Sci.*, 22, Springer, Berlin, 1980. (Rolf Klötzler) **81m:49023** 49B22
- Wolff, Georg** See **Burau, W.** **81a:01032**
- Wolff, H.** (with Schüler, L.) Automatische Klassifikation bei unbekannter Klassenzahl auf der Basis globaler Dichteschätzungen. (English summary) *Proceedings in Operations Research, 9 (Eighth Annual Meeting, Deutsch. Gesellsch. Operations Res., Regensburg, 1979)*, pp. 348-349, Physica, Würzburg, 1980. (Authors' summary) **81k:62008** 62H30 (62G05)
- Wolff, Harvey** (with Street, Ross; Thoen, Walter; Wischniewsky, Manfred Bernd) Semitopological functions. III. Lifting of monads and adjoint functors. *J. Pure Appl. Algebra* 16 (1980), no. 3, 299-314. (M. Hušek) **81g:18003** 18A40
- Wolff, M.-R.** Control theoretic solutions of the continuous portfolio selection and cash balance problem. *Proceedings of the First International Conference on Mathematical Modeling (St. Louis, Mo., 1977), Vol. V*, pp. 2417-2427, Univ. Missouri-Rolla, Rolla, Mo., 1977. (Author's summary) **81j:90016** 90A09
- Wolff, Manfred** Products of random variables depending on a random walk. *Monatsh. Math.* 88 (1979), no. 2, 171-187. (Pierre Crépel) **81a:60016** 60B15
- Compact group extensions of Markov operators and products of dependent random variables. *Functional analysis: surveys and recent results, II (Proc. Second Conf. Functional Anal., Univ. Paderborn, Paderborn, 1979)*, pp. 97-113, North-Holland Math. Studies, 38, North-Holland, Amsterdam, 1980. (R. L. Tweedie) **81i:60103** 60J35 (47A35, 47D07)
- Wolff, W. F.** (with Hoefer, P.; Zittartz, J.) Random layered frustration models. *Z. Phys. B* 41 (1981), no. 1, 43-53. (Authors' summary) **81m:82027** 82A42
- Wolffmann, Jacques** Résultats sur les paramètres des codes linéaires. (English summary) *Rev. CETHEDC Cahier* 1979, no. 2, 25-33. (Vera Pless) **81c:94030** 94B05
- Un problème d'extrémum dans les espaces vectoriels binaires. (English summary) *Combinatorics 79 (Proc. Colloq. Univ. Montréal, Montréal, Que., 1979), Part II. Adv. Discrete Math.* 9 (1980), 261-264. (F. J. MacWilliams) **81m:94024** 94B99 (05B10, 51E99)
- Wolffowitz, J.** On list codes. *J. Combin. Inform. System Sci.* 4 (1979), no. 2, 117-122. (Robert Gray) **81d:94018** 94A24
- Wolfrum, Christine** (with Lienert, G. A.) Simplified formulas for three-way chi-square testing. (German summary) *Biometrical J.* 22 (1980), no. 2, 159-167. (Graham J. G. Upton) **81j:62102** 62H15 (62H17)
- Wolfsdorf, Kurt** Über Partitionen endlicher Teilmengen. (English summary) *J. Combin. Theory Ser. A* 28 (1980), no. 1, 1-6. (N. Hindman) **81h:04005** 04A20 (05A17)
- Wolfshtein, M.** (with Reitman, V.; Hanin, M.) The interaction of an oblique shock wave with a flat plate boundary layer. *Recent advances in numerical methods in fluids, Vol. 1*, pp. 169-202, Pineridge, Swansea, 1980. (See **81j:76002**) 76L05 (76N99)
- Wolfsen, David B.** (with McDunnough, Philip) On some sampling schemes for estimating the parameters of a continuous time series. *Ann. Inst. Statist. Math.* 31 (1979), no. 3, 487-497. (A. Morris Walker) **81k:62122** 62M05 (62M10)
- (with McDunnough, Philip) Fixed versus random sampling of certain continuous parameter processes. *Austral. J. Statist.* 22 (1980), no. 1, 40-49. (R. L. Tweedie) **81j:62170** 62M05
- Wolk, Barry** (with Berman, Joel) Free lattices in some small varieties. *Algebra Universalis* 10 (1980), no. 3, 269-289. (M. E. Adams) **81i:06009** 06B20 (06-04)
- Wolke, Dieter** Fast-Primzahlen in kurzen Intervallen. *Math. Ann.* 244 (1979), no. 3, 233-242. (S. L. Segal) **81i:10055** 10H15
- Wolkensfelt, P. H. M.** (with Kok, J.; van der Houwen, P. J.) ★A semidiscretization algorithm for two-dimensional partial differential equations. *Afdeling Numerieke Wiskunde [Department of Numerical Mathematics], 54, Mathematisch Centrum, Amsterdam, 1978. ii+13 pp.* (H. Marcinkowska) **81d:65053** 65M05 (65M10, 65N05, 65N10)
- Wolkowicz, Henry** Convex programs with equivalent duals. *Appl. Math. Notes* 5 (1980), no. 2, 45-62. (Editors) **81h:90121** 90C25
- (with Styan, George P. H.) Bounds for eigenvalues using traces. *Linear Algebra Appl.* 29 (1980), 471-506. (M. Shafqat Ali) **81i:15015** 15A18
- (with Styan, George P. H.) More bounds for eigenvalues using traces. *Linear*

- Algebra Appl.* 31 (1980), 1-17. (J. Segethová) **81k:15016** 15A18 (65F15)
- Wollenberg, Manfred** ★Wave algebras and scattering theory. I. With German and Russian summaries. *Akademie der Wissenschaften der DDR, Zentralinstitut für Mathematik und Mechanik, Berlin*, 1979. 91 pp. (J. Weidmann) **81b:47010a** 47A40 (81F10)
- ★Wave algebras and scattering theory. II. With German and Russian summaries. Report 1979, 10. *Akademie der Wissenschaften der DDR, Zentralinstitut für Mathematik und Mechanik, Berlin*, 1979. i+91 pp. (J. Weidmann) **81b:47010b** 47A40 (81F10)
- Wolinski, David J.** (with Notestine, Ronald D.; Maurer, Robert N.) A continuum model appropriate for nonlinear analysis of the solidification of a pure metal. *Applied nonlinear analysis (Proc. Third Internat. Conf., Univ. Texas, Arlington, Tex., 1978)*, pp. 657-668. Academic Press, New York, 1979. (E. E. Tarveva) **81e:82025** 82A25 (80A20, 82A65) (with Hastings, Alan; Logan, Jesse A.) Models involving differential and integral equations appropriate for describing a temperature dependent predator-prey mite ecosystem on apples. *Modeling and differential equations in biology (Conf., Southern Illinois Univ., Carbondale, Ill., 1978)*, pp. 255-277. *Lecture Notes in Pure and Appl. Math.* 58, Dekker, New York, 1980. (L. E. Bobisud) **81m:92049** 92A15 (34D99)
- Wolman, Stephen** Global-in-time solutions of the two-dimensional Vlasov-Poisson systems. *Comm. Pure Appl. Math.* 33 (1980), no. 2, 173-197. (F. Nahon) **81e:85005** 85A05 (35Q20)
- Wolmer, Richard D.** Two-stage linear programming under uncertainty with 0-1 integer first stage variables. *Math. Programming* 19 (1980), no. 3, 279-288. (Author's summary) **81i:90161** 90C15 (90C11)
- Investment in stochastic minimum cost generalized multimodality networks with application to coal transport. *Networks* 10 (1980), no. 4, 351-362. (Author's summary) **81k:90078** 90C15 (90B15)
- Wolniewicz, Bogusław** On the verifiers of disjunction. *Polish Acad. Sci. Inst. Philos. Sociol. Bull. Sect. Logic* 9 (1980), no. 2, 57-59. (Editors) **81h:03065** 03B99
- Wolnyńska, K.** (with Perzyna, P.) Application of methods of characteristics and perturbation in solving the wave problems of viscoplasticity. (Polish and Russian summaries) *Arch. Mech. (Arch. Mech. Stos.)* 31 (1979), no. 2, 281-294. (R. D. Bhargava) **81h:73020** 73F99 (73E99)
- Wolovich, W. A.** (with Elliott, H.) Parameter adaptive control of linear multivariable systems. *Thirteenth Asilomar Conference on Circuits, Systems and Computers (Pacific Grove, Calif., 1979)*, pp. 33-37. IEEE, New York, 1980. (See **81m:93004**) 93C40 (with Elliott, H.) A frequency domain model reduction procedure. *Automatica—J. IFAC* 16 (1980), no. 2, 167-178. (Authors' summary) **81d:93021** 93C05
- Wolpert, Scott** (with Schoen, Richard; Yau, Shing Tung) Geometric bounds on the low eigenvalues of a compact surface. *Geometry of the Laplace operator (Proc. Sympos. Pure Math., Univ. Hawaii, Honolulu, Hawaii, 1979)*, pp. 279-285. *Proc. Sympos. Pure Math.*, XXXVI, Amer. Math. Soc., Providence, R.I., 1980. (Harold Donnelly) **81i:58052** 58G25 (49G05, 53C20)
- An asymptotic formula for the Taylor coefficients of automorphic forms. *Proc. Amer. Math. Soc.* 78 (1980), no. 4, 485-491. (William Harvey) **81d:10016** 10D15 (30F35)
- Wolsey, Laurence A.** (with Fisher, Marshall L.; Nemhauser, George L.) An analysis of approximations for finding a maximum weight Hamiltonian circuit. *Oper. Res.* 27 (1979), no. 4, 799-809. (A. C. Shershin) **81d:05047** 05C45 (90C35, 94C15)
- Heuristic analysis, linear programming and branch and bound. Combinatorial optimization, II (Proc. Conf., Univ. East Anglia, Norwich, 1979). *Math. Programming Stud.* No. 13 (1980), 121-134. (K. G. Murty) **81k:90068** 90C10
- Wolka-Bochenek, J.** (with v. Wolfersdorf, L.) A conjugacy problem of potential theory arising in calculus of variations. *Demonstratio Math.* 11 (1978), no. 3, 721-733. (Hélène Airault) **81e:31003** 31A25
- Wolter, Helmut** (with Herre, Heinrich) Entscheidbarkeit der Theorie der linearen Ordnung in Logiken mit Mächtigkeitssquantoren bzw. mit Chang-Quantor. *Z. Math. Logik Grundlag. Math.* 25 (1979), no. 4, 345-358. (M. M. Richter) **81a:03010** 03B25 (03C80, 06A05)
- (with Hermann, Eberhard) Untersuchungen zu schwachen Logiken der zweiten Stufe. *Z. Math. Logik Grundlag. Math.* 26 (1980), no. 1, 59-68. (M. M. Richter) **81k:03013** 03B15
- Womack, Baxter F.** (with Oda, Moriyo; Shimomura, Tsutomu) Concept structure and its distortion in the communication and formation process of morality concept. *Fuzzy sets (Proc. Sympos. Policy Anal. Inform. Systems, Duke Univ., Durham, N.C., 1980)*, pp. 369-389. Plenum, New York, 1980. (Authors' summary) **81i:92027** 92A25
- Wong, B.** A maximum principle on Clifford torus and nonexistence of proper holomorphic map from the ball to polydisc. *Pacific J. Math.* 87 (1980), no. 1, 211-222. (Herbert Alexander) **81k:32023** 32H99 (32A10)
- Wong, C. K.** (with McKellar, A. C.) Dynamic placement of records in linear storage. *J. Assoc. Comput. Mach.* 25 (1978), no. 3, 421-434. (Authors' summary) **81e:68021** 68B15 (68C25)
- (with Bitner, J. R.) Optimal and near-optimal scheduling algorithms for batched processing in linear storage. *SIAM J. Comput.* 8 (1979), no. 4, 479-498. (Jacek Błazewicz) **81b:68046** 68C15
- (with Chung, Kin Man; Luccio, Fabrizio) Magnetic bubble memory structures for efficient sorting and searching. *Information processing 80 (Proc. IFIP Congr., Tokyo/Melbourne, 1980)*, pp. 439-444. *IFIP Congress Ser.* 8, North-Holland, Amsterdam, 1980. (See **81b:68009**) 68E05 (68H05)
- (with Chung, Kin Man; Luccio, Fabrizio) On the complexity of sorting in magnetic bubble memory systems. *IEEE Trans. Comput.* 29 (1980), no. 7, 553-563. (Authors' summary) **81f:68071** 68E05 (68C25)
- (with Easton, M. C.) An efficient method for weighted sampling without replacement. *SIAM J. Comput.* 9 (1980), no. 1, 111-113. (Authors' summary) **81a:68054** 68C25 (62D05)
- (with Lee, D. T.) Voronoi diagrams in L_1 (L_∞) metrics with 2-dimensional storage applications. *SIAM J. Comput.* 9 (1980), no. 1, 200-211. (Authors' summary) **81d:68053** 68C15 (68H05)
- Wong, Chi Song** Matrix derivatives and its applications in statistics. *J. Math. Psych.* 22 (1980), no. 1, 70-81. (C. R. Rao) **81m:62105** 62H25 (15A54)
- Wong, Edward** (with Mackay, Alfred) Preference anarchy. *Theory and Decision* 11 (1979), no. 4, 457-463. (From the text) **81a:90031** 90A08
- Wong, Edward C.** Parameter identification of linear discrete stochastic systems with time delays. *Control and dynamic systems*, Vol. 16, pp. 131-176. Academic Press, New York, 1980. (See **81j:93002**) 93E12
- Wong, Eugene** A calculus of multiparameter martingales and its applications. *International Symposium on Systems Optimization and Analysis (Rocquencourt, 1978)*, pp. 73-80. *Lecture Notes in Control and Information Sci.*, 14, Springer, Berlin, 1979. (J. Walsh) **81d:60055** 60G48 (60H05)
- Wong, K. C.** (with Sitharama Iyengar, S.) A classical algorithm for product computations on a computer. *J. Tech. Bengal Engrg. College* 23 (1978), no. 1, 53-71. (Bernard Kolman) **81e:17001** 17-04
- Wong, K. W.** (with Fung, P. C. W.; Lau, C. C.) Study of the mathematical approximations made in the basis-correlation method and those made in the canonical-transformation method for an interacting Bose gas. *Phys. Rev. A* (3) 22 (1980), no. 3, 1272-1286. (Authors' summary) **81j:81074** 81Hx (82A15)
- Wong, M. K. F.** (with Yeh, Hsin Yang) Lowering and raising operators of $IU(n)$ and $IO(n)$ and their normalization constants. *J. Math. Phys.* 20 (1979), no. 4, 629-633. (Peter Holod) **81b:22020** 22E70 (81C40)
- On the multiplicity-free Wigner and Racah coefficients of $U(n)$. *J. Math. Phys.* 20 (1979), no. 12, 2391-2397. (Richard Haase) **81j:22041** 22E70 (81C40)
- (with Yeh, Hsin Yang) The most degenerate irreducible representations of the symplectic group. *J. Math. Phys.* 21 (1980), no. 4, 630-635. (J.-P. Antoine) **81e:22032** 22E70 (81C40)
- Wong, M. W.** Spectra of pseudodifferential operators on $L^p(\mathbb{R}^n)$. *Comm. Partial Differential Equations* 4 (1979), no. 12, 1389-1401. (Luigi Rodino) **81a:47052** 47G05
- On some exotic pseudodifferential operators. *Comm. Partial Differential Equations* 5 (1980), no. 7, 733-739. (Luigi Rodino) **81h:47045** 47G05 (35S05)
- Spectral analysis of strongly Carleman pseudodifferential operators. *J. London Math. Soc.* (2) 21 (1980), no. 3, 527-540. (E. A. Catechopoulos) **81j:47054** 47G05 (35P05)
- Wong, N. C.** (with Schenzle, Axel; Brewer, Richard G.) Theorem on coherent transients. *Phys. Rev. A* (3) 22 (1980), no. 2, 635-637. (Authors' summary) **81d:81133** 81K05 (81G45)
- Wong, P. G.** A test of the location parameter of the exponential distribution. *Austral. J. Statist.* 20 (1978), no. 3, 262-269. (G. S. Lingappaiah) **81a:62015a** 62E15 (62F03)
- Corrigenda: "A test of the location parameter of the exponential distribution". *Austral. J. Statist.* 22 (1980), no. 1, 98. (Editors) **81a:62015b** 62E15
- Wong, Pak Ken** A note on isomorphisms of multiplier algebras. *Canad. Math. Bull.* 22 (1979), no. 2, 243-245. (F. T. Birtel) **81h:46064** 46K05 (46J05)
- (with O'Keefe, M.) A smallest graph of girth 10 and valency 3. *J. Combin. Theory Ser. B* 29 (1980), no. 1, 91-105. (W. G. Brown) **81h:05085** 05C35
- Wong, Peng Choon** Cyclic extensions of parafermion groups. *Trans. Amer. Math. Soc.* 258 (1980), no. 2, 441-456. (D. E. Cohen) **81f:20042** 20F12
- Wong, Pit Mann** (with Sibony, Nessim) Capacité et propriétés globales d'ensembles analytiques. *Colloque d'Analyse Harmonique et Complexe*, 11 pp. (not consecutively pagged), Univ. Aix-Marseille 1, Marseille, 1977. (L. I. Ronkin) **81d:32035** 32H25' (32A22)
- Wong, Pui Kel** Sturmian theory of second-order elliptic differential equations and inequalities. *J. Math. Anal. Appl.* 72 (1979), no. 2, 551-586. (R. C. MacCamy) **81s:35005** 35B05 (35J15, 53C20, 58G99)
- Wong, R.** Explicit error terms for asymptotic expansions of Mellin convolutions. *J. Math. Anal. Appl.* 72 (1979), no. 2, 740-756. (John S. Lew) **81a:41049** 41A60 (44A05)
- (with Fu, James C.) An asymptotic expansion of a beta-type integral and its application to probabilities of large deviations. *Proc. Amer. Math. Soc.* 79 (1980), no. 3, 410-414. (F. W. J. Olver) **81f:60041** 60F10 (41A60, 62E20)
- Distributional derivation of an asymptotic expansion. *Proc. Amer. Math. Soc.* 80 (1980), no. 2, 266-270. (Hans-Jürgen Glaeske) **81j:46066** 46F12 (42B10)
- On a uniform asymptotic expansion of a Fourier-type integral. *Quart. Appl. Math.* 38 (1980/81), no. 2, 225-234. (F. W. J. Olver) **81j:41051** 41A60
- Asymptotic expansion of the Hilbert transform. *SIAM J. Math. Anal.* 11 (1980), no. 1, 92-99. (Philip Heywood) **81a:44004** 44A15 (41A60)
- Wong, R. Y. T.** (with West, J. E.) Based-free actions of finite groups on Hilbert cubes with absolute retract orbit spaces are conjugate. *Geometric topology (Proc. Georgia Topology Conf., Athens, Ga., 1977)*, pp. 655-672. Academic Press, New York, 1979. (B. L. Brochner) **81f:57043** 57S25 (57S17)
- Wong, Richard T.** Worst-case analysis of network design problem heuristics. *SIAM J. Algebraic Discrete Methods* 1 (1980), no. 1, 51-63. (H. Kramer) **81e:90043** 90B10 (65K05, 68C25, 94C15)
- Wong, S. P.** See Wilson, S. R., **81j:62140**
- Wong, Sherman** A central limit theorem for piecewise monotonic mappings of the unit interval. *Ann. Probab.* 7 (1979), no. 3, 500-514. (K. Jacobs) **81b:60025** 60F05 (28D05, 58F11)
- Wong, Warren J.** See Brauer, Richard, **81i:91017a**; Brauer, Richard, **81i:91017b** and Brauer, Richard, **81i:91017c**
- Wong, Wing Yue** (with Gupta, Shanti S.; Leong, Yoon Kwai) On subset selection procedures for Poisson populations. *Bull. Malaysian Math. Soc.* (2) 2 (1979), no. 2, 89-110. (Mir Masoom Ali) **81h:62048** 62F07
- On set with "lack of memory" property and some applications to the characterization of geometric distribution. *Bull. Malaysian Math. Soc.* (2) 3 (1980), no. 1, 29-31. (Ludwig Baringhaus) **81m:62026** 62E10
- A characterization of uniform distribution. *Bull. Malaysian Math. Soc.* (2) 3 (1980), no. 1, 33-35. (Ludwig Baringhaus) **81m:62027** 62E10
- Wong, Yau Chuen** ★Schwartz spaces, nuclear spaces and tensor products. *Lecture Notes in Mathematics*, 726. Springer-Verlag, Berlin-New York, 1979. viii+418 pp. ISBN 3-540-09513-6 (D. J. H. Garling) **81h:46005** 46A12 (46M05)
- A new cross-norm on a tensor product whose dual is cone-absolutely summing mappings. *Southeast Asian Bull. Math.* 3 (1979), no. 2, 270-286. (N. Popa) **81m:46097** 46M05 (46B30)
- Wong, Yuen Fat** (with Szeto, George) A general Maschke theorem. *Nanta Math.* 12 (1979), no. 1, 1-4. (S. Yuan) **81h:16012** 16A26
- (with Szeto, George) On quaternion algebras over a commutative ring. *Math.*

- Japon. 25 (1980), no. 1, 55-59. (Manuel Ojanguen) **81i:16008** 16A16
- Woonham, W. Murray ★Linear multivariable control: a geometric approach. Second edition. Applications of Mathematics, 10. Springer-Verlag, New York-Heidelberg, 1979. xv + 326 pp. ISBN 0-387-90354-2 (Editors) **81i:93049a** 93C35
- ★Линейные многомерные системы управления: геометрический подход. (Russian) [Linear multivariable control systems: a geometric approach] Translated from the English by É. L. Nappelbaum. "Nauka", Moscow, 1980. 376 pp. (Editors) **81i:93049b** 93C35
- See also Descusse, J., **81i:93034**
- Wonnacott, Ronald J. (with Wonnacott, Thomas H.) ★Econometrics. Second edition. Wiley Series in Probability and Mathematical Statistics. John Wiley & Sons, New York-Chichester-Brisbane, 1979. xxiii + 580 pp. ISBN 0-471-95981-2 (Editors) **81a:62113** 62P20
- Wonnacott, Thomas H. (with Wonnacott, Ronald J.) ★Econometrics. Second edition. Wiley Series in Probability and Mathematical Statistics. John Wiley & Sons, New York-Chichester-Brisbane, 1979. xxiii + 580 pp. ISBN 0-471-95981-2 (Editors) **81a:62113** 62P20
- Woo, Chia Wei (with Li, Tie Cheng; Sun, Xin) Theory of quantum solids: effect of lattice symmetry and anisotropy in the pair-correlation function. *Phys. Rev. B* (3) 22 (1980), no. 7, 3230-3241. (Authors' summary) **81i:82061** 82A55
- Woo, K. Y. Another definition for the angles between two n -planes in a Euclidean space. *Southeast Asian Bull. Math.* 3 (1979), no. 2, 287-291. (L. Gyarmathi) **81k:51021** 51M05
- Woo, T. H. (with Schmit, Lucien A.) Decomposition in optimal plastic design of structures. *Internat. J. Solids and Structures* 17 (1981), no. 1, 39-56. (Authors' summary) **81k:73055** 73K40 (90C50)
- Wood, Alastair D. (with Burghes, David N.) ★Mathematical models in the social, management and life sciences. Mathematics and its Applications. Ellis Horwood Ltd., Chichester; Halsted Press [John Wiley & Sons], New York-Chichester-Brisbane, 1980. 287 pp. ISBN 0-85312-097-8 (Colin W. Clark) **81b:00009** 00A69 (90-01, 92-01)
- Wood, B. (with Radatz, P.) Approximating derivatives of functions unbounded on the positive axis with linear operators. *Rev. Roumaine Math. Pures Appl.* 23 (1978), no. 5, 771-781. (Pierre Eymard) **81a:41036** 41A36
- Wood, Carol Notes on the stability of separably closed fields. *J. Symbolic Logic* 44 (1979), no. 3, 412-416. (G. Cherlin) **81m:03042** 03C45 (03C60, 12L99)
- Wood, Derrick (with Rosenberg, Arnold L.; Galil, Zvi) Storage representations for treelike data structures. *Conference Record of the Eleventh Annual ACM Symposium on Theory of Computing (Atlanta, Ga., 1979)*, pp. 99-107, ACM, New York, 1979. (Authors' summary) **81d:68036** 68B15 (68E05)
- A survey of grammar and L forms—1978. *Mathematical foundations of computer science, 1979 (Proc. Eighth Symp., Olomouc, 1979)*, pp. 191-200, *Lecture Notes in Comput. Sci.*, 74, Springer, Berlin, 1979. (Author's summary) **81e:68105** 68F10
- (with Ottmann, Th.; Rosenberg, Arnold L.; Six, H.-W.) Node-visit optimal 1-2 brother trees. *Theoretical computer science (Fourth GI Conf., Aachen, 1979)*, pp. 213-221, *Lecture Notes in Comput. Sci.*, 67, Springer, Berlin, 1979. (Authors' summary) **81k:68047** 68E10
- (with Culik, Karel, II) A mathematical investigation of propagating graph OL systems. *Inform. and Control* 43 (1979), no. 1, 50-82. (B. Zelinka) **81b:68099** 68F10 (68E10)
- (with Rosenberg, Arnold L.; Galil, Zvi) Storage representations for tree-like data structures. *Math. Systems Theory* 13 (1979/80), no. 2, 105-130. (J. Paredaens) **81c:68051** 68E10 (68B15)
- (with Maurer, Hermann A.; Rozenberg, Grzegorz; Salomaa, Arto) Pure interpretations of EOL forms. (French summary) *RAIRO Inform. Théor.* 13 (1979), no. 4, 347-362. (Branislav Rován) **81b:68073** 68F05
- (with Kwong, Y. S.) Approaches to concurrency in B-trees. *Mathematical foundations of computer science, 1980 (Proc. Ninth Symp., Rydzyna, 1980)*, pp. 402-413, *Lecture Notes in Comput. Sci.*, 88, Springer, Berlin, 1980. (See **81k:68003**) 68E05 (68B15, 68H05)
- (with Maurer, Hermann A.; Salomaa, Arto) On generators and generative capacity of EOL forms. *Acta Inform.* 13 (1980), no. 1, 87-107. (S. Ginsburg) **81f:68005** 68F05
- (with Rozenberg, Grzegorz) Context-free grammars with selective rewriting. *Acta Inform.* 13 (1980), no. 3, 257-268. (Joffroy Beauquier) **81g:68111** 68F05
- (with Vaishnavi, V. K.; Kriegl, H. P.) Optimum multiway search trees. *Acta Inform.* 14 (1980), no. 2, 119-133. (Authors' summary) **81g:68088** 68E05 (68C25)
- (with Ottmann, Th.) 1-2 brother trees or AVL trees revisited. *Comput. J.* 23 (1980), no. 3, 248-255. (Authors' summary) **81g:68095** 68E10
- (with Bentley, Jon Louis) An optimal worst case algorithm for reporting intersections of rectangles. *IEEE Trans. Comput.* 29 (1980), no. 7, 571-577. (Authors' summary) **81f:68053** 68C25
- (with Maurer, Hermann A.; Salomaa, Arto) Pure grammars. *Inform. and Control* 44 (1980), no. 1, 47-72. (Itsuho Takanami) **81i:68103** 68F05 (03D05)
- (with van Leeuwen, Jan) Dynamization of decomposable searching problems. *Inform. Process. Lett.* 10 (1980), no. 2, 51-56. (From the introduction) **81i:68091a** 68E05
- (with van Leeuwen, Jan) Errata: "Dynamization of decomposable searching problems". *Inform. Process. Lett.* 11 (1980), no. 1, 57. (Editors) **81i:68091b** 68E05
- (with Maurer, Hermann A.; Salomaa, Arto) Synchronized EOL forms. *Theoret. Comput. Sci.* 12 (1980), no. 2, 135-159. (J. Calvert) **81i:68106** 68F05
- Wood, G. R. A note on automorphisms of semigroups and near-rings of mappings. *Studia Math.* 62 (1978), no. 3, 209-218. (J. G. Dombrows) **81g:46034** 46E25 (20M20, 39B50)
- Automorphisms of semigroups of continuous functions. *J. Austral. Math. Soc. Ser. A* 29 (1980), no. 3, 301-309. (Bridget B. Baird) **81k:20097** 20M20 (54H15)
- Wood, G. V. Logarithms in multiplier algebras. *Proc. Edinburgh Math. Soc.* (2) 22 (1979), no. 3, 187-190. (Colin C. Graham) **81k:43005** 43A22 (43A10)
- (with Thomas, A. D.) ★Group tables. Shiva Mathematics Series, 2. Shiva Publishing Ltd., Nanwick; distributed by Imprint Editions, Inc., Fort Collins, Colo., 1980. 174 pp. (Not consecutively pagged) (errata). ISBN 0-906812-04-6, 0-906812-02-X (Editors) **81d:20002** 20-01 (20-04)
- Wood, James Unbounded multipliers on commutative Banach algebras. *Pacific J. Math.* 85 (1979), no. 2, 479-484. (K. B. Laursen) **81f:46063** 46J10 (47C05)
- Wood, John C. Holomorphicity of certain harmonic maps from a surface to complex projective n -space. *J. London Math. Soc.* (2) 20 (1979), no. 1, 137-142. (J. L. Koszul) **81c:58034** 58E20
- Wood, John W. (with Libgober, Anatoly S.) Diffeomorphic complete intersections with different multidegrees. *Bull. Amer. Math. Soc. (N.S.)* 2 (1980), no. 3, 459-461. (P. Orlik) **81c:14028** 14M10 (57R50)
- Wood, M. H. (with Clement, C. F.) Equations for the growth of a distribution of small physical objects. *Proc. Roy. Soc. London Ser. A* 368 (1979), no. 1735, 521-546. (Authors' summary) **81j:92059** 92A40 (80A99)
- (with Clement, C. F.) Moment and Fokker-Planck equations for the growth and decay of small objects. *Proc. Roy. Soc. London Ser. A* 371 (1980), no. 1747, 553-567. (Ph. Mathieu) **81i:82040** 82A42
- Wood, R. (with Griffiths, R. C.; Milne, R. K.) Aspects of correlation in bivariate Poisson distributions and processes. *Austral. J. Statist.* 21 (1979), no. 3, 238-255. (Jifi Andri) **81c:62066** 62H20 (60G35)
- Wood, R. D. (with Pica, A.; Hinton, E.) Finite element analysis of geometrically nonlinear plate behaviour using a Mindlin formulation. *Comput. & Structures* 11 (1980), no. 3, 203-215. (Authors' summary) **81b:73037** 73K25 (65N30, 73C50)
- Wood, R. J. From tensor products to products. *Comm. Algebra* 8 (1980), no. 7, 663-669. (Thomas F. Fox) **81i:18008** 18D10 (18A40)
- Wood, Reg M. W. (with Bardsley, William G.; Woolfson, Richard) Some mathematical results concerning Hessians of binding polynomials and cooperativity coefficients. *J. Theoret. Biol.* 85 (1980), no. 1, 45-51. (J. P. Kernevez) **81h:92030** 92A40 (80A30)
- Wood, Susan (with Corcoran, John) Boole's criteria for validity and invalidity. *Note Dame J. Formal Logic* 21 (1980), no. 4, 609-638. (Charles F. Kielkopf) **81j:03003** 03-03 (01A55, 03B20)
- Woodall, D. R. (with Wilson, Robin J.) The Appel-Haken proof of the four-color theorem. *Selected topics in graph theory*, pp. 83-101, Academic Press, London, 1978. (See **81e:05059**) 05C15
- Minimax theorems in graph theory. *Selected topics in graph theory*, pp. 237-269, Academic Press, London, 1978. (See **81e:05059**) 05C35
- Woodcock, Alexander (with Davis, Monte) ★Catastrophe theory. E. P. Dutton, New York, 1978. viii + 152 pp. ISBN 0-525-07812-6 (Louis H. Kauffman) **81c:58021** 58C28 (00A69, 92-01)
- Wooders, Myrna The Tiebout hypothesis: near optimality in local public good economies. *Econometrica* 48 (1980), no. 6, 1467-1485. (G. Duru) **81i:90041** 90A14
- Woodhead, Ronald W. (with Hall, Arthur Stanley) ★Frame analysis. Corrected reprint of the second edition. Robert E. Krieger Publishing Co., Inc., Huntington, N.Y., 1980. xvii + 333 pp. ISBN 0-88275-858-6 (Vadim Komkov) **81m:73004** 73-02 (73K99)
- Woodhouse, Nicholas Geometric quantization and the WKB approximation. *Differential geometrical methods in mathematical physics, II (Proc. Conf., Univ. Bonn, Bonn, 1977)*, pp. 295-309, *Lecture Notes in Math.*, 676, Springer, Berlin, 1978. (David J. Simms) **81c:58041** 58F06 (81C99)
- Woodland, Alan D. On testing weak separability. *J. Econometrics* 8 (1978), no. 3, 383-398. (Author's summary) **81i:62125** 62P20 (90A20)
- Woodroffe, Michael Repeated likelihood ratio tests. *Biometrika* 66 (1979), no. 3, 453-463. (D. Siegmund) **81a:62084** 62L10
- Woodrow, Robert E. There are four countable ultrahomogeneous graphs without triangles. *J. Combin. Theory Ser. B* 27 (1979), no. 2, 168-179. (C. St. J. A. Nash-Williams) **81f:05141** 05C99
- Woods, A. C. (with Bambah, R. P.) Minkowski's conjecture for $n=5$; a theorem of Skubenko. *J. Number Theory* 12 (1980), no. 1, 27-48. (C. G. Lekkerkerker) **81g:10043** 10E15
- Woods, J. D. (with Bradshaw, Peter) Geophysical turbulence and buoyant flows. *Turbulence, 171-192, Topics in Appl. Phys.*, 12, Springer, Berlin, 1978. (See **80d:76044**) 76F99 (86A99)
- Woods, John (with Walton, Douglas N.) Circular demonstration and von Wright-Geach entailment. *Note Dame J. Formal Logic* 20 (1979), no. 4, 768-772. (Alex Blum) **81c:03009** 03A05 (03B45)
- (with Walton, Douglas N.) Equivocation and practical logic. *Ratio* 21 (1979), no. 1, 31-43. (From the introduction) **81a:03009** 03A05
- Woods, John W. Correction to: "Kalman filtering in two dimensions" [IEEE Trans. Inform. Theory 23 (1977), no. 4, 473-482; MR 57 #9250] by Woods and C. H. Radewan. *IEEE Trans. Inform. Theory* 25 (1979), no. 5, 628-629. (Seihaku Higuchi) **81b:93074** 93E11 (94A05)
- Woods, L. C. Maxwell's models. *Bull. Inst. Math. Appl.* 16 (1980), no. 1, 11-15. (F. J. Murray) **81c:01025** 01A55 (00A69)
- "Scale": a basic concept in applied mathematics. H. G. Forder 90th birthday volume. *Math. Chronicle* 9 (1980), 75-89. (Stanley H. Benton, Jr.) **81j:00026** 00A69
- Woods, R. Grant A survey of absolutes of topological spaces. *Topological structures, II (Proc. Sympos. Topology and Geom., Amsterdam, 1978)*, Part 2, pp. 323-362, *Math. Centre Tracts*, 116, Math. Centrum, Amsterdam, 1979. (V. I. Malyhin) **81d:54019** 54D99
- (with Porter, Jack R.) Ultra-Hausdorff H -closed extensions. *Pacific J. Math.* 84 (1979), no. 2, 399-411. (K. D. Magill, Jr.) **81f:54013** 54D35 (54D15)
- Woodside, C. M. (with Pagurek, B.) The sum of serial correlations of waiting and system times in $G/G/1$ queues. *Oper. Res.* 27 (1979), no. 4, 755-766. (Anthony G. Pakes) **81a:60111** 60K25
- (with Pagurek, B.; Newell, G. F.) A diffusion approximation for correlation in queues. *J. Appl. Probab.* 17 (1980), no. 4, 1033-1047. (John P. Lehoczky) **81i:60100** 60K25 (60J60, 90B20)
- Woolbright, David E. On the size of partial 1-factors of 1-factorizations of the complete k -uniform hypergraph on kn vertices. *Ars Combin.* 6 (1978), 185-192. (R. Balakrishnan) **81c:05072** 05C65
- Woolfson, Richard Hyper-I-spaces and hyperspectra. *Quart. J. Math. Oxford Ser. (2)* 30 (1979), no. 118, 229-255. (J. P. May) **81b:55026** 55P47
- (with Bardsley, William G.; Wood, Reg M. W.) Some mathematical results concerning Hessians of binding polynomials and cooperativity coefficients. *J. Theoret.*

- Biol.** 85 (1980), no. 1, 45–51. (J. P. Kernevez) **81h:92030** 92A40 (80A30)
- Woodham, C. R.** (with Panwalkar, S. S.) Ordered flow shop problems with no in-process waiting: further results. *J. Oper. Res. Soc.* 31 (1980), no. 11, 1039–1043. (Authors' summary) **81j:90071** 90B35
- Woolley, Barry Lee** Backscattering from a plate with a thickness discontinuity. *J. Acoust. Soc. Amer.* 68 (1980), no. 1, 345–349. (Author's summary) **81d:73025** 73D25
- Woolley, R. G.** Gauge invariant wave mechanics and the Power-Zienau-Woolley transformation. *J. Phys. A* 13 (1980), no. 8, 2795–2805. (Author's summary) **81h:81207** 81L05
- Woodson, Robert F.** (with Leeper, James D.) Growth curve analysis of complete and incomplete longitudinal data. *Comm. Statist. A—Theory Methods* 9 (1980), no. 14, 1491–1513. (C. G. Khatri) **81j:62130** 62J05 (62H15)
- Wooten, J. W.** (with Hicks, H. R.) Numerical divergence of a tensor. *J. Comput. Phys.* 36 (1980), no. 3, 411–416. (S. Drobot) **81h:65022** 65D25 (53A45)
- Wurfel, Friedhard** (with Oelschlägel, Dieter) Lineare Mehrschrittverfahren zur Lösung impliziter Differentialgleichungssysteme I. Ordnung. *Wiss. Z. Tech. Hochsch. Leuna-Merseburg* 22 (1980), no. 1, 70–79. (J. Sprekels) **81g:65118** 65L99
- Worland, Peter B.** Predictor-corrector methods for the parallel solution of ordinary differential equations. *Proceedings of the Ninth Manitoba Conference on Numerical Mathematics and Computing* (Univ. Manitoba, Winnipeg, Man., 1979), pp. 411–423. *Congress. Numer., XXVII, Utilitas Math., Winnipeg, Man., 1980.* (Henning Esser) **81m:65126** 65L05
- Worley, R. T.** Positive points in polar lattices. II. *J. Austral. Math. Soc. Ser. A* 29 (1980), no. 4, 504–510. (Peter Gruber) **81j:10035** 10E05
- Worlton, J.** (with Metropolis, N.) A trilogy on errors in the history of computing. *Ann. Hist. Comput.* 2 (1980), no. 1, 49–59. (Authors' summary) **81e:68003** 68–03 (01A55)
- Wormald, Nicholas C.** (with Harary, Frank; Robinson, Robert W.) Isomorphic factorisations. III. Complete multipartite graphs. *Combinatorial mathematics* (Proc. Internat. Conf. Combinatorial Theory, Australian Nat. Univ., Canberra, 1977), pp. 47–54. *Lecture Notes in Math.*, 686, Springer, Berlin, 1978. (Jean-Claude Bermond) **81e:05111** 05C99
- Triangles in labelled cubic graphs. *Combinatorial mathematics* (Proc. Internat. Conf. Combinatorial Theory, Australian Nat. Univ., Canberra, 1977), pp. 337–345. *Lecture Notes in Math.*, 686, Springer, Berlin, 1978. (E. M. Palmer) **81d:05039** 05C30 (05C35)
- On the number of automorphisms of a regular graph. *Proc. Amer. Math. Soc.* 76 (1979), no. 2, 345–348. (F. Harary) **81a:05068** 05C25
- A correspondence for rooted planar maps. *Ars Combin.* 9 (1980), 11–28. (R. C. Entringer) **81k:05063** 05C30
- (with Read, Ronald C.) Catalogues of graphs and digraphs. *Discrete Math.* 31 (1980), no. 2, 224. (From the text) **81h:05117** 05C99
- (with Read, Ronald C.) Number of labeled 4-regular graphs. *J. Graph Theory* 4 (1980), no. 2, 203–212. (Authors' summary) **81e:05085** 05C30
- Woronowicz, Edmund** On saturated partitions. *Bull. Math. Soc. Sci. Math. R. S. Roumanie (N.S.)* 24(72) (1980), no. 1, 93–96. (Author's summary) **81j:68105** 68F99
- Woronowicz, S. L.** Positive maps of low dimensional matrix algebras. *Rep. Math. Phys.* 10 (1976), no. 2, 165–183. (E. Størmer) **81m:15014** 15A30 (46L05)
- Operator systems and their application to the Tomita-Takesaki theory. (French summary) *Algèbres d'opérateurs et leurs applications en physique mathématique* (Proc. Colloq. Marseille, 1977), pp. 459–527. *Colloques Internat. CNRS*, 274, CNRS, Paris, 1979. (Alain Connes) **81k:46088** 46L40
- Worrell, John** See Lakatos, Imre, **81e:01029** and Lakatos, Imre, **81e:01030**
- Worrell, J. M., Jr.** (with Wicke, H. H.) A covering property which implies isocompactness. II. The Proceedings of the 1979 Topology Conference (Ohio Univ., Athens, Ohio, 1979). *Topology Proc.* 4 (1979), no. 1, 213–224 (1980). (S. Broverman) **81j:54036** 54D20 (54D30)
- (with Wicke, H. H.) The development of generalized base of countable order theory. *Surveys in general topology*, pp. 495–557. *Academic Press*, New York, 1980. (Gary Gruenhage) **81h:54028** 54E30
- (with Wicke, H. H.) A covering property which implies isocompactness. I. *Proc. Amer. Math. Soc.* 79 (1980), no. 2, 331–334. (S. Broverman) **81j:54036a** 54D20 (54D30)
- Worsey, A. J.** (with Behrooz, G. H.; Papamichael, N.) A class of piecewise-cubic interpolatory polynomials. *J. Inst. Math. Appl.* 25 (1980), no. 1, 53–65. (Authors' summary) **81a:65019** 65D07 (41A15)
- Worsley, K. J.** On the likelihood ratio test for a shift in location of normal populations. *J. Amer. Statist. Assoc.* 74 (1979), no. 366, part 1, 365–367. (Hisao Nagao) **81d:62020** 62F03
- Woschni, E.-G.** Optimization of linear systems with dynamic redundancy and limitations. *Systems analysis and simulation*, 1980 (Proc. Internat. Sympos., Berlin, 1980), pp. 181–185. *Math. Research*, 5, Akademie-Verlag, Berlin, 1980. (See **81j:93009**) 93E20
- Wospiak, Hans J.** Yang-Mills magnetic charge and the equation of motion of a Yang-Mills particle in general relativity. *J. Singapore Nat. Acad. Sci.* 7 (1978), 91–94. (José M. Cervero) **81m:83011** 83C10 (53B15, 81E99)
- Woszczyńska, A.** Asymptotic states of Friedman universe and the energy conditions using the phase variable method. *Acta Phys. Polon. B* 11 (1980), no. 1, 15–25. (Author's summary) **81d:83058** 83F05
- Woszczyk, Detlef** (with Kintala, Chandra M. R.) Amounts of nondeterminism in finite automata. *Acta Inform.* 13 (1980), no. 2, 199–204. (David B. Benson) **81e:68065** 68D25 (68C25)
- van der Woude, Jaap** Disjointness and quasifactors in topological dynamics. *Topological structures, II* (Proc. Sympos. Topology and Geom., Amsterdam, 1978), Part 2, pp. 363–382. *Math. Centre Tracts*, 116, Math. Centrum, Amsterdam, 1979. (J. Auslander) **81g:54055** 54H20
- Wool, Arthur** ★ A course of applied functional analysis. Pure and Applied Mathematics. Wiley-Interscience [John Wiley & Sons], New York, 1979. xvii + 443 pp. ISBN 0-471-96238-4 (W. W. Breckner) **81a:46003** 46–01 (46N05, 49–01, 90–01)
- Wouwe, J. M. G.** GO-spaces and (generalized) metrizable. *Topological structures, II* (Proc. Sympos. Topology and Geom., Amsterdam, 1978), Part 2, pp. 383–393. *Math. Centre Tracts*, 116, Math. Centrum, Amsterdam, 1979. (Ivan L. Reilly) **81d:54023** 54E35 (54E18, 54F05)
- Woyczyński, Wojbor A.** (with Marcus, Michael B.) Stable measures and central limit theorems in spaces of stable type. *Trans. Amer. Math. Soc.* 251 (1979), 71–102. (J. Hoffmann-Jorgensen) **81i:60010** 60B12 (60E07)
- Wozniak, Czesław** On the thermoelasticity of non-linear discrete and continuous constrained systems. *Thermomechanics in solids* (Proc. Sympos., Internat. Centre Mech. Sci., Udine, 1974), pp. 73–86. *CISM Courses and Lectures*, 223, Springer, Vienna, 1977. (See **80e:73072**) 73U05
- Continuous models of thermomechanical systems. (Polish) *Problems of the thermomechanics of elastic bodies* (Polish), pp. 183–228. *Ossolineum*, Wrocław, 1978. (See **81f:73001**) 80A10
- Nonstandard analysis and its application to mechanics. *Trends in applications of pure mathematics to mechanics, Vol. II* (Second Sympos., Kozubnik, 1977), pp. 327–341. *Monographs and Studies in Math.*, 5, Pitman, London, 1979. (Vadim Komkov) **81e:83065** 03H10 (70D05, 73B99)
- On the formation of simplified theories of solid mechanics. (Polish and Russian summaries) *Arch. Mech. (Arch. Mech. Stas.)* 31 (1979), no. 6, 897–905. (R. D. Bhargava) **81k:73003** 73A05
- On the concept of abstract constraints. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Tech.* 27 (1979), no. 4, 389–393. (Author's summary) **81j:47055** 47H15
- Abstract constraints in Newtonian mechanics. I. General foundations. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Tech.* 27 (1979), no. 5–6, 455–460. (Peter J. Chen) **81e:70001** 70A05 (49H05, 58F05, 70D05)
- Abstract constraints in Newtonian mechanics. II. Special cases. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Tech.* 27 (1979), no. 5–6, 461–464. (Peter J. Chen) **81f:70002** 70D05 (58F40)
- Wozniakowska, Barbara** (with Palasiński, Marek) On congruence lattices of commutative BCK-algebras. *Polish Acad. Sci. Inst. Philos. Sociol. Bull. Sect. Logic* 8 (1979), no. 4, 188–190. (G. Georgescu) **81g:06010** 06D99 (03G25)
- On a problem on BCK-algebras. *Math. Sem. Notes Kobe Univ.* 8 (1980), no. 1, 233–234. (O. Frink) **81k:06022** 06D99 (03G25)
- Wozniakowski, H.** Roundoff-error analysis of a new class of conjugate-gradient algorithms. *Linear Algebra Appl.* 29 (1980), 507–529. (Norihiko Adachi) **81d:65016** 65F10 (65G05)
- Wraith, Gavin C.** (with Johnstone, Peter T.) Algebraic theories in toposes. *Indexed categories and their applications*, pp. 141–242. *Lecture Notes in Math.*, 661, Springer, Berlin, 1978. (From the introduction) **81f:18019** 18B25 (18C10)
- Locally equivalent toposes. *Ann. Fac. Sci. Univ. Nat. Zaire (Kinshasa) Sect. Math.-Phys.* 4 (1978), no. 2, 155–169 (1979). (M. Barr) **81h:18007** 18B25 (18F20)
- Generic Galois theory of local rings. *Applications of sheaves* (Proc. Res. Sympos. Appl. Sheaf Theory to Logic, Algebra and Anal., Univ. Durham, Durham, 1977), pp. 739–767. *Lecture Notes in Math.*, 753, Springer, Berlin, 1979. (M. L. Laplaza) **81c:13004** 13B05 (03G30, 14A15, 14F20)
- Complexification of variable fields. *Topos theoretic methods in geometry*, pp. 211–217. *Various Publ. Ser.*, 30, Mat. Inst., Aarhus Univ., Aarhus, 1979. (Lawrence Neff Stout) **81f:18022** 18B25 (03G25)
- Intuitionistic algebra: some recent developments in topos theory. *Proceedings of the International Congress of Mathematicians* (Helsinki, 1978), pp. 331–337. *Acad. Sci. Fennica, Helsinki*, 1980. (Anna Labella) **81f:18021** 18B25 (03F55, 03G30)
- Wrathall, Celia** (with Book, Ronald V.; Greibach, Sheila A.) Reset machines. *J. Comput. System Sci.* 19 (1979), no. 3, 256–276. (Ronald E. Prather) **81e:68071** 68D35 (68F10)
- Wrather, C.** (with Yu, P. L.) Advertising games in duopoly market expansion. *Control theory in mathematical economics* (Proc. Third Kingston Conf., Part B, Univ. Rhode Island, Kingston, R.I., 1978), pp. 111–149. *Lecture Notes in Pure and Appl. Math.*, 47, Dekker, New York, 1979. (From the summary) **81e:90174** 90D40 (90A16)
- Wreszinski, W.** (with Cattaneo, U.) Trotter limits of Lie algebra representations and coherent states. *Helv. Phys. Acta* 52 (1979), no. 2, 313–327. (J. Löhmus) **81a:17005** 17B15 (17B65, 81K05)
- Wriedt, Michael** (with Kosmol, Peter; Schill, Walter) Der Satz von Banach-Steinhaus für konvexe Operatoren. *Arch. Math. (Basel)* 33 (1979/80), no. 6, 564–569. (M. M. Day) **81f:46010** 46A40
- Wrigge, Staffan** (with Fransen, Arne) High-precision values of the gamma function and of some related coefficients. *Math. Comp.* 34 (1980), no. 150, 553–566. (F. W. J. Olver) **81f:65004** 65A05 (65D20)
- Wright, A. Larry** On a theorem of Maruyama. *Am. Probab.* 8 (1980), no. 4, 851–852. (T. Kawata) **81i:60037** 60G10
- Wright, Alden H.** (with Todd, Michael J.) A variable-dimension simplicial algorithm for antipodal fixed-point theorems. *Numer. Funct. Anal. Optim.* 2 (1980), no. 2–3, 155–186. (Kurt Georg) **81m:65076** 65H10 (55M20, 58C30, 90C30)
- Wright, C. R. B.** Frattini embeddings of normal subgroups. *Proc. Amer. Math. Soc.* 78 (1980), no. 3, 319–320. (Surinder K. Sehgal) **81g:20043** 20D25
- Wright, David C.** Black holes and the Gibbs-Duhem relation. *Phys. Rev. D* (3) 21 (1980), no. 4, 884–890. (Andrew King) **81e:83044** 83C99 (80A10, 83F05)
- Wright, David G.** A decomposition of E^n ($n \geq 3$) into points and a null sequence of cellular sets. *General Topology Appl.* 10 (1979), no. 3, 297–304. (John Bryant) **81a:57014** 57N15 (54B15)
- (with Cannon, James W.) Slippery Cantor sets in E^n . *Fund. Math.* 106 (1980), no. 2, 89–98. (R. J. Daverman) **81f:57010** 57N45 (54G15, 57N15)
- Wright, David John** The relevance of stochastic calculus to cross-correlation identification methods. *Internat. J. Control* 31 (1980), no. 3, 565–569. (Author's summary) **81k:93076** 93E12 (93E10)
- Wright, David Lee** Abelian subgroups of $Aut_k(k[X, Y])$ and applications to actions on the affine plane. *Illinois J. Math.* 23 (1979), no. 4, 579–634. (M. H. Gizatullin) **81k:14040** 14L30 (20B27)
- (with Connell, E. H.) A Mayer-Vietoris sequence in nonlinear K -theory. *J. Pure Appl. Algebra* 16 (1980), no. 2, 149–165. (Jean-Louis Loday) **81e:18014** 18F25 (13D15)
- Wright, E. M.** (with Hardy, Godfrey Harold) ★ An introduction to the theory of numbers. Fifth edition. *The Clarendon Press, Oxford University Press*, New York, 1979. xvi + 426 pp. ISBN 0-19-853170-2, 0-19-853171-0 (T. M. Apostol) **81i:10002** 10-01

- A quadratic recurrence of Faltung type. *Math. Proc. Cambridge Philos. Soc.* **88** (1980), no. 2, 193-197. (Ian Anderson) **81c:10016** 10A35
- See also Hardy, Geoffrey Harold, **81c:01028**
- Wright, F. J. Wavefront dislocations and their analysis using catastrophe theory. *Structural stability in physics (Proc. Internat. Symposia Appl. Catastrophe Theory and Topological Concepts in Phys., Inst. Inform. Sci., Univ. Tübingen, Tübingen, 1978)*, pp. 141-156, Springer Ser. in Synergetics, 4, Springer, Berlin, 1979. (From the summary) **81a:70012** 78A40 (58C28)
- Wright, F. T. (with Robertson, Tim) Algorithms in order restricted statistical inference and the Cauchy mean value property. *Ann. Statist.* **8** (1980), no. 3, 645-651. (James N. Adichie) **81m:62047** 62F10 (62C20)
- von Wright, Georg Henrik Diachronic and synchronic modalities. *Teorema* **9** (1979), no. 3-4, 231-245. (John R. Chidsey) **81f:03030** 03B45
- Wright, Ian W. (with Wegman, Edward J.) Isotonic, convex and related splines. *Ann. Statist.* **8** (1980), no. 5, 1023-1035. (L. I. Schumaker) **81k:41009** 41A15 (62G05, 65D07)
- Wright, J. A. (with Schlesinger, L.) High-energy bremsstrahlung in an intense laser field. *Phys. Rev. A* (3) **22** (1980), no. 3, 909-915. (Authors' summary) **81h:81198** 81K05 (81G10)
- Wright, J. D. Maitland (with Chu, Cho Ho) A theory of types for convex sets and ordered Banach spaces. *Proc. London Math. Soc.* (3) **36** (1978), no. 3, 494-517. (Authors' introduction) **81j:46016** 46A40 (46B30, 46L35)
- Operators from C^* -algebras to Banach spaces. *Math. Z.* **172** (1980), no. 2, 123-129. (G. K. Pedersen) **81k:46072** 46L50
- On some problems of Kaplansky in the theory of rings of operators. *Math. Z.* **172** (1980), no. 2, 131-141. (Kazuyuki Saitō) **81j:46097** 46L05 (46L10)
- Normal AW^* -algebras. *Proc. Roy. Soc. Edinburgh Sect. A* **85** (1980), no. 1-2, 137-141. (Kazuyuki Saitō) **81j:46101** 46L99
- Wright, Jesse B. (with Thatcher, James W.; Wagner, Eric G.) More on advice on structuring compilers and proving them correct. *Automata, languages and programming (Sixth Colloq., Graz, 1979)*, pp. 596-615, *Lecture Notes in Comput. Sci.*, 71, Springer, Berlin, 1979. (Authors' summary) **81f:68018** 68B05
- (with Thatcher, James W.; Wagner, Eric G.) Notes on algebraic fundamentals for theoretical computer science. *Foundations of computer science, III (Third Ado. Course, Amsterdam, 1978)*, Part 2, pp. 83-164, *Math. Centre Tracts*, 109, Math. Centrum, Amsterdam, 1979. (V. Ju. Melits) **81j:68035** 68B15 (18C10, 68F20)
- (with Ehrig, Hartmut; Krewski, Hans-Jörg; Thatcher, James W.; Wagner, Eric G.) Parameterized data types in algebraic specification languages (short version). *Automata, languages and programming (Proc. Seventh Internat. Colloq., Noordwijkerhout, 1980)*, pp. 157-168, *Lecture Notes in Comput. Sci.*, 85, Springer, Berlin, 1980. (From the introduction) **81j:68030** 68B15
- (with Bloom, Stephen L.; Elgot, Calvin C.) Solutions of the iteration equation and extensions of the scalar iteration operation. *SIAM J. Comput.* **9** (1980), no. 1, 25-45. (J. D. Rutledge) **81i:68021a** 68B05
- (with Bloom, Stephen L.; Elgot, Calvin C.) Vector iteration in pointed iterative theories. *SIAM J. Comput.* **9** (1980), no. 3, 525-540. (J. D. Rutledge) **81i:68021b** 68B05
- Wright, Steve (with Tsui, Sze Kai) The splitting of operator algebras. *Pacific J. Math.* **84** (1979), no. 1, 201-215. (John B. Conway) **81j:46062** 46L05 (46L10, 47C15)
- (with Akemann, Charles A.) Compact and weakly compact derivations of C^* -algebras. *Pacific J. Math.* **85** (1979), no. 2, 253-259. (J. P. Williams) **81j:47036** 47B47 (46L05)
- (with Akemann, Charles A.) Compact actions on C^* -algebras. *Glasgow Math. J.* **21** (1980), no. 2, 143-149. (J. W. Bunce) **81k:46063** 46L05 (47B05)
- Banach-module valued derivations on C^* -algebras. *Illinois J. Math.* **24** (1980), no. 3, 462-468. (B. E. Johnson) **81j:46062** 46H25 (46L99, 46M20)
- Wright, William E. Binary search trees in secondary memory. *Acta Inform.* **15** (1981), no. 1, 3-17. (Author's summary) **81k:68049** 68E10 (68B15)
- Wrobel, Volker Zur Fredholm-Riesz-Theorie in lokalkonvexen Räumen. *Math. Nachr.* **92** (1979), 195-202. (A. Pietsch) **81m:47021** 47A53 (47B05)
- Wroniec, Zygmunt On the application of the orthonormal Franklin system to the approximation of analytic functions. *Approximation theory (Papers, VIth Semester, Stefan Banach Internat. Math. Center, Warsaw, 1975)*, pp. 305-316, Banach Center Publ., 4, PWN, Warsaw, 1979. (Volker Klotz) **81f:30036** 30E10 (41A15, 46E15)
- Wroński, Andrzej (with Kabziński, Jacek K.; Porębska, Małgorzata) On (\leftrightarrow, \neg) -reduct of the intuitionistic negation operation. *Polish Acad. Sci. Inst. Philos. Sociol. Bull. Sect. Logic* **8** (1979), no. 3, 161-165. (Editors) **81a:03026** 03B60
- Wu, A. K. (with Miele, A.; Cloutier, J. R.; Mohanty, B. P.) Sequential conjugate gradient-restoration algorithm for optimal control problems with nondifferential constraints. I, II. *Internat. J. Control* **29** (1979), no. 2, 189-211, 213-234. (F. M. Kirillova) **81k:49022** 49D07 (93C99)
- (with Miele, A.) Sequential conjugate gradient-restoration algorithm for optimal control problems with nondifferential constraints and general boundary conditions. I. *Optimal Control Appl. Methods* **1** (1980), no. 1, 69-88. (T. Giec) **81m:49031** 49D07
- Wu, Angela (with Rosenfeld, Azriel) Cellular graph automata. *Graphs and their application to computer science and biology (Internat. Workshop, Bad Honnef, 1978)*, pp. 464-475, *Lecture Notes in Comput. Sci.*, 73, Springer, Berlin, 1979. (Authors' summary) **81c:68041** 68D20 (68F10)
- (with Rosenfeld, Azriel) Cellular graph automata. I. Basic concepts, graph property measurement, closure properties. *Inform. and Control* **42** (1979), no. 3, 305-329. (Roland Vollmar) **81c:68042a** 68D20 (68C25)
- (with Rosenfeld, Azriel) Cellular graph automata. II. Graph and subgraph isomorphism, graph structure recognition. *Inform. and Control* **42** (1979), no. 3, 330-353. (Roland Vollmar) **81c:68042b** 68D20 (68E10)
- (with Dubitzki, Tavi) Cellular d-graph automata with augmented memory. *Inform. Sci.* **22** (1980), no. 1, 69-77. (Authors' summary) **81k:68040** 68D20
- Wu, Chien Fu Characterizing the consistent directors of least squares estimates. *Ann. Statist.* **8** (1980), no. 4, 789-801. (M. M. Leonenko) **81j:62131** 62J05 (62F25)
- On some ordering properties of the generalized inverses of nonnegative definite matrices. *Linear Algebra Appl.* **32** (1980), 49-60. (Ronald L. Smith) **81j:15004** 15A09
- Wu, Chien H. Plane-strain buckling of cracks in incompressible elastic solids. *J. Elasticity* **10** (1980), no. 2, 163-177. (Author's summary) **81d:73090** 73M05 (73H05)
- Wu, Chong Xin See Wu, Cong Xin
- Wu, Chu Tao (with Posner, Marc E.) A note on programming problem with maximin objective function. *Opsearch* **15** (1978), no. 2-3, 117-119. (M. Vlach) **81h:90124** 90C25
- Wu, Chuan Lin (with Feng, Tse Yun) On a class of multistage interconnection networks. *IEEE Trans. Comput.* **29** (1980), no. 8, 694-702. (Authors' summary) **81j:94052** 94C99 (68B20)
- (with Feng, Tse Yun) The reverse-exchange interconnection network. *IEEE Trans. Comput.* **29** (1980), no. 9, 801-811. (Authors' summary) **81j:94080** 94C99
- Wu, Cong Xin Some problems of nuclear perfect spaces. (Chinese. English summary) *Acta Math. Sinica* **22** (1979), no. 6, 653-666. (Bor-Luh Lin) **81m:46022** 46A45
- Wu, Fang A note on Powell's method. (Chinese) *Acta Math. Sinica* **20** (1977), no. 1, 14-15. (Editors) **81j:65092** 65K10 (90C30)
- Wu, Han C. (with Yip, M. C.) Strain rate and strain rate history effects on the dynamic behavior of metallic materials. *Internat. J. Solids and Structures* **16** (1980), no. 6, 515-536. (Authors' summary) **81h:73017** 73E99
- Wu, Hsueh Mou See Wu, Xue Mou
- Wu, Hung Hsi (with Greene, Robert E.) ★Function theory on manifolds which possess a pole. *Lecture Notes in Mathematics*, 699, Springer-Verlag, Berlin-New York, 1979. ii + 215 pp. ISBN 3-540-09108-4 (M. L. Gromov) **81a:53002** 53-02 (32F99, 32H20, 53C20, 53C55, 58E20)
- On a problem concerning the intrinsic characterization of C^* . *Math. Ann.* **246** (1979/80), no. 1, 15-22. (Robert E. Greene) **81a:32008** 32C10 (53C55)
- A remark on the Bochner technique in differential geometry. *Proc. Amer. Math. Soc.* **78** (1980), no. 3, 403-408. (Bang-yen Chen) **81j:53046** 53C20
- Wu, Jang Mei G. Boundary limits of Green's potentials along curves. II. Lipschitz domains. *Studia Math.* **62** (1978), no. 3, 287-294. (Author's summary) **81i:31016** 31B25
- (with Kaufman, Robert P.) Singularity of parabolic measures. *Compositio Math.* **48** (1980), no. 2, 243-250. (S. Dummel) **81c:35055** 35K05 (31A15)
- Wu, Julian J. A computer program and approximate solution formulation for gun motions analysis. *Proceedings of the 1979 Army Numerical Analysis and Computers Conference (White Sands Missile Range, White Sands, N.M., 1979)*, pp. 255-279, ARO Rep. 79, 3, U. S. Army Res. Office, Research Triangle Park, N.C., 1979. (From the summary) **81a:70031** 70N05 (65N30)
- (with Vasilakis, J. D.) Dynamic stability of columns subjected to nonconservative forces. *Transactions of the Twenty-Fifth Conference of Army Mathematicians (Johns Hopkins Univ., Baltimore, Md., 1979)*, pp. 645-660, ARO Rep. 80, 1, U. S. Army Res. Office, Research Triangle Park, N.C., 1980. (Authors' summary) **81a:73028** 73H10
- (with Simkins, T. E.) A numerical comparison between two unconstrained variational formulations. *Transactions of the Twenty-Fifth Conference of Army Mathematicians (Johns Hopkins Univ., Baltimore, Md., 1979)*, pp. 675-700, ARO Rep. 80, 1, U. S. Army Res. Office, Research Triangle Park, N.C., 1980. (See 80m:73002) 73C99
- Wu, Ke Tsai (with Lin, Pi Erh; Ahmad, Ibrahim A.) Asymptotic joint distribution of sample quantiles and sample mean with applications. *Comm. Statist. A—Theory Methods* **9** (1980), no. 1, 51-60. (K. C. Chanda) **81f:62033** 62E20 (62G30)
- Wu, L. S. (with Hwang, Jun Shung; P'an, Ch'iao Sung) An extension of Bernstein-Müntz-Szász theorem. *Soochow J. Math.* **4** (1978), 121-126. (M. Dixon) **81c:41007** 41A10 (30B60, 62E10)
- Wu, Le Guang (with Wang, Yu Feng) Enumeration of equivalence classes of matric having the same characteristic polynomial. (Chinese. English summary) *J. Huazhong Inst. Tech.* **6** (1978), no. 3, 139-143, 146. (Editors) **81j:15011** 15A21
- (with Chen, Ting Peng) Some problems concerning fuzzy graphs. (Chinese. English summary) *J. Huazhong Inst. Tech.* **1980**, no. 2, Special Issue on Fuzzy Math, iv, 58-60. (Authors' summary) **81i:05115** 05C99 (03E72, 94D05)
- Wu, Lian Da (with Tong, Fu; Wang, Chang Bin) Recurrence relations of the inclination function. *Chinese Astronom.* **4** (1980), no. 1, 17-24. (Ram Krishan Sharma) **81b:70017** 70M05 (70F15)
- Wu, Lo Kuang See Wu, Le Guang
- Wu, Margaret (with Halperin, Marc; Ware, James H.) Conditional distribution-free tests for the two-sample problem in the presence of right censoring. *J. Amer. Statist. Assoc.* **75** (1980), no. 371, 638-645. (G. E. Noether) **81k:62058** 62G10 (62G20)
- Wu, Min Yen On solution of linear time-varying systems. *Information linkage between applied mathematics and industry, II (Proc. Second Annual Workshop, Monterey, Calif., 1979)*, pp. 233-248, Academic Press, New York, 1980. (See 81j:93004) 93C50
- A new concept of eigenvalues and eigenvectors and its applications. *IEEE Trans. Automat. Control* **25** (1980), no. 4, 824-826. (Authors' summary) **81g:93038** 93C05 (15A18, 93C45)
- Solvability and representation of linear time-varying systems. *Internat. J. Control* **31** (1980), no. 5, 937-945. (Authors' summary) **81c:93056** 93C50
- Wu, Pei Yuan Hyperinvariant subspaces of C_{11} contractions. II. *Indiana Univ. Math. J.* **27** (1978), no. 5, 805-812. (D. N. Clark) **81a:47012b** 47A45 (47A15)
- Hyperinvariant subspaces of C_{11} contractions. *Proc. Amer. Math. Soc.* **75** (1979), no. 1, 53-58. (D. N. Clark) **81a:47012a** 47A45 (47A15)
- On contractions of class C_{11} . *Acta Sci. Math. (Szeged)* **42** (1980), no. 1-2, 205-210. (B. Sz. Nagy) **81f:47013** 47A45 (47B37)
- On the reflexivity of $C_d(N)$ contractions. *Proc. Amer. Math. Soc.* **79** (1980), no. 3, 405-409. (V. V. Peller) **81f:47014** 47A45
- Wu, Qi Guang The optimality of orthogonal experimental designs. (Chinese) *Acta Math. Appl. Sinica* **1** (1978), no. 4, 283-299. (Ch'ing Shui Ch'eng) **81c:62085** 62K05
- Wu, S. M. (with Das, Sunil R.; Ch'en, Jen; Lee, Suh Yin; Bhattacharyya, A.) On the design of improved failure detection experiments in synchronous sequential machines based on terminal measurements. *Comput. Electr. Engrg.* **6** (1979), no. 4, 293-297. (Authors' summary) **81a:68059** 68D15
- Wu, S. Y. (with Bouwer, I. Z.) Symmetry of hypergraphs. *Second International Conference on Combinatorial Mathematics (New York, 1978)*, pp. 103-106, *Ann. New York Acad. Sci.*, 319, New York Acad. Sci., New York, 1979. (F. Sterboul) **81c:05069** 05C25 (05C25)

- Wu, Shou Zhang (with Wan, Bai Wu) Model reduction of large-scale systems. (Chinese. English summary) *Acta Automat. Sinica* 6 (1980), no. 1, 57-66. (Authors' summary) 81b:93006 93A15
- Wu, Tai Tsun (with Chao, Alexander W.; Yang, Chen Ning) Some inequalities in the eikonal approximation. *The Ta-Yu Wu Festschrift: Science of matter*, pp. 27-64, Gordon & Breach, New York, 1978. (N. Mukunda) 81c:81082 81F20 (49H05)
- (with McCoy, Barry M.) Lattice renormalization of nonperturbative quantum field theory. *Bifurcation phenomena in mathematical physics and related topics* (Proc. NATO Advanced Study Inst., Cargèse, 1979), pp. 69-90, NATO Adv. Study Inst. Ser., Ser. C: Math. and Phys. Sci., 54, Reidel, Dordrecht, 1980. (See 81f:00012) 81E15
- (with McCoy, Barry M.) Nonlinear partial difference equations for the two-dimensional Ising model. *Phys. Rev. Lett.* 45 (1980), no. 9, 675-678. (Authors' summary) 81m:82044 82A67 (39A10)
- Wu, Wen Jun On calculability of I^p -measure with respect to complex-union and other related constructions. A translation of *Kexue Tongbao* (Chinese) 25 (1980), no. 5, 196-198. *Kexue Tongbao* (English) 25 (1980), no. 3, 185-188. (Jean-Michel Lemaire) 81k:55019 55P62 (55U35)
- Wu, Wen T'ung (with Chuang, Lung I) On recursive parameter estimation of multivariable systems. (Chinese summary) *J. Chinese Inst. Engrs.* 3 (1980), no. 1, 89-93. (Authors' summary) 81b:93034 93C35
- Wu, Xiao Long (with Wan, Zhe Xian) On the second commutator subgroup of $PGL_2(\mathbb{Z})$. *C. R. Math. Rep. Acad. Sci. Canada* 2 (1980), no. 6, 303-308. (From the text) 81m:20060 20G30
- Wu, Xue Mou Fuzziness, reliability and pan-system analysis. I. (Chinese. English summary) *J. Huazhong Inst. Tech.* 6 (1978), no. 3, 56-66, 145. (Author's summary) 81j:94054a 94D05
- Fuzziness, reliability and pan-system analysis. II. Pan-system analysis of reliability. (Chinese. English summary) *J. Huazhong Inst. Tech.* 6 (1978), no. 4, vi, 44-62. (Author's summary) 81j:94054b 94D05
- Some boundary properties and imbedding inequalities of analytic functions. I. (Chinese. English summary) *J. Huazhong Inst. Tech.* 1979, no. 3, 41-49. (Author's summary) 81j:44010a 44A55 (30E10, 41A99)
- Some boundary properties and imbedding inequalities of analytic functions. II. (Chinese. English summary) *J. Huazhong Inst. Tech.* 1979, no. 4, 8, 49-61. (Author's summary) 81j:44010b 44A55 (30E10, 41A99)
- (with Li, Guo Ping) Some transformation concepts from mathematics. (Chinese) *Kexue Tongbao* 24 (1979), no. 4, 145-148. (Takayuki Nôno) 81c:00012 00A69 (00A25)
- (with Chen, Ting Hui) Transition logic, fuzzy logic and pansystem logic. I. (Chinese. English summary) *J. Huazhong Inst. Tech.* 1980, no. 2 Special Issue on Fuzzy Math, i-ii, 15-23. (Authors' summary) 81c:68088 68D45 (03B52)
- Wu, Y. C. (with Rekasius, Z. V.) Deterministic identification of linear dynamic systems. *IEEE Trans. Automat. Control* 25 (1980), no. 3, 501-504. (Authors' summary) 81c:93030 93B30
- Wu, Y. W. Adaptive control of systems with structural colored noise. *Proceedings of the 18th IEEE Conference on Decision and Control* (Fort Lauderdale, Fla., 1979), Vol. 1, 2, pp. 731-735, IEEE, New York, 1979. (Author's summary) 81m:93092 93E20 (90C39)
- Wu, Yel Chiang (with Cheng, Charles Ching An; Mitchell, Barry) Categories of fractions preserve dimension one. *Comm. Algebra* 8 (1980), no. 10, 927-939. (Howard Lyn Hiller) 81f:18029 18D20 (18E35)
- Corrections to: " $H^2(G, A)$ and obstructions of group extensions" [J. Pure Appl. Algebra 12 (1978), no. 1, 93-100; MR 57 #16387]. *J. Pure Appl. Algebra* 20 (1981), no. 1, 103-105. (Editors) 81j:20070 20J05
- Wu, Yong Shi (with Liu, Yu Fen) The effects of torsion fields on a spinning top. *Acta Phys. Polon. B* 11 (1980), no. 3, 173-183. (Authors' summary) 81c:83048 83D05
- Planck length and the five-dimensional principal U_1 -bundle theory unifying gravitation and electromagnetism. (Chinese. English summary) *Acta Phys. Sinica* 29 (1980), no. 3, 395-399. (Kotik K. Lee) 81h:83040 83E15 (53C80)
- (with Liu, Yu Fen) Equations of motion for a spinning particle in gravitational field with torsion. A translation of *Kexue Tongbao* (Chinese) 25 (1980), no. 4, 156-159. *Kexue Tongbao* (English) 25 (1980), no. 2, 127-133. (Larry L. Smalley) 81j:83039 83D05 (83C10)
- (with Zhou, Guang Zhao; Zhu, Zhong Yuan; Dai, Yuan Ben) The nontopological soliton with a nonabelian internal symmetry. *Sci. Sinica* 23 (1980), no. 1, 40-60. (A. Degasperis) 81j:81053 81E99
- Walbert, Daniel E. Real structure in complex L_1 -preduals. *Trans. Amer. Math. Soc.* 235 (1978), 165-181. (Y. Benyamini) 81d:46021 46B25
- The rational approximation of real functions. *Approximation theory and functional analysis* (Proc. Internat. Sympos. Approximation Theory, Univ. Estadual de Campinas, Campinas, 1977), pp. 421-428, North-Holland Math. Studies, 35, North-Holland, Amsterdam, 1979. (John A. Roulier) 81a:41026 41A20 (41A30)
- On the characterization of complex rational approximations. *Illinois J. Math.* 24 (1980), no. 1, 140-155. (D. Gaier) 81b:30073 30E10 (41A20)
- Wallman, Carl E. Dynamical groups in atomic and molecular physics. *Recent advances in group theory and their application to spectroscopy* (Proc. NATO Adv. Study Inst., St. Francis Xavier Univ., Antigonish, N.S., 1978), pp. 329-403, NATO Adv. Study Inst. Ser., Ser. B: Physics, 43, Plenum, New York, 1979. (L. E. H. Trainor) 81c:81051 81C40 (22E70, 58F30)
- Limit cycles as invariant functions of Lie groups. *J. Phys. A* 12 (1979), no. 4, L73-L75. (Ernest G. Kalnins) 81f:35016 35B32 (34C05, 35A30, 58F35)
- Wals, Michael (with Naumann, Joachim) On evolution inequalities of Bingham type in three dimensions. II. *J. Math. Anal. Appl.* 70 (1979), no. 2, 309-325. (P. S. Milojević) 81c:76082 76A05 (35Q99)
- On a nonlinear evolution problem arising in the theory of pseudoplastic fluids. (Italian summary) *Rend. Mat.* (6) 12 (1979), no. 3-4, 609-626 (1980). (Giovanni P. Galdi) 81f:76003 76A05 (35Q20)
- Wunderlich, Hartmut Deterministisches Zuordnen in heterogenen Prozesssystemen mit Pseudo-Boole Methoden. (English summary) *Arbeitsber. Inst. Math. Mach. Datenerarb. (Inform.)* 12 (1979/80), no. 2, iv + 150 pp. (Author's summary) 81g:68055 68C15
- Wunderlich, Marvin C. A running time analysis of Brillhart's continued fraction factoring method. *Number theory, Carbondale 1979* (Proc. Southern Illinois Conf., Southern Illinois Univ., Carbondale, Ill., 1979), pp. 323-342, *Lecture Notes in Math.*, 751, Springer, Berlin, 1979. (A. J. van der Poorten) 81f:10011 10A25 (10-04, 68C25)
- Wunderlich, Walter Windschiefe Gelenkschnecke mit schneidenden Diagonalen. (Serbo-Croatian summary) *Rad Jugoslav. Akad. Znan. Umjet.* No. 382 (1978), 115-127. (Hellmuth Stachel) 81c:53006 53A17 (51M20)
- Eine merkwürdige Familie von beweglichen Stabwerken. *Elem. Math.* 34 (1979), no. 6, 132-137. (Hellmuth Stachel) 81c:51011 51M20 (53A17, 70B15)
- On a consistent shell theory in mixed tensor formulation. *Theory of shells* (Proc. Third IUTAM Sympos., Tbilisi, 1978), pp. 607-633, North-Holland, Amsterdam, 1980. (P. Ladeveze) 81h:73039 73K15 (73L99)
- Orthogonale Erzeugendenpolygone auf einschaligen Hyperboloiden. (English summary) *Monatsh. Math.* 89 (1980), no. 2, 163-170. (K. Strubecker) 81g:51015 51N05
- Wundt, Wilhelm See Special issue: Wundt, Wilhelm, 81c:01002
- Wünsche, Volkmar Charakterisierung von Raum-Zeit-Mannigfaltigkeiten durch Relationen zwischen ihren Krümmungspinoren unter Benutzung eines modifizierten Newman-Penrose-Kalküls. *Math. Nachr.* 89 (1979), 321-336. (R. Roga) 81j:83019 83C40 (53B50)
- Selbstadjungierte Huygenssche Differentialgleichungen zweiter Ordnung für nichtskalare Spintensorfelder. *Math. Nachr.* 94 (1980), 211-242. (H. A. Buchdahl) 81c:35063 35L05 (58G16, 83C99)
- Wussing, Hans ★ Isaac Newton. (German) Second edition. *Biographien Hervorragender Naturwissenschaftler, Techniker und Mediziner* [Biographies of Distinguished Scientists, Technologists and Physicians], 27, BSB B. G. Teubner Verlagsgesellschaft, Leipzig, 1978. 146 pp. (1 plate). (J. S. Joel) 81d:01025 01A70
- Carl Friedrich Gauß—Leben und Wirken. *Festakt und Tagung aus Anlaß der 200. Geburtstages von Carl Friedrich Gauß* (Berlin, 1977), pp. 151-160, *Abh. Akad. Wiss. DDR, Abt. Math. Naturwiss. Tech.*, 1978, 3, Akademie-Verlag, Berlin, 1978. (M. Kline) 81c:01021 01A70
- ★ Vorlesungen zur Geschichte der Mathematik. (German) [Course on the history of mathematics] With the collaboration of S. Brentjes, H.-J. Ilgauds, K.-H. Schlotte, P. Schreiber, R. Siegmund-Schultze, R. Tobies and J. Wilke. Studienbücherei [Textbook library] Mathematik für Lehrer [Mathematics for Teachers], 13, VEB Deutscher Verlag der Wissenschaften, Berlin, 1979. 365 pp. (D. J. Struik) 81g:01001 01-01
- See also Biography: Mathematicians, 81c:01002a and Biography: Mathematicians, 81g:01002b
- Wüst, R. (with Klaus, Martin) Spectral properties of Dirac operators with singular potentials. *J. Math. Anal. Appl.* 72 (1979), no. 1, 206-214. (W. Allegretto) 81h:35082 35P99 (81C99)
- Wüstefeld, Axel (with Zimmermann, Uwe) Nonlinear one-parametric linear programming and t-norm transportation problems. *Nucl. Res. Logist. Quart.* 27 (1980), no. 2, 187-197. (Tomas Gal) 81f:90106 90C31 (90C08)
- Wüstenberg, H. (with Argyris, J. H.; Doltsinis, J. St.) On the analysis of forming problems in natural formulation. *Computing methods in applied sciences and engineering* (Proc. Fourth Internat. Sympos., Versailles, 1979), pp. 3-27, North-Holland, Amsterdam, 1980. (Authors' summary) 81k:73024 73E99 (73G05)
- Wüthrich, Gilbert Linearformen in Logarithmen von U -Zahlen und Transzendenz von Potenzen. II. *Arch. Math. (Basel)* 32 (1979), no. 4, 356-367. (R. Wallisser) 81c:10047 10F30
- Algebraische Unabhängigkeit von Werten von Funktionen, die gewissen Differentialgleichungen genügen. *J. Reine Angew. Math.* 317 (1980), 102-119. (Michel Waldschmidt) 81i:10044 10F37
- Wytylski, L. Commented bibliography on techniques for computing Padé approximants. *Padé approximation and its applications* (Proc. Conf., Univ. Antwerp, Antwerp, 1979), pp. 375-392, *Lecture Notes in Math.*, 765, Springer, Berlin, 1979. 81b:41046 41A21 (00A15, 65-02)
- (with Claessens, G.) On the computation of nonnormal Padé approximants. *J. Comput. Appl. Math.* 5 (1979), no. 4, 283-289. (Jean Timbalario) 81f:65013 65D15
- Wyatt, Robert E. (with Hutchinson, John S.) Quantum ergodicity and the Wigner distribution. *Chem. Phys. Lett.* 72 (1980), no. 2, 378-384. (Joseph Ford) 81f:81025 81C99 (58F11, 58F13)
- Wybourne, B. G. Aspects of the exceptional group E_6 . *Austral. J. Phys.* 32 (1979), no. 5, 417-426. (William H. Klink) 81c:22033 22E70 (20Hxx, 81G20)
- (with Dehuai, Luan) The symmetric group: branching rules, products and plethysms for spin representations. *J. Phys. A* 14 (1981), no. 2, 327-348. (Authors' summary) 81m:20022 20C35 (81C40)
- Wyckoff, James (with Engelhardt, Max) Cramér-Rao lower bounds for estimators based on censored data. *Comm. Statist. A—Theory Methods* 9 (1980), no. 13, 1385-1399. (I. A. Melamed) 81k:62039 62F11
- Wyderka, Zdzisław On the linear concave-convex differential open-loop game with measures as coefficients. (Polish summary) *Univ. Śląski w Katowicach Prace Nauk.-Prace Mat.* No. 8 (1978), 88-92. (U. R. Prasad) 81c:90107 90D25
- Some problems of optimal control for linear systems with measures as coefficients. *Systems Sci.* 5 (1979), no. 4, 425-431 (1980). (Eitelbert N. Chukwu) 81m:49019 49B10 (93C15)
- van Wyk, D. J. Remark on the relationship between the biconjugate direction algorithm and the generalized conjugate direction algorithm. *J. Optim. Theory Appl.* 28 (1979), no. 2, 263-264. (Author's summary) 81a:90146 90C30
- van Wyk, J. W. J. (with de Wet, T.) Some large sample properties of Hogg's adaptive trimmed means. *South African Statist. J.* 13 (1979), no. 1, 53-69. (Jon A. Wellner) 81c:62034 62F35 (62E20, 62G30)
- Wyld, H. W. (with Roomany, H. H.; Holloway, L. E.) New method for the Hamiltonian formulation for lattice spin systems. *Phys. Rev. D* (3) 21 (1980), no. 6, 1557-1563. (Authors' summary) 81a:82055 82A67
- Wylegala, Franz-Josef (with Bundschuh, Peter) Über algebraische Unabhängigkeit bei gewissen nichtfortsetzbaren Potenzreihen. *Arch. Math. (Basel)* 34 (1980), no. 1, 32-36. (P. L. Cijouw) 81m:10068 10F37 (10F35)
- Wyllie, James (with Fortune, Steven) Parallelism in random access machines. *Conference*

- Record of the Tenth Annual ACM Symposium on Theory of Computing (San Diego, Calif., 1978), pp. 114-118, ACM, New York, 1978. (Authors' summary) **81i:68036** 68B20 (03D10)
- (with Fortune, Steven; Hopcroft, John) The directed subgraph homeomorphism problem. *Theoret. Comput. Sci.* **10** (1980), no. 2, 111-121. (Thomas G. Szymanski) **81i:68079** 68E10 (68C25)
- Wyman, B. F. (with Hemami, H.) Indirect control of the forces of constraint in dynamic systems. *Trans. ASME Ser. G J. Dynamic Systems Measurement Control* **101** (1979), no. 4, 355-360. (Authors' summary) **81i:93045** 93C35 (70B15)
- Wyner, Aaron D. An analog scrambling scheme which does not expand bandwidth. II. Continuous time. *IEEE Trans. Inform. Theory* **25** (1979), no. 4, 415-425. (N. C. Mohanty) **81i:94001** 94A05
- (with Shepp, L. A.; Slepian, D.) On prediction of moving-average processes. *Bell System Tech. J.* **59** (1980), no. 3, 367-415. (A. Morris Walker) **81i:60041** 60G25 (62M20, 94A17)
- (with Wolf, Jack K.; Ziv, Jacob) Source coding for multiple descriptions. *Bell System Tech. J.* **59** (1980), no. 8, 1417-1426. (Authors' summary) **81i:94015** 94A29
- Wyrostek, Piotr (with Król, Jerzy) Syntax error recovery by means of synchronizing pairs. (Polish. English and Russian summaries) *Podstawy Sterowania* **10** (1980), no. 2, 109-124. (Authors' summary) **81i:68083** 68F25
- Wyrwich, Herbert (with Pittnauer, Franz) Ganze Funktionen mit endlich vielen vorgeschriebenen asymptotischen Entwicklungen. *Math. Z.* **161** (1978), no. 1, 1-8. (J. Winkler) **81j:30044** 30D20
- Wyrtkiński, Julian Propagation of acceleration waves in a constrained medium. (Polish) *Problems of the thermomechanics of elastic bodies* (Polish), pp. 259-274, Ossolineum, Wrocław, 1978. (See **81i:73001**) 73D99
- Wysocki, K. I. (with Taranko, E.; Taranko, R.; Pilat, M.) Optical conductivity of substitutionally disordered alloys: intraband transitions. *Z. Phys. B* **39** (1980), no. 3, 187-192. (Authors' summary) **81i:82037** 82A42 (82-04)
- Wyśkiel, Janusz Remarks on a test of normality proposed by Z. Pawłowski. (Polish. Russian and English summaries) *Przegląd Statyst.* **26** (1979), no. 1-2, 101-110 (1980). (Ryszard Zieliński) **81m:62036** 62F03 (62G10)
- Xanthopoulos, Basilis C. (with Gercoch, Robert) Asymptotic simplicity is stable. *J. Math. Phys.* **19** (1978), no. 3, 714-719. (Authors' summary) **81i:83020** 83C30 (58D25)
- Xekalaki, E. (with Panaretos, J.) A characteristic property of certain discrete distributions. *Analytic function methods in probability theory* (Proc. Colloq. Methods of Complex Anal. in the Theory of Probab. and Statist., Kossuth L. Univ. Debrecen, Debrecen, 1977), pp. 253-267, Colloq. Math. Soc. János Bolyai, 21, North-Holland, Amsterdam, 1979. (V. Seshadri) **81g:62027** 62E10
- On characterizing the bivariate Poisson, binomial and negative binomial distributions. *Analytic function methods in probability theory* (Proc. Colloq. Methods of Complex Anal. in the Theory of Probab. and Statist., Kossuth L. Univ. Debrecen, Debrecen, 1977), pp. 369-379, Colloq. Math. Soc. János Bolyai, 21, North-Holland, Amsterdam, 1979. (Ramesh C. Gupta) **81m:62028** 62E10
- Xiao, Ling (with Zhang, Tong) The Riemann problem for general 2×2 conservation laws. (Chinese) *Kexue Tongbao* **23** (1978), no. 8, 465-469. (Tai Ping Liu) **81j:35075** 35L65
- (with Zhang, Tong) A Riemann problem for the system of conservation laws of aerodynamics without convexity. (Chinese. English summary) *Acta Math. Sinica* **22** (1979), no. 6, 719-732. (Tai Ping Liu) **81j:35078** 35L65 (76N15)
- Xie, Li Tong Programming problems on n -complexes. *Combinatorics* **79** (Proc. Colloq. Univ. Montréal, Montréal, Que., 1979), Part I. *Ann. Discrete Math.* **8** (1980), 267-274. (Authors' summary) **81i:90100** 90C35 (90C08)
- Xie, Ting Fan Pavlovskii's approximation method. (Chinese) *Acta Math. Sinica* **22** (1979), no. 2, 253-257. (Yung-Ming Chen) **81i:42004** 42A10 (41A30)
- On approximation of differentiable function by Fourier sums. A translation of *Kexue Tongbao* (Chinese) **25** (1980), no. 6, 249-251. *Kexue Tongbao* (English) **25** (1980), no. 3, 189-190. (Yung-Ming Chen) **81i:42003** 42A10
- Xin, Y. L. Some results on stable harmonic maps. *Duke Math. J.* **47** (1980), no. 3, 609-613. (Samuel I. Goldberg) **81i:58041** 58E20
- Remarks on characteristic classes of four-dimensional Einstein manifolds. *J. Math. Phys.* **21** (1980), no. 2, 343-346. (Harold Donnelly) **81i:58060** 58G10 (53C25, 83C99)
- Xu, Bao Lu See Hsü, Pao Lu
- Xu, Guang Hui Mean memory response times in a complex computer system. (Chinese) *Acta Math. Appl. Sinica* **1** (1978), no. 2, 137-144. (Authors' summary) **81i:68005** 68A05
- Xu, Guang Shan (with Yu, Kun Rui) A note on a theorem of Baker and Mahler. (Chinese. English summary) *Acta Math. Sinica* **22** (1979), no. 4, 487-494. (Ming-Chit Liu) **81i:10050** 10F35
- (with Yu, Kun Rui) Some Diophantine inequalities involving a class of Siegel's E -functions. (Chinese) *Kexue Tongbao* **24** (1979), no. 11, 481-486. (From the text) **81i:10049** 10F10 (10F99)
- (with Zhu, Yao Chen; Wang, Lian Xiang) On the transcendence of a class of series. An application of W. M. Schmidt's theorem. A translation of *Kexue Tongbao* (Chinese) **25** (1980), no. 2, 49-53. *Kexue Tongbao* (English) **25** (1980), no. 1, 1-6. (Maurice Mignotte) **81m:10067** 10F35
- Xu, Jing Hua (with Ding, Da Fu) Replication of biological macromolecules and formation of dissipative structures. *Sci. Sinica* **22** (1979), no. 10, 1206-1219. (J. P. Kernevez) **81i:92003** 92A09 (35K55, 58F10)
- Xu, Ming Yao Semi- p -abelian p -groups and their power structures. (Chinese) *Acta Math. Sinica* **23** (1980), no. 1, 78-87. (Shui Chi Chang) **81j:20037** 20D15
- Xu, Shi Ying Order convergence in linear topological spaces. (Chinese) *Acta Math. Sinica* **22** (1979), no. 6, 759-761. (Kung-fu Ng) **81j:46017** 46A40
- Xu, Shao Xian (with Hu, Ying Sheng) A type of iterative limit for variation-diminishing operators. (Chinese) *Acta Math. Appl. Sinica* **1** (1978), no. 3, 240-249. (Authors' summary) **81i:41007** 41A15
- (with Hu, Ying Sheng) Iterated limit for variation-diminishing approximation of spline functions. (Chinese. English summary) *Acta Math. Sinica* **22** (1979), no. 3, 375-388. (From the introduction and summary) **81i:41008** 41A15
- Xu, Shao Chang Variational principle for stability of spinning solid bodies with liquid-filled cavities and its applications. *Sci. Sinica* **22** (1979), no. 12, 1372-1381. (Authors' summary) **81i:49038** 49H05 (49G05, 76E99)
- Xu, Yi Chao (with Shi, He; Hao, Bai Lin) A closed form approximation for the 3-dimensional Ising model. (Chinese. English summary) *Acta Phys. Sinica* **27** (1978), no. 1, 47-62. (Authors' summary) **81i:82073** 82A67 (82A15)
- On the Bergman kernel function of homogeneous bounded domains. *Sci. Sinica* **1979, Special Issue II on Math.**, 80-90. (Akio Kodama) **81i:32045** 32M15 (31C05)
- Xu, Yong Hua Nonassociative and nondistributive rings. II. (Chinese. English summary) *Acta Math. Sinica* **21** (1978), no. 4, 289-301. (C. Tsai) **81m:17007** 17A99
- Nonassociative and nondistributive rings. III. (Chinese. English summary) *Acta Math. Sinica* **22** (1979), no. 1, 1-13. (C. Tsai) **81m:17008** 17A99
- A theory of rings that are isomorphic to complete rings of linear transformations. I. (Chinese. English summary) *Acta Math. Sinica* **22** (1979), no. 2, 204-218. (From the summary) **81j:16023a** 16A42
- A theory of rings that are isomorphic to complete rings of linear transformations. II. (Chinese. English summary) *Acta Math. Sinica* **22** (1979), no. 3, 303-315. (From the summary) **81j:16023b** 16A42
- A theory of rings that are isomorphic to complete rings of linear transformations. III. (Chinese. English summary) *Acta Math. Sinica* **22** (1979), no. 4, 389-403. (From the summary) **81j:16023c** 16A42
- A theory of rings that are isomorphic to complete rings of linear transformations. IV. (Chinese. English summary) *Acta Math. Sinica* **22** (1979), no. 5, 556-568. (From the summary) **81j:16023d** 16A42
- Nonassociative and nondistributive rings. I. *Sci. Sinica* **22** (1979), no. 2, 135-148. (C. Tsai) **81m:17006** 17A99
- nguyen-Xuan-Loc See Nguyen-Xuan-Loc
- nguyen Xuan My See Nguyen Xuan My
- hoàng Xuân Sinh See Hoàng Xuân Sinh
- nguyen Xuan Tuyen See Nguyen Xuan Tuyen
- nguyen Xuan Uy See Nguyen Xuan Uy
- nguyen Huy Xuong See Nguyen Huy Xuong
- li-gün-Y See Li-Gün-Y
- Yabe, Hiroshi (with Hayashi, Kenji; Takahashi, Satoru) Stability of the general gradient methods for function minimization. *TRU Math.* **15** (1979), no. 2, 63-72. (Jon W. Tolle) **81i:65071** 65K10 (65L07, 90C30)
- Yabushita, S. On exact solutions of diffusion equation in cometary dynamics. *Astronom. and Astrophys.* **85** (1980), no. 1-2, 77-79. (K. K. Sen) **81i:85006** 85A05 (35Q20)
- Yabuta, Kôzô (with Hasumi, Morisuke) Monotonicity and continuity. *Bull. Fac. Sci. Ibaraki Univ. Ser. A* **12** (1980), 5-7. (Jaroslav Smítal) **81i:26003** 26A15 (28A33)
- Yacoubi, Afika L'inégalité de Hardy pour l'espace $H^1(SU(2))$. *Analyse harmonique sur les groupes de Lie (Sém., Nancy-Strasbourg 1976-1978)*, II, pp. 618-622, *Lecture Notes in Math.*, 739, Springer, Berlin, 1979. (J. Mitchell) **81i:32008** 32A35 (32M15)
- Yadav, B. S. Recent developments in Hilbert space operator theory. *Nieuw Arch. Wisk.* **(3)** **27** (1979), no. 3, 398-406. (P. Rosenthal) **81i:47001** 47-02
- (with Chatterjee, Supriya) On a partial solution of the transitive algebra problem. *Acta Sci. Math. (Szeged)* **42** (1980), no. 1-2, 211-215. (Eric Nordgren) **81m:47015** 47A15 (47B37, 47D25)
- Yadav, Hira Lal (with Ranga Rao, Melam P.) Some approximate analytical solutions for blast waves in solids. *J. Math. Phys.* **14** (1980), no. 1, 19-29. (Authors' summary) **81i:73011** 73D05 (76L05)
- Yadav, R. B. S. (with Singh, Tarkeshwar) An anisotropic magnetohydrodynamic universe in general relativity. *Indian J. Pure Appl. Math.* **11** (1980), no. 7, 917-930. (Sotirios Persides) **81i:83042** 83F05 (53B50)
- Yadav, Ram Avtar (with Sankaran, N.) G -domains and pseudovaluations. *Rend. Sem. Mat. Univ. Padova* **61** (1979), 33-38 (1980). (Marco Fontana) **81i:13003** 13B20
- Yadav, Sarjoo Prasad On $[C, I]$ -summability of factored Jacobi series. (Hindi. English summary) *Vijnana Parishad Anusandhan Patrika* **21** (1978), no. 3, 257-260. (Tilam Singh) **81i:42089** 42C10 (40F05)
- Yaffe, Laurence G. Confinement in $SU(N)$ lattice gauge theories. *Phys. Rev. D* **(3)** **21** (1980), no. 6, 1574-1590. (Authors' summary) **81i:81061** 81E10 (82A67)
- sangwine-Yager, J. R. See Sangwine-Yager, J. R.
- Yager, Ronald R. Building fuzzy decision models. *Proceedings of the First International Conference on Mathematical Modeling* (St. Louis, Mo., 1977), Vol. II, pp. 753-763, Univ. Missouri-Rolla, Rolla, Mo., 1977. (Authors' summary) **81j:90154** 90D35 (03E72)
- (with Basson, David) A filtering model for synaptic clefts. *Proceedings of the First International Conference on Mathematical Modeling* (St. Louis, Mo., 1977), Vol. II, pp. 829-835, Univ. Missouri-Rolla, Rolla, Mo., 1977. (See **81i:90005**) 92A07
- (with Kandel, Abraham) A 1979 bibliography on fuzzy sets, their applications, and related topics. *Advances in fuzzy set theory and applications*, pp. 621-744, North-Holland, Amsterdam, 1979. (From the text) **81i:00008** 00A15 (03E72, 94D05)
- A note on fuzziness in a standard uncertainty logic. *IEEE Trans. Systems Man Cybernet.* **9** (1979), no. 7, 387-388. (Settimo Termini) **81i:03028** 03B52
- A note on probabilities of fuzzy events. *Inform. Sci.* **18** (1979), no. 2, 113-128. (Constantin Drossos) **81i:60011** 60B99 (03E72, 60A10, 94D05)
- A measurement-informational discussion of fuzzy union and intersection. *Internat. J. Man-Mach. Stud.* **11** (1979), no. 2, 189-200. (Settimo Termini) **81g:03064** 03E72 (94D05)
- Satisfaction and fuzzy decision functions. *Fuzzy sets (Proc. Sympos. Policy Anal. Inform. Systems, Duke Univ., Durham, N.C., 1980)*, pp. 171-194, Plenum, New York, 1980. (M. Mañás) **81i:90009** 90A05
- On a general class of fuzzy connectives. *Fuzzy Sets and Systems* **4** (1980), no. 3, 235-242. (W. Wechler) **81m:03066** 03E72 (03B52)
- Extending Nash's bargaining model to include importances for multiobjective decisionmaking. *IEEE Trans. Systems Man Cybernet.* **10** (1980), no. 7, 405-407. (Andrzej Wiczeorek) **81j:90008** 90A07 (90D45)
- On the measure of fuzziness and negation. II. Lattices. *Inform. and Control* **44** (1980), no. 3, 236-260. (Authors' summary) **81i:03055** 03E72 (06B99, 94D05)
- A foundation for a theory of possibility. *J. Cybernet.* **10** (1980), no. 1-3, 177-204. (W. Wechler) **81i:03022** 03B52 (94D05)
- On the cheating problem in Nash's bargaining model. *J. Inform. Optim. Sci.* **1**

- (1980), no. 3, 281-290. (Author's summary) **81i:90219** 90D12
(with Hammerbacher, Irene M.) The personalization of security selection: an application of fuzzy set theory. *Fuzzy Sets and Systems* 5 (1981), no. 1, 1-9. (Authors' summary) **81j:90114** 90C31 (03E72, 90A09)
- Yagi, Atsumi On a class of linear evolution equations of "hyperbolic" type in reflexive Banach spaces. *Osaka J. Math.* 16 (1979), no. 2, 301-315. (J. R. Dorroh) **81a:34055** 34G10 (35L45, 47D05)
- Remarks on proof of a theorem of Kato and Kobayasi on linear evolution equations. *Osaka J. Math.* 17 (1980), no. 1, 233-243. (V. Sree-Hari-Rao) **81b:34054** 34G10
- Yagita, Nobuaki Brown-Peterson cohomology groups of exceptional Lie groups. *J. Pure Appl. Algebra* 17 (1980), no. 2, 223-226. (Francis Clarke) **81g:55006** 55N20 (57T15)
- Yagoda, H. P. Integral formulas for wound rolls. *Mech. Res. Comm.* 7 (1980), no. 2, 103-113. (From the introduction) **81d:73067** 73K99 (73C99)
- Centrifugally induced stresses within center-wound rolls. *I. Mech. Res. Comm.* 7 (1980), no. 3, 181-193. (From the introduction) **81d:73020** 73C99
- Yagodin, V. I. See Jagodin, V. I.
- Yahagi, Takashi Model-following control of linear dynamic systems using output feedback. *Systems-Comput.-Controls* 9 (1978), no. 2, 11-20. (From the summary) **81h:93025** 93C05
- Yahav, Joseph A. (with Razin, Assaf) On stochastic models of economic growth. *Internat. Econom. Rev.* 20 (1979), no. 3, 599-604. (M. Aoki) **81g:90030** 90A16
- Yahya, 'Abū Naṣr ibn Yahyā ibn 'Abbās al-Mağrebi al-Andalusī See Samī'ī ibn Yahyā, 'Abū Naṣr ibn Yahyā ibn 'Abbās al-Mağrebi al-Andalusī
- Yahya, S. M. P-neat exact sequences. *Studia Sci. Math. Hungar.* 11 (1976), no. 3-4, 363-371 (1978). (Khalid Benabdallah) **81h:20069** 20K40
- Yajima, Keiji Characteristics of incremental assignment method. *Optimization techniques (Proc. Ninth IFIP Conf., Warsaw, 1979), Part 2*, pp. 256-262, *Lecture Notes in Control and Information Sci.* 23, Springer, Berlin, 1980. (See **81j:49011b**) 90B05
- Yajima, Kenji An abstract stationary approach to three-body scattering. *J. Fac. Sci. Univ. Tokyo Sect. IA Math.* 25 (1978), no. 1, 109-132. (From the introduction) **81g:47009** 47A40 (81F10)
- The quasiclassical limit of quantum scattering theory. *Mathematical problems in theoretical physics (Proc. Internat. Conf. Math. Phys., Lausanne, 1979)*, pp. 73-77, *Lecture Notes in Phys.* 116, Springer, Berlin, 1980. (See **81f:81063**) 81C99 (81F99)
- A multichannel scattering theory for some time dependent Hamiltonians, charge transfer problem. *Comm. Math. Phys.* 75 (1980), no. 2, 153-178. (Gheorghe Nenciu) **81j:81057** 81F10 (47A40)
- Yajima, Shunzo (with Eiki, Hiroshi; Inagaki, Kosaku) Autonomous testing and its application to testable design of logic circuits. *FTCS-10 (Tenth Internat. Symp. Fault-Tolerant Comput., Kyoto, 1980)*, pp. 173-178, *IEEE, New York*, 1980. (See **81m:94002**) 94C05
- Yajima, Yoshihiro On prediction of integrated moving average processes. *Ann. Inst. Statist. Math.* 32 (1980), no. 1, 81-94. (Raúl Pedro Mentz) **81j:62142** 62M20
- Yajima, Yukinobu A note on order locally finite and closure-preserving covers. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math.* 27 (1979), no. 5, 401-405. (B. K. Lahiri) **81a:54021** 54D20
- Yajlik, Kirit S. (with Kumar, Anand) Internal separated flows at large Reynolds number. *J. Fluid Mech.* 97 (1980), no. 1, 27-51. (Authors' summary) **81a:76020** 76D15
- Yakimo, O. M. See Jahno, O. M.
- Yakimo, V. G. See Jahno, V. G.
- Yakimo, V. M. See Jahno, V. M.
- Yakimov, A. V. See Jakimov, A. V.
- Yakimov, Yu. L. See Jakimov, Yu. L.
- Yakobson, B. I. See Jakobson, B. I.
- Yakovlev, N. N. On bicompart in Σ -products and related spaces. *Comment. Math. Univ. Carolin.* 21 (1980), no. 2, 263-283. (Eric K. van Douwen) **81m:54036** 54D30 (54B10)
- Yakovleva, A. P. See Jakovleva, A. P.
- Yakubovich, V. A. See Jakubovič, V. A.
- Yalamov, Yu. I. See Jalalov, Ju. I.
- Yalavik, C. C. Solvability of Fermat's equation. *Math. Ed. (Sivan)* 12 (1978), no. 3, A69-A70. (From the introduction) **81i:10022** 10B15
- Yakub, T. (with Martin, Philippe A.) The charge fluctuations in classical Coulomb systems. *J. Statist. Phys.* 22 (1980), no. 4, 435-463. (Carlo Cercignani) **81f:82025** 82A45 (82A05)
- Yamada, Akira On the linear transformations of Ahlfors functions. *Kodai Math. J.* 1 (1978), no. 1, 159-169. (Tatsuo Fujii) **81i:30080** 30F35
- Precise variational formulas for abelian differentials. *Kodai Math. J.* 3 (1980), no. 1, 114-143. (Y. Kusunoki) **81i:30078** 30F30 (32G05, 32G15)
- Yamada, Gen (with Irie, Toshihiro; Takahashi, Ichiro) In-plane vibration of a free-clamped slender arc of varying cross section. *Bull. JSME* 23 (1980), no. 178, 567-573. (Authors' summary) **81j:73093** 73K99 (65D07)
- Yamada, Hiromichi Standard subgroups isomorphic to $PSU(6, 2)$ or $SU(6, 2)$. *J. Algebra* 61 (1979), no. 1, 82-111. (Gary L. Walls) **81f:20025** 20D05
- Yamada, Keigo Examples of optimal stopping problems for jump processes. *Optimizing methods in statistics (Proc. Internat. Conf., Indian Inst. Tech., Bombay, 1977)*, pp. 541-550, Academic Press, New York, 1979. (H. Taylor) **81d:62085** 62L15 (60G40)
- Yamada, Mieko On the Williamson type j matrices of orders 4-29, 4-41, and 4-37. *J. Combin. Theory Ser. A* 27 (1979), no. 3, 278-381. (A. L. Whiteman) **81f:05036** 05B20
- Yamada, Miyuki On the structure of completely regular semigroups having certain properties. *Proceedings of the Conference on Semigroups in Honor of Alfred H. Clifford (Tulane Univ., New Orleans, La., 1978)*, pp. 117-136, Tulane Univ., New Orleans, La., 1979. (K. S. S. Nambooripad) **81i:20089** 20M10
- (with Shoji, Kunitaka) On H -compatible quasi-orthodox semigroups. *Mem. Fac. Sci. Shimane Univ.* 13 (1979), 1-9. (N. R. Reilly) **81k:20093** 20M10
- (with Shoji, Kunitaka) Orthodox semigroups on which Green's relations are compatible. *Mem. Fac. Sci. Shimane Univ.* 13 (1979), 11-16. (N. R. Reilly) **81k:20094** 20M10
- J -compatible orthodox semigroups. *Proc. Japan Acad. Ser. A Math. Sci.* 55 (1979), no. 8, 301-305. (Mohan S. Putcha) **81g:20121** 20M10
- (with Shoji, Kunitaka) D^* -simple inverse semigroups. *J. Algebra* 65 (1980), no. 2, 317-327. (M. Yamada) **81m:20084** 20M10
- Yamada, Naoki Estimates on the support of solutions of elliptic variational inequalities in bounded domains. II. *Funkcial. Ekvac.* 22 (1979), no. 3, 339-350. (Gianfranco Bottaro) **81i:49007** 49A29 (35J20)
- Estimates on the support of solutions of parabolic variational inequalities in bounded cylindrical domains. *Hiroshima Math. J.* 10 (1980), no. 2, 337-349. (Giovanni M. Troianiello) **81k:49008** 49A29 (35K55)
- Yamada, Tomoji (with Graham, Robert) Chaos in a laser system under a modulated external field. *Phys. Rev. Lett.* 45 (1980), no. 16, 1322-1324. (Authors' summary) **81h:58044** 58F13 (81K05)
- Yamada, Toshiaki (with Fukui, Masaki) On the indicatized tensor of S_{dual} in Finisler spaces. *Tensor (N.S.)* 33 (1979), no. 3, 373-379. (W. Wrona) **81k:53021** 53B40
- On the indicatized tensor of S_{dual} in semi-C-reducible Finisler spaces. *Tensor (N.S.)* 34 (1980), no. 2, 151-156. (S. Watanabe) **81h:53028** 53B40
- Yamada, Yoshiaki (with Okabe, Masayuki; Nishiguchi, Isoharu) Basis transformation of trial function space in Lagrange interpolation. *Comput. Methods Appl. Mech. Engrg.* 23 (1980), no. 1, 85-99. (Authors' summary) **81e:65086** 65D05
- (with Okabe, Masayuki; Nishiguchi, Isoharu) Reconsideration of rectangular Lagrange families with hierarchy-ranking bases. *Comput. Methods Appl. Mech. Engrg.* 23 (1980), no. 3, 369-390. (Authors' summary) **81j:65159** 65N30
- Yamada, Yoshio Some remarks on the equation $y_n - \sigma(y_n)y_{n-1} - y_{n-2} = f$. *Osaka J. Math.* 17 (1980), no. 2, 303-323. (R. C. MacCamy) **81m:35067** 35K35
- Yamagata, Hideo On blizzard solutions as "superpositions" of c solitons with real speeds. *Math. Japon.* 23 (1978/79), no. 4, 439-455. (Jack Carr) **81h:35089** 35Q20 (81C05)
- On Bäcklund transformation associated with the sine-Gordon equation in 3+1 dimensions. *Math. Japon.* 25 (1980), no. 3, 301-319. (George Leibbrandt) **81k:35154** 35Q20 (58A15, 76B25, 81C05)
- Yamaguchi, Hiroshi Remarks on Riesz sets. *Hokkaido Math. J.* 7 (1978), no. 2, 328-335. (Editors) **81a:43011** 43A46
- (with Koshi, Shozo) The F. and M. Riesz theorem and group structures. *Hokkaido Math. J.* 8 (1979), no. 2, 294-299. (K. Yale) **81f:43085** 43A17 (43A10)
- Remarks on the spaces of type $H + AP$. *Hokkaido Math. J.* 9 (1980), no. 1, 79-82. (R. H. Cox) **81a:43012** 43A60
- Some multipliers on $H^2_p(G)$. *J. Austral. Math. Soc. Ser. A* 29 (1980), no. 1, 52-60. (Daniel M. Oberlin) **81k:43007** 43A22 (43A17)
- Yamaguchi, Katsuhito (with Gotō, Tetsuo; Naka, Sigefumi) The time as an observable in quantum mechanics. *Progr. Theoret. Phys.* 64 (1980), no. 1, 1-17. (Authors' summary) **81h:81008** 81B05
- Yamaguchi, Kazuo A mathematical model of friendship choice distribution. *J. Math. Sociol.* 7 (1980), no. 2, 261-287. (Authors' summary) **81k:92060** 92A20 (90A08)
- Yamaguchi, Meiri (with Kawahara, Yasuo) Minimal realization theory for tree process machines in monoidal categories. *Mem. Fac. Sci. Kyushu Univ. Ser. A* 34 (1980), no. 1, 71-78. (S. Huzino) **81f:68068** 68D30 (18B20)
- Yamaguchi, Satoru On complete affinely flat structures of some solvable Lie groups. *Mem. Fac. Sci. Kyushu Univ. Ser. A* 33 (1979), no. 2, 209-218. (J. L. Koszul) **81m:22014** 22E25 (53C05)
- Supplements to: "On complete affinely flat structures of some solvable Lie groups" [Mem. Fac. Sci. 33 (1979), no. 2, 209-218; MR 81m:22014] and an application to nilpotent Lie groups of dimension ≤ 5 . *Mem. Fac. Sci. Kyushu Univ. Ser. A* 33 (1979), no. 2, 219-223. (J. L. Koszul) **81m:22015** 22E25 (53C05)
- Derivations and affine structures of some nilpotent Lie algebras. *Mem. Fac. Sci. Kyushu Univ. Ser. A* 34 (1980), no. 1, 151-170. (Dragomir Ž. Đoković) **81f:17015** 17B30 (22E60)
- Yamaguchi, Seichi (with Yū, Wén Nèng) Geometry of holomorphically subprojective Kählerian manifolds. *Ann. Mat. Pura Appl. (4)* 121 (1979), 263-276. (Leopold Verstraeten) **81j:53016** 53B35 (53B25)
- (with Chūman, Gorō) Eigenvalues of the Laplacian of Sasakian manifolds. *TRU Math.* 15 (1979), no. 2, 31-41. (Shōkichi Tanno) **81b:53035** 53C25
- Yamaguchi, Yukio (with Brooks, Bernard R.; Laidig, William D.; Saxe, Paul; Goddard, John D.; Schaefer, Henry F., III) Analytic gradients from correlated wave functions via the two-particle density matrix and the unitary group approach. *J. Chem. Phys.* 72 (1980), no. 8, 4652-4653. (From the text) **81i:81119** 81G55
- Yamaguti, Masaya (with Mimura, Masayasu; Nishiura, Yasumasa) Some diffusive prey and predator systems and their bifurcation problems. *Bifurcation theory and applications in scientific disciplines (Papers, Conf., New York, 1977)*, pp. 490-510, *Ann. New York Acad. Sci.* 316, New York Acad. Sci., New York, 1979. (E. D. Conway) **81a:35050** 35K55 (35B32, 92A15)
- Yamakawa, H. (with Aoyama, T.; Matsuoka, O.) Relativistic self-consistent-field methods for molecules. II. A single-determinant Dirac-Fock self-consistent-field method for closed-shell polyatomic molecules. *J. Chem. Phys.* 73 (1980), no. 3, 1329-1333. (Authors' summary) **81h:81173b** 81G55
- Yamaki, Hiroyoshi (with Harada, Koichiro) Finite groups having 2-local subgroups $E_{16}L_2(2)$. II. *J. Fac. Sci. Univ. Tokyo Sect. IA Math.* 26 (1979), no. 1, 97-114. (Bernad Baumann) **81a:20007** 20B10
- Yamaki, N. (with Kodama, S.) Perturbation analyses for the postbuckling and imperfection sensitivity of circular cylindrical shells under torsion. *Theory of shells (Proc. Third IUTAM Symp., Tbilisi, 1978)*, pp. 635-667, North-Holland, Amsterdam, 1980. (J. L. Nowinski) **81h:73048** 73L99 (73H05)
- Yamakoshi Petrosky, Tomio (with Mishima, Nobuhiko; Suzuki, Ryōji) Theory of irreversible processes in nonequilibrium quantum systems. I. General formalism. *J. Statist. Phys.* 21 (1979), no. 4, 347-392. (J. Fernando Perez) **81i:81124a** 81Hxx (82A15)
- Theory of irreversible processes in nonequilibrium quantum systems. II. Cluster expansions with contraction for homogeneous systems. *J. Statist. Phys.* 21 (1979), no. 4, 393-413. (J. Fernando Perez) **81i:81124b** 81Hxx (82A15)
- Yamamoto, Hikaru (with Yamashita, Yoshifumi) Commensurate-incommensurate transition in sine-Gordon fields. *Progr. Theoret. Phys.* 64 (1980), no. 5, 1501-1515. (Authors' summary) **81m:82015** 82A15 (81E99)

- Yamamoto, Hiro-o** Constructibility and geometric finiteness of Kleinian groups. *Tôhoku Math. J. (2)* 32 (1980), no. 3, 353–362. (William Abikoff) **81k:30068** 30F40 (20H10, 32G15)
- Yamamoto, Hiromichi** On null sets for extremal distances of order 2 and harmonic functions. *Hiroshima Math. J.* 10 (1980), no. 2, 437–467. (M. Ohtsuka) **81i:31012** 31B15
- Yamamoto, Hirotsuke** (with Itoh, Kohji) Viterbi decoding algorithm for convolutional codes with repeat request. *IEEE Trans. Inform. Theory* 26 (1980), no. 5, 540–547. (Authors' summary) **81h:94021** 94B10
- Yamamoto, Kazuhiko** The Cauchy problem for hyperbolic operators with variable multiple characteristics. *Proc. Amer. Math. Soc.* 72 (1978), no. 1, 109–116. (Author's summary) **81g:35068** 35L30
- Hyperbolic second-order differential operators with complex coefficients. *Studies in analysis*, pp. 123–133, *Advances in Math., Suppl. Studies, 4*, Academic Press, New York, 1979. (David S. Tartakoff) **81g:35018** 35H05
- Some examples of the C^∞ well-posed Cauchy problem. *J. London Math. Soc. (2)* 22 (1980), no. 2, 307–317. (H. Kumano-go) **81m:35084** 35L15
- Yamamoto, Makoto** Amida-diagrams and Seifert matrices of positive iterated torus knots. *Proc. Japan Acad. Ser. A Math. Sci.* 54 (1978), no. 8, 256–261. (From the introduction) **81g:57006** 57M25
- Yamamoto, Masaru** A new fault detecting scheme for combinational logic circuits. *Systems-Comput.-Controls* 9 (1978), no. 3, 29–34 (1980). (Author's summary) **81j:94047** 94C10
- A method for minimizing incompletely specified sequential machines. *IEEE Trans. Comput.* 29 (1980), no. 8, 732–736. (Author's summary) **81f:68064** 68D15
- Yamamoto, Norio** An error analysis of Galerkin approximations of periodic solution and its period to autonomous differential system. *J. Math. Tokushima Univ.* 13 (1979), 53–77. (From the introduction) **81d:65051** 65L99 (34C25)
- Yamamoto, Sumiyasu** (with Tazawa, Shinsuke) Combinatorial aspects of balanced file organization schemes. *J. Inform. Process.* 2 (1979/80), no. 3, 127–133. (Authors' summary) **81i:68025** 68B15
- Yamamoto, Taku** On the treatment of autocorrelated errors in the multiperiod prediction of dynamic simultaneous equation models. *Internat. Econom. Rev.* 21 (1980), no. 3, 735–748. (Peter Schmidt) **81m:62174** 62M10 (62P20, 90A16)
- Yamamoto, Tetsuro** Componentwise error estimates for approximate solutions of nonlinear equations. *J. Inform. Process.* 2 (1979/80), no. 3, 121–126. (Author's summary) **81a:65052** 65H10
- Yamamoto, Yomeo** (with Aoe, Junichi; Shimada, Ryosaku) Practical method for reducing precedence parsers. *Systems-Comput.-Controls* 9 (1978), no. 3, 54–62 (1980). (Authors' summary) **81i:68120** 68F25
- Yamamoto, Yoshihiko** On the number of lattice points in the square $|x| + |y| < u$ with a certain congruence condition. *Osaka J. Math.* 17 (1980), no. 1, 9–21. (Eckehard Krätzel) **81k:10062** 10J25 (53C20, 58G25)
- Yamamoto, Yutaka** Some remarks on reachability of infinite-dimensional linear systems. *J. Math. Anal. Appl.* 74 (1980), no. 2, 568–577. (Roger Brockett) **81j:93029** 93C05 (34K30)
- Yamamura, Masatoshi** (with Nishiyama, Seiya; Iwasaki, Masaharu; Fukutome, Hideo) A variational foundation of the improper Hartree-Bogoliubov formalism. *Progr. Theoret. Phys.* 64 (1980), no. 2, 558–567. (Authors' summary) **81j:81069** 81G35
- Yamamura, S.** (with Kuznetsov, Alexander V.; Kasami, T.) An error correcting scheme for defective memory. *IEEE Trans. Inform. Theory* 24 (1978), no. 6, 712–718. (Authors' summary) **81h:94018** 94B05
- (with Kasami, T.; Kuznetsov, Alexander V.) The cardinality of additive matched codes that correct errors and defects. *Russian J. Math. Sci.* 14 (1978), no. 2, 3–10. (G. O. H. Katona) **81d:94027** 94B60
- Yamamura, Sadaaki** A note on the omega lemma. *Bull. Austral. Math. Soc.* 20 (1979), no. 3, 421–435. (Peter Michor) **81c:58015** 58C20
- Groups of C^∞ -diffeomorphisms and differentiation in locally convex spaces. *Math. Chronicle* 8 (1979), 57–71. (Peter Michor) **81c:58023** 58D15 (58C20, 58D05)
- Notes on the inverse mapping theorem in locally convex spaces. *Bull. Austral. Math. Soc.* 21 (1980), no. 3, 419–461. (Peter Michor) **81j:58017** 58C15 (47H15, 58C20)
- Yamashita, Takeshi** On differential equations in the sense of Fréchet differentials. (Japanese) *Sûgaku* 32 (1980), no. 1, 71–73. (Sadaaki Yamamoto) **81c:58015** 58C20
- Yamashita, Takahiro** (with Shimbo, Masaru; Sato, Yoshiharu; Kawaguchi, Michiaki) On the definition of three-way correlation coefficient. *Tensor (N.S.)* 33 (1979), no. 3, 343–346. (Jana Zvárová) **81k:62079** 62H20
- (with Yasuda, Hiroshi) On curves in the indicatrix bundle over a Finsler space. *Tensor (N.S.)* 33 (1979), no. 3, 357–364. (S. Watanabe) **81g:53021** 53B40
- Yamashita, A.** On a necessary condition for the local solvability of pseudodifferential operators with double characteristics. *Comm. Partial Differential Equations* 5 (1980), no. 3, 209–224. (William Margulies) **81c:35118** 35S99 (35A07)
- Yamashita, Hioki** On multiplate automata. *Mathematical foundations of computer science, 1979 (Proc. Eighth Sympos., Olomouc, 1979)*, pp. 533–541, *Lecture Notes in Comput. Sci.*, 74, Springer, Berlin, 1979. (Author's introduction) **81c:68067** 68D25 (03D05)
- Yamashita, Maresugu** Maximization of input conductances of an infinite network. *Discrete Appl. Math.* 1 (1979), no. 4, 301–309. (A. T. Amin) **81c:94031** 94C05
- Discrete potentials on an infinite network. *Mem. Fac. Sci. Shimane Univ.* 13 (1979), 31–44. (C. R. Deeter) **81i:31016** 31C20
- (with Kortanek, Kenneth O.) Equalities in transportation problems and characterizations of optimal solutions. *Naval Res. Logist. Quart.* 27 (1980), no. 4, 589–595. (Authors' summary) **81m:90074** 90C08
- Yamashita, Masayuki** (with Kojima, Sadao) Some new invariants of links. *Invent. Math.* 54 (1979), no. 3, 213–228. (L. Neuwirth) **81b:57004** 57M25
- (with Kato, Mitsuyoshi; Kojima, Sadao; Ohkawa, Tetsusuke) The Matsumoto tripling for compact simply connected 4-manifolds. *Tôhoku Math. J. (2)* 31 (1979), no. 4, 525–535. (Michael Freedman) **81k:57008** 57N65
- Yamashita, Susumu** (with Ishibashi, Toshihiko; Doshita, Shuji) Unit resolution for a subclass of the Ackermann class. *Mem. Fac. Engrg. Kyoto Univ.* 42 (1980), no. 1, 63–75. (John Cherniavsky) **81j:03065** 03D15 (03B35, 68G15)
- Yamashita, Hiroshi** A continuous path method of optimization and its application to global optimization. *Survey of mathematical programming (Proc. Ninth Internat. Math. Programming Sympos., Budapest, 1976)*, Vol. 1, pp. 539–546, North-Holland, Amsterdam, 1979. (Kurt Georg) **81h:90133** 90C30 (65H10)
- A differential equation approach to nonlinear programming. *Math. Programming* 18 (1980), no. 2, 155–168. (Yieh Hei Wan) **81k:90090** 90C30 (58F40)
- Yamashita, K.** (with Denham, M. J.) Dead-beat output zeroing by input and output feedback in multivariable delay-differential systems. *Internat. J. Control* 30 (1979), no. 5, 803–812. (Edward W. Kamen) **81a:93049** 93C35
- Yamashita, Katsumi** (with Taniguchi, Tsuneo) A method of optimization with power system nonlinear properties. *Bull. Univ. Osaka Prefect. Ser. A* 28 (1979), no. 2, 139–148 (1980). (Authors' summary) **81c:93046** 93C10 (34C15)
- Yamashita, Masakatsu** (with Ikeda, Hiroshi) Mapping cylinders and manifolds. *Math. Sem. Notes Kobe Univ.* 7 (1979), no. 3, 647–656. (David C. Wilson) **81d:57015** 57Q37 (57Q40)
- Yamashita, Shinji** A nonnormal function whose derivative has finite area integral of order $0 < p < 2$. *Ann. Acad. Sci. Fenn. Ser. A I Math.* 4 (1979), no. 2, 293–298. (Lovell Hansen) **81k:30042** 30D45 (30D50)
- Inequalities for the Schwarzian derivative. *Indiana Univ. Math. J.* 28 (1979), no. 1, 131–135. (A. Edrei) **81j:30030** 30C55 (30D30)
- Hyperbolic Hardy class H^1 . *Math. Scand.* 45 (1979), no. 2, 261–266. (Kenneth Stephenson) **81i:30059** 30D50 (30D55)
- Criteria for functions to be Bloch. *Bull. Austral. Math. Soc.* 21 (1980), no. 2, 223–227. (P. Lappan) **81c:30041** 30D45
- Nonnormal Dirichlet quotients and nonnormal Blaschke quotients. *Proc. Amer. Math. Soc.* 80 (1980), no. 4, 604–606. (D. Protas) **81j:30049** 30D45 (30D50)
- The normality of the derivative. *Rev. Roumaine Math. Pures Appl.* 25 (1980), no. 3, 481–484. (P. Lappan) **81g:30023** 30C45
- Yamashita, Yoshifumi** (with Yamamoto, Hiko) Commensurate-incommensurate transition in sine-Gordon fields. *Progr. Theoret. Phys.* 64 (1980), no. 5, 1501–1515. (Authors' summary) **81m:82015** 82A15 (81E99)
- Yamato, Hajime** Relations between limiting Bayes estimates and U -statistics for estimable parameters. *J. Japan Statist. Soc.* 7 (1977), no. 2, 57–66. (Author's summary) **81m:62073** 62G05 (62F15)
- Yamato, Kazuo** An effective method of counting the number of limit cycles. *Nagoya Math. J.* 76 (1979), 35–114. (S. Ju. Piljugin) **81a:58042** 58F21 (34C25)
- Yamato, Kenzi** Sur la classe caractéristique exotique de Lazarov-Paternack en codimension 2. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 289 (1979), no. 10, A537–A540. (Masahisa Adachi) **81f:57029** 57K30 (53C20)
- On exotic characteristic classes of conformal and projective foliations. *Osaka J. Math.* 16 (1979), no. 3, 589–604. (D. B. Fuku) **81c:57026** 57R30
- Yamato, Yutai** (with Nakao, Shintaro) Approximation theorem on stochastic differential equations. *Proceedings of the International Symposium on Stochastic Differential Equations (Res. Inst. Math. Sci., Kyoto Univ., Kyoto, 1976)*, pp. 283–296, Wiley, New York, 1978. (G. Papanicolaou) **81h:60081** 60H10
- Yamauchi, Masatoshi** (with Saito, Hiroshi) Trace formula of certain Hecke operator for $\Gamma_0(q)$. *Nagoya Math. J.* 76 (1979), 1–33. (A. N. Andrianov) **81i:10036** 10D15 (10D40)
- Yamazaki, Akira** On the pseudocompetitive allocations and the core of a large economy. *J. Math. Econom.* 5 (1978), no. 3, 217–228. (Author's introduction) **81m:90013** 90A06
- A note on the almost everywhere uniqueness of maximal elements without order preferences. *J. Math. Econom.* 7 (1980), no. 2, 209–211. (Rubin Saposnik) **81f:90010** 90A06
- Yamazaki, Hideki** (with Oono, Yoshitsugu; Kohda, Tohru) Disorder parameter for chaos. *J. Phys. Soc. Japan* 48 (1980), no. 3, 738–745. (Authors' summary) **81c:82023** 82A25 (58F13)
- Yamazaki, Kouetsu** (with Oda, Juhachi) A procedure to obtain a fully stressed shape of elastic continuum. *Internat. J. Numer. Methods Engrg.* 15 (1980), no. 7, 1095–1105. (Authors' summary) **81d:73066** 73K40
- Yamazaki, Masatoshi** On the Christodoulou-Ruffini mass formula. *Phys. Lett. A* 65 (1980), no. 3, 267–268. (Author's summary) **81k:83038** 83C99
- On the Kinnerley-Chitre spinning mass field. *Progr. Theoret. Phys.* 63 (1980), no. 6, 1950–1956. (Author's summary) **81k:83016** 83C20
- Yamazaki, Yohel** The theory of division games. (Japanese) *Sûgaku* 30 (1978), no. 1, 33–42. (S. Hitotumatu) **81h:90160** 90D05 (05B05, 90D40)
- Yamazaki, Yoshitake** Critical behaviour of isotropic spin systems with long- and short-range interactions. (Italian and Russian summaries) *Nuovo Cimento A (II)* 85 (1980), no. 1, 59–77. (Author's summary) **81d:82022** 82A25
- Yammine, Sleiman** Les théorèmes de Cohen-Seidenberg en algèbre non commutative. *Séminaire d'Algèbre Paul Dubreil 31ème année (Paris, 1977–1978)*, pp. 120–169, *Lecture Notes in Math.*, 740, Springer, Berlin, 1979. (Marie-Paule Malliavin) **81i:16004** 16A08 (16A33, 17B35)
- Yan, Fa Xiang** On a class of Diophantine equations. A translation of *Kexue Tongbao* (Chinese) 25 (1980), no. 12, 529–531. *Kexue Tongbao (English)* 25 (1980), no. 7, 543–546. (W. R. Utz) **81m:10029** 10B25
- Yan, Jia An** Sur une équation différentielle stochastique générale. *Seminar on Probability, XIV (Paris, 1978/1979) (French)*, pp. 305–315, *Lecture Notes in Math.*, 784, Springer, Berlin, 1980. (V. Mackevičius) **81m:60112** 60H10
- Yanagawa, Takuraki** On cross sections of higher dimensional ribbon knots. *Math. Sem. Notes Kobe Univ.* 7 (1979), no. 3, 609–628. (Yoshihiko Marumoto) **81g:57012** 57Q45
- Yanagawa, Takashi** (with Chen, Shan Huo) The MG-procedure in ranked set sampling. *J. Statist. Plann. Inference* 4 (1980), no. 1, 33–44. (Kenneth R. W. Brewer) **81m:62020** 62D05 (62G30)
- Yanagi, Kenjiro** On some fixed point theorems for multivalued mappings. *Pacific J. Math.* 87 (1980), no. 1, 233–240. (S. Swaminathan) **81j:47047** 47H10
- Yanagihara, Hiroshi** On glueings of prime ideals. *Hiroshima Math. J.* 10 (1980), no. 1, 351–363. (H. H. Brungs) **81m:13003** 13A17 (13B20)
- Yanagihara, Niro** Meromorphic solutions of the difference equation $y(x+1) = y(x) + 1 + \lambda/y(x)$. II. *Funkcial. Ekvac.* 21 (1978), no. 3, 223–240. (L. M. Sheffer) **81h:30028** 30D05 (39A10)

- (with Hirai, Isamu) Difference equations in Banach spaces. *Comment. Math. Univ. St. Paul.* 28 (1980), no. 1, 51–61. (I. M. Sheffer) **81k:39002** 39A10 (46G20, 47H15)
- Yang, Jintao, Akira On set-sequence-covering maps and bi-sequential spaces. *Math. Japon.* 23 (1978/79), no. 4, 393–399. (Authors' summary) **81g:54024** 54D55
- Yang, Jintao, Hiroki On Gauss-type numerical double integral. *Bull. Fukuoka Univ. Ed. III* 29 (1979), 59–67. (H. E. Fettes) **81k:65021** 65D30
- Yang, Haruo (with Rao, C. Radhakrishna) General definition and decomposition of projectors and some applications to statistical problems. *J. Statist. Plann. Inference* 3 (1979), no. 1, 1–17. (George P. H. Styan) **81h:62124** 62J05 (15A03, 15A09)
- Yanase, Mitsuo M. Hidden realism. I. *Ann. Japan Assoc. Philos. Sci.* 5, no. 5, 225–244 (1980). (I. Ruzsa) **81i:03010** 03A05 (00A25, 03B52)
- Yanase, Shinichiro The instability of natural convection in a fluid layer between coaxial cylinders. *J. Phys. Soc. Japan* 48 (1980), no. 3, 998–1008. (W. O. Criminale, Jr.) **81d:76049** 76E15
- Yanykh, G. F. See Janbith, G.
- Yanenko, N. N. See Janenko, N. N.
- Yaniv, N. M. See Janiv, N. M.
- Yang, Chao Chih (with May, Charmaine P.) Algorithms for finding directed graph isomorphisms by finite automata. *Internat. J. Comput. Inform. Sci.* 9 (1980), no. 2, 117–140. (Authors' summary) **81g:68059** 68E10
- Yang, Chen Ning (with Chao, Alexander W.; Wu, Tai Tsun) Some inequalities in the eikonal approximation. *The Ta-Yu Wu Festschrift: Science of matter*, pp. 27–64, Gordon & Breach, New York, 1978. (N. Mukunda) **81a:81062** 81F20 (49H05)
- Einstein's impact on theoretical physics. *Phys. Today* 33 (1980), no. 6, 42–44, 48–49. (Lawrence Sklar) **81c:81001** 81–03 (01A65, 81G99, 83–03, 83C99)
- Yang, Cheng (with Dasarthy, B.) A transformation on ordered trees. *Comput. J.* 23 (1980), no. 2, 161–164. (Authors' summary) **81e:68078** 68E10 (68C25)
- Yang, Chung Chun (with Carroll, C. E.; Ahn, S.) Some triangle inequalities and generalizations. *Canad. Math. Bull.* 23 (1980), no. 3, 267–274. (E. F. Beckenbach) **81m:26008** 26D05 (51M25)
- (with Urabe, Hironobu) On a characteristic property of periodic entire functions. *Kodai Math. J.* 3 (1980), no. 2, 253–286. (I. N. Baker) **81k:30034** 30D15 (30D30)
- (with Gross, Fred) On prime periodic entire functions. *Math. Z.* 174 (1980), no. 1, 43–48. (I. N. Baker) **81k:30029** 30D05 (30D15)
- Yang, Chai Tong (with Song, Guo Xuan) Approximate solutions of residual deformations for impulsively loaded rigid-plastic structures. (Chinese. English summary) *Acta Mech. Sinica (Beijing)* 1980, no. 1, 57–65. (Authors' summary) **81j:73043** 73E99 (49H05)
- Yang, Helen See Au-Yang, Helen
- Yang, J. S. Simple equicontinuity in transformation groups. *Math. Japon.* 24 (1979/80), no. 3, 263–270. (Herbert Abels) **81c:54061** 54H15
- On certain groups of functions. *Internat. J. Math. Math. Sci.* 3 (1980), no. 3, 491–504. (W. A. Feldman) **81i:54011** 54C35 (54H15)
- Yang, Kuo Ho (with Hirschfelder, Joseph O.) Interaction of molecules with electromagnetic fields. I. Classical particles and fields. *J. Chem. Phys.* 72 (1980), no. 11, 5863–5899. (Tuan W. Chen) **81g:81111** 81G45
- (with Hirschfelder, Joseph O.) Generalizations of classical Poisson brackets to include spin. *Phys. Rev. A* (3) 22 (1980), no. 5, 1814–1816. (Authors' summary) **81j:81030** 81C99 (58F06, 81G55)
- Yang, L. J. Multiple lattice packings and coverings of spheres. *Monatsh. Math.* 89 (1980), no. 1, 69–76. (J. B. Wilker) **81h:52013** 52A45
- Yang, Le Common Borel directions of meromorphic functions and their derivatives. *Sci. Sinica* 1979, Special Issue II on Math., 91–104. (W. K. Hayman) **81i:30056** 30D35
- (with Zhang, Guang Hou) Deficient values and asymptotic values of entire functions. *Sci. Sinica* 1979, Special Issue II on Math., 190–203. (A. Edrei) **81g:30038** 30D35
- Angular distribution and multiple values between entire functions and their derivatives. *Sci. Sinica* 23 (1980), no. 1, 16–39. (D. Drasin) **81g:30037** 30D30 (30D45)
- Yang, Lu (with Zhang, Jing Zhong) A proof of the simplex structure theorem. (Chinese) *Knowledge Practice Math. No. 1* (1980), 43–45. (Stephen H. Y. Hung) **81j:51016** 51M05
- Yang, Ming Zhu (with Zhu, Guang Tian) The spectrum of transport operator with continuous energy in inhomogeneous medium with any cavity. *Sci. Sinica* 21 (1978), no. 3, 298–304. (Authors' summary) **81k:47017** 47A70 (47G05, 82A70)
- (with Zhu, Guang Tian) Multigroup theory for neutron transport. *Sci. Sinica* 22 (1979), no. 10, 1114–1127. (M. Drăganu) **81e:82074** 82A75
- Yang, Paul C. (with Hagi, I. N.; Trick, T. N.) On equation ordering in the modified nodal approach. *Thirteenth Asilomar Conference on Circuits, Systems and Computers (Pacific Grove, Calif., 1979)*, pp. 112–116. IEEE, New York, 1980. (See **81m:93004**) 94C99
- (with Yau, Shing Tung) Eigenvalues of the Laplacian of compact Riemannian surfaces and minimal submanifolds. *Ann. Scuola Norm. Sup. Pisa Cl. Sci.* (4) 7 (1980), no. 1, 55–63. (Scott Wolpert) **81m:80004** 58G25 (49G10, 53C20)
- (with Nirenberg, Louis; Webster, S. M.) Local boundary regularity of holomorphic mappings. *Comm. Pure Appl. Math.* 33 (1980), no. 3, 305–338. (Herbert Alexander) **81g:32020** 32H99
- (with Quine, J. R.) A noncompact version of Plücker's second equation. *Duke Math. J.* 47 (1980), no. 1, 127–134. (A. Hirschowitz) **81h:14006** 14C30 (14N10, 32H99)
- Yang, Sung Kil Cylindrical-mixing phenomena. *Lett. Nuovo Cimento* (2) 28 (1980), no. 9, 325–333. (From the text) **81k:81103** 81G25
- Yang, T. C. (with Wojcik, A. S.) Parallel and serial decompositions of multivalued sequential machines. *Proceedings of the Eighth International Symposium on Multiple-Valued Logic (Rosemont, Ill., 1978)*, pp. 179–186. IEEE, Long Beach, Calif., 1978. (Authors' summary) **81d:68064** 68D15 (94C10)
- Yang, T. F. (with Chao, Y. A.; Frantz, E. R.) The effective mode approximation for analyzing position instability of a tokamak plasma. *IEEE Trans. Plasma Sci.* 8 (1980), no. 3, 234–243. (B. Buti) **81j:76101** 76X05 (76E25)
- Yang, W. H. A useful theorem for constructing convex yield functions. *Trans. ASME Ser. E J. Appl. Mech.* 47 (1980), no. 2, 301–303. (Z. Mróz) **81h:73020** 73E05
- Yang, Xiang Qun U intervals for denumerable Markov processes. (Chinese. English summary) *Chinese Ann. Math.* 1 (1980), no. 1, 131–138. (Author's summary) **81k:60078** 60J27
- Yang, Yi Qun Uniform approximation of a class of functions by Cesàro means of negative order for Fourier series. (Chinese) *Acta Math. Sinica* 22 (1979), no. 6, 766–768. (Yung-Ming Chen) **81e:42005** 42A10 (41A30, 42A24)
- Yankielowicz, S. (with Horn, D.) Renormalization group calculation for Z(2) gauge theory. *Nuclear Phys. B* 161 (1979), no. 2–3, 533–547. (Authors' summary) **81d:81078** 81E99 (82A67)
- (with Casalbuoni, R.; Rittenberg, V.) Self-duality conditions for spin systems defined on a new class of nonabelian solvable finite groups. *Nuclear Phys. B* 170 (1980), no. 1, FS 1, 139–155. (Authors' summary) **81f:82008** 82A25 (20D99)
- (with Banks, T.; Schwimmer, Adam) Anomaly constraints in chiral gauge theories. *Phys. Lett. B* 96 (1980), no. 1–2, 67–71. (Authors' summary) **81j:81063** 81G20 (53C05)
- Yankov, B. Ya. See Jankov, B. Ja.
- Yankov, Ya. D. See Jankov, Ja. D.
- Yankovsky, George See Jankovskii, G.
- Yannakakis, Mihalis On a class of totally unimodular matrices. *21st Annual Symposium on Foundations of Computer Science (Syracuse, N.Y., 1980)*, pp. 10–16. IEEE, New York, 1980. (Authors' summary) **81k:90036** 90B10 (68C25, 90C09)
- (with Honeyman, Peter; Ladner, Richard E.) Testing the universal instance assumption. *Inform. Process. Lett.* 10 (1980), no. 1, 14–19. (From the introduction) **81a:68024** 68B15 (68C25)
- Yanney, Ralf (with Hayes, John P.) Fault recovery in multiprocessor networks. *FTCS-8 (Eighth Ann. Internat. Conf. Fault-Tolerant Comput., Toulouse, 1978)*, pp. 123–128. IEEE, New York, 1978. (Authors' summary) **81f:94048** 94C15 (68A05)
- Yano, Kentaro (with Kon, Masahiro; Ishihara, Ikuro) Anti-invariant submanifolds with flat normal connection. *J. Differential Geom.* 13 (1978), no. 4, 577–588 (1979). (Koichi Ogibe) **81e:53035** 53C40 (53C55)
- (with Kon, Masahiro) Submanifolds of Kaehlerian product manifolds. *Atti Accad. Naz. Lincei Mem. Cl. Sci. Fis. Mat. Natur. Ser. Ia* (8) 15 (1979), no. 5, 265–292. (Aurel Bejancu) **81h:53040** 53C40 (53C55)
- (with Hiramatsu, Hitosi) Kaehlerian manifolds with constant scalar curvature admitting a holomorphically projective vector field. *J. Differential Geom.* 14 (1979), no. 1, 81–92 (1980). (Haruo Kitahara) **81f:53054** 53C55
- Infinitesimal variations of submanifolds of Riemannian and Kaehlerian manifolds. *Southeast Asian Bull. Math.* 3 (1979), no. 2, 292–304. (Alan West) **81e:53016** 53B25 (53B35)
- (with Ki, U Hang) Infinitesimal variations of hypersurfaces of a Sasakian manifold. *Tensor (N.S.)* 33 (1979), no. 1, 1–10. (V. Mihova-Nehmer) **81k:53042** 53C25
- Notes on infinitesimal variations of submanifolds. *J. Math. Soc. Japan* 32 (1980), no. 1, 45–53. (M. A. Akivis) **81e:53036** 53C40
- (with Kon, Masahiro) Generic submanifolds with semidefinite second fundamental form of a complex projective space. *Kyungpook Math. J.* 20 (1980), no. 1, 47–51. (M. Okumura) **81m:53062** 53C40
- Yano, Michio Three types of Hindu sine tables. *Proceedings of the Symposium on the 1500th Birth Anniversary of Āryabhaṭa I (New Delhi, 1976)*. *Indian J. Hist. Sci.* 12 (1977), no. 2, 83–89. (A. I. Volodarskii) **81d:01007** 01A32
- Yano, Sumio (with Kotera, Tadashi) Instability of motion of a disc supported by an asymmetric shaft in asymmetric bearings (influence of external damping). *Bull. JSME* 23 (1980), no. 181, 1194–1199. (Authors' summary) **81g:70023** 70K20
- Yano, Tamaki (with Sekiguchi, Jiro) The microlocal structure of weighted homogeneous polynomials associated with Coxeter systems. I. *Tokyo J. Math.* 2 (1979), no. 2, 193–219. (P. Orlík) **81c:32027** 32C40
- (with Saito, Kyoji; Sekiguchi, Jiro) On a certain generator system of the ring of invariants of a finite reflection group. *Comm. Algebra* 8 (1980), no. 4, 373–408. (E. Vinberg) **81g:20095** 20H15 (15A72, 32C40, 32M10)
- Yanovitskii, E. G. See Janovickii, E. G.
- Yanovskii, V. V. See Janovskii, V. V.
- Yanush, A. M. See Janin, A. M.
- Yanuki, Tetsu (with Murakami, Toshiaki; Nakano, Masatsuka; Arii, Mitsuru) Asymmetric shrink fit of a cylindrical shell. *Bull. JSME* 23 (1980), no. 179, 644–649. (From the summary) **81d:73074** 73L99
- Yanushkevich, R. T. See Januskevich, R. T.
- Yanushka, A. A restriction on the parameters of a suboctagon. *J. Combin. Theory Ser. A* 26 (1979), no. 2, 193–196. (Robert B. Feinberg) **81b:05026** 05B25
- Yao, Andrew Chi Chih (with Tarjan, Robert Endre) Storing a sparse table. *Comm. ACM* 22 (1979), no. 11, 606–611. (Armin Cremers) **81e:68019** 68B15 (68H05)
- A note on a conjecture of Kam and Ullman concerning statistical databases. *Inform. Process. Lett.* 9 (1979), no. 1, 48–50. (From the text) **81a:68028** 68B15
- (with Coffman, E. G., Jr.; So, Kimming; Hofri, Micha) A stochastic model of bin-packing. *Inform. and Control* 44 (1980), no. 2, 105–115. (Authors' summary) **81b:68016** 68B15 (68H05, 90B05)
- (with Lipton, Richard J.; Rosenberg, Arnold L.) External hashing schemes for collections of data structures. *J. Assoc. Comput. Mach.* 27 (1980), no. 1, 81–95. (Authors' summary) **81g:68127** 68H05 (68B15)
- New algorithms for bin packing. *J. Assoc. Comput. Mach.* 27 (1980), no. 2, 207–227. (Authors' summary) **81j:68057** 68C25
- Yao, F. Frances (with Guibas, Leo J.) On translating a set of rectangles. *Conference Proceedings of the Twelfth Annual ACM Symposium on Theory of Computing (Los Angeles, Calif., 1980)*, pp. 154–160. ACM, New York, 1980. (See **81j:68006**) 68K05 (51–04)
- Efficient dynamic programming using quadrangle inequalities. *Conference Proceedings of the Twelfth Annual ACM Symposium on Theory of Computing (Los Angeles, Calif., 1980)*, pp. 429–435. ACM, New York, 1980. (See **81j:68006**) 90C39
- (with Stockmeyer, Paul K.) On the optimality of linear merge. *SIAM J. Comput.* 9 (1980), no. 1, 85–90. (Authors' summary) **81b:68057** 68C25
- Yao, Jing Qi (with Ni, Lu Qun; Zhao, Han Zhang) Some fixed-point theorems of contractive type mappings. (Chinese. English summary) *Chinese Ann. Math.* 1 (1980), no. 1, 63–74. (J. S. W. Wong) **81k:47084** 47H10

- Yao, Jing Zhi** A direct method for solving large systems of linear equations with unrestricted band width. (Chinese. English summary) *Numer. Math. J. Chinese Univ.* 1 (1979), no. 2, 179–185. (Winston T. Lin) **81h:15004** 15A06
- Yao, Kung** (with Biglieri, Ezio M.) Multidimensional moment error bounds for digital communication systems. *IEEE Trans. Inform. Theory* 26 (1980), no. 4, 454–464. (Authors' summary) **81g:94007** 94A05
- Yao, L. S.** (with Catton, L.; McDonough, J. M.) Asymmetric boundary layer on a nonisothermally heated cone. *Trans. ASME Ser. E J. Appl. Mech.* 47 (1980), no. 3, 467–474. (Authors' summary) **81g:76095** 76R10 (76E99, 76R05)
- Yao, York Peng** (with Kazama, Yoichi) Effective Lagrangian due to heavy quarks in quantum chromodynamics. *Phys. Rev. D* (3) 22 (1980), no. 2, 514–522. (Authors' summary) **81e:81125** 81G05
- Yao, Zhen Sheng** Regression equations established by multiple correlation screening. (Chinese. English summary) *Nanjing Daxue Xuebao* No. 2 (1980), 121–130. (Authors' summary) **81h:62098** 62J05
- Yap, Chee K.** (with Miller, Raymond E.) On the formal specification and analysis of loosely connected processes. *Mathematical studies of information processing (Proc. Internat. Conf., Kyoto, 1978)*, pp. 33–66, *Lecture Notes in Comput. Sci.*, 75, Springer, Berlin, 1979. (Authors' summary) **81g:68042** 68B20
- (with Miller, Raymond E.) On formulating simultaneity for studying parallelism and synchronization. *ACM-SIGACT Symposium on the Theory of Computing (San Diego, Calif., 1978)*, *J. Comput. System Sci.* 20 (1980), no. 2, 203–218. (Jane W. S. Liu) **81h:68026** 68B10
- Yap, Hsiao Poh** On the critical graph conjecture. *J. Graph Theory* 4 (1980), no. 3, 309–314. (I. Broere) **81i:05071** 05C15
- Yap, Leonard Y. H.** (with Quek, T. S.) Some recent results on Young's inequality for convolution. *Southeast Asian Bull. Math.* 3 (1979), no. 2, 235–239. (Harald E. Krogstad) **81e:43008** 43A15 (43A22)
- (with Quek, T. S.) Absolute convergence of Vilenkin-Fourier series. *J. Math. Anal. Appl.* 74 (1980), no. 1, 1–14. (C. W. Onneweer) **81d:43009** 43A75
- Yaqub, Adil** (with Putcha, Mohan S.) Rings with constraints on nilpotent elements and commutators. *Studia Sci. Math. Hungar.* 12 (1977), no. 1–2, 193–197 (1980). (B. Felzenszwalb) **81h:16058** 16A70 (16A48)
- (with Nicholson, W. K.) A commutativity theorem for rings and groups. *Canad. Math. Bull.* 22 (1979), no. 4, 419–423. (Howard E. Bell) **81e:16045** 16A70 (20A05)
- (with Outcalt, David L.) Structure and commutativity of rings with constraints on nilpotent elements. *Math. J. Okayama Univ.* 21 (1979), no. 1, 15–19. (Hal G. Moore) **81h:16055** 16A70
- (with Abu-Khuzam, Hazar) Structure and commutativity of rings with constraints on nilpotent elements. II. *Math. J. Okayama Univ.* 21 (1979), no. 2, 165–166. (From the introduction) **81h:16056** 16A70
- (with Nicholson, W. K.) A commutativity theorem. *Algebra Universalis* 10 (1980), no. 2, 260–263. (Howard E. Bell) **81e:16046** 16A70
- (with Abu-Khuzam, Hazar) A commutativity theorem for division rings. *Bull. Austral. Math. Soc.* 21 (1980), no. 1, 43–46. (B. Fein) **81e:16014** 16A40 (16A70)
- (with Putcha, Mohan S.) Rings which are multiplicatively generated by idempotents. *Comm. Algebra* 8 (1980), no. 2, 153–159. (T. S. Ravisankar) **81g:16019** 16A32 (06E20)
- (with Abu-Khuzam, Hazar; Tominaga, Hisao) Equational definability of addition in rings satisfying polynomial identities. *Math. J. Okayama Univ.* 22 (1980), no. 1, 55–57. (B. Felzenszwalb) **81h:16018** 16A38 (16A32)
- (with Abu-Khuzam, Hazar) n -torsion-free rings with commuting powers. *Math. Japon.* 25 (1980), no. 1, 37–42. (Howard E. Bell) **81h:16051** 16A70
- Yaqub, M.** (with Khan, A. H.) Distributions of quotient and product of maximum values in samples from populations following power distribution. *Pure Appl. Math. Sci.* 10 (1979), no. 1–2, 89–93. (J. S. Huang) **81h:62024** 62E15
- (with Khan, A. H.) On the distribution of a distance function on the sphere. *Metrica* 27 (1980), no. 3, 145–151. (Authors' summary) **81j:62046** 62E15 (52A45, 60D05)
- (with Alam, S. N.) On order statistics for random geometric sample size. *Pure Appl. Math. Sci.* 12 (1980), no. 1–2, 49–51. (M. M. Siddiqui) **81d:62084** 62G30 (62E15)
- Yarin, A. L.** See **Jarin, A. L.**
- Yarlagadda, R.** (with Babu, B. N. Suresh) A note on the application of FFT to the solution of a system of Toeplitz normal equations. *IEEE Trans. Circuits and Systems* 27 (1980), no. 2, 151–154. (Authors' summary) **81a:94072** 94C30
- Yarmish, Joshua** (with Quintas, Louis V.; Stehlik, Mark) Degree partition classes for 4-trees having specified properties. *Proceedings of the Tenth Southeastern Conference on Combinatorics, Graph Theory and Computing (Florida Atlantic Univ., Boca Raton, Fla., 1979)*, pp. 795–821, *Congress. Numer.*, XXXIII–XXIV, Utilitas Math., Winnipeg, Man., 1979. (E. M. Palmer) **81c:05030** 05C05
- Yaroslavskii, L. P.** See **Jaroslavskii, L. P.**
- Yasase, Hedayat** Characteristic functions of Dirichlet distributions. *Transactions of the Eighth Prague Conference on Information Theory, Statistical Decision Functions, Random Processes (Prague, 1978)*, Vol. B, pp. 383–392, *Reidel, Dordrecht*, 1978. (Authors' summary) **81h:60024** 60E10 (62E15)
- On the independence of sample mean and sample variance. *Bull. Iranian Math. Soc.* No. 8 (1978), 271–321. (D. N. Shanbhag) **81h:62065** 62H10 (62E15)
- Yasinski, Philip B.** (with Isenberg, James A.) Twistor description of non-self-dual Yang-Mills field. *Complex manifold techniques in theoretical physics (Proc. Workshop, Lawrence, Kan., 1978)*, pp. 180–206, *Res. Notes in Math.*, 32, Pitman, San Francisco, Calif., 1979. (M. F. Atiyah) **81g:32023** 32L05 (53C05, 81E10)
- (with Stoeger, William R.) Can a macroscopic gyroscope feel torsion? *Gen. Relativity Gravitation* 11 (1979), no. 6, 427–431 (1980). (Authors' summary) **81d:83011** 83B05 (53B50, 83D05)
- (with Stoeger, William R.) Propagation equations for test bodies with spin and rotation in theories of gravity with torsion. *Phys. Rev. D* (3) 21 (1980), no. 8, 2081–2094. (Andrzej Trautman) **81d:83049** 83D05 (53B50)
- Yasuda, Hiroshi** On the indicatrices of a Finsler space. *Tensor (N.S.)* 33 (1979), no. 2, 213–221. (S. Watanabe) **81g:53020** 53B40
- (with Yamanoi, Takahiro) On curves in the indicatrix bundle over a Finsler space. *Tensor (N.S.)* 33 (1979), no. 3, 357–364. (S. Watanabe) **81g:53021** 53B40
- On Landsberg spaces. *Tensor (N.S.)* 34 (1980), no. 1, 77–84. (Makoto Matsumoto) **81d:53021** 53B40
- Yasuda, Masami** Semi-Markov decision processes with countable state space and compact action space. *Bull. Math. Statist.* 18 (1978/79), no. 1–2, 35–54. (J. A. E. van Nunen) **81b:90151** 90C40
- Policy improvement in Markov decision processes and Markov potential theory. *Bull. Math. Statist.* 18 (1978/79), no. 1–2, 55–67. (J. A. E. van Nunen) **81b:90152** 90C40 (60J45)
- The calculation of limit probabilities for Markov jump processes. *Bull. Math. Statist.* 18 (1978/79), no. 1–2, 69–80. (A. A. Juskevicius) **81f:60101** 60J27 (90C39, 90C40)
- Yasuda, Yutaka** (with Ito, Hisataka; Ishizu, Hisatsugu) On the input-output stability of linear time-varying systems. *SIAM J. Appl. Math.* 38 (1980), no. 1, 175–188. (Authors' summary) **81b:93053** 93D25
- Yasue, Kunio** Stochastic quantization: a review. *Internat. J. Theoret. Phys.* 18 (1979), no. 12, 861–913 (1980). (V. P. Belavkin) **81i:81030** 81C20
- (with Zambrini, J.-C.) Thermal mechanics: a quantum mechanical analogue of nonequilibrium statistical thermodynamics. *Ann. Physics* 125 (1980), no. 1, 176–192. (Gerhard Hegerfeldt) **81e:82012** 82A05 (35K70, 60H99, 82A40)
- Schrödinger's variational method of quantization revisited. *Lett. Math. Phys.* 4 (1980), no. 2, 143–146. (M. M. Skrziganov) **81g:81021** 81C20 (49H05)
- Yasugi, Mariko** A formalization of Od(Q). *Comment. Math. Univ. St. Paul.* 27 (1978/79), no. 2, 133–154. (Jane E. Kister) **81f:03068** 03F15
- Yasui, Tsutomu** The enumeration of embeddings of lens spaces and projective spaces. *Hiroshima Math. J.* 8 (1978), no. 2, 235–253. (From the introduction) **81e:57020** 57N35
- Yates, Frank** Obituary: Gertrude Mary Cox, 1900–1978. *J. Roy. Statist. Soc. Ser. A* 142 (1979), no. 4, 516–517. (Editors) **81a:01045** 01A70
- Yates, R. E.** (with Shieh, L. S.; Wai, W. B.) A geometric series approach for approximation of transition matrices in quadratic synthesis. *Trans. ASME Ser. G J. Dynamic Systems Measurement Control* 102 (1980), no. 3, 193–197. (Authors' summary) **81i:93013** 93B50
- Yatirvaghba, See Jain, L. C.** **81c:01010**
- Yatsenko, A. A.** See **Jacenko, A. A.**
- Yau, J. F.** (with Wang, S. S.; Corten, H. T.) A mixed-mode crack analysis of rectilinear anisotropic solids using conservation laws of elasticity. (French summary) *Internat. J. Fracture* 16 (1980), no. 3, 247–259. (Authors' summary) **81d:73089** 73M05
- Yau, Shing Tung** Métriques de Kähler-Einstein sur les variétés ouvertes. *Première classe de Chern et courbure de Ricci: preuve de la conjecture de Calabi (Papers, Sémin. Centre math. École Polytech., Palaiseau, 1978)*, pp. 163–167, *Astérisque*, 58, Soc. Math. France, Paris, 1978. (See **80j:53064**) 53C55
- On the Ricci curvature of a compact Kähler manifold and the complex Monge-Ampère equation. I. *Comm. Pure Appl. Math.* 31 (1978), no. 3, 339–411. (Robert E. Greene) **81d:53045** 53C55 (32C10, 35J60)
- On the heat kernel of a complete Riemannian manifold. *J. Math. Pures Appl.* (9) 57 (1978), no. 2, 191–201. (Mark Pinsky) **81h:58041** 58G11 (58G32, 60J35)
- (with Meeks, William H., III) The classical Plateau problem and the topology of 3-manifolds. *Minimal submanifolds and geodesics (Proc. Japan-United States Sem., Tokyo, 1977)*, pp. 101–102, *North-Holland, Amsterdam*, 1979. (F. J. Almgren, Jr.) **81e:49034** 49F10 (53A10, 57M35)
- (with Schoen, Richard) Existence of incompressible minimal surfaces and the topology of three-dimensional manifolds with nonnegative scalar curvature. *Ann. of Math.* (2) 110 (1979), no. 1, 127–142. (Jonathan Sacks) **81h:58029** 58E12 (49F10, 53C42)
- (with Schoen, Richard) Positivity of the total mass of a general space-time. *Phys. Rev. Lett.* 43 (1979), no. 20, 1457–1459. (F. J. Flaherty) **81e:58024** 58D25 (58E20, 83C40)
- (with Schoen, Richard) Compact group actions and the topology of manifolds with nonpositive curvature. *Topology* 18 (1979), no. 4, 361–380. (Helmut Kaul) **81a:53044** 58E20 (53C20, 58E20)
- (with Li, Peter) Estimates of eigenvalues of a compact Riemannian manifold. *Geometry of the Laplace operator (Proc. Sympos. Pure Math., Univ. Hawaii, Honolulu, Hawaii, 1979)*, pp. 205–239, *Proc. Sympos. Pure Math.*, XXXVI, Amer. Math. Soc., Providence, R.I., 1980. (P. Günther) **81h:58050** 58G25 (53C20)
- (with Schoen, Richard; Wolpert, Scott) Geometric bounds on the low eigenvalues of a compact surface. *Geometry of the Laplace operator (Proc. Sympos. Pure Math., Univ. Hawaii, Honolulu, Hawaii, 1979)*, pp. 279–285, *Proc. Sympos. Pure Math.*, XXXVI, Amer. Math. Soc., Providence, R.I., 1980. (Harold Donnelly) **81h:58052** 58G25 (49G05, 53C20)
- The role of partial differential equations in differential geometry. *Proceedings of the International Congress of Mathematicians (Helsinki, 1978)*, pp. 237–250, *Acad. Sci. Fennica, Helsinki*, 1980. (Helmut Kaul) **81f:53031** 53C20 (58G30)
- (with Yang, Paul C.) Eigenvalues of the Laplacian of compact Riemann surfaces and minimal submanifolds. *Ann. Scuola Norm. Sup. Pisa Cl. Sci.* (4) 7 (1980), no. 1, 55–63. (Scott Wolpert) **81h:58084** 58G25 (49G10, 53C20)
- (with Siu, Yum Tong) Compact Kähler manifolds of positive bisectional curvature. *Invent. Math.* 59 (1980), no. 2, 189–204. (John C. Wood) **81h:58029** 58E20 (53C55)
- See also **Kazdan, Jerry L.** **81d:53046** and **Bourguignon, Jean Pierre.** **81d:58057**
- Yau, Stephen S.** (with Chen, Fu Chung) An approach to concurrent control flow checking. *IEEE Trans. Software Engrg.* 6 (1980), no. 2, 126–137. (Authors' summary) **81h:68014** 68B10
- Yau, Stephen Shing Tung** Hypersurface weighted dual graphs of normal singularities of surfaces. *Amer. J. Math.* 101 (1979), no. 4, 761–812. (O. Riemenschneider) **81a:32089** 32C40 (05C99)
- Gorenstein singularities with geometric genus equal to two. *Amer. J. Math.* 101 (1979), no. 4, 813–854. (O. Riemenschneider) **81a:32010** 32C40
- On strongly elliptic singularities. *Amer. J. Math.* 101 (1979), no. 4, 855–884. (O. Riemenschneider) **81a:32011** 32C40
- Normal two-dimensional elliptic singularities. *Trans. Amer. Math. Soc.* 254 (1979),

- 117-134. (Philip Wagreich) **81k:32012** 32C40
Index theory for the boundaries of complex analytic varieties. *Proc. Nat. Acad. Sci. U.S.A.* **77** (1980), no. 3, part 1, 1248-1249. (H. Blaine Lawson) **81j:32013** 32C30
- Yarin, Yaakov (with Friedman, Menahem; Solomon, E.) Optimal control of a nonlinear noisy sine wave oscillator. (French and German summaries) *Internat. J. Non-Linear Mech.* **14** (1979), no. 3, 205-219. (Authors' summary) **81a:93041** 93C15
An impulse control policy for a class of jump diffusion processes. *Internat. J. Systems Sci.* **11** (1980), no. 3, 309-321. (Author's summary) **81a:93113** 93E20
(with Friedman, Menahem) Optimal control of partially observable jump diffusion processes. *Internat. J. Systems Sci.* **11** (1980), no. 3, 323-335. (Authors' summary) **81a:93109** 93E20
- Yaver, M. I. (with Matveev, V. B.) Solutions presque périodiques et à N -solitons de l'équation hydrodynamique non linéaire de Kaup. (English summary) *Ann. Inst. H. Poincaré Sect. A (N.S.)* **31** (1979), no. 1, 25-41. (W. Güttinger) **81b:35087** 35Q20 (76B25)
- Yazykova, S. M. See Jazykova, S. M.
- Ye, Du Zheng (with Zeng, Qing Cun) The adaptation processes of motion in rotating atmosphere. (Chinese. English summary) *Acta Mech. Sinica (Beijing)* **1980**, no. 1, 1-11. (L. N. Tao) **81h:86008** 86A10 (35Q20, 76C99)
- Yeadon, F. J. Ito's theorem and the ratio theorem. *Bull. London Math. Soc.* **12** (1980), no. 4, 279-288. (Michael Lin) **81e:47013** 47A35
Ergodic theorems for semifinite von Neumann algebras. II. *Math. Proc. Cambridge Philos. Soc.* **88** (1980), no. 1, 135-147. (Christopher Lance) **81h:46086** 46L50
- Yechiall, Uri (with Gottlieb, Gary) Damage models for multicomponent systems. *European J. Oper. Res.* **5** (1980), no. 3, 193-197. (Authors' summary) **81i:90087** 90B25 (62N05)
(with Mendelson, Haim) A new approach to the analysis of linear probing schemes. *J. Assoc. Comput. Mach.* **27** (1980), no. 3, 474-483. (H. P. Kriegel) **81k:68016** 68B15 (68H05)
(with Mendelson, Haim; Pliskin, Joseph S.) A stochastic allocation problem. *Oper. Res.* **28** (1980), no. 3, part 2, 687-693. (Authors' summary) **81d:90056** 90B30 (90B05)
- Yee, H. C. (with Felippa, C. A.; Park, K. C.) Synthesis of staggered solution procedures for coupled field analysis. *Applied numerical modelling (Proc. Second Internat. Conf., Madrid Polytech. Univ., Madrid, 1978)*, pp. 551-561, Pentech, London, 1979. (From the text) **81a:93010** 93A99 (90C30)
- Yee, James (with Assad, Arjang; Golden, Bruce L.) Scheduling players in team competitions. *Proceedings of the Second International Conference on Mathematical Modelling (St. Louis, Mo., 1979)*, Vol. I, II, pp. 369-379, Univ. Missouri-Rolla, Rolla, Mo., 1980. (Authors' summary) **81m:90120** 90D35
- Yegorov, Ye. A. See Egorov, E. A.
- Yeh, Cheh Chih (with Chen, Lu San) Comparison theorems and integrability of nonoscillatory solutions of n -th order functional differential equations. (Italian summary) *Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur.* (8) **62** (1977), no. 3, 321-324. (From the summary and text) **81h:34077** 34K15
(with Chen, Lu San) Nonoscillatory generating delay terms in functional-differential inequalities. (Italian summary) *Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur.* (8) **64** (1978), no. 5, 433-439. (Erwin Kozakiewicz) **81c:34061** 34K15
On common fixed point of continuous mappings. *Math. Sem. Notes Kobe Univ.* **6** (1978), no. 1, 115-121. (From the text) **81h:54056** 54H25
(with Chen, Lu San) On oscillation of solutions of higher order differential retarded inequalities. *Houston J. Math.* **5** (1979), no. 1, 37-40. (Authors' summary) **81g:34094** 34K15
On fixed point under contractive mappings. *Bull. Malaysian Math. Soc.* (2) **3** (1980), no. 1, 37-40. (Sieh Park) **81m:54084** 54H25
Common fixed point theorems in complete metric spaces. *Bull. Malaysian Math. Soc.* (2) **3** (1980), no. 1, 41-44. (Sieh Park) **81m:54085** 54H25
On the existence and uniqueness of solutions of functional-differential equations. *Indian J. Pure Appl. Math.* **11** (1980), no. 3, 287-291. (V. Staiikos) **81c:34058** 34K05 (34A10)
Some fixed point theorems in normed linear spaces. *Indian J. Pure Appl. Math.* **11** (1980), no. 3, 292-296. (O. P. Kapoor) **81c:47063** 47H10
(with Ch'en, Hung I) A note on fixed point in compact metric spaces. *Indian J. Pure Appl. Math.* **11** (1980), no. 3, 297-298. (Alessio Volčič) **81f:54026** 54H25
An oscillation criterion for second order nonlinear differential equations with functional arguments. *J. Math. Anal. Appl.* **76** (1980), no. 1, 72-76. (V. Staiikos) **81h:34064** 34K15 (34C10)
(with Chen, Lu San) Oscillation theorems for second order nonlinear differential equations with an "integrally small" coefficient. *J. Math. Anal. Appl.* **78** (1980), no. 1, 49-57. (Hiroshi Onose) **81m:34039** 34C10
Wendroff's inequality in n independent variables. *J. Math. Anal. Appl.* **78** (1980), no. 1, 78-87. (B. G. Pachpatte) **81d:26014** 26D15
- Yeh, Ching Ming (with Bradley, Ralph A.) Trend-free block designs: theory. *Ann. Statist.* **8** (1980), no. 4, 883-893. (S. K. Tharthare) **81j:62150** 62K10 (05B05)
- Yeh, Hsin Yang (with Wong, M. K. F.) Lowering and raising operators of $IU(n)$ and $IO(n)$ and their normalization constants. *J. Math. Phys.* **20** (1979), no. 4, 629-633. (Peter Holod) **81h:22020** 22E70 (81C40)
(with Wong, M. K. F.) The most degenerate irreducible representations of the symplectic group. *J. Math. Phys.* **21** (1980), no. 4, 630-635. (J.-P. Antoine) **81e:22032** 22E70 (81C40)
- Yeh, J. J. (with Zubairy, M. S.) Photon statistics in multiphoton absorption and emission processes. *Phys. Rev. A* (3) **21** (1980), no. 5, 1624-1631. (Authors' summary) **81a:81132** 81K05 (81G45)
- Yeh, K. C. (with Liu, Chang Han) Statistics of pulse arrival time in turbulent media. *J. Opt. Soc. Amer.* **70** (1980), no. 2, 168-172. (From the summary) **81b:78005** 78A40 (82A42)
- Yeh, S. (with Berman, P. R.) Theory of collisionally aided radiative excitation in three-level systems. *Phys. Rev. A* (3) **22** (1980), no. 4, 1403-1424. (Authors' summary) **81i:81112** 81G40
- Yehudai, Amiram (with Harrison, Michael A.; Havel, Ivan M.) On equivalence of grammars through transformation trees. *Theoret. Comput. Sci.* **9** (1979), no. 2, 173-205. (Authors' summary) **81e:68092** 68F05
- Yellen, Jay E. (with Liebler, Robert A.) In search of nonsolvable groups of central type. *Pacific J. Math.* **82** (1979), no. 2, 485-492. (R. B. Howlett) **81g:20018** 20C15 (20D05)
- Yen, Chi Lin Two variational inequalities in Banach spaces. *Soochow J. Math.* **5** (1979), 141-144. (M. Biroli) **81d:49010** 49A29 (47H06)
- Yen, Ti (with Bryant, Roger M.) Sylow subgroups of locally finite CZ-groups. *Arch. Math. (Basel)* **31** (1978/79), no. 2, 117-119. (From the text) **81g:20076** 20F38 (20D20)
- Yeo, Sung Chul A study on the linear estimation of scale and location parameters by order statistics. (Korean summary) *Ulsan Inst. Tech. Rep.* **11** (1980), no. 2, 175-178. (Author's summary) **81m:62063** 62G30 (62F10)
- Yeomans, F. E. (with Robertson, W. J.) On the stability of barrelled topologies. I. *Bull. Austral. Math. Soc.* **20** (1979), no. 3, 385-395. (I. Tveddle) **81a:46007** 46A07 (46A20)
(with Robertson, W. J.; Tveddle, I.) On the stability of barrelled topologies. III. *Bull. Austral. Math. Soc.* **22** (1980), no. 1, 99-112. (Author's review (I.T.)) **81m:46006** 46A07 (46A20)
(with Tveddle, I.) On the stability of barrelled topologies. II. *Glasgow Math. J.* **21** (1980), no. 1, 91-95. (I. Tveddle) **81m:46006a** 46A07 (46A20)
- Yeomans, J. M. (with Huse, David A.; Fisher, Michael E.) Multiphase behavior and modulated ordering in soluble Ising models. *Phys. Rev. B* (3) **23** (1981), no. 1, 180-185. (Authors' summary) **81k:82056** 82A67
- Yeremin, I. I. See Eremin, I. I.
- Yershov, M. P. See Eršov, M. P.
- Yesha, Y. (with Fraenkel, A. S.) Complexity of problems in games, graphs and algebraic equations. *Discrete Appl. Math.* **1** (1979), no. 1-2, 15-30. (R. E. Stearns) **81c:90091** 90D05 (68C25)
- Yeung, Wai Bong Is the Feynman-Dyson series adequate for the asymptotic expansion of the Green function of the quantum mechanical anharmonic oscillator? *J. Math. Phys.* **21** (1980), no. 3, 477-485. (Author's summary) **81j:81004** 81C12 (41A60)
(with Brandt, Richard A.; Ng, Wing Chiu) Finite field equation of Yang-Mills theory. *J. Math. Phys.* **21** (1980), no. 3, 547-560. (José M. Cerveró) **81h:81081** 81E15
- au-Yeung, Yik Hoi See Au-Yeung, Yik Hoi
- Yeylos, A. (with Hadjimos, A.) The principle of extrapolation in connection with the accelerated overrelaxation method. *Linear Algebra Appl.* **30** (1980), 115-128. (Jan Zitko) **81h:65029** 65F10
- Yger, Alain Propriétés de certains systèmes d'équations de convolution dans \mathbb{R}^2 . (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **289** (1979), no. 3, A169-A171. (Olaf von Grudzinski) **81c:46036** 46F10 (44A35)
- Yih, Chia Shun Flows with condensation. *Quart. Appl. Math.* **37** (1979/80), no. 4, 401-409. (J. R. Ockendon) **81c:76032** 76N10 (34E05)
★Stratified flows. Second edition of *Dynamics of nonhomogeneous fluids*. Academic Press [Harcourt Brace Jovanovich, Publishers], New York-London-Toronto, Ont., 1980. xvii + 418 pp. (loose errata). ISBN 0-12-771050-7 (Editors) **81b:76082** 76-02 (76V05)
See also *Advances in applied mechanics*, **81a:76003**
- Yildiz, Asim See Workshop: Grand Unification, **81j:81066**
- Yilmaz, Hüseyin Experiments in quantum gravity. *Hadronic J.* **3** (1979/80), no. 5, 1418-1430. (Author's summary) **81h:83024** 83C45 (83B05)
- Yilmaz, Mustafa R. Theory of single-dimensional utilities. A survey. *Proceedings of Applied Statistics Seminars (Middle East Tech. Univ., Ankara, 1976/1977)*. *Stat. Develop. Special Issue 1977*, 191-265 (1978). (Editors) **81j:90007** 90A06 (90A10)
- Yin, Wei Ping Explicit solutions of the Cauchy problem for some hyperbolic differential equations. (Chinese) *Acta Math. Sinica* **23** (1980), no. 1, 102-117. (Tai Ping Liu) **81g:35094** 35M05
- Ying, John H. Finite p -groups with restricted quotient structures. *Bull. Inst. Math. Acad. Sinica* **8** (1980), no. 1, 1-14. (Norman Blackburn) **81j:20023** 20D15
- Ying, S. C. (with Houghton, A.; Kenway, R. D.) Effects of a random symmetry-breaking field on topological order in two dimensions. *Phys. Rev. B* (3) **23** (1981), no. 1, 298-307. (Authors' summary) **81k:82065** 82A05 (81D25)
- Yip, E. L. (with Ballantine, C. S.) Congruence and conjunctivity of matrices. *Linear Algebra Appl.* **32** (1980), 159-198. (Marvin Marcus) **81f:15017** 15A21
- Yip, M. C. (with Wu, Han C.) Strain rate and strain rate history effects on the dynamic behavior of metallic materials. *Internat. J. Solids and Structures* **16** (1980), no. 6, 515-536. (Authors' summary) **81b:73017** 73E99
- Yip, P. (with Rao, K. R.; Jalali, A.) Rationalized Hadamard-Haar transform. *Appl. Math. Comput.* **6** (1980), no. 3, 263-281. (A. D. Booth) **81f:68011** 68A05 (65V05)
- Ylisen, Kari On vector bimeasures. *Ann. Mat. Pura Appl.* (4) **117** (1978), 115-138. (J. J. Uhl, Jr.) **81a:28010** 28B05
- Ylisen, Raimo (with Ruuth, Sampo; Sinervo, Jyrki) On set theoretical and algebraic systems theory for linear differential and difference systems. *Topics in systems theory. Acta Polytech. Scand. Math. Comput. Sci. Ser. No. 31* (1979), 150-167. (J. E. Rubio) **81c:93035** 93C05 (93A05)
- Yngve, Staffan (with Fröman, Nanny) On the calculation of phase shifts produced by complex potentials. *Phys. Rev. D* (3) **22** (1980), no. 6, 1375-1379. (Authors' summary) **81h:81108** 81F05 (34E20, 81C15)
- Yoccoz, Jean-Christophe Centralisateur d'un difféomorphisme du cercle dont le nombre de rotation est irrationnel. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **291** (1980), no. 9, A523-A526. (Author's summary) **81m:58049** 58F11 (28D99)
- Yoeli, M. (with Ginzburg, A.) Control nets for parallel processing. *Information processing 80 (Proc. IFIP Congr., Tokyo/Melbourne, 1980)*, pp. 71-76, IFIP Congress Ser., 8, North-Holland, Amsterdam, 1980. (Authors' summary) **81k:68022** 68B20
(with Ginzburg, A.) Vector addition systems and regular languages. *J. Comput. System Sci.* **20** (1980), no. 3, 277-284. (Rüdiger Valk) **81h:68038** 68B20 (68F10)
- Yoeup, Ch. Compléments sur les temps locaux et les quasi-martingales. *Temps locaux (Exp. Sémin. J. Azéma-M. Yor, Univ. Pierre et Marie Curie, Paris, 1976-1977)*, 197-218, *Astérisque*, 52,53, Soc. Math. France, Paris, 1978. (See **81b:60042**) 60J55
Solution explicite de l'équation $Z_t = 1 + \int_0^t |Z_s| dX_s$. *Séminaire de Probabilités*,

- XIII (Univ. Strasbourg, Strasbourg, 1977/78), pp. 614-619, *Lecture Notes in Math.*, 721, Springer, Berlin, 1979. (V. Mackevičius) **81m:60113** 60H10
- Sur la dérivation des intégrales stochastiques. *Seminar on Probability, XIV* (Paris, 1978/1979) (French), pp. 249-253, *Lecture Notes in Math.*, 784, Springer, Berlin, 1980. (Philip Protter) **81m:60098** 60H05 (60J65)
- Yohai, Victor (with Maronna, Ricardo; Bustos, Oscar) Bias- and efficiency-robustness of general M -estimators for regression with random carriers. *Smoothing techniques for curve estimation* (Proc. Workshop, Heidelberg, 1979), pp. 91-116, *Lecture Notes in Math.*, 757, Springer, Berlin, 1979. (A. I. Khuri) **81m:62060** 62F35 (62J05)
- (with Garcia Ben, M. S.) Canonical variables as optimal predictors. *Ann. Statist.* **8** (1980), no. 4, 865-869. (Jacques Dauxois) **81h:62106** 62H20
- Yokomori, Takashi Stochastic characterizations of EOL languages. *Inform. and Control* **45** (1980), no. 1, 26-33. (Author's summary) **81f:68094** 68F15
- Yokomoto, Charles F. A note on congruence transformed completely equivalent p -ports. *IEEE Trans. Circuits and Systems* **27** (1980), no. 4, 311-317. (Author's summary) **81g:94054** 94C05
- Yokota, Ichiro (with Shukuzawa, Osamu) Noncompact simple Lie group $E_{6(6)}$ of type E_6 . *J. Fac. Sci. Shinshu Univ.* **14** (1979), no. 1, 1-13. (Dragomir Ž. Đoković) **81g:2203a** 22E60 (17B25, 22E15)
- (with Shukuzawa, Osamu) Noncompact simple Lie groups $E_{6(-14)}$ and $E_{6(2)}$ of type E_6 . *J. Fac. Sci. Shinshu Univ.* **14** (1979), no. 1, 15-28. (Dragomir Ž. Đoković) **81g:2203b** 22E60 (17B25, 22E15)
- Explicit isomorphism between $SU(4)$ and $Spin(6)$. *J. Fac. Sci. Shinshu Univ.* **14** (1979), no. 1, 29-34. (Dragomir Ž. Đoković) **81g:22006** 22E15
- Subgroups of type A_2 -series in the exceptional Lie groups G_2 , F_4 and E_6 . *J. Fac. Sci. Shinshu Univ.* **14** (1979), no. 2, 87-94. (Dragomir Ž. Đoković) **81g:22007** 22E15
- Yokoyama, Kan-ichi (with Fukuda, Takashi; Kubo, Reiji) Possible situation for gauge independence of wave-function renormalization constants in gauge-field theories. *Progr. Theoret. Phys.* **63** (1980), no. 4, 1384-1392. (Authors' summary) **81d:81075** 81E99 (81L05)
- (with Fukuda, Takashi) The Higgs-Kibble model on the basis of a canonical Yang-Mills field theory with gauge covariance. *I. Progr. Theoret. Phys.* **63** (1980), no. 6, 2061-2077. (Authors' summary) **81f:81051** 81E15
- Yokoyama, Ryūsō Convergence of moments in the central limit theorem for stationary ϕ -mixing sequences. *Tsukuba J. Math.* **3** (1979), no. 2, 1-6. (Gutti J. Babu) **81g:60025** 60F05
- Moment bounds for stationary mixing sequences. *Z. Wahrsch. Verw. Gebiete* **52** (1980), no. 1, 45-57. (Holger Rootzén) **81f:60026** 60F05 (60G10)
- Yokoyama, Shozo The rate of allelism of lethal genes in a geographically structured population. *Genetics* **93** (1979), no. 1, 245-262. (Author's summary) **81k:92045** 92A10
- Yoneyama, Kanji (with Nishida, Toshio; Serikawa, Yuichi) n queues in tandem attended by a single server. *Rep. Statist. Appl. Res. Un. Japan. Sci. Engrs.* **26** (1979), no. 1, 14-19. (Ralph L. Disney) **81k:60100** 60K25
- (with Yuasa, T.; Nishida, Toshio) A queueing system with c random additional service channels. *Z. Angew. Math. Mech.* **60** (1980), no. 1, 57-59. (S. Christian Albright) **81m:60174** 60K25 (60J27)
- Yonezawa, Katsumi (with Leonides, C. T.) On the geometric structure of Bryson-Johansen filter and stochastic observer. *IEEE Trans. Automat. Control* **25** (1980), no. 5, 992-994. (Authors' summary) **81k:93070** 93E11
- Reduced-order Kalman filtering with incomplete observability. *J. Guidance Control* **3** (1980), no. 3, 280-282. (From the introduction) **81d:93067** 93E11
- Yood, Bertram (with Putter, P. S.) Banach Jordan \ast -algebras. *Proc. London Math. Soc.* (3) **41** (1980), no. 1, 21-44. (Horst Behncke) **81h:46066** 46K05 (17C65)
- Yoon, Kwangsoon See Hwang, Ching Lai; et al. **81d:90001**
- Yor, Marc (with Azéma, Jacques) En guise d'introduction. *Temps locaux* (Exp. Sém. J. Azéma-M. Yor, Univ. Pierre et Marie Curie, Paris, 1976-1977), pp. 3-16, *Astérisque*, 52,53, Soc. Math. France, Paris, 1978. (See **81h:60042**) 60J55
- Rappels et préliminaires généraux. *Temps locaux* (Exp. Sém. J. Azéma-M. Yor, Univ. Pierre et Marie Curie, Paris, 1976-1977), pp. 17-22, *Astérisque*, 52,53, Soc. Math. France, Paris, 1978. (See **81h:60042**) 60J55
- Sur la continuité des temps locaux associés à certaines semi-martingales. *Temps locaux* (Exp. Sém. J. Azéma-M. Yor, Univ. Pierre et Marie Curie, Paris, 1976-1977), pp. 23-35, *Astérisque*, 52,53, Soc. Math. France, Paris, 1978. (See **81h:60042**) 60J55 (60G48)
- (with Jeulin, T.) Autour d'un théorème de Ray. *Temps locaux* (Exp. Sém. J. Azéma-M. Yor, Univ. Pierre et Marie Curie, Paris, 1976-1977), pp. 145-158, *Astérisque*, 52,53, Soc. Math. France, Paris, 1978. (See **81h:60042**) 60J55
- (with Chaleyat-Maurel, M.) Les filtrations de $[X]$ et X^* , lorsque X est une semi-martingale continue. *Temps locaux* (Exp. Sém. J. Azéma-M. Yor, Univ. Pierre et Marie Curie, Paris, 1976-1977), pp. 193-196, *Astérisque*, 52,53, Soc. Math. France, Paris, 1978. (See **81h:60042**) 60J55 (60G48)
- Un exemple de processus qui n'est pas une semi-martingale. *Temps locaux* (Exp. Sém. J. Azéma-M. Yor, Univ. Pierre et Marie Curie, Paris, 1976-1977), pp. 219-221, *Astérisque*, 52,53, Soc. Math. France, Paris, 1978. (See **81h:60042**) 60J55 (60G48)
- (with Nghiêm Đình Ngọc) Champs markoviens et mesures de Gibbs sur \mathbb{R} . (English summary) *Ann. Sci. École Norm. Sup.* (4) **11** (1978), no. 1, 29-69. (Authors' summary) **81g:60100** 60K35 (60G60, 60J99, 81E10, 82A05)
- Convergence de martingales dans L^1 et dans H^1 . (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **286** (1978), no. 12, A571-A573. (Author's summary) **81e:60054** 60G44
- Quelques épilogues. *Séminaire de Probabilités, XIII* (Univ. Strasbourg, Strasbourg, 1977/78), pp. 400-406, *Lecture Notes in Math.*, 721, Springer, Berlin, 1979. (Jacques Azéma) **81f:60084** 60H05
- Les filtrations de certaines martingales du mouvement brownien dans \mathbb{R}^2 . *Séminaire de Probabilités, XIII* (Univ. Strasbourg, Strasbourg, 1977/78), pp. 421-440, *Lecture Notes in Math.*, 721, Springer, Berlin, 1979. (F. B. Knight) **81h:60045** 60G44 (60H05, 60J65)
- Sur l'étude des martingales continues extrémales. *Stochastics* **2**, no. 3, 191-196 (1979). (Philip Protter) **81e:60065** 60G44 (60H05)
- Les inégalités de sous-martingales, comme conséquences de la relation de domination. *Stochastics* **3** (1979), no. 1, 1-15. (T. R. McConnell) **81f:60052** 60G44
- See also Temps locaux, **81h:60042** and Seminar: Probability, **81f:60004**
- Yorinaga, Masataka Carmichael numbers with many prime factors. *Math. J. Okayama Univ.* **22** (1980), no. 2, 169-184. (Henry S. Warren, Jr.) **81m:10018** 10A40 (10-04, 10A20)
- York, James W., Jr. Kinematics and dynamics of general relativity. *Sources of gravitational radiation* (Proc. Workshop, Battelle Seattle Res. Center, Seattle, Wash., 1978), pp. 83-126, Cambridge Univ. Press, Cambridge, 1979. (See **81j:83017**) 83Cxx (58D30)
- Yorke, A. C. Differentiability and local rotundity. *J. Austral. Math. Soc. Ser. A* **28** (1979), no. 2, 205-213. (Russell G. Bilyeu) **81m:46033** 46B20
- Yorke, H. W. Numerical solution of the equation of radiation transfer in spherical geometry. *Astronom. and Astrophys.* **86** (1980), no. 3, 286-294. (Author's summary) **81e:85011** 85A25 (65M05)
- Yorke, James A. (with Kaplan, James L.) The onset of chaos in a fluid flow model of Lorenz. *Bifurcation theory and applications in scientific disciplines* (Papers, Conf., New York, 1977), pp. 400-407, Ann. New York Acad. Sci., 316, New York Acad. Sci., New York, 1979. (Authors' summary) **81a:76029** 76F99 (58F13)
- Yormark, J. S. (with McBride, R. D.) An implicit enumeration algorithm for quadratic integer programming. *Management Sci.* **26** (1980), no. 3, 282-296. (Authors' summary) **81g:90164** 90C20 (90C10)
- (with McBride, R. D.) Finding all solutions for a class of parametric quadratic integer programming problems. *Management Sci.* **26** (1980), no. 8, 784-795. (From the introduction) **81i:90150** 90C10 (90C20, 90C31)
- Yorosa, Shinzuke (with Kitahara, Haruo) On some differential geometric characterizations of a bundle-like metric. *Kodai Math. J.* **2** (1979), no. 1, 130-138. (I. Vaisman) **81f:53027** 53C20 (57R30)
- Notes on square-integrable cohomology spaces on certain foliated manifolds. *Trans. Amer. Math. Soc.* **255** (1979), 329-341. (Bruce L. Reinhart) **81h:57012** 57R30
- (with Kitahara, Haruo) Erratum: "On the Čech bicomplex associated with foliated structures" [Ann. Inst. Fourier (Grenoble) **28** (1978), no. 3, 217-224; MR 80c:57016]. *Ann. Inst. Fourier (Grenoble)* **30** (1980), no. 3, loose erratum. (Editors) **81k:57025** 57R30
- Yoshida, Hiroyuki On an explicit construction of Siegel modular forms of genus 2. *Proc. Japan Acad. Ser. A Math. Sci.* **55** (1979), no. 8, 297-300. (K.-B. Gundlach) **81d:10021** 10D20
- (with Aomoto, Kazuhiko) Works of P. Deligne. II. (Japanese) Special issue: International Congress of Mathematicians (Helsinki, 1978). *Sūgaku* **31** (1979), no. 1, 25-29. (Editors) **81m:01084** 01A70 (10Dxx)
- Siegel's modular forms and the arithmetic of quadratic forms. *Invent. Math.* **60** (1980), no. 3, 193-248. (A. N. Andrianov) **81m:10051** 10D20 (10D24)
- Yoshida, Jitsuo (with Ishimoto, Hiroyasu) Classification of certain manifolds with sufficient connectedness. *Sci. Rep. Kanazawa Univ.* **24** (1979), no. 2, 61-71. (Edgar H. Brown, Jr.) **81f:57034** 57R65
- Yoshida, Masanaki An example of a family of ordinary Fuchsian differential equations with discrete projective monodromy groups. *Funkcial. Ekvac.* **21** (1978), no. 3, 241-247. (Author's introduction) **81j:34013** 34A20 (14K25, 32C10)
- Euler integral transformations of hypergeometric functions of two variables. *Hiroshima Math. J.* **10** (1980), no. 2, 329-335. (N. C. Jain) **81h:33005** 33A30
- Yoshida, Noriyoshi (with Kikuno, Toru; Watanabe, Ryūji) On a parallel computation model PSN. *Systems-Comput.-Controls* **9** (1978), no. 2, 41-48. (Authors' summary) **81h:68017** 68B20
- Yoshida, Norio (with Narita, Mamoru) Oscillation of semilinear ultrahyperbolic differential operators. *Ann. Mat. Pura Appl.* (4) **122** (1979), 289-300. (E. S. Noussair) **81f:35012** 35B05 (35L80)
- Yoshida, Noriyoshi (with Kikuno, Toru; Kakuda, Yoshiaki) Computing the depth of a D -chart flow graph. *Mem. Fac. Engrg. Hiroshima Univ.* **7**, no. 2, 13-21 (1980). (Authors' summary) **81d:68085** 68E10 (68C25, 90B10)
- Yoshida, Reikichi McAlister representation of proper simple inverse semigroups. *Proceedings of the 2nd Symposium on Semigroups* (Tokyo Gakugei Univ., Tokyo, 1978), pp. 17-24, Tokyo Gakugei Univ., Tokyo, 1978. (T. S. Blyth) **81e:20052** 20M30
- Yoshida, Tomoyoshi On the rational homotopy of fixed point sets of circle actions. *Math. J. Okayama Univ.* **21** (1979), no. 2, 149-153. (Oscar Burlet) **81d:57031** 57S10 (55P62)
- On the Browder-Livesay invariant of free involutions on homology 3-spheres. *Math. J. Okayama Univ.* **22** (1980), no. 1, 91-106. (W. D. Neumann) **81f:57040** 57S25 (57S17)
- Yoshida, Toshio (with Kobayashi, Teichi; Maki, Haruo) Extensibility with degree d of the complex vector bundles over lens spaces and projective spaces. *Mem. Fac. Sci. Kochi Univ. Ser. A Math.* **1** (1980), 23-33. (David Handel) **81e:55027** 55R50 (55R40)
- Yoshihara, Hisao On deformations of hyperelliptic manifolds. *Proceedings of the International Symposium on Algebraic Geometry* (Kyoto Univ., Kyoto, 1977), pp. 735-737, Kinokuniya Book Store, Tokyo, 1978. (Tatsuo Suwa) **81j:32016** 32G05 (14J15, 32J99)
- A problem concerning rational plane curves. (Japanese) *Sūgaku* **31** (1979), no. 3, 256-261. (M. Miyanishi) **81i:14019** 14H20
- Yoshihara, Ken-ichi The Borel-Cantelli lemma for strong mixing sequences of events and their applications to LIL. *Kodai Math. J.* **2** (1979), no. 2, 148-157. (A. Späru) **81m:60048** 60F15 (60F20)
- Summability of random variables satisfying the strong mixing condition. *Sci. Rep. Yokohama Nat. Univ. Sect. I No. 26* (1979), 9-15. (Gutti J. Babu) **81f:60025** 60F05
- Convergence rates of the invariance principle for absolutely regular sequences. *Yokohama Math. J.* **27** (1979), no. 1, 49-55. (C. C. Heyde) **81e:60036** 60F17 (60G10)
- Note on an almost sure invariance principle for some empirical processes. *Yokohama Math. J.* **27** (1979), no. 2, 105-110. (Sam Gutmann) **81f:60049** 60F99 (60G10)
- Yoshikawa, Shoichi (with Inoue, Sanae; Itoh, Kimioka) Critical conditions for drift, drift-Alfvén and drift-tearing instabilities of finite- β plasma in sheared magnetic field. *J. Phys. Soc. Japan* **48** (1980), no. 3, 973-982. (Authors' summary) **81b:76071** 76W05 (82A45)

- Yoshimoto, T. Vector valued ergodic theorems for operators satisfying norm conditions. *Pacific J. Math.* 85 (1979), no. 2, 485-499. (Author's summary) 81m:47016 47A35 (28D15)
- Yoshimura, Isao On a test of homogeneity hypothesis for directional data. *Sankhyā Ser. A* 40 (1978), no. 3, 310-312. (J. S. Rao) 81j:62082 62G10
- Yoshimura, T. (with Hunt, Giles W.; Reay, N. A.) Local diffeomorphisms in the bifurcational manifestations of the umbilic catastrophes. *Proc. Roy. Soc. London Ser. A* 369 (1979), no. 1736, 47-65. (D. R. J. Chillingworth) 81g:58005 58C28 (73H05)
- Yoshimura, Tetsu (with Ford, L. H.) Mass generation by self-interaction in non-Minkowskian spacetimes. *Phys. Lett. A* 70 (1979), no. 2, 89-91. (Authors' summary) 81h:81091 81E99
- Electromagnetic self-energy of charged fields in non-Minkowskian spacetime and gauge dependence of mass renormalization. *Phys. Lett. A* 72 (1979), no. 6, 391-394. (Author's summary) 81h:81065 81E15 (81C12, 81G10)
- Yoshimura, Toshiro (with Kiyota, Musanori; Soeda, Takashi) An adaptive control policy of discrete-time linear systems with random parameters. *Trans. ASME Ser. G, J. Dynamic Systems Measurement Control* 101 (1979), no. 4, 361-363. (Authors' summary) 81a:93052 93C40
- (with Hirata, Kojo; Soeda, Takashi) Filter implementation for a linear stochastic distributed-parameter system with a moving boundary. *Internat. J. Systems Sci.* 11 (1980), no. 6, 731-741. (Authors' summary) 81f:93075 93E11
- (with Watanabe, Keigo; Soeda, Takashi) Optimal nonlinear estimation for distributed-parameter systems via the partition theorem. *Internat. J. Systems Sci.* 11 (1980), no. 9, 1113-1130. (Authors' summary) 81j:93033 93C20
- (with Konishi, Katsunobu; Inouchi, Kōji; Soeda, Takashi) Stable identification scheme for linear discrete-time systems. *Internat. J. Systems Sci.* 11 (1980), no. 11, 1265-1278. (Authors' summary) 81k:93074 93E12
- Yoshinaga, Etsuo (with Suzuki, Masahiko) Normal forms of nondegenerate quasihomogeneous functions with inner modality < 4 . *Invent. Math.* 55 (1979), no. 2, 185-206. (E. Brieskorn) 81h:32001 32B30 (14B07, 32C40, 58C27)
- Yoshino, Kuniio (with Morimoto, Mitsuo) A uniqueness theorem for holomorphic functions of exponential type. *Hokkaido Math. J.* 7 (1978), no. 2, 259-270. (From the introduction) 81g:46052 46F15 (30D15, 32A45)
- Yoshino, N. (with Ohta, M.; Hatakeyama, K.; Iwashige, H.) A statistical theory on the general random noise of arbitrary distribution type with a quantized level and its actual application. (German and French summaries) *Acustica* 46 (1980), no. 2, 201-209. (G. Paria) 81m:76034 76Q05 (60G99)
- Yoshino, Toshiro (with Utsugi, Satoshi) Three-dimensional analysis of a finite hollow cylinder subjected to axisymmetric deformations. *Bull. JSME* 23 (1980), no. 184, 1596-1603. (Authors' summary) 81j:73017 73C05
- Yoshioka, Iwao Note on topologies for function spaces. *Math. Japon.* 25 (1980), no. 4, 373-377. (Robert A. McCoy) 81m:54022 54C35 (54A10)
- Yoshizawa, Akira A statistical investigation upon the eddy viscosity in incompressible turbulence. *J. Phys. Soc. Japan* 47 (1979), no. 5, 1665-1669. (William C. Meecham) 81d:76060 76F10
- Yoshizawa, Mitsuo On multiply transitive permutation groups. *Osaka J. Math.* 16 (1979), no. 3, 775-795. (Cheryl E. Praeger) 81j:20007 20B20
- On some periodic 4-transitive permutation groups. *Proc. Japan Acad. Ser. A Math. Sci.* 55 (1979), no. 7, 261-263. (Cheryl E. Praeger) 81j:20009 20B22 (20B20)
- On 2p-fold transitive permutation groups. II. *Proc. Japan Acad. Ser. A Math. Sci.* 56 (1980), no. 1, 45-49. (Peter Rowlinson) 81b:20007 20B20
- Block intersection numbers of block designs. *Proc. Japan Acad. Ser. A Math. Sci.* 56 (1980), no. 2, 75-76. (Chester J. Salwach) 81i:05032 05B05
- On block-schematic Steiner systems $S(t, t+1, v)$. *Proc. Japan Acad. Ser. A Math. Sci.* 56 (1980), no. 7, 348-350. (From the introduction) 81k:05018 05B05
- Yoshizawa, Taro Stability properties in almost periodic systems of functional differential equations. *Functional differential equations and bifurcation* (Proc. Conf., Inst. Cienc. Mat. São Carlos, Univ. São Paulo, São Carlos, 1979), pp. 385-409. *Lecture Notes in Math.*, 799, Springer, Berlin, 1980. (V. Lakshmikantham) 81m:34055 34C27
- Yoshizawa, Y. (with Miyatake, O.; Inoue, H.; Kumahara, H.; Ichimura, M.; Kimura, H.) On the generation and properties of physical random numbers. *Math. Japon.* 24 (1979/80), no. 4, 369-376. (From the summary) 81a:65016 65C10
- Yoshida, Kōsaku (with Okamoto, Shūichi) A note on Mikusiński's operational calculus. *Proc. Japan Acad. Ser. A Math. Sci.* 56 (1980), no. 1, 1-3. (R. Bittner) 81d:44010 44A40
- Yoshimura, Zen-ichi Universal coefficient sequences for cohomology theories of CW-spectra. II. *Osaka J. Math.* 16 (1979), no. 1, 201-217. (D. W. Anderson) 81b:55021 55P42
- (with Johnson, David Copeland) Torsion in Brown-Peterson homology and Hurewicz homomorphisms. *Osaka J. Math.* 17 (1980), no. 1, 117-136. (W. Stephen Wilson) 81b:55010 55N22 (55S05)
- Yost, R. A. (with Blasgen, M. W.; Astrahan, M. M.; Chamberlin, D. D.; Gray, James N.; King, W. F.; Lindsay, B. G.; Lorie, R. A.; Mehl, J. W.; Price, T. G.; Putzolu, G. R.; Scholnick, M.; Selinger, P. G.; Stutz, D. R.; Strong, H. R.; Traiger, I. L.; Wade, B. W.) System R: an architectural overview. *IBM Systems J.* 20 (1981), no. 1, 41-62. (Authors' summary) 81m:68079 68H05
- Yotsumatsu, Shoji Evolution equations associated with the subdifferentials. *J. Math. Soc. Japan* 31 (1979), no. 4, 623-646. (A. Pazy) 81d:47066 47H15 (35K22)
- You, Zhao Yong Block estimation of the spectral radius of a matrix. (Chinese) *Numer. Math. J. Chinese Univ.* 1 (1979), no. 1, 129-130. (Yik-Hoi Au-Yeung) 81g:15011 15A18 (15A48)
- Yousa, D. C. A maximum modulus theorem for spectral radius and absolutely stable amplifiers. *IEEE Trans. Circuits and Systems* 27 (1980), no. 12, 1274-1276. (From the summary) 81k:94048 94C05
- Young, Alfred See Combinatorics, representation theory and statistical methods in groups. 81k:05003 and Robinson, G. de B., 81m:01072
- Young, Andrew (with Kiountouzis, E. A.) Best approximation in an asymmetrically weighted L_1 measure. *J. Inst. Math. Appl.* 24 (1979), no. 4, 379-394. (Derek W. Arthur) 81b:41072 41A50 (65D07)
- Young, Bing Lin (with Suura, H.; Wilson, Weldon James) Relativistic wave equation and heavy quarkonium spectra. *Phys. Rev. D* (3) 21 (1980), no. 11, 3204-3211. (Authors' summary) 81g:81090 81G05
- Young, E. C. (with Chan, C. Y.) Sturmian theorems for degenerate parabolic inequalities. *J. Math. Anal. Appl.* 74 (1980), no. 2, 560-567. (V. Lakshmikantham) 81e:35069 35K65 (35B05)
- Young, E. R. (with Richards, P. G.; Torr, D. G.) A flux preserving method of coupling first and second order equations to simulate the flow of plasma between the protonosphere and the ionosphere. *J. Comput. Phys.* 38 (1980), no. 2, 141-156. (Authors' summary) 81j:86003 86A35
- Young, Forrest W. (with Sands, Richard) Component models for three-way data: an alternating least squares algorithm with optimal scaling features. *Psychometrika* 45 (1980), no. 1, 39-67. (B. K. Shah) 81h:62183 62P15
- Young, H. P. Exploitable surplus in n-person games. *Applied game theory* (Proc. Conf., Inst. Adv. Stud., Vienna, 1978), pp. 32-38. *IHS—Studies, I. Physica, Würzburg*, 1979. (Author's summary) 81d:90135 90D45 (90A10, 92A20)
- (with Balinski, M. L.) Quotations apportionment methods. *Math. Oper. Res.* 4 (1979), no. 1, 31-38. (Authors' summary) 81j:90009 90A08
- Young, John H. (with Tombrello, Joseph F.) A discussion of the pseudo-Weyl-type metrics. *Gen. Relativity Gravitation* 12 (1980), no. 1, 43-49. (S. M. Christensen) 81f:83015 83C20 (53B30)
- Young, Lai Sang (with Robinson, Clark) Nonabsolutely continuous foliations for an Anosov diffeomorphism. *Invent. Math.* 61 (1980), no. 2, 159-176. (C. S. Hartzman) 81m:58061 58F15 (32D20)
- Young, N. J. Formulae for the solution of Lyapunov matrix equations. *Internat. J. Control* 31 (1980), no. 1, 159-179. (Author's summary) 81h:93018 93B40 (15A24)
- Functions of canonical matrices. *Linear and Multilinear Algebra* 9 (1980), no. 2, 141-149. (George P. Barker) 81j:15012 15A21 (93B17)
- Young, P. (with Jakeman, A. J.) Systems identification and estimation for convolution integral equations. *Application and numerical solution of integral equations* (Proc. Sem., Australian Nat. Univ., Canberra, 1978), pp. 235-255. *Monographs and Textbooks on Mech. of Solids and Fluids (Mech. Analysis)*, 6, Sijthoff & Noordhoff, Alphen aan den Rijn, 1980. (From the conclusion) 81k:93064 93E10 (93E12)
- Young, Paul (with Machty, Michael) ★ An introduction to the general theory of algorithms. Computer Science Library—Theory of Computation series. North-Holland, New York-Oxford-Shannon, 1978. vii + 264 pp. ISBN 0-444-00226-X (Authors' introduction) 81k:68001 68-01
- Young, Robert M. An elementary proof of a trigonometric identity. *Amer. Math. Monthly* 86 (1979), no. 4, 296-297. (P. G. Rooney) 81a:42023 42A99
- ★ An introduction to nonharmonic Fourier series. Pure and Applied Mathematics, 93. Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], New York-London, 1980. x + 246 pp. ISBN 0-12-772850-3 (Carlos A. Berenstein) 81m:42027 42C30 (30D15, 42-02)
- Young, Sam W. (with Smith, Michel) Periodic homeomorphisms on T-like continua. *Fund. Math.* 104 (1979), no. 3, 221-224. (L. E. Ward, Jr.) 81a:54038 54F62
- Younger, D. H. From shortest paths to directed cut transversals. *Second International Conference on Combinatorial Mathematics* (New York, 1978), pp. 555-562. *Ann. New York Acad. Sci.*, 319, New York Acad. Sci., New York, 1979. (Hugo S. Sun) 81e:05046 05C20 (05C40)
- Younis, Mohamed I. (with Vogt, William G.; Mahmoud, Magdi S.) A computational procedure to stabilize nonlinear sampled-data systems. *Comput. Electr. Engrg.* 7 (1980), no. 1, 3-9. (Authors' summary) 81g:93084 93D15
- Younis, Rahman Best approximation in certain Douglas algebras. *Proc. Amer. Math. Soc.* 80 (1980), no. 4, 639-642. (Nicholas P. Jewell) 81j:46031 46E15 (41A50, 46J15)
- Yourgrau, Wolfgang Einstein—and the vanity of academia. *Albert Einstein: his influence on physics, philosophy and politics*, pp. 213-220. Vieweg, Braunschweig, 1979. (See 81f:01039) 01A70
- (with Liebscher, Dierck-Ekkehard) Classical spontaneous breakdown of symmetry and induction of inertia. (German summary) *Ann. Physik* (7) 36 (1979), no. 1, 20-24. (Jean Chevalier) 81h:83032 83C99
- (with Park, James L.; Band, William) Simultaneous measurement, phase-space distributions, and quantum state determination. (German summary) *Ann. Physik* (7) 37 (1980), no. 3, 189-199. (Authors' summary) 81h:81028 81C20
- (with János, L.; van der Merwe, A. J.) On the mode of propagation of light. (German summary) *Astronom. Nachr.* 301 (1980), no. 1, 1-7. (Authors' summary) 81f:83007 83B05 (78A10, 83A05)
- See also Margenau, Henry, 81k:01042
- Youshevitich, A. P. See Jukić, A. P.
- Youssef, Nabil Labib Distribution de nullité du tenseur de courbure d'une connexion. (English summary) *C. R. Acad. Sci. Paris Ser. A-B* 290 (1980), no. 14, A653-A656. (Francesco Mercuri) 81m:53023 53B15
- Yovits, Marshall C. See Advances in computers, 81f:68004 and Advances in computers, 81f:68003
- Yverantant, Harry Die Mehrstellenformeln für den Laplaceoperator. *Numer. Math.* 34 (1980), no. 2, 171-187. (Kristian Witich) 81h:65101 65N05
- Yu, Christopher C. H. (with Costello, Daniel J., Jr.) Generalized minimum distance decoding algorithms for Q-ary output channels. *IEEE Trans. Inform. Theory* 26 (1980), no. 2, 238-243. (Authors' summary) 81h:94023 94A24 (94B35)
- Yu, Fong Ming (with Chen, Lu San) Sufficient conditions for nonoscillation of forced n-th order retarded functional differential equations. (Italian summary) *Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur.* (8) 65 (1978), no. 3-4, 100-103 (1979). (John R. Graef) 81g:34093 34K15 (34C10)
- Yu, Hong Zu (with Li, Chu Lin) Some problems concerning the solution of fuzzy equations. (Chinese. English summary) *J. Huazhong Inst. Tech.* 1980, no. 2 Special Issue on Fuzzy Math, iii, 53-57. (From the summary) 81m:03064 03E72
- Yu, Jia Rong Some properties of random Dirichlet series. (Chinese. English summary) *Acta Math. Sinica* 21 (1978), no. 2, 97-118. (From the summary) 81k:30002 30B50 (60G17)
- Yu, Jing Yuan (with Song, Jian) On the theory of distributed parameter systems with ordinary point-wise feedback control and measurement. *Sci. Sinica* 1979, Special Issue II on Math., 177-189. (J. P. Babary) 81m:93044 93C20

- Yu, Kun Rui (with Xu, Guang Shan) A note on a theorem of Baker and Mahler. (Chinese. English summary) *Acta Math. Sinica* 22 (1979), no. 4, 487-494. (Ming-Chit Liu) 81a:10050 10F35
- (with Dai, Zong Duo; Feng, Xu Ning) Integral solutions of $x^{1/n} + y^{1/n} = z^{1/n}$ and the degrees $[Q(p_1^{1/n}, p_2^{1/n}, \dots, p_r^{1/n}):Q]$. (Chinese) *Kexue Tongbao* 24 (1979), no. 10, 438-442. (Ming-Chit Liu) 81a:10028 10B25
- (with Xu, Guang Shan) Some Diophantine inequalities involving a class of Siegel's E-functions. (Chinese) *Kexue Tongbao* 24 (1979), no. 11, 481-486. (From the text) 81h:10049 10F10 (10F99)
- Yu, P. L. (with Wrather, C.) Advertising games in duopoly market expansion. *Control theory in mathematical economics (Proc. Third Kingston Conf., Part B, Univ. Rhode Island, Kingston, R.I., 1978)*, pp. 111-149, *Lecture Notes in Pure and Appl. Math.*, 47, Dekker, New York, 1979. (From the summary) 81a:90174 90D40 (90A16)
- Yu, Wen Ning (with Yamaguchi, Seiichi) Geometry of holomorphically subprojective Kählerian manifolds. *Ann. Mat. Pura Appl.* (4) 121 (1979), 263-276. (Leopold Verstraeten) 81g:53016 53B35 (53B25)
- Yu, Xiang Ming (with Shi, Xian Liang) Cesàro means of negative degree of Fourier series. (Chinese) *Acta Math. Sinica* 22 (1979), no. 6, 762-765. (Yung-Ming Chen) 81b:42039 42A24
- Yuan, Hsi Shih The fundamental group of the residual space of a curve in an algebraic surface. *Chinese J. Math.* 7 (1979), no. 2, 163-175. (Lee Rudolph) 81f:14018 14H35 (14F45, 14J05, 57M05)
- Branches covering spaces. *Chinese J. Math.* 7 (1979), no. 2, 177-206. (Richard Randell) 81g:14006 14E20 (57M12)
- Yuan, J. S.-C. Deadbeat nutation controller for momentum bias stabilized spacecraft. *J. Guidance Control* 3 (1980), no. 4, 361-368. (Author's summary) 81d:70024 70M05
- Yuan, John On supports and equivalence of embeddable probability measures. *Bull. Inst. Math. Acad. Sinica* 7 (1979), no. 4, 471-478. (Eberhard Siebert) 81e:60009 60B15
- A note on angular semigroups. *Semigroup Forum* 19 (1980), no. 3, 261-265. (M. Satyanarayana) 81d:22002 22A99 (43A05)
- Yuan, L. (with Hadlock, Frank) Generating route systems for automated guideway transit networks. *Proceedings of the Tenth Southeastern Conference on Combinatorics, Graph Theory and Computing (Florida Atlantic Univ., Boca Raton, Fla., 1979)*, pp. 469-492, *Congress. Numer. XXIII-XXIV, Utilitas Math., Winnipeg, Man., 1979*. (Kenneth D. Shere) 81g:90058 90B35 (90C08, 90C35)
- Yusasa, T. (with Yoneyama, Kanji; Nishida, Toshio) A queueing system with c random additional service channels. *Z. Angew. Math. Mech.* 60 (1980), no. 1, 57-59. (S. Christian Albright) 81m:60174 60K25 (60J27)
- Yuba, Toshitsugu (with Hoshi, Mamoru) Optimum scatter storage tables. *Systems-Comput. Controls* 9 (1978), no. 1, 28-36 (1979). (From the introduction) 81a:68111 68H05 (68B15)
- Yue, Dick K. P. (with Mei, Chiang C.) Forward diffraction of Stokes waves by a thin wedge. *J. Fluid Mech.* 99 (1980), no. 1, 33-52. (Authors' summary) 81g:76019 76B15
- Yue, Min Yi (with Han, Ji Ye) A new reduced gradient method. *Sci. Sinica* 22 (1979), no. 10, 1099-1113. (Stefan Tijan) 81k:90091 90C30
- Yue Chi Ming, Roger On annihilators and quasi-Frobenius rings. *Bull. Soc. Math. Belg.* 28 (1976), no. 2, 115-120. (Yutaka Kawada) 81c:16024 16A36 (16A52)
- On regular rings and continuous rings. *Math. Japon.* 24 (1979/80), no. 6, 563-571. (K. R. Gooden) 81c:16016 16A30 (16A52)
- On regular rings and V-rings. *Monatsh. Math.* 88 (1979), no. 4, 335-344. (Annie Page) 81d:16012 16A30
- On annihilator ideals. II. *Comment. Math. Univ. St. Paul.* 28 (1980), no. 2, 129-136. (H. Tominaga) 81i:16014 16A30 (16A34)
- On V-rings and prime rings. *J. Algebra* 62 (1980), no. 1, 13-20. (Annie Page) 81d:16013 16A30
- Yuen, C. K. (with Beauchamp, Kenneth George) ★Digital methods for signal analysis. *George Allen & Unwin, London-Boston, Mass.*, 1979. xv+316 pp. ISBN 0-04-621027-X (From the preface) 81b:94001 94-01
- (with Fraser, Donald Alexander Stuart) ★Digital spectral analysis. *Applicable Mathematics Series. Commonwealth Scientific and Industrial Research Organization (CSIRO), Melbourne; Pitman (Advanced Publishing Program), San Francisco, Calif.-London, 1979.* viii+156 pp. ISBN 0-273-08439-9 (From the publisher's description) 81k:94001 94-01 (62M15, 94A05)
- Yuen, Henry C. (with Saffman, Philip G.) A note on numerical computations of large amplitude standing waves. *J. Fluid Mech.* 95 (1979), no. 4, 707-715. (Authors' summary) 81a:76010 76B15 (65R20)
- (with Crawford, Donald R.; Saffman, Philip G.) Evolution of a random inhomogeneous field of nonlinear deep-water gravity waves. *Wave Motion* 2 (1980), no. 1, 1-16. (Authors' summary) 81b:76009 76B15
- Yuen, Horace P. (with Shapiro, Jeffrey H.) Optical communication with two-photon coherent states. III. Quantum measurements realizable with photoemissive detectors. *IEEE Trans. Inform. Theory* 26 (1980), no. 1, 78-92. (Carl W. Helstrom) 81a:94010 94A05
- Yūhanna ibn Yūsuf, ibn Hārith ibn al-Batriq al-Qas See Matvievskaja, G. P., 81j:01007
- Yukalov, V. I. See Yukalov, V. I.
- Yukawa, Hideki See Theory of elementary particles extended in space-time, 81e:81007
- Yukawa, S. P. See Yukawa, S. P.
- Yuu, Kwan Koo Quasistability in a system of generalized differential equations and its economic applications. *Proceedings of the First International Conference on Mathematical Modeling (St. Louis, Mo., 1977)*, Vol. V, pp. 2331-2337, *Univ. Missouri-Rolla, Rolla, Mo., 1977*. (From the text) 81k:90024 90A16 (58E17, 58F10)
- Yun, Tian Quan An optimally convergent algorithm for Fredholm integral equations $AX = Y$ of the first kind. (Chinese. English summary) *J. Huazhong Inst. Tech.* 6 (1978), no. 3, 94-98, 145. (Author's summary) 81j:45020 45L05 (45B05, 65R20)
- An integral equation method for solving the problem of torsion of rotating bodies. (Chinese. English summary) *J. Huazhong Inst. Tech.* 1979, no. 3, 5, 97-104. (Author's summary) 81m:73028 73C99
- A note on the solution of a static problem of elastic bodies with fuzzy boundary conditions. (Chinese. English summary) *J. Huazhong Inst. Tech.* 1980, no. 2 Special
- Issue on Fuzzy Math, vi, 92-96. (Author's summary) 81m:73029 73C99 (03E72)
- Yurtseven, H. O. (with Ecer, Akin) Application of finite element method for the solution of Navier-Stokes equations at high Reynolds numbers. *Finite element methods for convection dominated flows (Papers, Winter Ann. Meeting Amer. Soc. Mech. Engrs., New York, 1979)*, pp. 73-83, *AMD, 34, Amer. Soc. Mech. Engrs. (ASME), New York, 1979*. (J. D. Atkinson) 81g:76035 76D05 (65N30)
- Yushankhai, V. Yu. See Yushankhai, V. Yu.
- Yushchenko, E. L. See Yushchenko, E. L.
- Yushkanov, A. A. See Yushkanov, A. A.
- Yūhanna ibn Yūsuf, ibn Hārith ibn al-Batriq al-Qas See Yūhanna ibn Yūsuf, ibn Hārith ibn al-Batriq al-Qas
- Yusupov, R. M. See Jusupov, R. M.
- Yutani, Hiroshi An axiom system for a BCK-algebra with the condition (S). *Math. Sem. Notes Kobe Univ.* 7 (1979), no. 2, 427-432. (G. Georgescu) 81g:06011 06D99 (03G25)
- Zabeyk, Jerzy Stabilization of boundary control systems. *International Symposium on Systems Optimization and Analysis (Roquecourt, 1978)*, pp. 321-332, *Lecture Notes in Control and Information Sci.*, 14, Springer, Berlin, 1979. (From the introduction) 81b:93059 93D99 (93B05)
- (with Ciesielski, Z.) A note on a selection problem. *Probability theory (Papers, VIII Semester, Stefan Banach Internat. Math. Center, Warsaw, 1976)*, pp. 47-51, *Banach Center Publ.*, 5, PWN, Warsaw, 1979. (S. M. Samuels) 81b:60041 60G40 (62L15)
- (with Stettner, L.) Stochastic version of a penalty method. *Optimization techniques (Proc. Ninth IFIP Conf., Warsaw, 1979)*, Part 1, pp. 179-183, *Lecture Notes in Control and Information Sci.*, 22, Springer, Berlin, 1980. (Benson Kurtaran) 81m:49039 49D30
- Erratum: "On decomposition of generators" [SIAM J. Control Optim. 16 (1978), no. 4, 523-534; MR 58 #23757]. *SIAM J. Control Optim.* 18 (1980), no. 3, 325. (Editors) 81c:47044 47D05
- Zabel, Edward (with Bradfield, James) Price adjustment in a competitive market and the securities exchange specialist. *General equilibrium, growth, and trade*, pp. 51-77, *Academic Press, New York, 1979*. (See 81m:90004) 90A09 (90A12)
- Zabell, Sandy (with Bahadur, R. R.; Gupta, J. C.) Large deviations, tests, and estimates. *Asymptotic theory of statistical tests and estimation (Proc. Adv. Internat. Sympos., Univ. North Carolina, Chapel Hill, N.C., 1979)*, pp. 33-64, *Academic Press, New York, 1980*. (Dominique Picard) 81j:60034 60F10 (62F10, 62F12)
- (with Meier, Paul) Benjamin Peirce and the Howland will. *J. Amer. Statist. Assoc.* 75 (1980), no. 371, 497-506. (Joseph W. Dauben) 81j:01025 01A55
- Zabelo, L. E. On the theory of controllability of time dependent systems. (Russian. English summary) *Dokl. Akad. Nauk BSSR* 24 (1980), no. 6, 497-499, 572. (Author's summary) 81h:93011 93B05 (34H05)
- (with Mamrila, Ju.) On controllability of a linear nonstationary system. (Russian) *Vestnik Belorus. Gos. Univ. Ser. I* 1980, no. 2, 30-33, 63. (Authors' summary) 81f:93023 93B05
- Zabko, A. P. (with Haritonov, V. L.) Problem of vibrational stabilization of linear systems. *Avtomat. i Telemekh.* 1980, no. 2, 31-34. (Russian. English summary); translated as *Avtomat. Remote Control* 41 (1980), no. 2, part 1, 161-164. (Authors' summary) 81h:93069 93D99 (93C05)
- Zabludowski, Antoni An algorithm for evaluating the probability of network connectivity. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Tech.* 27 (1979), no. 3, 21-31. (Author's summary) 81a:94069 94C15
- Zabolotnyĭ, P. A. (with Todoroi, D. N.) Geometric problems of computer graphics. (Russian) *Contemporary questions of applied mathematics and programming (Russian)*, pp. 44-50, 167, "Shtiintsa", Kishinev, 1979. (Authors' summary) 81d:68136 68K05 (68B99)
- Zaborsky, J. (with Tarn, Tzyh Jong) Reply to: "Topological equivalence of state spaces in the interconnected power system in emergency control" [IEEE Trans. Automat. Control 24 (1979), no. 3, 514-516; MR 81f:93008]. *IEEE Trans. Automat. Control* 24 (1979), no. 3, 516. (B. D. Doneski) 81f:93008 93A15
- See also Funahashi, Yasuyuki, 81c:93019
- Zabotina, I. Ja. Methods for unconditional minimization of a function using a simplex. (Russian) *Issled. Prikl. Mat. No. 7* (1979), 55-64. (N. I. Janev) 81m:90090 90C25 (65K05)
- Zabotina, Ja. I. (with Norden, A. P.; Eskin, L. D.; Grigor'ev, S. V.; Begovatov, E. A.) Al'bert Valentinovich Sul'din (on the occasion of his fiftieth birthday). (Russian) *Izv. Vys. Ucheb. Zaved. Matematika* 1978, no. 12, 3-5. (Editors) 81m:01071 01A70
- Zabreiko, P. P. (with Povolockii, A. I.) The Hammerstein operator and Orlicz spaces. (Russian) *Qualitative and approximate methods for the investigation of operator equations*, No. 2 (Russian), pp. 39-51, *Jaroslavl. Gos. Univ., Yaroslavl', 1977*. (J. Kolomyj) 81c:47067 47H15 (45P05, 46E30)
- (with Bondarenko, V. A.) The superposition operator in Hölder spaces. (Russian) *Qualitative and approximate methods for the investigation of operator equations*, No. 3 (Russian), pp. 17-29, *Jaroslavl. Gos. Univ., Yaroslavl', 1978*. (Ulrich Kosel) 81d:47041 47H99 (58C07)
- (with Malorova, N. L.) Solvability of the nonlinear Uryson integral equation. (Russian) *Qualitative and approximate methods for the investigation of operator equations*, No. 3 (Russian), pp. 61-73, *Jaroslavl. Gos. Univ., Yaroslavl', 1978*. (C. Corduneanu) 81c:45011 45G10 (45N05, 47G05)
- (with Zafievskii, A. V.) Conditions for the extremum of smooth functions. (Russian) *Qualitative and approximate methods for the investigation of operator equations*, No. 4 (Russian), pp. 76-86, *Jaroslavl. Gos. Univ., Yaroslavl', 1979*. (M. Craioveanu) 81m:58014 58C05 (58C20, 90C30, 90C48)
- (with Rjabikova, I. N.) On the theory of higher-order derivatives for operators in Banach spaces. (Russian) *Qualitative and approximate methods for the investigation of operator equations*, No. 4 (Russian), pp. 87-101, *Jaroslavl. Gos. Univ., Yaroslavl', 1979*. (A. B. Németh) 81i:46047 46G05 (47E05, 47H99)
- (with Petrova, O. M.) Theorem on extension of bounded solutions for differential equations and the averaging principle. (Russian) *Sibirsk. Mat. Z.* 21 (1980), no. 4, 50-61, 236. (D. Bainov) 81i:34002 34A15 (34C29)
- See also Studies in stability and the theory of oscillations, 81a:34004; Šilov, G. E.

- 51c:26001 and qualitative and approximate methods for the investigation of operator equations. 81c:65004
- Zabrodskii, V. A. (with Ivačenko, P. A.) Choice of the length of check period. (Russian) *Avtomat. Sistemy Upravlenija i Prirody Avtomat.* No. 54 (1980), 53–58, ii. (Authors' summary) 81i:90054 90A20
- Zabrodskii, Alexander (with Dror, Emmanuel) Unipotency and nilpotency in homotopy equivalences. *Topology* 18 (1979), no. 3, 187–197. (Brayton Gray) 81g:55008 55P10
- Zach, M. (with Margaria, I.) Tree-manipulation in an algorithm for maximizing parallelism. *Les arbres en algèbre et en programmation (Troisième Colloq. de Lille, Lille, 1978)*, pp. 207–232. *Univ. Sci. Tech. Lille, Villeneuve d'Ascq, 1978.* (Karel Čulík) 81c:68012 68B10 (68E10)
- (with Margaria, I.; Meo, A. R.) Determinacy and maximal parallelism in a structured model of parallel computation. *Calcolo* 16 (1979), no. 3, 305–333 (1980). (Authors' summary) 81g:68041 68B20
- Zacharias, Cecily (with Subba Rao, V.) A characterisation theorem for simultaneous approximation by sums of Chebyshev norms. *J. Math. Phys. Sci.* 14 (1980), no. 1, 1–8. (R. A. Lorentz) 81j:41044 41A50 (41A28)
- Zacharias, Klaus (with Gajewski, Herbert) Zur Begründung des Galerkin-Verfahrens für die nichtlineare Vlasov-Gleichung. *Math. Nachr.* 84 (1978), 93–121. (From the text) 81g:82048 82A45 (35Q20, 65P05)
- (with Gajewski, Herbert) Über Näherungsverfahren zur Lösung der nichtlinearen Schrödinger-Gleichung mit selbstkonsistentem Potential. *Math. Nachr.* 89 (1979), 71–85. (D. E. Edmunds) 81a:35009 35Q20 (65P05, 76B25)
- Zachariasen, F. The infrared behaviour of the running coupling constant in Yang-Mills theories. *Hadronic matter at extreme energy density (Proc. Workshop, Ettore Majorana Center, Erice, 1978)*, pp. 313–334. *Ettore Majorana Internat. Sci. Ser.: Phys. Sci., 2, Plenum, New York, 1980.* (Jacques P. Leveille) 81g:81108 81G25
- Zacher, Giovanni The class of hypercyclic and projectively invariant groups. (Italian) *Rend. Sem. Mat. Univ. Padova* 59 (1978), 263–268 (1979). (J. Wiegold) 81c:20016 20E15
- Zachanoglou, E. C. Flat solutions and singular solutions of linear partial differential equations with analytic coefficients. *Séminaire Goulaouic-Schwartz* (1978/1979), *Exp. No. 18*, 11 pp., *École Polytech., Palaiseau, 1979.* (K. Lancaster) 81f:35009 35A07
- Manifolds with arbitrary submanifolds of nonanalyticity of solutions of linear PDEs. *Comm. Partial Differential Equations* 5 (1980), no. 3, 225–243. (Jorge Hounie) 81f:35008 35A05 (35B65)
- Zachorowski, Stanisław Remarks on interpolation property for intermediate logics. *Rep. Math. Logic* No. 10 (1978), 139–146 (1979). (Peter Köhler) 81b:03027 03B55
- Zachoval, Ladislav On research in physics in Prague during the interwar period. (Czech) *Science in Czechoslovakia, 1918–1952 (Czech)*, pp. 67–78. *Prace Džijm. Pírod. Věd, 11, ČSAV, Prague, 1979.* (See 81j:01032) 01A60
- Zacks, S. Numerical determination of the distributions of stopping variables associated with sequential procedures for detecting epochs of shift in distributions of discrete random variables. *Comm. Statist. B—Simulation Comput.* 9 (1980), no. 1, 1–18. (Rasul A. Khan) 81f:62127 62L10
- Zadan, M. I. Lopatinskiĭ's condition in the Dirichlet problem for elliptic systems of three equations. (Russian. English summary) *Vesci Akad. Nauk BSSR Ser. Fiz.-Mat. Nauk* 1978, no. 5, 121–123, 146. (B. P. Panejah) 81c:35046 35J55
- The Dirichlet problem for a class of systems. (Russian. English summary) *Vesci Akad. Nauk BSSR Ser. Fiz.-Mat. Nauk* 5 (1979), no. 5, 34–37, 139. (Ju. V. Kostarčuk) 81c:35044 35J55
- Tagl-Zade, A. T. See Tagl-Zade, A. T.
- Bahn-Zade, M. A. See Bahn-Zade, M. A.
- Kasim-Zade, O. M. See Kasim-Zade, O. M.
- Abbar-Zadeh, Hassan See Akbar-Zadeh, Hassan
- Zadeh, L. A. A theory of approximate reasoning. *Machine intelligence, Vol. 9*, pp. 149–194. *Horwood, Chichester, 1979.* (W. Wechler) 81m:03034 03B52 (68G99, 94D05)
- See also Nallimov, V. V. 81m:03032
- Zadereĭ, N. N. (with Stepanec', O. I.) Approximation by Fourier sums on classes of periodic functions defined by polyharmonic operators. (Russian) *Mat. Zametki* 27 (1980), no. 4, 569–581, 669. (S. Baron) 81h:42006 42A10 (42B05)
- Zadereĭ, P. V. Approximation of conjugate functions of two variables by Fourier sums. (Russian) *Mathematical analysis and probability theory (Russian)*, pp. 53–57, 210. "Naukova Dumka", Kiev, 1978. (From the text) 81a:42026 42B05
- Approximation of periodic functions of several variables by positive polynomial operators. (Russian) *Studies in the theory of approximation of functions and their applications (Russian)*, pp. 85–88, 190. *Akad. Nauk Ukrain. SSR, Inst. Mat., Kiev, 1978.* (V. Veselinov) 81c:41048 41A35 (42B10)
- Approximation of discontinuous functions by de la Vallée Poussin sums. (Russian) *The theory of functions and its applications (Russian)*, pp. 94–101, 210. "Naukova Dumka", Kiev, 1979. (V. N. Temljakov) 81f:42003 42A10
- (with Stepanec', O. I.) On the approximation of conjugate functions from Hölder classes by Fejér means. (Russian summary) *Anal. Math.* 5 (1979), no. 2, 167–178. (J. A. Siddiqui) 81j:42024 42A50 (42A10)
- Convergence rate for Fourier partial sums on classes of continuous nonperiodic functions of two variables. (Russian) *Ukrain. Mat. Ž.* 32 (1980), no. 1, 102–104, 143. (F. Móricz) 81c:42026 42B05
- Zadravka, V. K. Quadrature formulae with optimal accuracy for the calculation of the Fourier transform. *Fourier analysis and approximation theory (Proc. Colloq., Budapest, 1976)*, Vol. II, pp. 905–915. *Colloq. Math. Soc. János Bolyai, 19, North-Holland, Amsterdam, 1978.* (D. Stancu) 81d:41038 41A55 (65D32, 65R10)
- Žado, Ladislav On certain properties of the volume Green potential for the iterated Helmholtz equation and for the octant E_3^+ . *Wyż. Szkoła Ped. Krakow. Rocznik Nauk-Dydakt. Prace Mat.* No. 9 (1979), 185–190. (I. Netuka) 81d:35020 35J05 (31B35)
- Zadojan, M. A. Mixed variational equation for plates and shells of nonlinear hereditary-aging material. *Izv. Akad. Nauk SSSR Meh. Tverd. Tela* 15 (1980), no. 3, 97–104 (Russian); translated as *Mech. Solids* 15 (1980), no. 3, 93–100. (Author's summary) 81m:73034 73E25 (49H05)
- Zadoroznii, V. F. Synthesis of time-optimal controllable dynamic systems. (Russian) *Mat. Fiz. Zh.* No. 27 (1980), 3–7, 120. (Author's summary) 81i:49028 49E30 (49A50)
- Zadoroznyi, V. N. (with Bagrov, V. G.; Gitman, D. M.; Suhomlin, N. B.; Šapovalov, V. N.) New exact solutions of the Dirac equation. VIII. (Russian) *Izv. Vysš. Učebn. Zaved. Fizika* 1978, no. 2, 13–18. (Authors' summary) 81a:81015 81C05
- (with Bagrov, V. G.; Gitman, D. M.; Šapovalov, A. V.; Šapovalov, V. N.) New exact solutions of the Dirac equation. IX. (Russian) *Izv. Vysš. Učebn. Zaved. Fizika* 1978, no. 3, 46–49. (From the summary) 81a:81015c 81C05
- Zadoyan, M. A. See Zadojan, M. A.
- Zadumalsky, P. E. On the accuracy in the numerical solution of the N -body problem. *Celestial Mech.* 20 (1979), no. 3, 209–230. (Author's summary) 81h:70009 70F10 (65L05)
- Zaflevskii, A. V. (with Zabreiko, P. P.) Conditions for the extremum of smooth functions. (Russian) *Qualitative and approximate methods for the investigation of operator equations, No. 4 (Russian)*, pp. 76–86. *Jaroslavl. Gos. Univ., Yaroslavl', 1979.* (M. Craioveanu) 81m:58014 58C05 (58C20, 90C30, 90C48)
- Salvi Zagaglia, Norma See Salvi Zagaglia, Norma
- Zaghad, Amir I. (with Macphie, Robert H.) Radiation from a rectangular waveguide with infinite flange—exact solution by the correlation matrix method. *IEEE Trans. Antennas and Propagation* 28 (1980), no. 4, 497–503. (From the introduction) 81c:78009 78A50
- Zagler, D. (with Suter, S.) Dilatationen von abelschen Gruppen. *Enseign. Math.* (2) 24 (1978), no. 1–2, 125–142. (I. H. Bekker (Zbl 396:20035)) 81c:20061 20K30
- (with Stark, Harold M.) A property of L -functions on the real line. *J. Number Theory* 12 (1980), no. 1, 49–52. (Paula A. Kemp) 81i:10051 10H08
- Zagnibeva, I. G. (with Ljul'ka, V. A.) Motion of a solid filled with a viscous fluid under the action of an arbitrary system of forces and moments. (Russian) *Direct numerical simulation of gas flows (Russian)*, pp. 145–155, 176. *Akad. Nauk SSSR, Vyčisl. Centr, Moscow, 1978.* (See 81g:76004) 76D99
- Zagorov, V. P. (with Arsenin, V. Ja.; Gorjačev, V. A.) Calculation of pulse functions of lines of propagation of radio pulses with reflection from the lower ionosphere. (Russian) *Differencial'nye Uravnenija* 16 (1980), no. 7, 1185–1195, 1348. (Authors' summary) 81h:78012 78A40 (86A99)
- Zagorin, L. E. Commutative-nilpotent algebras of matrices with real-quaternion elements. (Russian. English summary) *Vesci Akad. Nauk BSSR Ser. Fiz.-Mat. Nauk* 1979, no. 6, 9–13, 138. (J. Vanžura) 81j:15017 15A33 (15A27, 16A42)
- Zagorodnii, N. A. (with Trigub, R. M.) A question of Salem. (Russian) *Theory of functions and mappings (Russian)*, pp. 97–101, 178. "Naukova Dumka", Kiev, 1979. (O. D. Gabisonija) 81g:42008 42A10
- Zagorodnikov, Ju. I. (with Zarubin, A. G.) A boundary value problem for equations of vector flows in the ocean. (Russian) *Sibirsk. Mat. Ž.* 21 (1980), no. 1, 63–73, 236. (N. N. Janenko) 81j:35102 35Q20 (65M10, 86A05)
- Zagorinik, A. S. (with Efimenko, V. V.) Program realization of direct integration methods for a problem of multidimensional minimization. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 20 (1980), no. 3, 615–622, 812. (H. Voigt) 81h:65066 65K10 (90C30)
- Zagorinik, N. G. Methodological problems and problems of the automatic detection of regularities. (Russian) *Methodological problems of mathematics (Russian)*, pp. 5–15. "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. (Editors) 81i:00010 00A25 (03A05, 68G15)
- See also Proceedings: All-Union School-Seminar on Statistical Hydroacoustics. 81a:00010
- Zagrebnev, V. A. On the families of Gibbs semigroups. *Comm. Math. Phys.* 76 (1980), no. 3, 269–276. (Gheorghe Necu) 81k:47055 47D05 (47B10, 82A15)
- Zagrodzinski, J. Particular solutions of the sine-Gordon equation in $2+1$ dimensions. *Phys. Lett. A* 72 (1979), no. 4–5, 284–286. (George Leibbrandt) 81k:81082 81E99 (35Q20, 58A15)
- Zagustin, E. A. (with Kalaba, Robert) Cauchy system for the nonlinear boundary value problem of a shallow arch. *Applied nonlinear analysis (Proc. Third Internat. Conf., Univ. Texas, Arlington, Tex., 1978)*, pp. 619–625. *Academic Press, New York, 1979.* (A. C. Garibaldi) 81e:73065 73K99 (34B15)
- Zahalski, George Ireness Plane harmonic functions in the presence of a surface layer of arbitrary stiffness. *Quart. Appl. Math.* 37 (1979/80), no. 4, 337–353. (V. Girault) 81c:73009 73C40 (31A05)
- Zahar, Elie G. The mathematical origins of general relativity and of unified field theories. *Einstein Symposium, Berlin (1979)*, pp. 370–396. *Lecture Notes in Phys.*, 100, Springer, Berlin, 1979. (W. B. Bonnor) 81m:83004 83–03 (00A69, 01A60, 03A05)
- Einstein, Meyerson and the role of mathematics in physical discovery. *British J. Philos. Sci.* 31 (1980), no. 1, 1–43. (Lawrence Sklar) 81j:83006 83B05 (01A80)
- Zahar, R. V. M. (with Bacopoulos, A.) An error analysis for absolute and relative approximation. *Aequationes Math.* 18 (1978), no. 1–2, 158–177. (E. W. Cheney) 81b:65014 65D15 (41A10)
- Conditioning of asymptotic band matrix systems. *Proceedings of the Ninth Manitoba Conference on Numerical Mathematics and Computing (Univ. Manitoba, Winnipeg, Man., 1979)*, pp. 425–434. *Congress. Numer., XXVII, Utilitas Math., Winnipeg, Man., 1980.* (N. N. Abdelmalek) 81m:65059 65F35 (15A12)
- Zaharenko, V. G. (with Gurvič, I. B.; Počman, Ju. M.) A randomized algorithm for solving nonlinear programming problems. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* 1979, no. 5, 30–33, 219. (Russian); translated as *Engng. Cybernetics* 17 (1979), no. 5, 18–22 (1980). (Authors' summary) 81i:90177 90C30
- Zaharevič, V. G. On the question of the formalization and aggregation of information in systems of the control of industrial plants. (Russian) *Izv. Severo-Kavkaz. Nauch. Centra Vyš. Školy Ser. Tehn. Nauk.* 1980, no. 2, 34–36, 109. (Author's summary) 81h:90023 90A11
- Zaharin, F. M. An application of a method of inverse sensitivity. (Russian) *Theory of invariance and its application (Proc. Fifth All-Union Conf., Kiev, 1976)*, Part 2 (Russian), pp. 364–373. "Naukova Dumka", Kiev, 1979. (B. I. Anan'ev) 81m:90098 90C30 (65H15, 93B35)
- Zaharin, O. M. Processes of servicing complex randomized recurrent flows. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* 1979, no. 4, 126–131, 221. (Russian); translated as *Engng. Cybernetics* 17 (1979), no. 4, 110–115 (1980). (Do Le Minh) 81m:60175 60K25 (90B22)

- Zaharjan, V. S.** (with Sehopjan, L. A.) A bound for the growth of functions of the class $N(u)$. (Russian. Armenian and English summaries) *Izv. Akad. Nauk Armjan. SSR Ser. Mat.* 14 (1979), no. 5, 348–368, 403–404. (A. È. Eremenko) **81f:30031** 30D50
- Zaharjukov, M. V.** (with Popov, S. V.) A deduction search procedure based on the syntactic tree method. (Russian. English summary) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 111* (1978), 51 pp. (Gábor Dávid) **81h:03014** 03B35 (68G15)
- Zaharov, A. Ju.** Comparison of numerical methods of solving stiff systems of ordinary differential equations. (Russian) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 124* (1979), 25 pp. (E. L. Albasiny) **81m:65127** 65L05
- (with Krugljakov, S. V.) A difference operator of high-order accuracy and its application in the method of lines. (Russian) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 1* (1980), 28 pp. (F. M. Pascal) **81m:65156** 65N05 (65D25, 65N40)
- Zaharov, A. V.** (with Ignat'ev, Ju. G.) The reflection of gravitational waves from compact stars. *Phys. Lett. A* 66 (1978), no. 1, 3–4. (Authors' summary) **81k:83021** 83C35
- Zaharov, E. V.** (with Davydov, A. G.; Pimenov, Ju. V.) On integral equations for problems of electromagnetic wave diffraction by uncylindrical surfaces. (Russian) *Dokl. Akad. Nauk SSSR* 253 (1980), no. 1, 82–84. (Piero Bassanini) **81m:78021** 78A45 (45B05)
- Zaharov, Ju. N.** (with Janenko, N. N.; Šokin, Ju. I.) On the nonlinear acceleration of iterative schemes. *Computing methods in applied sciences and engineering (Proc. Fourth Internat. Sympos., Versailles, 1979)*, pp. 113–132, North-Holland, Amsterdam, 1980. (From the introduction) **81j:65113** 65N10
- Zaharov, V. E.** (with Belinskii, V. A.) The integration of Einstein's equations, by the method of inverse scattering, and exact solution solutions. *Sources of gravitational radiation (Proc. Workshop, Battelle Seattle Res. Center, Seattle, Wash., 1978)*, pp. 161–172, Cambridge Univ. Press, Cambridge, 1979. (See **81j:83017**) **83C05** (35A25, 35Q20)
- (with Manakov, S. V.; Novikov, S. P.; Pitaevskii, L. P.) ★Теория солитонов. (Russian) [Theory of solitons] Метод обратной задачи. [The method of the inverse problem] "Nauka", Moscow, 1980. 320 pp. (Eugene Gutkin) **81g:35112** 35Q99 (35P25, 58F07, 76B99, 81C05)
- (with Mihalov, A. V.) On the integrability of classical spinor models in two-dimensional space-time. *Comm. Math. Phys.* 74 (1980), no. 1, 21–40. (M. Carmeli) **81h:81078** 81E10 (35Q99, 58F07)
- (with Mihalov, A. V.) A variational principle for equations that are integrable by the inverse problem method. (Russian) *Funktsional. Anal. i Prilozhen.* 14 (1980), no. 1, 55–56. (L. A. Takhtajan (Tahtadjan)) **81c:35111** 35Q20 (49H05, 58F07)
- (with Schulman, E. I.) Degenerative dispersion laws, motion invariants and kinetic equations. *Phys. D* 1 (1980), no. 2, 192–202. (J. R. Ockendon) **81j:35077** 35L70 (35Q20, 76B15, 81C05)
- Zaharov, V. I.** (with Šifman, M. A.; Vainstein, A. I.) Can confinement ensure natural CP invariance of strong interactions? *Nuclear Phys. B* 166 (1980), no. 3, 493–506. (Jorge André Swieca) **81g:81097** 81G05 (81E10)
- Zaharov, V. K.** Functional representation of the orthocompletion and the divisible hull of torsion-free Utumi modules. (Russian) *Mat. Zametki* 27 (1980), no. 3, 333–343, 492. (G. Eisenreich) **81f:13004** 13C05 (06F25, 18F20)
- (with Vekaler, A. I.) Topological spaces and vector lattices. (Russian) International Topology Conference (Moscow State Univ., Moscow, 1979). *Uspehi Mat. Nauk* 35 (1980), no. 3(213), 153–157. (Y. Kodama) **81h:54047** 54G99
- Functional representation of the uniform completion of a maximal module and of a countable dense module of quotients of the module of continuous functions. (Russian) *Uspehi Mat. Nauk* 35 (1980), no. 4(214), 187–188. (C. C. White) **81h:46062** 46J99 (16A64)
- Zaharov, V. M.** (with Salimov, F. I.) On the question of the synthesis of probability converters. (Russian) *Probabilistic methods and cybernetics*. No. 14 (Russian), pp. 47–50, Kazan. Gos. Univ., Kazan, 1978. (I. Váduva) **81h:94038** 94C10
- Zaharov, Yu. N.** See Zaharov, Ju. N.
- Zaharova, E. N.** Simple radical classes of rings and algebras. (Russian) Algebraic structures. *Mat. Issled.* No. 56 (1980), 51–61, 159. (J. Jiřísko) **81h:16019** 16A21
- Zaharova, N. V.** (with Zalevskii, V. I.) Construction of a plane curve from a small number of points. (Russian) *Prikl. Geom. i Inzhener. Grafika* No. 30 (1980), 38–39, 133. (Authors' summary) **81j:65036** 65D10
- Zaher, Neyamat** (with Alam, Mahfooz) Zeros of polar-composite polynomials in algebraically closed fields. *Proc. London Math. Soc.* (3) 40 (1980), no. 3, 527–552. (W.-D. Geyer) **81f:12014** 12D10 (30C15)
- Zahirov, M.** Construction of a homeomorphism of a system of Beltrami equations. (Russian) *Dokl. Akad. Nauk UzSSR* 1980, no. 5, 9–10. (Wolfgang Tutschke) **81m:35054** 35J55
- Zähle, U.** Asymptotic behavior of the flow of events of a Gaussian field. (Russian) *Dokl. Akad. Nauk SSSR* 249 (1979), no. 3, 562–565. (Ju. S. Mišura) **81h:60073** 60G60 (60G55)
- A class of random dependent shifts leaving recurrent point processes invariant. (Russian. Lithuanian and English summaries) *Lietosk. Mat. Sb.* 19 (1979), no. 3, 85–102, 203. (Walter Wurmuth) **81f:60074** 60G55 (60K05)
- (with Debes, Hermann) Some transformations of renewal processes. *Serdica* 5 (1979), no. 1, 39–49. (D. J. Daley) **81d:60029** 60F05 (60G55, 60K25)
- Zahn, Jean-Paul** Stellar convection theory. *Stellar turbulence (Proc. Colloq., Univ. Western Ontario, London, Ont., 1979)*, pp. 1–14, Lecture Notes in Phys., 114, Springer, Berlin, 1980. (See **81j:85001**) **85A20** (76E20)
- Zahorski, S.** Unsteady shearing flows and plane shear waves in simple fluids. (Polish and Russian summaries) *Arch. Mech. (Arch. Mech. Stos.)* 32 (1980), no. 2, 285–298. (Author's summary) **81k:76007** 76A10
- Zaicev, D. I.** Solvable groups of finite rank. (Russian) *Algebra i Logika* 16 (1977), no. 3, 300–312, 377. (From the text) **81j:20052** 20F16 (20F18)
- Infinitely irreducible normal subgroups. (Russian) Structures of groups and properties of their subgroups (Russian), pp. 17–38, 150–151, Inst. Kibernet., Akad. Nauk Ukrain. SSR, Kiev, 1978. (David McDougall) **81d:20031** 20F28 (20E36)
- Hypercyclic extensions of abelian groups. (Russian) Groups defined by properties of a system of subgroups (Russian), pp. 16–37, 152, Akad. Nauk Ukrain. SSR, Inst. Mat., Kiev, 1979. (A. I. Moskalenko) **81h:20037** 20E22 (20K99)
- Zaicev, G. Ju.** Estimates of measures of sets of planes that are almost tangent to a compactum with bounded variations. (Russian) *Izv. Akad. Nauk SSSR Ser. Mat.* 44 (1980), no. 1, 145–160, 239. (G. Marinescu) **81j:28013** 28A99
- Zaicev, L. D.** (with Salyga, V. I.; Vainer, V. G.) A problem of the theory of communication networks. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* No. 12 (1979), 1035–1039, 1070. (Authors' summary) **81e:94051** 94C15
- Zaicev, L. I.** (with Grečka, G. P.; Mokljazuk, M. P.; Jadrenko, M. I.) A statistical problem in the error analysis of frequency type detectors. (Russian. English summary) *Vychisl. Prikl. Mat. (Kiev)* No. 38 (1979), 49–53, 164. (Authors' summary) **81k:62124** 62M09
- Zaicev, M. A.** (with Kelmans, A. K.) Trees with randomly decreasing vertices. (Russian) Algorithmic studies in combinatorics (Russian), pp. 107–118, 186. (errata insert), "Nauka", Moscow, 1978. (N. Hadžiivanov) **81c:05032** 05C05
- Zaicev, N. A.** (with Šikin, G. N.) Plane-symmetric interior solutions of the equations of general relativity in the presence of scalar and electromagnetic fields. (Russian) *Problemy Teor. Gravitatsii i Element. Častic* No. 10 (1979), 50–54. (Ilija Lukešević) **81c:83016** 83C20 (83C50)
- (with Mel'nikov, V. N.) Theories of gravitation with variable masses and gravitational relation. (Russian) *Problemy Teor. Gravitatsii i Element. Častic* No. 10 (1979), 131–141. (M. C. Chaki) **81c:83037** 83D05
- Zaicev, V. I.** (with Aleksandrov, P. S.) The general topology school at Moscow University. (Russian) *Vestnik Moskov. Univ. Ser. I Mat. Meh.* 1979, no. 6, 3–6. (Esther R. Phillips) **81a:01025** 01A60 (54–03)
- Zaiceva, O. V.** Well-posedness of the Cauchy problem for certain degenerate hyperbolic equations. (Russian) *Izv. Vys. Učebn. Zaved. Matematika* 1980, no. 5, 83–84. (Editor) **81g:35064** 35L15
- On the well-posedness of the Cauchy problem for a model equation with fourfold characteristics. (Russian) *Izv. Vys. Učebn. Zaved. Matematika* 1980, no. 6, 20–22. (O. Vejvoda) **81k:35098** 35L30
- Zaidenberg, M. G.** (with Lin, V. Ja.) Bounded domains of holomorphy that cannot be blown down homologically. (Russian) *Dokl. Akad. Nauk SSSR* 249 (1979), no. 2, 282–285. (Harold P. Boas) **81j:32018** 32D05 (32H20)
- Zaidi, S. M. A.** (with Kazim, M. A.; Khan, B.) On characterization of a complete category. *Tamkang J. Math.* 10 (1979), no. 2, 205–214. (From the introduction) **81h:18003** 18A35
- Zaidman, Samuel D.** ★Abstract differential equations. *Research Notes in Mathematics*, 36. Pitman (Advanced Publishing Program), San Francisco, Calif.-London, 1979. vii+130 pp. ISBN 0-8224-8427-7 (H. O. Fattorini) **81k:34054** 34G10 (34K30, 47D05)
- Some results on abstract differential equations and inequalities. *Romanian-Finnish Seminar on Complex Analysis (Proc., Bucharest, 1976)*, pp. 702–705, *Lecture Notes in Math.*, 743, Springer, Berlin, 1979. (Gianfranco Bottaro) **81d:34049** 34G10
- A remark on the weak backward Cauchy problem. *Romanian-Finnish Seminar on Complex Analysis (Proc., Bucharest, 1976)*, pp. 706–713, *Lecture Notes in Math.*, 743, Springer, Berlin, 1979. (Gianfranco Bottaro) **81d:34050** 34G10
- A partial differential equation with almost-periodic right-hand side. (French summary) *Ann. Sci. Math. Québec* 3 (1979), no. 2, 273–285. (H. Günzler) **81h:35004** 35B15 (35K10)
- On optimal mild solutions of nonhomogeneous differential equations in Banach spaces. *Proc. Roy. Soc. Edinburgh Sect. A* 84 (1979), no. 3-4, 273–277. (Author's summary) **81g:34081** 34G10 (47D05)
- Zaikin, V. N.** (with Fradkin, E. S.; Pal'čik, M. Ja.) Calculation of anomalous dimensions in conformally invariant field theory. *J. Phys. A* 13 (1980), no. 11, 3429–3446. (Authors' summary) **81h:81070** 81E99 (82A25)
- Zaikov, R. P.** Superconformal invariant two- and three-point functions, and invariant equations in a two-dimensional space-time. (Russian. English summary) *Bulgar. J. Phys.* 6 (1979), no. 6, 595–604. (J. Niederle) **81d:10083** 81E99 (17A70)
- Superconformal invariant nonlinear sigma model in the four-dimensional space-time. *C. R. Acad. Bulgare Sci.* 32 (1979), no. 8, 1053–1055. (From the text) **81d:81113** 81G25 (58E20)
- (with Sotkov, G. M.) Quantum dynamics of the relativistic membrane. *C. R. Acad. Bulgare Sci.* 32 (1979), no. 9, 1187–1190. (From the text) **81a:81145** 81M05 (53B50, 81G05)
- Supersymmetric generalized nonlinear sigma models. An infinite set of nonlocal conserved currents and instantonlike solutions. (Russian summary) *Bulgar. J. Phys.* 7 (1980), no. 2, 155–160. (Authors' summary) **81h:81159** 81G25 (81D15)
- Zaine, M. C.** (with Bianchini, M.; Paques, O. W.) On the strong compact-ported topology for spaces of holomorphic mappings. *Pacific J. Math.* 77 (1978), no. 1, 33–49. (Klaus-Dieter Bierstedt) **81h:46059** 46G20 (32A30, 46E10)
- Zainiev, R. M.** Application of two-norm convergence to the solution of a boundary value problem for an equation of mixed type. (Russian) *Azerbaidžan. Gos. Univ. Učen. Zap.* 1977, no. 4, 60–66. (L. Berg) **81k:35116** 35M05 (65R20)
- A problem with nonlinear gluing conditions for an equation of mixed type. (Russian) *Differentsial'nye Uravnenija (Ryazan)* No. 14 (1979), 58–68. (Authors' summary) **81h:35076** 35M05
- Zainulabidin, M. M.** (with Zarubin, A. N.) Inversion of a singular integral equation of Carleman type by means of the Hankel transform. (Russian) *Differentsial'nye Uravnenija* 16 (1980), no. 1, 171–173, 191. (N. L. Vasilevskii) **81d:45013** 45E05
- Zaitov, B. A.** Application of the contraction method to the solution of a mixed problem for a countable system of partial differential equations. (Russian) *Theoretical and applied problems of mathematics and mechanics (Russian)*, pp. 94–99, 241, "Nauka" Kazah. SSR, Alma-Ata, 1979. (R. R. Ahmerov) **81c:35029** 35F30 (35F25)
- Zajackowski, V. S.** (with Balinskii, A. I.) The property of generalized biorthogonality of eigenvectors of mutually adjoint polynomial operator pencils. (Russian) *Mat. Metody i Fiz.-Meh. Polja* No. 10 (1979), 8–11, 133. (Heinz Langer) **81d:15004** 15A18 (15A24)
- Behavior of frequencies of connected gyroscopic systems. (Russian) *Mat. Metody i Fiz.-Meh. Polja* No. 11 (1980), 31–34, 121. (Authors' summary) **81h:70005** 70E05
- Zajczkowski, Wojciech** Riemann invariants interaction for nonelliptic systems. *Demonstratio Math.* 13 (1980), no. 1, 7–21. (Alan Jeffrey) **81k:35101** 35L65
- Zak, J.** Symmetry specification of bands in solids. *Phys. Rev. Lett.* 45 (1980), no. 12, 1025–1028. (Authors' summary) **81h:81040** 81C40 (82A60)

- Žak, J. E.** Some properties of absolutely convergent double trigonometric series. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1980, no. 4, 24–31. (R. L. Cooke) 81j:42016 42B05
- Žak, Stanislav** A Turing machine oracle hierarchy. *Mathematical foundations of computer science*, 1979 (Proc. Eighth Sympos., Olomouc, 1979), pp. 542–551, Lecture Notes in Comput. Sci. 74, Springer, Berlin, 1979. (See 81c:68004) 68C40 (03D10)
- A Turing machine oracle hierarchy. I, II. *Comment. Math. Univ. Carolin.* 21 (1980), no. 1, 11–39. (Cristian Calude) 81k:03036 03D15 (03D10, 68C25, 68C40)
- Žak, Stanislav H.** (with Olbrot, Andrzej W.) Controllability and observability problems for linear functional-differential systems. *Found. Control Engng.* 5 (1980), no. 2, 79–89. (Authors' summary) 81e:93017 93B05 (93B07)
- Zakaj, M.** (with Kailath, Thomas; Segall, Adrian) Fubini-type theorems for stochastic integrals. *Sankhyā Ser. A* 40 (1978), no. 2, 138–143. (Philip Protter) 81j:60067 60H05
- Zakharčenko, V. G.** See Zakharčenko, V. G.
- Zakharin, A. M.** See Zakharin, O. M.
- Zakharov, A. V.** See Zakharov, A. V.
- Zakharov, V. E.** See Zakharov, V. E.
- Zakharov, V. I.** See Zakharov, V. I.
- Zakowski, Wojciech** (with Męczyński, M. J.; Muszyński, J.; Traczyk, Tadeusz) ★*Matematyka: podręcznik podstawowy dla WST. Tom I.* (Polish) [Mathematics: textbook for students in polytechnics. Vol. I] *Matematyka dla Politechnik*. [Mathematics for Engineering Colleges] Państwowe Wydawnictwo Naukowe (PWN), Warsaw, 1979. 371 pp. (loose errata). ISBN 83-01-00075-9 (B. Choczewski) 81g:00003 00A06 (15-01, 26-01)
- (a, k)-computations in continuous time. *Demonstratio Math.* 12 (1979), no. 4, 1071–1087. (From the introduction) 81m:68038 68C30
- (with Chmiel, Krzysztof) Properties of ($a, 2$)-machine computations. *Found. Control Engng.* 5 (1980), no. 1, 3–11. (Authors' summary) 81m:68039 68C30
- Zakrevskii, A. D.** See Levin, G. M.; et al. 81b:90143
- Zakrvidorova, V. N.** (with Kočubievskii, I. D.) Cybernetic simulation of systems in the reproduction of processes of energy exchange of real elements. (Russian) *Engineering cybernetics*, Vol. 12 (Russian), pp. 114–148, 239, Akad. Nauk SSSR, Vsesojuz. Inst. Nauch. i Tehn. Informacii, Moscow, 1980. (Authors' summary) 81f:93014 93A99
- Zakrzewski, W. J.** (with Din, A. M.) Embeddings of classical solutions of $S_{0,1}$ nonlinear σ -models in CP^{n-1} models. *Lett. Nuovo Cimento* (2) 28 (1980), no. 4, 121–127. (Jorge André Swieca) 81g:81049 81E10 (35Q20)
- (with Din, A. M.) Stability properties of classical solutions to nonlinear σ models. *Nuclear Phys. B* 168 (1980), no. 1, 173–180. (Authors' summary) 81d:81074 81E99 (53C05, 53C80)
- (with Din, A. M.) Properties of general classical CP^{n-1} solutions. *Phys. Lett. B* 95 (1980), no. 3–4, 419–422. (Authors' summary) 81i:81068 81E99 (53C05, 58E20)
- Zaka, Abraham** On a problem of Kaplansky. *J. Algebra* 61 (1979), no. 1, 1–15. (Douglas L. Costa) 81k:13004 13D15 (13F20)
- Zaka, Joseph** Some Hamiltonian results in polytopal graphs. (French summary) *Problèmes combinatoires et théorie des graphes (Colloq. Internat. CNRS, Univ. Orsay, Orsay, 1976)*, pp. 435–436, Colloques Internat. CNRS, 260, CNRS, Paris, 1978. (See 80e:05005) 05C45
- Semiregular polyhedra and maps. *Geom. Dedicata* 7 (1978), no. 4, 465–478. (E. Hertel) 81e:57008 57N05 (05B45)
- Bounds of neighborly families of convex polytopes. *Geom. Dedicata* 8 (1979), no. 3, 279–296. (Peter Kleinschmidt) 81a:52008 52A25
- Non-Hamiltonian cubic planar graphs having just two types of faces. *Combinatorics 79 (Proc. Colloq., Univ. Montréal, Montréal, Que., 1979)*, Part II. *Ann. Discrete Math.* 9 (1980), 225–227. (Editors) 81m:05094 05C45
- Zaka, Shmuel** (with Plaisted, David A.) An NP-complete matching problem. *Discrete Appl. Math.* 2 (1980), no. 1, 65–72. (Authors' summary) 81f:68071 68C25 (05C70)
- (with Dershowitz, Nachum) Enumerations of ordered trees. *Discrete Math.* 31 (1980), no. 1, 9–28. (E. M. Palmer) 81f:05069 05C30
- Lexicographic generation of ordered trees. *Theoret. Comput. Sci.* 10 (1980), no. 1, 63–82. (Authors' summary) 81a:68076 68E10
- Žakala, R. B.** (with Tošić, B. S.; Vlahov, A.) A new method for solving the one-dimensional Schrödinger equation. *Phys. A* 100 (1980), no. 1, 196–204. (B. Hellwig) 81c:81010 81C05 (34B25)
- (with Stamenković, S.) Solitons in pseudo-one-dimensional hydrogen bounded ferroelectrics. *Phys. A* 102 (1980), no. 3, 554–560. (Authors' summary) 81i:82046 82A42 (53A67)
- Zakaria, O. K.** A property of stable distributions. (Russian) *Mathematical analysis and probability theory* (Russian), pp. 57–58, 210, "Naukova Dumka", Kiev, 1978. (Author's summary) 81b:60026 60F05 (60E07)
- Zakman, Lawrence** Offset integral geometry. *Amer. Math. Monthly* 87 (1980), no. 3, 161–175. (Adrian Baddeley) 81b:53046 53C65 (43A85)
- Zakman, Marian** Comparative analysis of the reliability of optimal structures with reserve. (Polish. English and Russian summaries) *Prace Nauk. Inst. Cybernet. Tech. Politech. Wrocław. Ser. Stud. Materialy No. 28 Modele Niezawodnościowe Systemów* (1979), 81–102. (Author's summary) 81b:90006 90B25
- Reliability of a cyclic system with two renewal strategies. (Polish. English, French, German and Russian summaries) *Rozprawy Elektrotech.* 26 (1980), no. 1, 71–81. (Author's summary) 81b:90068 90B25 (62N05)
- Zakstein, Yechezkel** (with Henderson, Peter B.) Synchronization problems solvable by generalized PV systems. *J. Assoc. Comput. Mach.* 27 (1980), no. 1, 60–71. (Ryszard Janicki) 81c:68101 68F10 (68B20, 68F20)
- Zakuski, Stéphane** (with Pomeau, Yves) Sélection du nombre d'onde dans les structures cellulaires convectives. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 290 (1980), no. 23, 505–507. (Authors' summary) 81b:76027 76E15 (58E07, 58F13)
- Zakuski, V. B.** (with Marčuk, G. I.; Kordadze, A. A.) Problems of mathematical modeling of sea and ocean currents. (Russian) *Differential and integral equations. Boundary value problems* (Russian), pp. 195–228, Tbilis. Gos. Univ., Tbilisi, 1979. (Jifi Nedoma) 81m:86002 86A05
- Zakuski, A. E.** (with Serezhkin, V. N.) ★*Конечные линейные группы, порожденные* отражениями, над полями нечетных характеристик. (Russian) [Finite linear groups generated by reflections over fields of odd characteristics] *Akad. Nauk Belarus. SSR, Inst. Mat., Minsk*, 1979. 60 pp. (Ju. I. Merzjakov) 81a:20053 20G40 (20H30)
- On T-ideals of free associative and Lie algebras. *Ring theory (Proc. Antwerp Conf. (NATO Adv. Study Inst.), Univ. Antwerp, Antwerp, 1978)*, pp. 351–360, Lecture Notes in Pure and Appl. Math., 51, Dekker, New York, 1979. (Claudio Procesi) 81i:16025 16A38
- (with Benediktović, I. I.) T-ideals of free Lie algebras with polynomial growth of a sequence of codimensionalities. (Russian. English summary) *Vesci Akad. Nauk BSSR Ser. Fiz.-Mat. Nauk* 1980, no. 3, 5–10, 139. (M. Stănescu) 81k:17002 17B05
- Zakrevskii, V. I.** (with Zaharova, N. V.) Construction of a plane curve from a small number of points. (Russian) *Prikl. Geom. i Inžener. Grafika* No. 30 (1980), 38–39, 133. (Authors' summary) 81j:65036 65D10
- Zalki, R. A.** Weighted polynomial approximation on unbounded intervals. *J. Approx. Theory* 28 (1980), no. 2, 113–119. (Martin E. Price) 81h:41024 41A30
- Approximation by nonfundamental sequences of translates. *Proc. Amer. Math. Soc.* 78 (1980), no. 2, 261–266. (Jean Trzimbalaro) 81a:41032 41A30
- On fundamental sequences of translates. *Proc. Amer. Math. Soc.* 79 (1980), no. 2, 255–259. (H. Burkil) 81d:42021 42A65 (41A30)
- Zaljaljaildinov, A. R.** (with Bezručenko, L. I.) Diffraction of acoustic-gravitational waves around the spherical earth. (Russian) *Problems in the diffraction and propagation of waves*, No. 17 (Russian), pp. 148–157, 213, Leningrad. Univ., Leningrad, 1979. (A. S. Alekseev) 81h:76043 76Q05 (65A10)
- Zalkind, David** (with Lipscomb, Joseph) Deterministic models for production of services with stochastic technology. *Econometrica* 48 (1980), no. 5, 1169–1186. (Authors' summary) 81f:90025 90A11 (90C15)
- Zalnu, V. G.** (with Uspenskii, S. V.) Reconstruction of functions specified by integrals over a family of second-order surfaces. (Russian) *Theory of cubature formulas and the application of functional analysis to problems of mathematical physics* (Russian), pp. 32–40, 165, *Trudy Sem. S. L. Soboleva*, No. 1, 1976, Akad. Nauk SSSR Sibirsk. Otdel., Inst. Mat., Novosibirsk, 1976. (V. G. Romanov) 81e:53053 53C65
- Zamalov, Z. Z.** (with Šadimetov, H. M.) Calculation of the coefficients of optimal quadrature formulas. (Russian) *Dokl. Akad. Nauk UzSSR* 1980, no. 4, 4–7. (I. P. Myslovskii) 81h:41025 41A55 (65D32)
- (with Šadimetov, H. M.) Optimal quadrature formulas. (Russian) *Dokl. Akad. Nauk UzSSR* 1980, no. 7, 3–5. (Yury Ginzovich) 81j:41049 41A55 (65D32)
- Zamanelli, L. Ja.** (with Potasnik, V. Ja.; Konovalov, V. M.) Study of graphs of intersections of code sets for the synthesis of data transmission circuits. (Russian) *Questions of modeling complex systems* (Russian), pp. 39–47, Akad. Nauk Ukrain. SSR, Inst. Kibernet., Kiev, 1978. (Authors' introduction) 81c:94062 94C15
- Zambalidze, L. G.** The relations between local and peripheral properties of topological spaces. (Russian. Georgian and English summaries) *Sobšč. Akad. Nauk Gruz. SSR* 94 (1979), no. 3, 557–560. (R. Engelking) 81k:54033 54D99 (54B10)
- The interrelation between peripheral properties of Tikhonov spaces, their powers, exponents, free groups and semigroups. (Russian) *Uspehi Mat. Nauk* 34 (1979), no. 6(210), 154–157. (Y. Kodama) 81h:54034 54F45
- Zambickii, D. K.** (with Lozovanu, D. D.) The problem of optimal placement of a network source ensuring a flow of minimal cost. (Russian) *Mathematical modeling of planning and control processes. Mat. Issled.* No. 60 (1980), 75–83, 170. (Authors' summary) 81f:90041 90B05
- Zambotti, G.** (with Rimini, A.) Initial and regime situations in the decay of unstable quantum systems. (Italian summary) *Nuovo Cimento A* (11) 55 (1980), no. 2, 197–214. (Authors' summary) 81e:81065 81D99 (81C20)
- Zambini, J.-C.** (with Yasue, Kunio) Thermal mechanics: a quantum mechanical analogue of nonequilibrium statistical thermodynamics. *Ann. Physics* 125 (1980), no. 1, 176–192. (Gerhard Hegerfeldt) 81e:82012 82A05 (35K70, 60H99, 82A40)
- Zame, William R.** Existence, uniqueness and continuity of functional calculus homomorphisms. *Proc. London Math. Soc.* (3) 39 (1979), no. 1, 73–92. (Toma W. Tonev) 81i:46065 46J99 (32E25, 46H30)
- Zameeruddin, Qazi** On the existence of some binary systems. *Aligarh Bull. Math.* 3/4 (1973/74), 71–76. (From the introduction) 81a:08004 08A05
- Zamfirescu, Tudor** (with Blind, Roswitha; Valette, G.) Rectangular convexity. *Geom. Dedicata* 9 (1980), no. 3, 317–327. (Gerald Beer) 81k:52001 52A01 (52A30)
- Three small cubic graphs with interesting Hamiltonian properties. *J. Graph Theory* 4 (1980), no. 3, 287–292. (Geoffrey Exoo) 81k:05097 05C45 (05C35)
- Inscribed and circumscribed circles to convex curves. *Proc. Amer. Math. Soc.* 80 (1980), no. 3, 455–457. (P. Scherk) 81j:52004 52A20 (52A22, 54E52)
- Zamkova, L. D.** The central m -exponent for a system of discrete equations. (Russian) *Differentsial'nye Uravneniya* 16 (1980), no. 2, 363–365, 383. (A. Haimovici) 81h:39004 39A11 (34D10)
- On a method of "freezing" for discrete systems. (Russian) *Differentsial'nye Uravneniya* 16 (1980), no. 4, 697–704, 765–766. (A. Haimovici) 81f:39006 39A10 (65L99)
- Zacomba Zamora, Ernesto A.** See Zacomba Zamora, Ernesto A.
- Zamornanov, A. M.** (with Palistrant, A. F.) Antisymmetry, its generalization and geometrical applications. *Z. Krist.* 151 (1980), no. 3–4, 231–248. (J. J. Burckhardt) 81m:51021 51F15 (20H15, 82A60)
- Zampa, Pavel** Large scale system analysis from the theory of stochastic system point of view. *Third Formator Symposium on Mathematical Methods for the Analysis of Large-Scale Systems*, pp. 165–170, Academia, Prague, 1979. (See 81j:93007) 93E03
- Zampieri, Gaetano** Minkowski asymptotic spaces in general relativity. *Rend. Sem. Mat. Univ. Padova* 61 (1979), 331–359 (1980). (Cari Brana) 81e:83020 83C30 (53C50)
- μ -Minkowskianity of the Schwarzschild universe. *Rend. Sem. Mat. Univ. Padova* 62 (1980), 17–21. (Brian O. J. Tupper) 81j:83020 83C30 (53B30)
- Zampieri, Giuseppe** On some conjectures by E. De Giorgi relative to the global resolvability of overdetermined systems of differential equations. *Rend. Sem. Mat. Univ. Padova* 62 (1980), 115–128. (Makhlof Derridj) 81m:35100 35N05 (32F20, 58G05)
- Zampoli, A.** See Computational and mathematical linguistics, 81b:68085
- Zamuratov, R. K.** (with Begmatov, A.) Classical and generalized solutions of a problem of

- non-steady-state filtration. (Russian) *Dokl. Akad. Nauk UzSSR* 1980, no. 2, 11-13. (J. Ławrynowicz) **81k:76066** 76S05 (35Q20)
- Zanasi, Riccardo** (with Lazeretti, Paolo; Rossi, Elda) A proof of Pitzer's theorem for abelian groups and its application to two-electron integral transformation. *Chem. Phys. Lett.* 75 (1980), no. 2, 392-394. (John J. Sullivan) **81k:81110** 81G40 (20K27)
- Zanco, Clemente** (with Roux, Delfina) Quasiconvex mappings: strong and weak convergence to a fixed point of the sequence of iterates. (Italian summary) *Matematiche (Catania)* 32 (1977), no. 2, 307-315. (B. E. Rhoades) **81k:47061** 47H10
- (with Roux, Delfina) Kannan maps in normed spaces. (Italian summary) *Atti Accad. Naz. Lincei Rend. Cl. Sci. Mat. Natur.* (8) 65 (1978), no. 6, 252-258 (1979). (J. Kolomy) **81k:47062** 47H10 (47H15)
- Zandbergen, P. J.** On the integral equation of lifting surface theory. (Dutch) *Colloquium Numerical Treatment of Integral Equations* (Math. Centre, Amsterdam, 1978/79), pp. 151-169. *MC Syllabus*, 41, Math. Centrum, Amsterdam, 1979. (See **81c:65004**) 76B15 (76G99)
- New solutions of the Kármán problem for rotating flows. *Approximation methods for Navier-Stokes problems* (Proc. Sympos., Univ. Paderborn, Paderborn, 1979), pp. 562-581, *Lecture Notes in Math.*, 771, Springer, Berlin, 1980. (J. R. Ockendon) **81k:76049** 76U05 (34B15, 76D05)
- Zanelli, Jorge** (with Dresden, M.) Naive inquiries into supersymmetry. *Phys. Rev. D* (3) 22 (1980), no. 2, 308-312. (Authors' summary) **81j:81065** 81G20
- Zanetti, S. I.** (with Caride, A. O.; Farach, H. A.) Recursion relations for the group SU(2). *J. Comput. Phys.* 29 (1978), no. 2, 278-282. (Jifi Patera) **81g:22027** 22E70 (81C40)
- (with Caride, A. O.) On the calculation of rotation matrices. *J. Comput. Phys.* 33 (1979), no. 3, 441-443. (M. Lotkin) **81a:15004** 15-04 (65F30)
- Zanfir, Ștefan** Un théorème d'unicité de la solution dans la théorie linéaire de l'élasticité des corps dipolaires, cas dynamiques. *Bull. Math. Soc. Sci. Math. R. S. Roumanie (N.S.)* 23(71) (1979), no. 4, 439-443. (D. Iegan) **81h:73004** 73B25
- Zanghirati, Luisa** Differential equations with constant coefficients having solutions in certain classes of generalized distribution with support in a half-space. (Italian. English summary) *Boll. Un. Mat. Ital. B* (5) 16 (1979), no. 3, 1167-1177. (V.-V. Olariu) **81h:35013** 35E05
- Zangwill, W. L.** (with Garcia, C. B.) An approach to homotopy and degree theory. *Math. Oper. Res.* 4 (1979), no. 4, 390-405. (Kurt Georg) **81d:55004** 55M25 (58C15, 65H10, 90C30)
- franchi-Zannettacci, Paul** See **Franchi-Zannettacci, Paul**
- Zannier, U.** (with Perelli, A.) An arithmetic property of polynomials. (Italian. English summary) *Boll. Un. Mat. Ital. A* (5) 17 (1980), no. 1, 199-202. (L. Carlitz) **81i:10073** 10M05
- Zanolin, F.** (with Invernizzi, S.) Periodic solutions of a differential delay equation of Rayleigh type. *Rend. Sem. Mat. Univ. Padova* 61 (1979), 115-124 (1980). (Wadi Mahfoud) **81c:34054** 34K15
- Zanon, D.** (with Montaldi, E.) On the Green functions for the discrete-time Schrödinger equation. *Lett. Nuovo Cimento* (2) 27 (1980), no. 7, 215-221. (From the text) **81c:81030** 81C05
- Zanovello, Renato** Numerical analysis of the Laplace transform of the Struve function $H_2(x)$. (Italian) *Atti Accad. Sci. Torino Cl. Sci. Fis. Mat. Natur.* 113 (1979), no. 1-2, 39-47. (F. W. Stallmann) **81j:44002** 44A10 (65D20)
- Numerical analysis of the Laplace transforms of the Anger and Weber functions. (Italian) *Rend. Sem. Mat. Univ. Padova* 62 (1980), 183-190. (F. W. Stallmann) **81j:44003** 44A10 (65R10)
- Zanzotto, Pio Andrea** Compacité en loi des solutions d'une famille d'équations stochastiques. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 291 (1980), no. 1, A57-A60. (From the text) **81k:60060** 60H10
- Zappa, Michal August** Convergence rates for quadratic forms of random variables. *Probability theory (Papers, VIIth Semester, Stefan Banach Internat. Math. Center, Warsaw, 1976)*, pp. 283-289, *Banach Center Publ.*, 5, PWN, Warsaw, 1979. (V. K. Rohatgi) **81c:60042** 60F15
- The Erdős-Rényi law of large numbers for a sequence of Wiener processes. (Russian summary) *Bull. Acad. Polon. Sci. Sér. Sci. Math.* 27 (1979), no. 2, 221-226. (Robert L. Taylor) **81f:60014** 60B12 (60B10)
- Zaprawa, Ju. I.** (with Cohen, Leon) Positive quantum joint distributions. *J. Math. Phys.* 21 (1980), no. 4, 794-796. (Authors' summary) **81d:81027** 81C20
- Zapata, Guido** Fundamental seminorms. *Approximation theory and functional analysis (Proc. Internat. Sympos. Approximation Theory, Univ. Estadual de Campinas, Campinas, 1977)*, pp. 429-443, *North-Holland Math. Studies*, 35, North-Holland, Amsterdam, 1979. (J. P. Ferrier) **81f:41009** 41A10
- Zapletnii, V. I.** Construction of the density of the Lagrangian function from a given system of second-order partial differential equations. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A No. 1* (1980), 33-35, 93. (Jifi Nedoma) **81c:35120** 35R30
- Zaporozec, A. V.** (with Petrov, V. V.; Ageev, V. M.; Kort'ev, A. V.; Medvedev, S. B.; Lebedev, G. N.; Poljakov, I. N.) Informational theory of adaptive systems. (Russian) *Engineering cybernetics*, Vol. 12 (Russian), pp. 149-211, 239, *Akad. Nauk SSSR, Vsesojuz. Inst. Naučn. i Tehn. Informacii*, Moscow, 1980. (Authors' summary) **81h:93050** 93C40
- The principle of developed systems and its application for the synthesis of structure and parameters of complex dynamic systems. *Systems analysis and simulation*, 1980 (Proc. Internat. Sympos., Berlin, 1980), pp. 219-223, *Math. Research*, 5, Akademie-Verlag, Berlin, 1980. (Author's summary) **81m:93078** 93E11 (49B60)
- Zaprianov, Zaprian Dimitrov** (with Hristov, Hristo Ja.) Oscillatory fully developed viscous flow in a toroidal tube. *Comput. Methods Appl. Mech. Engrs.* 22 (1980), no. 1, 49-58. (From the introduction) **81d:76025** 76D05
- Zapuskalova, T. A.** (with Kac, B. A.) A Riemann boundary value problem on a spiral-shaped contour. (Russian) *Trudy Sem. Kravc. Zadačam* No. 15 (1978), 53-61, 214-215. (Zbigniew Biederman) **81k:30054** 30E20
- Zardecki, A.** Time-dependent fluctuations in optical bistability. *Phys. Rev. A* (3) 22 (1980), no. 4, 1664-1671. (Author's summary) **81h:81199** 81K05
- Zarelua, A. V.** Algebraic characterization of certain classes of mappings and the perfectness of Wiener extensions of harmonic spaces. (Russian) *Sibirsk. Mat. Ž.* 19 (1978), no. 6, 1283-1299, 1437. (B. Walsh) **81c:54025** 54D35 (30F25, 31D05)
- Sheaf theory and zero-dimensional mappings. *Applications of sheaves* (Proc. Res. Sympos. Appl. Sheaf Theory to Logic, Algebra and Anal., Univ. Durham, Durham, 1977), pp. 768-779, *Lecture Notes in Math.*, 753, Springer, Berlin, 1979. (W. J. R. Mitchell) **81b:55003** 55M10 (18F20, 55N30)
- Zarembo, A. T.** (with Sokolov, B. N.) Optimal control of the point of suspension of a hanging load. *Izv. Akad. Nauk SSSR Meh. Toerd. Tela* 14 (1979), no. 2, 18-22 (Russian); translated as *Mech. Solids* 14 (1979), no. 2, 18-22. (Authors' summary) **81c:93043** 93C15
- Zarembo, L. S.** Existence of value in pursuit-evasion games with restricted phase coordinates. *J. Optim. Theory Appl.* 30 (1980), no. 3, 451-470. (Author's summary) **81a:90170** 90D25
- Zarembo, S. K.** Polynomial trends in time series. (French and German summaries) *Math. Operationsforsch. Statist. Ser. Statist.* 9 (1978), no. 4, 625-642. (K. C. Chanda) **81k:62133** 62M10
- Zarhin, Ju. G.** Abelian varieties, l -adic representations and Lie algebras. Rank independence on l . *Invent. Math.* 55 (1979), no. 2, 165-176. (Michiel Hazewinkel) **81j:14024** 14K15
- Zarinov, V. V.** Duality in families of l.c.s.-subspaces. (Russian) *Dokl. Akad. Nauk SSSR* 247 (1979), no. 4, 786-788. (Guy Noel) **81b:46036** 46A05 (46M35)
- Compact families of locally convex spaces and FS and DFS spaces. (Russian) *Uspehi Mat. Nauk* 34 (1979), no. 4(208), 97-131, 256. (M. Dostal) **81m:46011** 46A12 (46F15, 46M40)
- (with Vladimirov, V. S.) Closed forms associated with linear differential operators. (Russian) *Differentsial'nye Uravnenija* 16 (1980), no. 5, 845-867, 956. (V. Oproin) **81h:47039** 47F05 (35N10, 81E99)
- Zariski, Oscar** A new proof of the total embedded resolution theorem for algebraic surfaces (based on the theory of quasi-ordinary singularities). *Amer. J. Math.* 100 (1978), no. 2, 411-442. (Tomás Sánchez Giralda) **81b:14004** 14E15 (14J17)
- ★Collected papers. Vol. IV. Equisingularity on algebraic varieties. Edited and with an introduction by J. Lipman and B. Teissier. *Mathematicians of Our Time*, 16, MIT Press, Cambridge, Mass.-London, 1979. xxvi+651 pp. (1 plate). ISBN 0-262-08049-4. (José L. Vicente) **81f:01049** 01A75 (14B05)
- Foundations of a general theory of equisingularity on r -dimensional algebraic and algebraic varieties, of embedding dimension $r+1$. *Amer. J. Math.* 101 (1979), no. 2, 453-514. (José L. Vicente) **81m:14005** 14B05 (14E15)
- Zarkhi, V. A.** (with Višnevskii, V. M.; Žožikašvili, V. A.; Petuhova, N. V.) Analysis of algorithms for interfacing a large and small electronic computer in remotely operated queueing systems. I. *Avtomat. i Telemekh.* 1979, no. 3, 150-164 (Russian. English summary); translated as *Automat. Remote Control* 40 (1979), no. 3, part 2, 448-459. (D. C. McNickle) **81f:68051a** 68C15 (60K25)
- (with Višnevskii, V. M.; Žožikašvili, V. A.; Petuhova, N. V.) Analysis of algorithm for interfacing a large and small electronic computer in remotely operated queueing systems. II. *Avtomat. i Telemekh.* 1979, no. 7, 156-165 (Russian. English summary); translated as *Automat. Remote Control* 40 (1979), no. 7, part 2, 1072-1079. (D. C. McNickle) **81f:68051b** 68C15 (60K25)
- Zarnadze, D. N.** Some locally convex spaces of continuous functions and Radon measures. (Russian) *Trudy Vychisl. Centra Akad. Nauk Gruz. SSR* 19 (1979), no. 1 Vychisl. Mat. i Programirovanie, 29-40. (Harold H. McFaden) **81a:46028** 46E10 (46A05)
- Reflexivity and best approximations in Fréchet spaces. (Russian) *Izv. Akad. Nauk SSSR Ser. Mat.* 44 (1980), no. 4, 821-830, 973. (J. Reif) **81k:46003** 46A12 (41A50, 41A65)
- Zarov, S. V.** A hypercubic with a double normal curve in P_4 and its rectilinear generators. (Russian) *Studies in the geometry of imbedded manifolds and projective geometry* (Russian), pp. 57-66, *Leningrad. Gos. Ped. Inst., Leningrad*, 1979. (E. J. F. Primrose) **81b:14018** 14J30
- Zarov, V. G.** Complexity of terms of constructive sequences of Turing machines. (Russian) *Studies in the theory of algorithms and mathematical logic* (Russian), pp. 39-52, 132, "Nauka", Moscow, 1979. (G. Wechsung) **81g:03045** 03D10 (68C40)
- Zarrop, Martin B.** A Chebyshev system approach to optimal input design. *IEEE Trans. Automat. Control* 24 (1979), no. 5, 687-698. (Lennart Ljung) **81b:93071** 93E10
- (with Payne, R. L.; Goodwin, Graham C.) Experiment design for time series analysis: the multivariate case. *SIAM J. Appl. Math.* 37 (1979), no. 2, 370-381. (André Pázmán) **81a:62079** 62K05 (62M99)
- Zarrow, Robert** A counting function for orientation reversing maps. *Illinois J. Math.* 24 (1980), no. 3, 469-476. (M. L. Marx) **81f:58014** 58D05 (57S05)
- ben-Zarty, Omar** See **Ben-Zarty, Omar**
- Zarubanova, V. V.** (with Il'inskiĭ, A. S.) An algorithm for calculating the flow distributions of normal waves of a nonsymmetric microstrip line. (Russian) *Vestnik Moskov. Univ. Ser. XV Vychisl. Mat. Kibernet.* 1979, no. 3, 43-50, 73. (Authors' summary) **81e:78037** 78A50
- Zarubin, A. G.** Convergence of an iteration process for the solution of a two-point boundary value problem. (Russian) *Proceedings of a Seminar on Differential Equations*, No. 3 (Russian), pp. 38-45, 145, *Kuibyshev. Gos. Univ., Kuibyshev*, 1977. (Author's summary) **81a:65004** 65L10
- The rate of convergence of Galerkin's method for quasilinear parabolic equations. (Russian) *Differentsial'nye Uravnenija* 16 (1980), no. 2, 366-369, 384. (Ju. K. Dem'janovič) **81k:65129** 65N30 (35J65)
- (with Zagorodnikov, Ju. I.) A boundary value problem for equations of vector flow in the ocean. (Russian) *Sibirsk. Mat. Ž.* 21 (1980), no. 1, 63-73, 236. (N. N. Janenko) **81j:35102** 35Q20 (65M10, 86A05)
- Zarubin, A. N.** (with Zainulabidov, M. M.) Inversion of a singular integral equation of Carleman type by means of the Hankel transform. (Russian) *Differentsial'nye Uravnenija* 16 (1980), no. 1, 171-173, 191. (N. L. Vasilevskii) **81d:45013** 45E05
- Zaruckii, Vladimir** The use of models of simple dependence in problems of classification. (Russian. Lithuanian and English summaries) *Statist. Problemy Upravlenija—Trudy Sem. Processy Optimal. Upravlenija V Sekcija No. 38* (1979), 53-75. (F. Pecka) **81m:62116** 62H30
- Zasev, I. A.** A hierarchical semantic system with a deductive interpretation of the

- second-order universal quantifier. (Russian) *C. R. Acad. Bulgare Sci.* 32 (1979), no. 7, 851-854. (P. Hajek) **81i:03097** 03F99
- Zarba, Ju. N. Interpolation of functions by cyclic polynomials in the complex plane. (Russian. English summary) *Vysisl. Prikl. Mat. (Kiev)* No. 34 (1978), 115-120, 167. (P. M. Tamrazov) **81i:30066** 30E05
- Zaslavskii, I. D. ★Симметрическая конструктивная логика. (Russian) [Symmetric constructive logic] *Akad. Nauk Armjan. SSR, Erevan*, 1978. 281 pp. (L. L. Maksimova) **81i:03059** 03F50, 03F30
- Realization of three-valued logical functions by means of recursive and Turing operators. (Russian) *Studies in the theory of algorithms and mathematical logic (Russian)*, pp. 52-61, 132, "Nauka", Moscow, 1979. (V. V. Gorlov) **81i:03031** 03B50 (03D10, 03D20)
- Zaslavsky, Thomas Arrangements of hyperplanes; matroids and graphs. *Proceedings of the Tenth Southeastern Conference on Combinatorics, Graph Theory and Computing (Florida Atlantic Univ., Boca Raton, Fla., 1979)*, pp. 895-911, Congress. Numer., XXIII-XXIV, Utilitas Math., Winnipeg, Man., 1979. (G. L. Alexanderson) **81i:05043** 05B35 (51M20)
- Zassenhaus, Hans On the van der Waerden criterion for the group of an equation. *Symbolic and algebraic computation (EUROSAM '79, Internat. Sympos., Marseille, 1979)*, pp. 95-107, *Lecture Notes in Comput. Sci.*, 72, Springer, Berlin, 1979. (Maurice Mignotte) **81i:12002** 12-04 (12E10)
- (with Pohst, Michael) On unit computation in real quadratic fields. *Symbolic and algebraic computation (EUROSAM '79, Internat. Sympos., Marseille, 1979)*, pp. 140-152, *Lecture Notes in Comput. Sci.*, 72, Springer, Berlin, 1979. (Duncan A. Buell) **81i:12001** 12-04 (12A45)
- (with Patera, J.; Winternitz, P.) On the maximal abelian subgroups of the quadratic classical algebraic groups. *C. R. Math. Rep. Acad. Sci. Canada* 2 (1980), no. 5, 237-242. (Editors) **81i:20052** 20G20
- On structural stability. *Comm. Algebra* 8 (1980), no. 19, 1799-1844. (I. Reiner) **81i:16011** 16A18
- (with Patera, J.; Saint-Aubin, Y.) Finite subgroups of the generalized Lorentz groups $O(p, q)$. *J. Math. Phys.* 21 (1980), no. 2, 234-239. (Nigel B. Backhouse) **81i:22023** 22E43 (20C35, 81C40)
- Zatrun, B. (with Rothert, H.) Parametrisierung zum Tragverhalten flacher Schalen. *Z. Angew. Math. Mech.* 59 (1979), no. 5, T209-T210. (From the text) **81j:73072** 73L99 (53C45)
- Zavadskii, A. G. Quivers without cycles and with an isolated path of tame type. (Russian) *Akad. Nauk Ukrain. SSR Inst. Mat. Preprint No. 43* (1978), 42-56. (From the introduction) **81i:05057** 05C20
- Zavalishin, S. T. (with Drozdenko, S. E.) A means of optimal synthesis under unknown perturbations. (Russian) *Dynamics of control systems (Third All-Union Cetaev Conf., Irkutsk, 1977)* (Russian), pp. 104-111, 339, "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. (Authors' summary) **81i:93020** 93B50 (93C10)
- (with Sesekin, A. N.) On the question of the synthesis of sampled-data control in a problem of optimization of dynamical systems with quadratic quality criterion. (Russian) *Trudy Inst. Mat. i Meh. Uralsk. Nauch. Centr Akad. Nauk SSSR No. 32 Nekotorye Sposoby Anal. Konstruirovaniya Impul'snykh Regulirovok* (1979), 3-8, 98. (Rolf Klötter) **81i:93059a** 93C57
- A minimax variant of Mayer's problem with momentary constraints on the complete control impulses. (Russian) *Trudy Inst. Mat. i Meh. Uralsk. Nauch. Centr Akad. Nauk SSSR No. 32 Nekotorye Sposoby Anal. Konstruirovaniya Impul'snykh Regulirovok* (1979), 34-44, 98-99. (Authors' summary) **81i:49015** 49C05 (90D25)
- Zavalishin, N. V. (with Aleskerov, F. T.; Litvakov, B. M.) Decomposition of choice functions into a system of simpler functions. *Axiomat. i Telemekh.* 1979, no. 3, 107-118 (Russian. English summary); translated as *Automat. Remote Control* 40 (1979), no. 3, part 2, 409-419. (Prasanta K. Pattanaik) **81d:90010** 90A08 (90A10)
- Zavalloni, M. (with Aubin, Jean-Pierre; Louis-Guérin, C.) Compatibilité entre conduites sociales réelles dans des groupes et les représentations symboliques de ces groupes: un essai de formalisation mathématique. (English summary) *Math. Sci. Humaines* No. 68 (1979), 27-61, 85. (Manfred Kochen) **81i:92011** 92A20 (92A25)
- malek-Zavareh, M. See Malek-Zavareh, M.
- Zavjalov, R. L. (with Drozdin, Ju. N.) Tauberian theorems for generalized functions with carriers in the cones. (Russian) *Mat. Sb. (N.S.)* 100(150) (1979), no. 1, 78-90, 144. (Szymon Szneider) **81i:46045** 46F12 (32A99, 44A10)
- (with Vladimirov, V. S.) Tauberian theorems in quantum field theory. (Russian. English summary) *Teoret. Mat. Fiz.* 40 (1979), no. 2, 155-178. (Authors' summary) **81i:81032** 81E05 (46F12)
- Zavjalov, Ju. S. Extremal properties of spline functions of several variables. (Russian) *The theory of the approximation of functions (Proc. Internat. Conf., Kaluga, 1975)* (Russian), pp. 182-187, "Nauka", Moscow, 1977. (Gheorghe Micula) **81i:41027** 41A15
- (with Imamov, A.) Variational problems of the theory of splines. (Russian) *Mathematical analysis and related mathematical questions (Russian)*, pp. 27-36, 351, "Nauka" Sibirsk. Otdel., Novosibirsk, 1978. (E. Neuman) **81i:41028** 41A15
- Zavrozin, Z. G. (with Bljumin, G. D.) One property of mechanical systems in which the position of the center of mass is adjustable. *Izv. Akad. Nauk SSSR Meh. Teor. Tela* 14 (1979), no. 3, 24-29 (Russian); translated as *Mech. Solids* 14 (1979), no. 3, 20-24. (From the introduction) **81i:70003** 70E05
- Zariev, S. K. On finding stationary points in the problem of searching for a maximin with constraints. (Russian) *Vestnik Moskov. Univ. Ser. XV Vysisl. Mat. Kibernet.* 1980, no. 2, 48-57, 73. (Authors' summary) **81i:90075** 90C15 (49D30)
- Zazumov, L. G. (with Truten', V. I.) The Callan-Symanzik equation and the scaling behavior of correlation functions in the second-order phase transition. (Russian. English summary) *Ukrain. Fiz. Zh.* 25 (1980), no. 3, 376-380, 518. (Authors' summary) **81i:82005** 82A25 (81E15)
- Zaworsky, Raymond M. Controllability and observability of linear time-invariant compartmental models. *Proceedings of the First International Conference on Mathematical Modeling (St. Louis, Mo., 1977)*, Vol. III, pp. 1603-1612, Univ. Missouri-Rolla, Rolla, Mo., 1977. (Authors' summary) **81j:92018** 92A09 (93A13, 93B05, 93B07)
- (with Jensen, David; Baker, William P.) The set of all minimal partial realizations. *IEEE Trans. Automat. Control* 24 (1979), no. 6, 966-970. (Authors' summary) **81i:93120** 93E99
- Zbierski, Pawel (with Marek, Wiktor) On a class of models of the n th order arithmetic. *Higher set theory (Proc. Conf., Math. Forschungsinst., Oberwolfach, 1977)*, pp. 361-374, *Lecture Notes in Math.*, 669, Springer, Berlin, 1978. (Authors' introduction) **81i:03104** 03H15
- See also Mostowski, Andrzej Włodzimierz, 81i:01018a and Mostowski, Andrzej Włodzimierz, 81i:01018b
- Ždanok, A. I. Pseudogradienty of algorithms of random search with continuous tactics. (Russian) *Problemy Shchita. Poiska No. 6 Zadači Optimizacii* (1978), 147-159, 332. (Olavi Hellman) **81i:65029** 65K05 (90B40)
- Determination of a structure and its adaptation in search optimization algorithms. (Russian) *Problemy Shchita. Poiska No. 8 Voprosy Strukturnoi Adaptacii* (1980), 116-126, 333. (A. G. Žilinskas) **81i:65093** 65K10 (90C30)
- Ždanov, T. A. The stability of the solvability of an equation with a random closed linear operator. (Russian) *Lato. Mat. Ežegodnik* No. 23 (1979), 3-12, 271. (H. Salehi) **81i:60091** 60H25 (47A99)
- Separation of random convex sets. (Russian) *Theory of random processes*, No. 8 (Russian), pp. 47-50, 124, "Naukova Dumka", Kiev, 1980. (W. J. Firey) **81i:60021** 60D05 (46A55)
- Ždanov, V. I. Low-frequency solutions of wave equations in Schwarzschild space. (Russian) *Izv. Vysl. Ucheb. Zaved. Fizika* 1979, no. 9, 34-39. (Michael P. Ryan, Jr.) **81i:83047** 83C99 (81C05)
- Zdebskaja, G. V. Some properties of limiting computations. (Russian) *Probabilistic methods and cybernetics*, No. XV (Russian), pp. 34-39, Kazan. Univ., Kazan, 1979. (S. A. Berezin) **81i:03068** 03D30
- Zderkiewicz, Josef (with Bogucki, Zbigniew) Sur les majorantes convexes des fonctions analytiques. (Polish and Russian summaries) *Ann. Univ. Mariae Curie-Skłodowska Sect. A* 31 (1977), 21-25 (1979). (K. S. Padmanabhan) **81i:30024** 30C80 (30C55)
- (with Bogucki, Zbigniew) Le rayon d'univalence de certaines fonctions analytiques. (Polish and Russian summaries) *Ann. Univ. Mariae Curie-Skłodowska Sect. A* 31 (1977), 27-33 (1979). (W. C. Royster) **81i:30022** 30C50
- Zdravkova, Smilka P-localization in pro-Ab. (Macedonian summary) *Glas. Mat. Ser. III* 13(33) (1978), no. 2, 223-230. (D. Gildenhuys) **81i:18007** 18E35
- P-localization and a torsion theory in abelian categories with exact colimits. (Macedonian summary) *Prirad. Mat. Fak. Univ. Kiri Metodji Skopje Godišen Zb.* 29 (1978), 27-32. (Authors' summary) **81i:18018** 18E35
- P-localization and a torsion theory in pro-Ab. *J. Pure Appl. Algebra* 16 (1980), no. 2, 215-222. (Guido Mislin) **81i:18014** 18E35 (20E18)
- Zduń, Marek Cezary ★Continuous and differentiable iteration semigroups. With Polish and Russian summaries. *Prace Naukowe Uniwersytetu Śląskiego w Katowicach [Scientific Publications of the University of Silesia]*, 308, Uniwersytet Śląski, Katowice, 1979. 90 pp. (loose errata). (K. D. Magill, Jr.) **81i:39006** 39B10 (20M20, 22A15, 26A18)
- On differentiable iteration groups. *Publ. Math. Debrecen* 26 (1979), no. 1-2, 105-114. (D. Preiss) **81i:26004** 26A18 (39B05)
- Zeamer, R. Warwick On the near-ring generated by the endomorphisms of a free group. *J. Proc. London Math. Soc.* (3) 41 (1980), no. 2, 363-384. (Günter Pilz) **81i:16039** 16A76 (20E05)
- Zebib, Abdelfattah (with Schubert, Gerald; Straus, Joe M.) Infinite Prandtl number thermal convection in a spherical shell. *J. Fluid Mech.* 97 (1980), no. 2, 257-277. (L. R. Mack) **81i:76050** 76E15
- Zecca, Antonio Dirac's superposition of pure states extended to the statistical operators. *Internat. J. Theoret. Phys.* 19 (1980), no. 9, 629-634. (Authors' summary) **81i:81036** 81D99
- Zecca, Pietro (with Grasse, Kevin A.) Local controllability of multivalued differential equations. *Ann. Mat. Pura Appl.* (4) 124 (1980), 281-292. (Authors' summary) **81i:34063** 34H05 (93B05, 93C10)
- Zecchia, M. (with Pianca, P.; Volpentesta, A.) On the solution of a class of extremal problems with integer variables connected with the problem of optimal allocation at a service center. (Italian) *Proceedings of the First AMASES Meeting (Pisa, 1977)* (Italian), pp. 309-331, Giapichelli, Turin, 1979. (Peter Bod) **81i:90151** 90C10 (90B35)
- Zech, Friedrich (with Kirsch, Arnold) ★Affine Geometrie der Ebene. (German) [Affine geometry of the plane] Ein axiomatischer Aufbau mit Hilfe des Vektorbegriffs. [An axiomatic presentation using the vector concept] Klett Studienbücher Mathematik. [Klett Textbooks in Mathematics] Ernst Klett Verlag, Stuttgart, 1972. 151 pp. ISBN 3-12-983140-1 (Table of contents) **81i:51002** 51-01
- Zeckhauser, Richard (with Hylland, Aunund) The impossibility of Bayesian group decision making with separate aggregation of beliefs and values. *Econometrica* 47 (1979), no. 6, 1321-1336. (Maurice Salles) **81i:90015** 90A08
- Zee, A. (with Kim, Jih E.) $SU(5) \times U(1)$ phenomenology: theorems on neutral-current analysis. *Phys. Rev. D* (3) 21 (1980), no. 7, 1939-1951. (R. Delbourgo) **81i:81066** 81G15
- Zeeb, E. O. Trigonometric interpolation of type $(0, 1, p, q)$. (Russian) *Mathematical analysis and the theory of functions*, No. 8 (Russian), pp. 141-150, Moskov. Oblast. Ped. Inst., Moscow, 1977. (See **81i:32001**) 65D05
- Zeeman, E. C. Levels of structure in catastrophe theory illustrated by applications in the social and biological sciences. (Hungarian) *Alkalmaz. Mat. Lapok* 4 (1978), no. 3-4, 363-376 (1979). (Editors) **81i:58022** 58C28 (00A69, 92-01)
- Catastrophe theory. *Structural stability in physics (Proc. Internat. Symposia Appl. Catastrophe Theory and Topological Concepts in Phys., Inst. Inform. Sci., Univ. Tübingen, Tübingen, 1978)*, pp. 12-22, Springer Ser. in Synergetics, 4, Springer, Berlin, 1979. (Yung-Chen Lu) **81i:58018** 58C28 (70C99)
- Zeephoengkul, P. Some results concerning the entropy of a point process. *Inform. Sci.* 16 (1978), no. 3, 151-156. (N. P. Leon'eva) **81i:60062a** 60G55 (94A17)
- A note on the upper bound for the difference between two entropies. *Inform. and Control* 45 (1980), no. 1, 34-36. (Editors) **81i:60062b** 60G55 (94A17)
- Generalized entropy of deleted point processes. *Inform. Sci.* 20 (1980), no. 2, 115-125. (I. Csizsár) **81i:60056** 60G55 (94A17)
- de Zeeuw, Aart J. Stackelberg solutions in macroeconomic policy models with a decentralized decision structure. *Optimization techniques (Proc. Ninth IFIP Conf., Warsaw, 1979)*, Part 1, pp. 204-212, *Lecture Notes in Control and Information Sci.*, 22, Springer, Berlin, 1980. (Edwin Burmeister) **81i:90010** 90A05

- (with Plasmans, Joseph E. J.) Incentives to cooperate in linear quadratic difference games. *Internat. J. Systems Sci.* 11 (1980), no. 5, 607-619. (Authors' summary) **81d:90124** 90D30 (90A17)
- Zegner, S. I.** Application of a formula in binary coding. (Russian) *Control of technical and organizational systems by application of computer technology* (Russian), pp. 49-55, 227, "Nauka", Moscow, 1979. (Author's summary) **81f:94026** 94B35
- Zegner, V. L.** A problem of Tricomi type with five shifts in the hyperbolic part of the domain. (Russian) *Trudy Sem. Krasn. Zashch. No. 15* (1978), 48-52, 214. (Author's summary) **81j:35083** 35M05
- The Frankl' problem with a shift. (Russian) *Izv. Vys. Ucheb. Zaved. Matematika* 1979, no. 9, 11-20. (A. M. Nahušev) **81g:35095** 35M05
- Zehb, Ezra** (with Walach, Eugene) Sign test of multivariable real polynomials. *IEEE Trans. Circuits and Systems* 27 (1980), no. 7, 619-625. (Authors' summary) **81f:65039** 65H05
- Zehnder, E.** (with Rüschmann, Helmut) On a normal form of symmetric maps of $[0, 1]$. *Comm. Math. Phys.* 72 (1980), no. 1, 49-53. (B. Weiss) **81g:28020** 28D05 (58F20)
- Zeld, Ibrahim** (with Padovan, Joseph) On the development of traveling load finite elements. *Comput. & Structures* 12 (1980), no. 1, 77-83. (Authors' summary) **81f:73037** 73K25
- Zeldner, Eberhard** Lectures on Lyusternik-Schnirelman theory for indefinite nonlinear eigenvalue problems and its applications. *Nonlinear analysis, function spaces and applications* (Proc. Spring School, Horni Bradlo, 1978), pp. 176-219, Teubner, Leipzig, 1979. (Ju. G. Borisovič) **81h:58025a** 58E05 (45G10, 47H12)
- The Lyusternik-Schnirelman theory for indefinite and not necessarily odd nonlinear operators and its applications. *Nonlinear Anal.* 4 (1980), no. 3, 451-489. (Ju. G. Borisovič) **81h:58025b** 58E05 (35J35, 47H12)
- Zeliger, Bernard P.** Multilevel multiformalism modelling: an ecosystem example. *Proceedings of the First International Conference on Mathematical Modeling* (St. Louis, Mo., 1977), Vol. 1, pp. 341-347, Univ. Missouri-Rolla, Rolla, Mo., 1977. (See **81i:90005** 92A17)
- Modelling and simulation methodology: state of the art and promising directions. *Simulation of systems '79* (Proc. Ninth IMACS Congress, Sorrento, 1979), pp. 819-836, North-Holland, Amsterdam, 1980. (Author's summary) **81m:90018** 00A69 (68J05)
- See also *Methodology in systems modelling and simulation*, **81c:68079a**
- Zelinger, Duran** A new proof to Ehrenpreis's semilocal quotient structure theorem. *Amer. J. Math.* 106 (1978), no. 6, 1317-1332. (Carlos A. Berenstein) **81m:32008** 32A99 (39A10, 46F10)
- A lattice walk approach to the "INV" and "MAJ" q -counting of multiset permutations. *J. Math. Anal. Appl.* 74 (1980), no. 1, 192-199. (Dominique Foata) **81f:05016** 05A15
- Some comments on Rota's umbral calculus. *J. Math. Anal. Appl.* 74 (1980), no. 2, 456-463. (R. A. Askey) **81e:05025** 05A19
- The algebra of linear partial difference operators and its applications. *SIAM J. Math. Anal.* 11 (1980), no. 6, 919-932. (R. A. Askey) **81m:47047** 47B39 (05A19, 39A70)
- Zelinger, N. K.** (with Guž, O. M.; Kuliev, G. G.) Buckling of a stretched thin plate with a curvilinear aperture. *Izv. Akad. Nauk SSSR Meh. Toerd. Tela* 14 (1979), no. 2, 163-168 (Russian); translated as *Mech. Solids* 14 (1979), no. 2, 166-170. (From the introduction) **81c:73034** 73H05 (73K10)
- Zelizer, H.** On reflections in Minkowski planes. *Geometry and differential geometry* (Proc. Conf., Univ. Haifa, Haifa, 1979), pp. 183-202, *Lecture Notes in Math.*, 792, Springer, Berlin, 1980. (Cyril W. L. Garner) **81m:51011** 51B20
- Zelitsman, R. H.** See Zeytounian, Radvanour Kh.
- Zelkowskij, Zigmund** On generalized symmetric curvature tensor fields in the Riemannian manifolds. *Demonstratio Math.* 11 (1978), no. 1, 157-171. (Editors) **81f:53032** 53C20
- On some generalized 2-inner products in the Riemannian manifolds. *Demonstratio Math.* 12 (1979), no. 3, 833-836. (Guido Karrer) **81k:53041** 53C20 (53A55)
- Zelazko, Wiesław** On some classes of ideals in commutative Banach algebras. (Italian summary) *Rend. Sem. Mat. Fis. Milano* 48 (1978), 51-58 (1980). (R. Arena) **81h:46060** 46J20
- See Banach, Stefan, **81f:46001**
- Zel'dine, E. A.** Calculation of unsteady viscous liquid flow in complex piping systems. *Izv. Vys. Ucheb. Zaved. Aviacion. Tehn.* 23 (1980), no. 1, 47-53 (Russian); translated as *Soviet Aeronaut.* 23 (1980), no. 1, 37-42. (Author's summary) **81h:76024** 76D99
- Zel'dovik, Ja. B.** Cosmology and the early universe. *General relativity*, pp. 518-532, Cambridge Univ. Press, Cambridge, 1979. (See **81i:83002**) 83F05
- The great physicist and his work. (Bulgarian) Translated from the Russian by I. Čobanov. *Fiz.-Mat. Spis. B'lgar. Akad. Nauk.* 22(55) (1979), no. 3, 219-232. (From the text) **81a:83001** 83-03 (01A70)
- (with Braginskij, V. B.; Griščuk, L. P.; Dorofčevič, A. G.; Menskij, M. B.; Novikov, I. D.; Sazim, M. V.) On the electromagnetic detection of gravitational waves. *Gen. Relativity Gravitation* 11 (1979), no. 6, 407-409 (1980). (Authors' summary) **81d:83026** 83C35
- (with Barenblatt, G. I.; Guirguis, R. H.; Kamel, M. M.; Kuhl, A. L.; Oppenheim, A. K.) Self-similar explosion waves of variable energy at the front. *J. Fluid Mech.* 99 (1980), no. 4, 841-858. (Authors' summary) **81f:76063** 76L05
- (with Ruzmalkin, A. A.) The magnetic field in a conducting fluid in two-dimensional motion. *Ž. Eksp. Teoret. Fiz.* 78 (1980), no. 3, 980-986 (Russian); translated as *Soviet Phys. JETP* 51 (1980), no. 3, 493-497. (Authors' summary) **81k:76005** 76W05
- Zelenjak, T. I.** (with Belonosov, V. S.) Ljapunov stability of the solution of mixed problems for nonlinear parabolic equations. (Russian) *Proceedings of an All-Union Conference on Partial Differential Equations* (Moscow State Univ., Moscow, 1976) (Russian), pp. 42-45, *Moskov. Gos. Univ., Meh.-Mat. Fakul'tet*, Moscow, 1978. (See **80f:35002**) 35B35 (35K55)
- Zelenko, Bogdan** Über eine kubische diophantische Gleichung. (Serbo-Croatian summary) *Rad Jugoslav. Akad. Znan. Umjet.* No. 382 (1978), 35-53. (A. J. Zajta) **81c:10022** 10B10
- Zelenko, L. B.** (with Kučment, P. A.) The Floquet representation of exponentially growing solutions of elliptic equations with periodic coefficients. (Russian) *Dokl. Akad. Nauk*
- SSSR** 239 (1978), no. 6, 1283-1284. (C. Kalik) **81a:35088** 35B10 (35C99, 35J30)
- Zelenkij, K. H.** (with Kostjuk, V. L.; Krasčevič, V. E.) Frequency domain identification of nonstationary distributed parameter systems. *Identification and system parameter estimation* (Proc. Fourth IFAC Sympos., Tbilisi, 1976), Part 3, pp. 1557-1568, North-Holland, Amsterdam, 1978. (See **80d:93010c**) 93B30
- Zelenskij, V. G.** High-spin rotational motion: TDHF cranking description and random phase approximation. *Nuclear Phys. A* 344 (1980), no. 1, 109-136. (Author's summary) **81i:81107** 81G35
- Zelenskij, John** Orthodox semirings and rings. *J. Austral. Math. Soc. Ser. A* 30 (1980/81), no. 1, 50-54. (M. Stefănescu) **81m:16040** 16A78 (20M25)
- Zelichenko, A. I.** The correspondence of monotone Boolean functions to systems of linear inequalities. (Russian) *Ž. Vychisl. Mat. i Mat. Fiz.* No. 19 (1979), no. 6, 1543-1554, 1630. (Author's summary) **81b:94075** 94C10 (03G05)
- zam-Zelković, T. G.** See Zam-Zelković, T. G.
- Zelinka, Bohdan** Derivatives of hypergraphs. *Czechoslovak Math. J.* 28(103) (1978), no. 3, 394-399. (D. K. Ray-Chaudhuri) **81h:05088** 05C65
- The number of isomorphism classes of spanning trees of a graph. (Russian summary) *Math. Slovaca* 28 (1978), no. 4, 385-388. (D. Ja. Kešelman) **81a:05074** 05C30
- Embedding trees into clique-bridge-clique graphs. (Czech summary) *Časopis Pěst. Mat.* 104 (1979), no. 4, 353-356, 412. (O. D'Antona) **81d:05022** 05C05 (05C10)
- Some remarks on Eulerian graphs. (Russian summary) *Czechoslovak Math. J.* 29(104) (1979), no. 4, 564-567. (Pavol Hell) **81b:05076** 05C45
- (with Chajda, Ivan) Tolerances and convexity. (Russian summary) *Czechoslovak Math. J.* 29(104) (1979), no. 4, 584-587. (Terence P. Speed) **81a:06010** 06B99
- (with Chajda, Ivan) Tolerance relations on direct products of monoids and distributive lattices. (Serbo-Croatian summary) *Glas. Mat. Ser. III* 14(34) (1979), no. 1, 11-16. (W. Russell Belding) **81f:08001** 08A05 (06D99, 20M99)
- Self-complementary vertex-transitive undirected graphs. (Russian summary) *Math. Slovaca* 29 (1979), no. 1, 91-95. (Richard D. Ringeisen) **81h:05116** 05C99
- (with Chajda, Ivan; Dalik, Josef; Niederle, Josef; Veselý, Vítězslav) How to draw tolerance lattices of finite chains. *Arch. Math. (Brno)* 16 (1980), no. 3, 161-165. (Hartmut Höft) **81k:06007** 06B15 (05A05)
- Join graphs of trees. With a loose Russian summary. *Czechoslovak Math. J.* 30(105) (1980), no. 2, 332-335. (L. Caccetta) **81i:05058a** 05C05
- Subarborians. *Czechoslovak Math. J.* 30(105) (1980), no. 2, 336-340. (L. Caccetta) **81i:05058b** 05C05
- Domatically critical graphs. With a loose Russian summary. *Czechoslovak Math. J.* 30(105) (1980), no. 3, 486-489. (G. N. Kopylov) **81j:05103** 05C99
- The bichromaticity of a graph. With a loose Russian summary. *Czechoslovak Math. J.* 30(105) (1980), no. 4, 655-660. (Zevi Miller) **81k:05050** 05C15
- Zelinskij, Ju. B.** n -permissible multivalued mappings. (Russian) *Metric questions of the theory of functions and mappings, No. VII* (Proc. Fourth Colloq., Quasiconformal Mappings and their Generalizations, Donetsk, 1974) (Russian), pp. 61-83, "Naukova Dumka", Kiev, 1975. (See **80c:30023**) 54C60
- Some properties of equivariant mappings with local degree existing everywhere. (Russian) *Complex analysis and manifolds* (Russian), pp. 138-148, *Inst. Mat. Akad. Nauk Ukrain. SSR, Kiev*, 1978. (Gencho Skordev) **81d:55005** 55M25 (55M35, 57S17)
- An application of homological methods in the study of conjugate sets in C^* . (Russian) *Complex analysis and manifolds* (Russian), pp. 149-152, *Inst. Mat., Akad. Nauk Ukrain. SSR, Kiev*, 1978. (See **80d:00004**) 32C99
- Multivalued mappings having regular restrictions. (Russian) *Questions in the metric theory of mappings and its application* (Proc. Fifth Colloq., Quasiconformal Mappings, Generalizations Appl., Donetsk, 1976) (Russian), pp. 31-36, 182, "Naukova Dumka", Kiev, 1978. (Author's summary) **81d:55003** 55M25 (54C60)
- Imbedding of compacta in Euclidean space. (Russian) *The theory of functions and its applications* (Russian), pp. 102-111, 210, "Naukova Dumka", Kiev, 1979. (I. Ivančik) **81b:54016** 54C25
- The connection of properties of sets with properties of their cross sections and projections. (Russian) *Uspehi Mat. Nauk* 34 (1979), no. 6(210), 158-162. (V. D. Golovin) **81c:32001** 32A07 (52A20)
- On connection between properties of a compact set in C^* and its conjugate set. *Analytic functions, Kozubnik 1979* (Proc. Seventh Conf., Kozubnik, 1979), pp. 465-476, *Lecture Notes in Math.*, 798, Springer, Berlin, 1980. (Gary A. Harris) **81i:32015** 32F99 (52A01, 57N17)
- Zelinko, V. R.** On the determination of generalized multipliers of a matrix polynomial. (Russian) *Theoretical and applied questions of differential equations and algebra* (Russian), pp. 90-92, 263, "Naukova Dumka", Kiev, 1978. (M. C. Chaki) **81c:15017** 15A24
- (with Kazimirs'kij, P. S.) On isolation with a polynomial matrix of a regular multiplier with a given Smith form. (Russian) *Theoretical and applied questions of differential equations and algebra* (Russian), pp. 93-96, 263, "Naukova Dumka", Kiev, 1978. (George P. Barker) **81c:15016** 15A23 (15A21)
- Construction of a class of invertible matrices. (Russian) *Mat. Metody i Fiz.-Meh. Polja* No. 12 (1980), 14-21, 120. (M. M. Konstantinov) **81i:15010** 15A23 (15A54)
- Zeller, Karl** (with Scherer, R.) Two-dimensional grids for polynomials. *Multivariate approximation theory* (Proc. Conf., Math. Res. Inst., Oberwolfach, 1979), pp. 346-352, *Internat. Ser. Numer. Math.*, 51, Birkhäuser, Basel, 1979. (D. D. Stancu) **81m:65017** 65D05 (41A05, 41A63)
- (with Scherer, R.) Lobatto-Quadratur und Fixpunkte. *Numerische Integration* (Tagung, Math. Forschungsinst., Oberwolfach, 1978), pp. 245-251, *Internat. Ser. Numer. Math.*, 45, Birkhäuser, Basel, 1979. (Helmut Brass) **81g:65027** 65D30 (41A55)
- (with Ishiguro, Kazuo) Vorgegebene Grenzübergänge auf nichtisolierten Mengen. *Hokkaido Math. J.* 8 (1979), no. 2, 288-293. (W. Niethammer) **81c:30079** 30F20 (46A45)
- (with Scherer, R.) Der Einsequenzensatz in der Birkhoff-Interpolation. *Reinhold Math.* 2 (1979), no. 2, 186-195. (A. Meir) **81c:41009** 41A05
- (with Scherer, R.) Shorthand notation for rounding errors. *Fundamentals of numerical computation* (computer-oriented numerical analysis) (Proc. Conf., Tech. Univ. Berlin, Berlin, 1979), pp. 165-168, *Comput. Suppl.*, 2, Springer, Vienna, 1980. (Ramon E.

- Moore) **81m:65064** 65G05
- Zellin, Paolo On some properties of circulant matrices. *Linear Algebra Appl.* **26** (1979), 31-43. (M. Shafat Ali) **81b:15010** 15A21
- Zellner, Arnold Estimation of functions of population means and regression coefficients including structural coefficients. A minimum expected loss (MELO) approach. *J. Econometrics* **8** (1978), no. 2, 127-158. (Author's summary) **81b:62126** 62P20 (62F10)
- An error-components procedure (ECP) for introducing prior information about covariance matrices and analysis of multivariate regression models. *Internat. Econom. Rev.* **20** (1979), no. 3, 679-692. (D. V. Lindley) **81c:62077** 62J05
- (with Park, Soo Bin) Minimum expected loss (MELO) estimators for functions of parameters and structural coefficients of econometric models. *J. Amer. Statist. Assoc.* **74** (1979), no. 365, 185-193. (A. L. Nagar) **81c:62078** 62J05 (62P20)
- (with Palm, Franz) Large sample estimation and testing procedures for dynamic equation systems. *J. Econometrics* **12** (1980), no. 3, 251-283. (Denise R. Osborn) **81g:62156** 62M10 (62F10, 62P20)
- A note on the relationship of minimum expected loss (MELO) and other structural coefficient estimates. *Rev. Econom. Statist.* **62** (1980), no. 3, 482-484. (From the introduction) **81c:62202** 62P20
- Zelmanov, E. I. Jordan algebras with finiteness conditions. (Russian) *Algebra i Logika* **17** (1978), no. 6, 693-704, 747. (Kevin McCrimmon) **81b:17022** 17C10
- Primary Jordan algebras. (Russian) *Algebra i Logika* **18** (1979), no. 2, 162-175, 253. (I. P. Šestakov) **81b:17012** 17C10 (17C20)
- Jordan division algebras. (Russian) *Algebra i Logika* **18** (1979), no. 3, 286-310, 385. (Aleksij Gajnov) **81m:17021** 17C10
- Jordan nil algebras of bounded index. (Russian) *Dokl. Akad. Nauk SSSR* **249** (1979), no. 1, 30-33. (Kevin McCrimmon) **81b:17023** 17C10 (17B30)
- Zelmanov, J. M. (with Nicholson, W. K.; Watters, J. F.) On extensions of weakly primitive rings. *Canad. J. Math.* **32** (1980), no. 4, 937-944. (J. Luh) **81m:16012** 16A20 (16A27)
- Zel'nikov, A. I. (with Frolov, V. P.) The massless scalar field around a static black hole. *J. Phys. A* **13** (1980), no. 9, L345-L347. (Authors' summary) **81g:83013** 83C15
- Zel'manov, V. A. Tensor description of half-integer spin fields. (Russian) *Dokl. Akad. Nauk SSSR* **249** (1979), no. 1, 85-89. (S. A. Vladimirov) **81d:81040** 81D25 (53B50, 81G99)
- Zemach, Charles (with Menikoff, Ralph) Methods for numerical conformal mapping. *J. Comput. Phys.* **36** (1980), no. 3, 366-410. (D. Gaier) **81b:30012** 30C30
- Zeman, Marvin On the uniqueness of the Cauchy problem for partial differential operators with multiple characteristics. *Ann. Scuola Norm. Sup. Pisa Cl. Sci. (4)* **7** (1980), no. 2, 257-285. (H. Kumano-go) **81m:35006** 35A05
- Zemack, H. Central European prehistory of computing. *A history of computing in the twentieth century*, pp. 587-609. Academic Press, New York, 1980. (See **81b:68002**) 01A55 (68-03)
- Zemánek, Jaroslav Spectral characterization of two-sided ideals in Banach algebras. (Russian) *Studia Math.* **67** (1980), no. 1, 1-12. (V. K. Srinivasan) **81b:46051** 46H10 (47D30)
- Zemanian, A. H. Some models in the social and behavioral sciences based on proportioning networks. *Constructive approaches to mathematical models (Proc. Conf. in honor of R. J. Duffin, Pittsburgh, Pa., 1978)*, pp. 113-123. Academic Press, New York, 1979. (J. S. Joel) **81d:90044** - 90B10 (90C35)
- Countably infinite nonlinear time-varying active electrical networks. *SIAM J. Math. Anal.* **10** (1979), no. 5, 944-960. (Author's summary) **81a:94055** 94C05
- Countably infinite time-varying electrical networks. *SIAM J. Math. Anal.* **10** (1979), no. 6, 1193-1198. (Author's summary) **81a:94056** 94C05
- Žemby, Ivan A note on categories of partial algebras. (Russian summary) *Math. Slovaca* **29** (1979), no. 2, 157-158. (Editors) **81d:08008** 08A55 (08C05, 18B99)
- Zemel, Eitan Lifting the facets of zero-one polytopes. *Math. Programming* **15** (1978), no. 3, 268-277. (Thomas L. Magnanti) **81b:90113** 90C10 (52A25)
- (with Balas, Egon) An algorithm for large zero-one knapsack problems. *Oper. Res.* **28** (1980), no. 5, 1130-1154. (Authors' summary) **81b:90136** 90C09 (65-04)
- Zemljakov, A. S. (with Sabitov, R. A.; Somov, E. I.) Automated synthesis of hierarchical systems of control of motion with an application of Ljapunov vector-valued functions. (Russian) *Theory of stability and its applications (Russian)*, pp. 264-271, 304, "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. (Pavel Krbec) **81d:34055** 34H05 (93C15)
- Zemljakova, L. S. The existence of a piecewise constant control for a boundary value problem. (Russian) *Differencial'nye Uravnenija (Ryazan)* **13** (1979), 55-64. (Author's summary) **81b:93026** 93C15
- Control in the small of a system of differential equations. (Russian) *Differencial'nye Uravnenija (Ryazan)* **13** (1979), 65-72. (Author's summary) **81b:93008** 93B05 (34H05)
- Zemljakov, N. C. (with Danieljan, E. A.) Correlation coefficients of lengths of queues in a single-channel queueing system with relative priority. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* **1978**, no. 6, 104-110 (Russian); translated as *Engng. Cybernetics* **16** (1978), no. 6, 81-87. (Authors' summary) **81b:60114** 60K25
- Zemakov, P. A. (with Butenin, N. V.; Butenin, N. N.; Metrikin, V. S.) On the theory of stability of self-oscillations of a stand with an automatic pilot. (Russian) *Theory of stability and its applications (Russian)*, pp. 88-94, 299, "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. (Authors' summary) **81c:93068** 93D99 (34C15, 58F13)
- Žemahov, H. K. The Cauchy problem for a fourth-order degenerate nonlinear hyperbolic equation. (Russian) *Numerical-analytic methods for the solution of problems of heat conduction and electrodynamics (Russian)*, pp. 158-163, 187. *Akad. Nauk Ukrain. SSR, Inst. Mat., Kiev*, 1979. (I. Aganović) **81b:35118** 35L75
- Zeng, Qing Cun (with Ye, Du Zheng) The adaptation processes of motion in rotating atmosphere. (Chinese. English summary) *Acta Mech. Sinica (Beijing)* **1980**, no. 1, 1-11. (L. N. Tao) **81b:86008** 86A10 (35Q20, 76C99)
- Zenga, Michele The use of the incomplete arctangent function in the study of the asymptotic distribution of the maximum of the standardized frequencies of a trinomial. (Italian. English and French summaries) *Statistica (Bologna)* **39** (1979), no. 2, 269-286. (A. L. Rukhin) **81m:62035** 62E20 (60E05)
- Žemlek, Alexander Curved triangular C^∞ -elements and their applications. *Proceedings of the Fourth Symposium on Basic Problems of Numerical Mathematics (Přez, 1978)*, pp. 183-194. Charles Univ., Prague, 1978. (Georges A. Lebaud) **81g:65162** 65N30
- Zemkov, V. I. 2-Sylow intersections in finite groups. (Russian) *Ural. Gos. Univ. Mat. Zap.* **11** (1979), no. 3. Issled. po Sovremen. Algebre, 48-53, 210. (V. V. Kabanov) **81g:20041** 20D20
- Zenor, Phillip See *Proceedings: Topology Conference, 81b:54001 and Proceedings: Topology Conference, 81b:54001*
- Zemlyshin, A. A. Monosplines deviating least from zero and best quadrature formulas. (Russian) *Dokl. Akad. Nauk SSSR* **249** (1979), no. 2, 278-281. (A. A. Pekarskii) **81c:41041** 41A50 (41A55)
- Zepf, Gérard (with Duret, Gilles; Wick, Alain) Résonateur ouvert en géométrie sphérique. (English summary) *Canad. J. Phys.* **58** (1980), no. 1, 80-86. (Authors' summary) **81g:78002** 78A05
- Zepf, D. A. A sorting algorithm for finding Hamiltonian circuits. (Russian. German and English summaries) *Elektron. Informatsionnaya Kibernet.* **16** (1980), no. 1-3, 69-75. (Author's summary) **81m:68056** 68E10 (90B10)
- Zerakhidze, Z. S. Markov property of the solution of a stochastic differential equation of hyperbolic type. (Russian) *Transactions of the Eighth Prague Conference on Information Theory, Statistical Decision Functions, Random Processes (Prague, 1978)*, Vol. C, pp. 325-330. Reidel, Dordrecht, 1979. (G. M. Molčan) **81c:60066** 60G60 (60H15)
- Zerbe, Gary O. (with Goldgar, David E.) Comparison of intraclass correlation coefficients with the ratio of two independent F-statistics. *Comm. Statist. A—Theory Methods* **9** (1980), no. 15, 1641-1655. (Authors' summary) **81b:62033** 62E15
- Zerby, Gloria C. Risk of asymptotically optimum sequential tests. *Ann. Statist.* **8** (1980), no. 5, 1110-1122. (Prem K. Goel) **81m:62152** 62L12 (62L15)
- Zerem, Leyli A generalization of quadric surfaces from the intrinsic properties point of view. (Turkish summary) *Istanbul Tek. Univ. Bil.* **32** (1979), no. 1, 17-38. (Walter O. Vogel) **81b:53005** 53A05
- Zermolensko, V. N. On B. V. Bulgakov's problem of the maximum deviation of a second-order oscillatory system. (Russian. English summary) *Vestnik Moskov. Univ. Ser. I Mat. Meh.* **1980**, no. 2, 87-91. (L. Pinter) **81b:34036** 34C05 (70K10)
- Zessin, Hans (with Nguyen, Xuan-Kanh) Ergodic theorems for spatial processes. *Z. Wahrsch. Verw. Gebiete* **48** (1979), no. 2, 133-158. (J. Fritz) **81c:60061** 60G60 (60K35, 82A05)
- See also Fichtner, Karl-Heinz; et al., **81c:60058**
- Zet, George The calculation of s_p -coefficients in $SL(n, C)$ extension formulas. (Romanian summary) *Bul. Inst. Politehn. Iași Sec. I* **24(28)** (1978), no. 3-4, 115-117. (J. F. Cornwell) **81c:22026** 22E46
- Extension of representations and its applications in physics. (Romanian. French summary) *Stud. Cerc. Mat.* **31** (1979), no. 1, 119-135. (Ion D. Teodorescu) **81c:22034** 22E70 (81G20)
- Zetli, A. (with Evans, W. D.) Levinson's limit-point criterion and powers. *J. Math. Anal. Appl.* **62** (1978), no. 3, 629-639. (Authors' summary) **81f:34025** 34B20
- (with Kwong, Man Kam) Norm inequalities for dissipative operators on inner product spaces. *Houston J. Math.* **5** (1979), no. 4, 543-557. (P. R. Chernoff) **81d:47025** 47B44 (47A30)
- (with Everitt, W. N.) Generalized symmetric ordinary differential expressions. I. The general theory. *Nieuw Arch. Wisk. (3)* **27** (1979), no. 3, 363-397. (J. B. McLeod) **81a:34022** 34B20 (47E05)
- Zevallos Gutierrez, Mauro (with Ruiz-Claeyssen, Julio) Power series solutions for the m -order-matrix ordinary differential equation. *Quart. Appl. Math.* **37** (1979/80), no. 4, 447-450. (R. C. Varma) **81c:34004** 34A25 (34A30)
- Zevin, A. A. Approximation of functions of Volterra operators in problems of creep theory of aging materials. (Russian. Armenian and English summaries) *Izv. Akad. Nauk Armjan. SSR Ser. Meh.* **32** (1979), no. 6, 41-54, 79. (N. Cristescu) **81j:73045** 73F20 (73F05)
- Optimum shape of an aging hereditary solid. *Izv. Akad. Nauk SSSR Meh. Toed. Tela* **14** (1979), no. 3, 127-134 (Russian); translated as *Mech. Solids* **14** (1979), no. 3, 112-118. (Author's summary) **81c:73030** 73F20 (73C35)
- Zeytounian, Radosław Kh. Models for Lee waves in a baroclinic compressible troposphere. *Izv. Akad. Nauk SSSR Ser. Fiz. Atmosf. i Okeana* **15** (1979), no. 5 (Russian); translated as *Izv. Acad. Sci. USSR Atmospher. Ocean. Phys.* **15** (1979), no. 5, 341-346 (1980). (From the summary) **81c:86019** 86A35 (76C15)
- (with Guiraud, J.-P.) Long time evolution of acoustic waves and the concept of incompressibility. *Boundary and interior layers—computational and asymptotic methods (Proc. Conf., Trinity College, Dublin, 1980)*, pp. 297-300. Boole, Dún Laoghaire, 1980. (See **81j:76001**) 76Q05
- Sur la forme limite des équations de Navier-Stokes, aux grands nombres de Reynolds et au voisinage d'une paroi et de l'instant initial. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* **290** (1980), no. 12, A567-A569. (E. G. Broadbent) **81c:76032** 76D05 (35Q10, 76D10)
- Magnetic hydrodynamics of heavy fluids. (Russian) *Ž. Prikl. Meh. i Tehn. Fiz.* **1980**, no. 2, 37-42, 172. (Ilija Lukačević) **81c:76117** 76W05 (85A30)
- Žetev, R. P. (with Kuznetsov, Ju. E.; Černov, Ju. P.) Some examples of exact solution of the problem of motion of a small particle in a gas flow. (Russian) *Učen. Zap. CAGI* **10** (1979), no. 5, 109-112. (Authors' summary) **81b:76009** 76T05
- Zetev, A. P. Decidability of the unification problem for second-order languages with unary functional symbols. *Kibernetika (Kiev)* **1979**, no. 5, iii, 120-125, 155 (Russian. English summary); translated as *Cybernetics* **15** (1979), no. 5, 735-741 (1980). (From the introduction) **81b:03028** 03B25 (68G15)
- Žgunt, V. S. (with Guntner, A. F.; Meunargija, T. V.; Chadaja, F. G.) Solution of problems of the theory of plates and shells by I. N. Vekua's method. *Theory of shells (Proc. Third IUTAM Sympos., Tbilisi, 1978)*, pp. 669-684. North-Holland, Amsterdam, 1980. (Vadim Komkov) **81c:73073** 73L99
- Zhabko, A. P. See **Žabko, A. P.**
- Zhang, Cheng Fu The effect on finite ion Larmor radius on the eigenmodes of drift waves. (Chinese. English summary) *Acta Phys. Sinica* **29** (1980), no. 6, 778-787. (Author's summary) **81j:82024** 82A45 (76X05)
- Zhang, Fu Ji The problem of the queueing system $G1/M/\infty$ with batch arrivals. (Chinese) *Acta Math. Appl. Sinica* **2** (1979), no. 1, 44-50. (Tack-Wang Lee) **81a:60115** 60K25
- The stationary distribution of a queueing system with batch arrivals. (Chinese) *Knowledge Practice Math.* **2** (1979), 38-45. (Tack-Wang Lee) **81a:60116** 60K25

- Zhang, Gong Qing** The obstacle problem and partial differential equations with discontinuous nonlinearities. *Comm. Pure Appl. Math.* 33 (1980), no. 2, 117–146. (Charles C. Conley) **81f:35832** 35J25 (35R35)
- (with Jiang, Bo Ju) Multiple solutions for asymptotically linear operators. *Sci. Sinica* 23 (1980), no. 5, 539–553. (Theodore Laetsch) **81j:47056** 47H15 (35J65)
- Zhang, Guang Hou** (with Yang, Le) Deficient values and asymptotic values of entire functions. *Sci. Sinica* 1979, *Special Issue II on Math.*, 190–203. (A. Edrei) **81g:30058** 30D35
- Zhang, Jia Ju** Some properties of the M -matrices. (Chinese. English summary) *Chinese Ann. Math.* 1 (1980), no. 1, 47–50. (Author's summary) **81i:15023** 15A57 (15A51)
- Zhang, Jian Zhong** (with Deng, Nai Yang) A quasi-Topkis-Veinott method for minimax problems. (Chinese. English summary) *Numer. Math. J. Chinese Univ.* 2 (1980), no. 1, 15–25. (Authors' summary) **81j:90108** 90C30 (65K05)
- Zhang, Jing Zhong** (with Yang, Lu) A proof of the simplex structure theorem. (Chinese) *Knowledge Practice Math.* No. 1 (1980), 43–45. (Stephen H. Y. Hung) **81j:51016** 51M05
- Zhang, Li Ning** (with Guo, Han Ying) The actions of gauge fields for gravitation and their principal bundle formulation. (Chinese) *Kexue Tongbao* 24 (1979), no. 3, 103–106. (Authors' introduction) **81j:83031** 83C99 (53C05, 83E99)
- Zhang, Li Qian** The parameter combinations of PBIB(2) designs with $k, r < 10$ for which the problem of existence has not yet been solved. (Chinese. English summary) *J. Huazhong Inst. Tech.* 1979, no. 3, 27–40. (Ching Shui Cheng) **81m:05030** 05B05 (62K10)
- Zhang, Shang Tai** A classical problem of numerical mathematics. (Chinese. English summary) *Acta Math. Sinica* 22 (1979), no. 6, 667–674. (Editors) **81h:65061** 65J15 (47H17)
- Zhang, Tong** (with Xiao, Ling) The Riemann problem for general 2×2 conservation laws. (Chinese) *Kexue Tongbao* 23 (1978), no. 8, 465–469. (Tai Ping Liu) **81j:35075** 35L65
- (with Xiao, Ling) A Riemann problem for the system of conservation laws of aerodynamics without convexity. (Chinese. English summary) *Acta Math. Sinica* 22 (1979), no. 6, 719–732. (Tai Ping Liu) **81j:35078** 35L65 (76N15)
- Zhang, Xian Ke** (with Feng, Ke Qin) Analysis of the behavior of error-detecting codes under the condition of feedback and retransmission error control. (Chinese) *Acta Math. Appl. Sinica* 2 (1979), no. 3, 278–286. (Tai Yang Hwang) **81j:94029** 94B70
- Zhang, Yuan Zhong** (with Chen, Shi; Guo, Han Ying; Li, Gen Dao) A theory of conformal gravity and conformal supergravity. *Sci. Sinica* 23 (1980), no. 3, 299–307. (Kenneth Dunn) **81g:83047** 83D05 (53C80)
- Zhao, De Zi** (with Liu, Lin) The solution of second-order perturbation of an artificial Earth satellite. (Chinese. English summary) *Acta Astronom. Sinica* 20 (1979), no. 4, 349–359. (Authors' summary) **81j:70023** 70M05
- Zhao, Han Bin** Existence theorems for fixed points of generalized nonexpansive mappings in a Banach space. (Chinese. English summary) *Acta Math. Sinica* 22 (1979), no. 4, 459–470. (T. C. Lim) **81c:47064** 47H10 (47H09)
- Zhao, Han Zhang** (with Ni, Lu Qun; Yao, Jing Qi) Some fixed-point theorems of contractive type mappings. (Chinese. English summary) *Chinese Ann. Math.* 1 (1980), no. 1, 63–74. (J. S. W. Wong) **81k:47084** 47H10
- Zhao, Lin Cheng** (with Lu, Kun Liang) UMVUE of two-sided truncation parameters. A translation of *Kexue Tongbao* (Chinese) 25 (1980), no. 3, 102–104. *Kexue Tongbao* (English) 25 (1980), no. 2, 113–115. (G. K. Bhattacharyya) **81i:62051** 62F10
- Zhao, Su Xia** Absolute stability of direct control systems. (Chinese. English summary) *Acta Math. Sinica* 22 (1979), no. 4, 404–419. (Author's summary) **81a:93069** 93D05 (34H05)
- Zhao, Yong Chang** Studies on the flowgraph expansion of determinants. (Chinese. English summary) *Kexue Tongbao* 24 (1979), no. 23, 1084–1086. (Author's summary) **81c:15011** 15A15 (90B10)
- Zhao, Zhong Xin** (with Tao, Hua Cheng) Optimum selection with time delay. (Chinese. English summary) *Acta Math. Sinica* 22 (1979), no. 2, 129–139. (Authors' summary) **81k:62115** 62L10
- Zharikh, V. A.** See **Zarikh, V. A.**
- Zheng, Wei An** A note on the convergence of sequences of conditional expectations of random variables. *Z. Wahrsch. Verw. Gebiete* 53 (1980), no. 3, 291–292. (Editors) **81k:60042** 60F15
- Zheng, Zhang Guo** (with Hsu, Pao Lu; Chen, Jia Ding) The coincidence property of stochastic matrices. (Chinese. English summary) *Beijing Daxue Xuebao* No. 1 (1979), 21–47. (Jau-Shyong Shiue) **81c:60080** 60J10 (15A51)
- Zhererun, A. P.** See **Zekierun, A. P.**
- Zheng, V. S.** See **Zgenil, V. S.**
- Zhilinsky, A. P.** See **Zilinski, A. P.**
- Zhrabok, A. N.** See **Zhrabok, A. N.**
- Zhiyanov, V.** See **Zijanov, V. I.**
- Zhou, Guang Zhao** (with Gao, Chong Shou) Electro-weak theory in SU(3). A translation of *Kexue Tongbao* (Chinese) 25 (1980), no. 1, 13–15. *Kexue Tongbao* (English) 25 (1980), no. 1, 21–25. (From the text) **81m:81069** 81G15 (22E70)
- (with Zhu, Zhong Yuan; Dai, Yuan Ben; Wu, Yong Shi) The nontopological soliton with a nonabelian internal symmetry. *Sci. Sinica* 23 (1980), no. 1, 40–60. (A. Degasperis) **81j:81053** 81E99
- On the vacuum of the pure gauge fields on coset. *Sci. Sinica* 23 (1980), no. 4, 431–440. (H. Rund) **81k:81067** 81E10 (53C05, 53C30)
- Zhou, Hao Xuan** Martin's axiom and its applications. I. (Chinese. English summary) *J. Huazhong Inst. Tech.* 1979, no. 3, 2, 15–26. (From the summary) **81k:03052a** 03E50
- Martin's axiom and its applications. II. (Chinese. English summary) *J. Huazhong Inst. Tech.* 1979, no. 4, 8, 33–48. (From the summary) **81k:03052b** 03E50
- Zhou, Yu Mei** (with Qing, Cheng Rui) The free boundary solution to the equation of plasma magnetohydrodynamic equilibrium with axisymmetry and noncircular cross section. (Chinese. English summary) *Acta Phys. Sinica* 29 (1980), no. 1, 106–110. (Authors' summary) **81j:76049** 76W05
- Zhou, Yu Rong** The existence of limit cycles of nonlinear oscillating equations. (Chinese) *Acta Math. Appl. Sinica* 3 (1980), no. 1, 50–56. (J. S. W. Wong) **81h:34037** 34C05
- Zhu, Guo Tian** (with Yang, Ming Zhu) The spectrum of transport operator with continuous energy in inhomogeneous medium with any cavity. *Sci. Sinica* 21 (1978), no. 3, 298–304. (Authors' summary) **81h:47017** 47A70 (47G05, 82A70)
- (with Yang, Ming Zhu) Multigroup theory for neutron transport. *Sci. Sinica* 22 (1979), no. 10, 1114–1127. (M. Drăganu) **81c:82074** 82A75
- Zhu, L.** A construction for orthogonal Steiner triple systems. *Acta Combin.* 9 (1980), 253–262. (Jane W. Di Paola) **81j:05027** 05B05
- A pair of orthogonal Steiner systems $S(3, 5, 17)$. *Discrete Math.* 31 (1980), no. 1, 111–113. (A. Rosa) **81i:05047** 05B30 (05B05)
- Zhu, Yao Chen** (with Wang, Lian Xiang; Xu, Guang Shan) On the transcendence of a class of series. An application of W. M. Schmidt's theorem. A translation of *Kexue Tongbao* (Chinese) 25 (1980), no. 2, 49–53. *Kexue Tongbao* (English) 25 (1980), no. 1, 1–6. (Maurice Mignotte) **81m:10067** 10F35
- Zhu, Yong Jin** (with Liu, Zhen Hong) Minimum spanning monocyclic graph passing through two fixed vertices. (Chinese) *Acta Math. Appl. Sinica* 2 (1979), no. 3, 241–250. (A. C. Liu) **81j:05077** 05C35 (05C38)
- (with Wang, Jian Fang) On alphabetic-extended binary trees with restricted path length. *Sci. Sinica* 22 (1979), no. 12, 1362–1371. (Eberhard Lüdde) **81h:68060** 68E10 (05C05, 68H05)
- (with Tian, Feng) On the strong path connectivity of a tournament. *Sci. Sinica* 1979, *Special Issue II on Math.*, 18–28. (Brian Alspach) **81g:05065** 05C20 (05C38)
- Some results on Hu's conjecture concerning binary trees. *Discrete Math.* 29 (1980), no. 3, 251–255. (Linda Pagli) **81f:05079** 68E10 (05C25, 68E05)
- Zhu, Zhong Yuan** (with Zhou, Guang Zhao; Dai, Yuan Ben; Wu, Yong Shi) The nontopological soliton with a nonabelian internal symmetry. *Sci. Sinica* 23 (1980), no. 1, 40–60. (A. Degasperis) **81j:81053** 81E99
- Zhuang, Qi Tai** On the distribution of the values of meromorphic functions. (Chinese. English summary) *Chinese Ann. Math.* 1 (1980), no. 1, 91–114. (Chung-Chun Yang) **81j:30045** 30D30
- Zhuikov, V. V.** See **Zukov, V. V.**
- Zuk, V. I.** See **Zuk, V. I.**
- Zukhorovskii, E. M.** See **Zubovickii, E. M.**
- Zukov, S. A.** See **Zukov, S. A.**
- Zurin, V. V.** See **Zurin, V. V.**
- Zia, R. K. P.** (with Swendsen, R. H.) The surprising effectiveness of the Migdal-Kadanoff renormalization scheme. *Phys. Lett. A* 69 (1978/79), no. 6, 382–384. (Authors' summary) **81h:82011** 82A05 (82A25)
- Žilinski, S.** Motions in central puncter spaces. (Russian. Lithuanian and English summaries) *Litovsk. Mat. Sb.* 19 (1979), no. 4, 85–89, 210. (I. P. Egorov) **81a:53019** 53B15
- Zichichi, A.** New developments in elementary-particle physics. *Riv. Nuovo Cimento* 3 (1979), no. 14, 65 pp. (Victor Wong) **81c:81141** 81G25
- Zidek, James V.** (with Weerahandi, Samaradasa) A characterization of the general mean. (French summary) *Canad. J. Statist.* 7 (1979), no. 1, 83–90. (R. J. Buehler) **81a:60027** 60E99 (39B70, 62A99)
- (with Navin, Francis P. D.; Lockhart, Richard) Statistics of extremes: an alternate method with application to bridge design codes. *Technometrics* 21 (1979), no. 2, 185–191. (A. M. Hasofer) **81m:62084** 62G30 (62N99)
- (with Brown, P. J.) Adaptive multivariate ridge regression. *Ann. Statist.* 8 (1980), no. 1, 64–74. (Pi-Erh Lin) **81j:62119** 62J07 (62C20)
- (with Tsui, Kam Wah; Weerahandi, Samaradasa) Inadmissibility of the best fully equivariant estimator of the generalized residual variance. *Ann. Statist.* 8 (1980), no. 3, 1156–1159. (Steven Arnold) **81m:62015** 62C15 (62H12)
- Zidkov, E. P.** (with Nguen, M.; Nedjalkov, I. P.; Horomskii, B. N.) Investigation of a class of solutions for Low's equation. (Russian) *Ž. Vyšl. Mat. i Mat. Fiz.* 19 (1979), no. 4, 998–1014, 1083. (Authors' summary) **81i:81089** 81F20 (65H10, 65R20)
- Zidkov, G. V.** The solvability of a variational problem for a certain class of functions in an axially symmetric domain. (Russian) *Differentsial'nye Uravnenija* 14 (1978), no. 2, 274–280, 387. (I. F. Kušniruk) **81b:35022** 35J20 (33A45)
- The finiteness of the Dirichlet integral for a class of functions. (Russian) *Differentsial'nye Uravnenija* 14 (1978), no. 9, 1624–1631, 1723. (P. Szeptycki) **81j:46058** 46E35 (35Q99)
- Zidkov, Ju. N.** Slater-optimal controls in optimal processes. (Russian) *Vestnik Moskov. Univ. Ser. XV Vyšl. Mat. Kibernet.* 1980, no. 2, 41–47, 73. (Author's summary) **81m:49030** 49D05 (49D10)
- Ziegler, Martin** (with Flum, Jörg) ★Topological model theory. Lecture Notes in Mathematics, 769. Springer-Verlag, Berlin-New York, 1980. x + 151 pp. ISBN 3-540-09732-5 (Andreas Blass) **81j:03059** 03C85 (46A15, 54H13)
- Ziegler, Zvi** (with Pinkus, Allan) Interlacing properties of the zeroes of the error functions in best L^p -approximations. *J. Approx. Theory* 27 (1979), no. 1, 1–18. (John W. Lee) **81c:41063** 41A50
- Zielas, W.** Exakte Verfahren für ausgewählte Klassen von Differentialgleichungen. *Lectures from the Problem Seminar on Mathematical Procedures* (Weißig, 1978), pp. 122–128. *Weiterbildungszentrum Math. Kybernet. Rechentechnik. Informationsverarbeitung*, 36. Tech. Univ. Dresden, Dresden, 1979. (H. Brunner) **81j:65085** 65L05
- Zielezny, Z.** (with Szajnider, S.) On some properties of convolution operators in X_1^* and S_1^* . *J. Math. Anal. Appl.* 65 (1978), no. 3, 543–554. (L. Artega) **81c:46035** 46F10
- (with Shafii-Mousavi, M.) On hypoelliptic differential operators of constant strength. *Pacific J. Math.* 82 (1979), no. 1, 249–256. (Makhlof Derridj) **81c:35032** 35H05
- Zielinski, Ryszard** Fixed precision estimate of mean of a Gaussian sequence with unknown covariance structure. *Mathematical statistics and probability theory* (Proc. Sixth Internat. Conf., Wista, 1978), pp. 360–364. *Lecture Notes in Statist.*, 2. Springer, New York, 1980. (I. M. Stojanov) **81m:62161** 62M09 (62L12)
- See also **Mathematical statistics**, **81m:62004**
- Zielke, Gerhard** (with Tutschke, Wolfgang; Kühnau, Reiner; Vogel, Wolfgang; Krötenheerd, Otto; Stammer, Ludwig; Schleiff, Martin; Strehmel, Karl; Köhler, Jürgen) Mathematische Forschung für Theorie und Anwendung. *Wiss. Z. Martin-Luther-Universität Halle-Wittenberg Math.-Natur. Reihe* 28 (1979), no. 3, 5–21. (Editors) **81m:01103** 01A72 (00A05)
- Die Auflösung beliebiger linearer algebraischer Gleichungssysteme durch Blockzerlegung. *Beiträge Numer. Math.* 8 (1980), 181–199. (Cs. J. Hegedűs) **81e:15A06** 15A09 (65F05)

- Die Auflösung linearer Gleichungssysteme mittels verallgemeinerter inverser Matrizen. *Wiss. Z. Martin-Luther-Univ. Halle-Wittenberg Math.-Natur. Reihe* 29 (1980), no. 1, 5-15. (Cs. J. Hegedüs) **81i:15002** 15A06 (15A09, 65F05)
- Zielke, Roland** ★Discontinuous Chebyshev systems. *Lecture Notes in Mathematics*, 707. Springer-Verlag, Berlin-New York, 1979. vi+111 pp. ISBN 0-540-09125-4 (A. B. Németh) **81a:41001** 41-02 (41A50)
- Ziemba, W. T.** (with Kira, D.) The demand for a risky asset. *Management Sci.* 26 (1980), no. 11, 1158-1165. (Edwin Burmeister) **81m:90019** 90A09
- Zimmer, W. P.** (with Ewing, John; Gustafson, William H.; Halmos, P. R.; Moolgavkar, S. H.; Wheeler, William H.) American mathematics from 1940 to the day before yesterday. (Czech) Translated from the English by Jiří Vanžura. *Pokroky Mat. Fyz. Astronom.* 24 (1979), no. 5, 258-267. (Editors) **81b:01021** 01A65
- (with Ewing, John; Gustafson, William H.; Halmos, P. R.; Moolgavkar, S. H.; Wheeler, William H.) American mathematics from 1940 to the day before yesterday. (Czech) Translated from the English by Jiří Vanžura. *Pokroky Mat. Fyz. Astronom.* 24 (1979), no. 6, 326-335. (Editors) **81i:01034** 01A65
- Zimmer, William P.** Behavior at the boundary of solutions of quasilinear parabolic equations. *J. Differential Equations* 35 (1980), no. 3, 291-305. (Pierre-Louis Lions) **81c:35073** 35K55 (35K20)
- (with Gariepy, Ronald) Removable sets for quasilinear parabolic equations. *J. London Math. Soc.* (2) 21 (1980), no. 2, 311-318. (J. Kačur) **81j:35026** 35D10 (35K55)
- Zienian, Bogdan** On distributions invariant with respect to some linear transformations. *Ann. Polon. Math.* 36 (1979), no. 3, 261-276. (Jacques Faraut) **81k:43012b** 43A80 (22E30, 46F10)
- (with Szmjdyt, Zofia) Fundamental solution E_n of the operator $\partial^2/\partial t^2 - \Delta_n$ for $n > 3$. *Ann. Polon. Math.* 36 (1979), no. 3, 277-286. (Jacques Faraut) **81k:43012c** 43A80 (22E30, 46F10)
- On G-invariant distributions. *J. Differential Equations* 35 (1980), no. 1, 66-86. (S. Łojasiewicz) **81h:58023** 58C99 (46F05, 58A30)
- le hyu Zien** See **Le Hyu Zien**
- Zienkiewicz, O. C.** (with Heinrich, J. C.) The finite element method and "upwinding" techniques in the numerical solution of convection dominated flow problems. *Finite element methods for convection dominated flows (Papers, Winter Ann. Meeting Amer. Soc. Mech. Engrs., New York, 1979)*, pp. 105-136. AMD, 34, Amer. Soc. Mech. Engrs. (ASME), New York, 1979. (Michael Engelman) **81i:76039** 76R99 (65N30, 76D99)
- New path for the finite element method. *Mathematics of finite elements and applications, III (Proc. Third MAFLAP Conf., Brunel Univ., Uxbridge, 1978)*, pp. 187-216. Academic Press, London, 1979. (From the introduction) **81d:65068** 65N30 (73K25)
- Finite elements—the basic concepts and an application to 3-D magnetostatic problems. *Finite elements in electrical and magnetic field problems*, pp. 11-31. Wiley, Chichester, 1980. (J. S. Colonias) **81m:78013** 78A30
- (with Kelly, D. W.; Nakazawa, S.; Heinrich, J. C.) A note on upwinding and anisotropic balancing dissipation in finite element approximations to convective diffusion problems. *Internat. J. Numer. Methods Engrg.* 15 (1980), no. 11, 1705-1711. (Authors' summary) **81i:76076** 76R99 (65N30)
- Đi ngoc Ziep** See **Dô Ngoc Ziep**
- Zihl, Robert M.** Kinetics of polymerization. *J. Statist. Phys.* 23 (1980), no. 2, 241-263. (Author's summary) **81g:82046** 82A42 (52A22)
- New class of soluble-model Boltzmann equations. *Phys. Rev. Lett.* 45 (1980), no. 5, 306-310. (Author's summary) **81k:82010** 82A05 (82A40)
- Zigangorov, K. Š.** (with Kolesnik, V. D.) List decoding of convolutional codes. (Russian. English summary) *Teoriya i Prikladnaya Elektronika* 24 (1979), no. 10, 2131-2133 (Russian); translated as *Radio Engng. Electron. Phys.* 24 (1979), no. 10, 114-116 (1980). **81k:94030** 94B10 (94B35)
- Ziggelaar, Augustine** Die Erklärung des Regenbogens durch Marcantonio de Dominis, 1611. Zum Optikerunterricht am Ende des 16. Jahrhunderts. *Centaurus* 23 (1979/80), no. 1, 21-50. (A. G. Molland) **81b:01011** 01A40 (01A45)
- How did the wave theory of light take shape in the mind of Christiaan Huygens? *Ann. of Sci.* 37 (1980), no. 2, 179-187. (M. Kline) **81g:01008** 01A45 (78-03)
- Ziglin, S. L.** On the extension of the general WKB method to materials with substantially nonlinearly varying parameters. *Radioelektronika i Elektronika* 24 (1979), no. 10, 2131-2133 (Russian); translated as *Radio Engng. Electron. Phys.* 24 (1979), no. 10, 114-116 (1980). **81k:78008** 78A40
- Nonintegrability of the problem of the motion of four point vortices. (Russian) *Dokl. Akad. Nauk SSSR* 250 (1980), no. 6, 1296-1300. (A. A. Arsen'ev) **81e:76021** 76C05 (34A05, 58F07)
- Ziglavskii, A. A.** Some questions connected with sampling from nonuniform distributions. (Russian) *Operations research and statistical simulation*, No. 5 (Russian), pp. 159-197, 203. Leningrad. Univ., Leningrad, 1979. (B. L. Granovskii) **81b:65005** 65C05
- Zijahulliev, N. S.** (with Serbulov, A. V.) Some problems of estimating the amount of calculation involved in problems of scheduling theory. (Russian) *Voprosy Vychisl. i Prikl. Mat. (Tashkent)* No. 57 (1979), 153-163, 172. (From the text) **81i:90049** 90B30 (68C15)
- Zijunov, V. I.** The development of economic system in case of differential optimization (for one-sector dynamic model). *Optimization techniques (Proc. Ninth IFIP Conf., Warsaw, 1979)*, Part 2, pp. 473-481. *Lecture Notes in Control and Information Sci.*, 23, Springer, Berlin, 1980. (From the text) **81m:90036** 90A16
- Zijunov, Mynt** Optimum replacement and maintenance policies for units with a decreasing performance level. *European J. Oper. Res.* 5 (1980), no. 4, 267-275. (Author's summary) **81j:90058** 90B25
- (with Engel, Jan) A characterization of the gamma distribution by the negative binomial distribution. *J. Appl. Probab.* 17 (1980), no. 4, 1138-1144. (Peter Flusser) **81j:62031** 62E10
- Zhaidin, M. K.** New u-type families of periodic orbits in the restricted three-body problem. *Astronom. and Astrophys.* 88 (1980), no. 3, 298-301. (Author's summary) **81g:70012** 70F07 (58F14)
- Zhigova, N. D.** A boundary value problem for a holomorphic vector. (Russian) *Questions of mathematical physics and theory of oscillations*, No. 4 (Russian), pp. 123-125. *Izvestiya Akad. Nauk SSSR, Ser. Fiz.-Mat. Nauki*, 1976. (V. B. Dybin) **81e:30058** 30G30
- On the normal solvability of the Dirichlet problem for an elliptic system. (Russian) *Differentsial'nye Uravneniya* 16 (1980), no. 1, 74-79, 187. (G. Albinus) **81c:35045** 35J55
- Ziletkin, Ja. M.** (with Környei, I.) Accuracy of interpolation on the classes $D_p^{s, \lambda}(A, B)$. (Russian. English summary) *Numerical analysis (Russian)*, pp. 5-20, 79. *Comp. Center Universities, Budapest*, 1978. (Authors' summary) **81b:65126** 65D05
- (with Környei, I.) An upper estimate of the error of the approximate computation of the Fourier transform on the classes $D_p^{s, \lambda}(A, B)$. (Russian. English summary) *Numerical analysis (Russian)*, pp. 21-27, 80. *Comp. Center Universities, Budapest*, 1978. (Authors' summary) **81b:65127** 65T05 (65R10)
- Zink, A. G.** (with Korytin, O. V.) Electromagnetic waves in an anisotropic semiconductor in the vicinity of the interband-transitions frequency. (Russian. English summary) *Vestnik Leningrad. Univ. Fiz. Him.* 1980, vyp. 1, 21-27, 123. (Piero Bassanini) **81m:78011** 78A25 (78A55)
- Zinnikus, Antanas** On statistical models for multimodal optimization. (German and Russian summaries) *Math. Operationsforsch. Statist. Ser. Statist.* 9 (1978), no. 2, 255-266. (G. S. Tarasenko) **81a:90158** 62P15 (93E20)
- On the use of statistical models of multimodal functions for the construction of the optimization algorithms. *Optimization techniques (Proc. Ninth IFIP Conf., Warsaw, 1979)*, Part 2, pp. 138-147. *Lecture Notes in Control and Information Sci.*, 23, Springer, Berlin, 1980. (Kimio Kanai) **81m:65110** 65K10 (49D05, 90C31, 93C15)
- (with Baraukas, Arunas; Piljavskii, Valeri; Sul'man, V. S.; Juklena, Elena) Investigation of optimization problems in synthesis of pigment compositions. (Russian. Lithuanian and English summaries) *Teor. Optimal. Reshenii—Trudy Sem. Protsessy Optimal. Upravleniya VI Sekciya No. 6* (1980), 57-74, 155. (Authors' summary) **81j:90136** 90C50 (92A27)
- Zinnitskii, A. P.** (with Golant, V. E.; Saharov, I. E.) ★Fundamentals of plasma physics: Translated from the Russian by K. Z. Vedeneyeva [K. Z. Vedeneyeva] and V. F. Agranat. Translation edited by Sanborn C. Brown. Wiley Series in Plasma Physics. John Wiley & Sons, New York-Chichester-Brisbane, 1980. xvi+405 pp. ISBN 0-471-04593-4 (Editors) **81k:82018** 82A45 (76X05)
- Zilles, Stephen N.** An introduction to data algebra. *Abstract software specifications (Proc. Winter School, Tech. Univ. Denmark, Copenhagen, 1979)*, pp. 248-272. *Lecture Notes in Comput. Sci.*, 86, Springer, Berlin, 1980. (See **81k:68002**) 68B15
- venturini Zilli, Marina** See **Venturini Zilli, Marina**
- Zima, Kazimierz** A certain theorem on the oscillation of solutions of equation $(p(t)x')' + q(t)x = 0$. *Comment. Math. Prace Mat.* 21 (1980), no. 2, 391-393. (Raul F. Manasevich) **81k:34028** 34C10
- Zimmering, Shimon** A new representation theorem for regularly varying functions. Special issue dedicated to Władysław Orlicz on the occasion of his seventy-fifth birthday. *Comment. Math. Special Issue* 2 (1979), 339-342. (E. Seneta) **81c:26002** 26A12
- Zimmerman, A. H.** (with Aguilera-Navarro, V. C.; Ley Koo, E.) Perturbative, asymptotic and Padé-approximant solutions for harmonic and inverted oscillators in a box. *J. Phys. A* 13 (1980), no. 12, 3585-3598. (Authors' summary) **81i:81007** 81C05
- Zimlin, A. I.** Semigroups that are nilpotent in the sense of Mal'cev. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1980, no. 6, 23-29. (Václav Koubek) **81k:20082** 20M05
- Zimlin, V. D.** (with Šahurdin, V. I.) Method of calculating stresses by the results through transience of three-dimensional birefractive models. (Russian) *Problems in the theory of elasticity and viscoelasticity (Russian)*, pp. 19-33, 121, Akad. Nauk SSSR, Ural. Nauch. Centr, Sverdlovsk, 1978. (M. Mićić) **81g:78004** 78A05 (73C05)
- (with Hripchenko, S. Ju.) Two-dimensional representation of the magnetohydrodynamic equations of flow in plane-parallel channels with ferromagnetic cores. *Magnit. Gidrodinamika* No. 4 (1979), 117-122 (Russian); translated as *Magnetohydrodynamics* 15 (1979), no. 4, 461-466 (1980). (From the text) **81g:76118** 76W05
- Zimmer, Horst Günter** (with Bartz, H.; Fischer, Klaus G.; Folz, H.) Some computations related to torsion points on elliptic curves over number fields. *Symbolic and algebraic computation (EUROSAM '79, Internat. Sympos., Marseille, 1979)*, pp. 108-118. *Lecture Notes in Comput. Sci.*, 72, Springer, Berlin, 1979. (Maurice Mignotte) **81m:14001** 14-04 (14G05)
- Torsion points on elliptic curves over a global field. *Manuscripta Math.* 29 (1979), no. 2-4, 119-145. (Reinhard Bölling) **81a:14018** 14G25 (10B10)
- See also **Hasse, Helmut**, **81c:12001a** and **Hasse, Helmut**, **81c:12001b**
- Zimmer, Robert J.** Induced and amenable ergodic actions of Lie groups. *Ann. Sci. École Norm. Sup.* (4) 11 (1978), no. 3, 407-428. (Pierre Eymard) **81h:22013** 22D40 (28D15)
- Amenable pairs of groups and ergodic actions and the associated von Neumann algebras. *Trans. Amer. Math. Soc.* 243 (1978), 271-286. (G. W. Mackey) **81e:22008** 22D40 (28D15, 43A07, 46L10)
- On the cohomology of ergodic group actions. *Israel J. Math.* 35 (1980), no. 4, 289-300. (S. G. Dani) **81m:22011** 22D40 (28D99)
- Zimmer, William J.** (with Shaked, Moshe; Ball, Clifford A.) A nonparametric approach to accelerated life testing. *J. Amer. Statist. Assoc.* 74 (1979), no. 367, 694-699. (Richard A. Johnson) **81d:62107** 62N05
- Zimmerman, Robert L.** (with Hellings, Ronald W.) Gravitational radiation dominated cosmologies. *Astrophys. J.* 241 (1980), no. 2, part 1, 475-485. (Authors' summary) **81k:83046** 83F05 (83C35, 85A40)
- Zimmermann, H.-J.** Theory and applications of fuzzy sets. (French summary) *Operational research '78 (Proc. Eighth IFORS Internat. Conf., Toronto, Ont., 1978)*, pp. 1017-1033. North-Holland, Amsterdam, 1979. (See **80c:90003**) 03E72 (54A40, 90B99)
- Zimmermann, Uwe** Matroid intersection problems with generalized objectives. *Survey of mathematical programming (Proc. Ninth Internat. Math. Programming Sympos., Budapest, 1976)*, Vol. 2, pp. 383-392. North-Holland, Amsterdam, 1979. (Gerald Hammer) **81i:90154** 90C10 (05B35)
- On some extremal optimization problems. (Czech summary) *Ekonom.-Mat. Obzor* 15 (1979), no. 4, 438-442. (Hans-Jürgen Albrand) **81j:90134** 90C48
- Duality for algebraic linear programming. *Linear Algebra Appl.* 32 (1980), 9-31. (J. K. Lenstra) **81k:90060** 90C05
- (with Burkard, Rainer E.) Weakly admissible transformations for solving algebraic assignment and transportation problems. *Combinatorial optimization. Math. Programming Stud.* No. 12 (1980), 1-18. (Peter Brucker) **81k:90093** 90C08 (06F05, 90C10)

- (with Wüstefeld, Axel) Nonlinear one-parametric linear programming and t -norm transportation problems. *Naval Res. Logist. Quart.* 27 (1980), no. 2, 187-197. (Tomas Gal) **81f:90106** 90C31 (90C08)
- Zimonjić, Svetozar** The gradient basis of the simplex method. II. (Serbo-Croatian. English summary) *Akad. Nauka Unjet. Bosne Hercegov. Rad. Odjelj. Tehn. Nauka* 65 (1979), no. 5, 77-88. (E. G. Albrecht) **81b:90106** 90C05 (49D35)
- Žjuzin-Zimčenko, A. A.** See **Zjuzin-Zimčenko, A. A.**
- Zimčenko, A. I.** See **Zimčenko, O. I.**
- Zimčenko, I. L.** The structure of asymptotically stable invariant sets of periodic complex analytic systems of differential equations. (Russian. English summary) *Vestnik Leningrad. Univ. Mat. Meh. Astronom.* 1980, vyp. 1, 23-25, 117-118. (T. Čanturia) **81f:34011** 34A20 (32L05, 34D05, 58F18)
- Zimčenko, O. I.** Gradient methods for approximate solution of equations with nondifferentiable operators. (Russian) *Mat. Fiz. No. 26* (1979), 94-96, 129. (P. P. Zabreiko) **81c:47068** 47H17
- Zinder, Ja. A.** Minimization of the maximum penalty in a determined queueing system with identical servers. (Russian) *Systems analysis of industrial production* (Russian), pp. 56-63, *Inst. Kibernet., Akad. Nauk Ukrain. SSR, Kiev*, 1978. (N. B. Lebedinskaja) **81b:90095** 90B35
- Zink, Ernst-Wilhelm** Ergänzungen: "Exercices dyadiques" [Invent. Math. 27 (1974), 1-22; MR 52 #350] von André Weil. *Math. Nachr.* 92 (1979), 163-183. (J. Dieudonné) **81c:12028** 12B27 (20C15)
- Zink, Thomas** See **Haberkant, Klaus**, **81b:12009**
- Zinn, Joel** (with Giné, Evarist; Mandrekav, P.) On sums of independent random variables with values in L_p ($2 < p < \infty$). Probability in Banach spaces, II (Proc. Second Internat. Conf., Oberwolfach, 1978), pp. 111-124, *Lecture Notes in Math.*, 709, Springer, Berlin, 1979. (J. Hoffmann-Jorgensen) **81f:60009** 60B12
- Zinn-Justin, Jean** Asymptotic estimate of perturbation theory at large orders. *Hadron structure and lepton-hadron interactions* (Proc. Cargèse Summer Inst., Cargèse, 1977), pp. 631-663, *NATO Adv. Study Inst. Ser. B: Physics*, 39, Plenum, New York, 1979. (From the introduction) **81c:81013** 81C12 (81C35)
- (with Le Guillou, J. C.) Critical exponents from field theory. *Phys. Rev. B* (3) 21 (1980), no. 9, 3976-3998. (Authors' summary) **81b:82024** 82A25
- See also **Hadron structure and lepton-hadron interactions**, **81c:81002**
- Zinn-Justin, Nicole** Remarque sur le nombre minimal de générateurs d'idéaux maximaux. (English summary) *C. R. Acad. Sci. Paris Sér. A-B* 288 (1979), no. 2, A93-A94. (Authors' summary) **81g:13002** 13A15
- Zinov'ev, A. A.** Complete (rigorous) induction & Fermat's great theorem. With a comment by Georg Kreisel. *Logique et Anal. (N.S.)* 22 (1979), no. 87, 243-264. (Carlo Cellucci) **81i:03098** 03F99 (10B15)
- Zinov'ev, Ju. M.** Lorentz-invariant distributions and the Laplace transform. *Proceedings of the International Conference on Operator Algebras, Ideals, and their Applications in Theoretical Physics* (Leipzig, 1977), pp. 301-307, *Teubner, Leipzig*, 1978. (L. Artega) **81b:46041** 46F12 (44A10, 81E05)
- Zinov'ev, N. P.** Particular solutions of an inverse problem for an equation of elliptic type with a piecewise constant right-hand side. (Russian) *Kul'tybo. Gos. Ped. Inst. Nauch. Trudy* 232 (1979), *Differencial. Uravnenija i Mat. Fiz. No. 1*, 18-26. (V. M. Isakov) **81j:35107** 35R30 (35R05)
- Zinov'ev, S. M.** Study of the filtration of a two-phase fluid in stratified layers using imaginary permeabilities. (Russian) *Application of computers to the solution of problems in mathematical physics and automatic control systems* (Russian), pp. 50-54, *Kazan. Univ., Kazan*, 1978. (See **80c:65004**) 76S05 (65P05)
- Zinov'ev, V. A.** (with Zjablov, V. V.) Decoding of nonlinear generalized concatenated codes. (Russian) *Problemy Peredachi Informacii* 14 (1978), no. 2, 46-52. (Authors' summary) **81b:94024** 94B35
- (with Zjablov, V. V.) Correction of error bursts and independent errors using generalized cascade codes. *Problemy Peredachi Informacii* 15 (1979), no. 2, 58-70. (Russian); translated as *Problems Inform. Transmission* 15 (1979), no. 2, 125-134. (Vera Pless) **81g:94035** 94B20 (94B35)
- (with Bassalygo, L. A.; Zjablov, V. V.; Pinsker, M. S.; Poltyrev, G. Š.) Bounds for codes with unequal protection of two sets of messages. *Problemy Peredachi Informacii* 15 (1979), no. 3, 40-49. (Russian); translated as *Problems Inform. Transmission* 15 (1979), no. 3, 190-197 (1980). (Authors' summary) **81c:94016** 94A24 (94B05)
- (with Zjablov, V. V.) Codes with unequal protection of information symbols. *Problemy Peredachi Informacii* 15 (1979), no. 3, 50-60. (Russian); translated as *Problems Inform. Transmission* 15 (1979), no. 3, 197-205 (1980). (Authors' summary) **81h:94023** 94B20 (94A24)
- Zinov'ev, Yu. M.** See **Zinov'ev, Ju. M.**
- Zions, Stanley** (with Villarreal, Bernardo; Karwan, Mark H.) An interactive branch-and-bound procedure for multicriterion integer linear programming. *Multiple criteria decision making theory and application* (Proc. Third Conf., Hagen/Königswinter, 1979), pp. 448-467, *Lecture Notes in Econom. and Math. Systems*, 177, Springer, Berlin, 1980. (Authors' summary) **81d:90080** 90C10 (90C11)
- Methods for solving management problems involving multiple objectives. *Multiple criteria decision making theory and application* (Proc. Third Conf., Hagen/Königswinter, 1979), pp. 540-558, *Lecture Notes in Econom. and Math. Systems*, 177, Springer, Berlin, 1980. (Authors' summary) **81d:90006** 90A05
- (with Wallenius, J.) On finding the subset of efficient vectors of an arbitrary set of vectors. *Studies on mathematical programming* (Papers, Third Conf. Math. Programming, Mafra, 1975), pp. 187-200, *Math. Methods Oper. Res.*, 1, *Akad. Kiadó, Budapest*, 1980. (Authors' summary) **81k:90061** 90C05
- Zipkin, Paul H.** Bounds for aggregating nodes in network problems. *Math. Programming* 19 (1980), no. 2, 155-177. (Authors' summary) **81f:90048** 90B10 (90C35)
- Bounds on the effect of aggregating variables in linear programs. *Oper. Res.* 28 (1980), no. 2, 403-418. (Authors' summary) **81a:90111** 90C05
- Bounds for row-aggregation in linear programming. *Oper. Res.* 28 (1980), no. 4, 903-916. (Authors' summary) **81i:90128** 90C05 (90C08)
- Zippel, Richard** Probabilistic algorithms for sparse polynomials. *Symbolic and algebraic computation* (EUROSAM '79, Internat. Sympos., Marseille, 1979), pp. 216-226, *Lecture Notes in Comput. Sci.*, 72, Springer, Berlin, 1979. (From the introduction) **81g:68061** 68C20
- Žirabok, A. N.** (with Danilov, V. V.; Filippov, F. V.) Structural abstract method of design of diagnostic tests for automata. *Automat. i Telemekh.* 1978, no. 7, 137-145. (Russian. English summary); translated as *Automat. Remote Control* 39 (1978), no. 7, part 2, 1051-1058. (Authors' introduction) **81g:94072** 94C99 (68D05)
- Zisek, Albert B.** Second-order expansion of indices in the generalized Villain model. *J. Phys. A* 13 (1980), no. 7, 2451-2455. (Authors' summary) **81b:82026** 82A25
- Žitnikov, Ju. V.** (with Každan, Ja. M.) Convergence of a cylindrical wave of refraction to an axis. (Russian. English summary) *Akad. Nauk SSSR Inst. Prikl. Mat. Preprint No. 150* (1979), 34 pp. (Authors' summary) **81g:76083** 76N15
- Žitomirskii, Ja. I.** A generalization of a theorem of M. Riesz. (Russian) *Mathematical analysis and the theory of functions*, No. 8. (Russian), pp. 114-119, *Moskov. Oblast. Ped. Inst., Moscow*, 1977. (See **81c:32001**) 30C99
- (with Derfel, G. A.) Behavior at zero of the solutions of a class of functional-differential equations. (Russian) *Teor. Funkcii Funkcional. Anal. i Prilozh.* No. 31 (1979), 44-49, 165. (Ju. L. Daleckii) **81c:35155** 35R10
- (with Borok, V. M.) The Cauchy problem for a certain class of loaded equations. (Russian) *Uspehi Mat. Nauk* 34 (1979), no. 1(205), 221-222. (L. Cattabriga) **81c:35026** 35G10
- Zittartz, J.** Existence and renormalization of the sine-Gordon field theory in all dimensions. *Z. Phys. B* 32 (1978/79), no. 1, 113-126. (Authors' summary) **81g:81077** 81E99 (82A67)
- Square lattice Ising antiferromagnet in an external magnetic field. *Z. Phys. B* 40 (1980/81), no. 3, 233-240. (Authors' summary) **81b:82068** 82A67
- (with Hoever, P.; Wolff, W. F.) Random layered frustration models. *Z. Phys. B* 41 (1981), no. 1, 43-53. (Authors' summary) **81b:82027** 82A42
- Ziv, A. D.** (with Samokis, B. A.) A posteriori estimate for the inverse operator of a degenerate two-point boundary value problem. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 20 (1980), no. 1, 77-83, 260. (E. S. Čičkin) **81g:65115** 65L10
- Ziv, Jacob** (with Wolf, Jack K.; Wyner, Aaron D.) Source coding for multiple descriptions. *Bell System Tech. J.* 59 (1980), no. 8, 1417-1426. (Authors' summary) **81h:94015** 94A29
- Distortion-rate theory for individual sequences. *IEEE Trans. Inform. Theory* 26 (1980), no. 2, 137-143. (Authors' summary) **81b:94028** 94A34
- Živaljević, Rade** $\text{md}H = \text{md}H$. (Russian) *Publ. Inst. Math. (Beograd) (N.S.)* 26(40) (1979), 307-311. (V. P. Soltan) **81h:52009** 52A55
- Note on H -convex functions. *Publ. Inst. Math. (Beograd) (N.S.)* 26(40) (1979), 313-317. (V. P. Soltan) **81g:52013** 52A55 (26A51, 90C99)
- Živetta, V. B.** On control with respect to deviation and perturbation. (Russian) *Dynamics of control systems* (Third All-Union Četaev Conf., Irkutsk, 1977) (Russian), pp. 127-135, 339, "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. (Authors' summary) **81g:93055** 93C15
- Živogljadov, V. P.** See **Data processing and adaptation in automated systems of control of technological processes**, **81c:93002** and **Optimization and adaptive control in large-scale systems**, **81j:93005**
- Ziza, O. A.** Summation of orthogonal series by (φ, λ) methods. (Russian) *Mat. Zametki* 25 (1979), no. 2, 177-197, 317. (D. P. Gupta) **81b:42091** 42C15
- Žitňavský, L. V.** Integrability and continuity of conjugate functions of several variables. (Russian. Georgian and English summaries) *Soobšč. Akad. Nauk Gruz. SSR* 97 (1980), no. 1, 17-20. (R. L. Cooke) **81g:42017** 42B05
- Convergence of multiple trigonometric Fourier series and their conjugate trigonometric series in the spaces L and C . (Russian. Georgian and English summaries) *Soobšč. Akad. Nauk Gruz. SSR* 97 (1980), no. 2, 277-279. (Włodzimierz Lesniak) **81m:42012** 42B05
- Summability by the Cesàro method of negative order of multiple orthogonal series. (Russian. Georgian and English summaries) *Soobšč. Akad. Nauk Gruz. SSR* 97 (1980), no. 3, 533-535. (S. Baron) **81j:40014** 40G05 (40B05, 42C15)
- Zlaker, V.** (with John, K.) On extension of rotund norms. II. *Pacific J. Math.* 82 (1979), no. 2, 451-455. (Roy M. Rakestraw) **81b:46009** 46B05
- Zjablov, V. V.** (with Zinov'ev, V. A.) Decoding of nonlinear generalized concatenated codes. (Russian) *Problemy Peredachi Informacii* 14 (1978), no. 2, 46-52. (Authors' summary) **81b:94024** 94B35
- (with Zinov'ev, V. A.) Correction of error bursts and independent errors using generalized cascade codes. *Problemy Peredachi Informacii* 15 (1979), no. 2, 58-70. (Russian); translated as *Problems Inform. Transmission* 15 (1979), no. 2, 125-134. (Vera Pless) **81g:94035** 94B20 (94B35)
- (with Bassalygo, L. A.; Zinov'ev, V. A.; Pinsker, M. S.; Poltyrev, G. Š.) Bounds for codes with unequal protection of two sets of messages. *Problemy Peredachi Informacii* 15 (1979), no. 3, 40-49. (Russian); translated as *Problems Inform. Transmission* 15 (1979), no. 3, 190-197 (1980). (Authors' summary) **81c:94016** 94A24 (94B05)
- (with Zinov'ev, V. A.) Codes with unequal protection of information symbols. *Problemy Peredachi Informacii* 15 (1979), no. 3, 50-60. (Russian); translated as *Problems Inform. Transmission* 15 (1979), no. 3, 197-205 (1980). (Authors' summary) **81h:94023** 94B20 (94A24)
- Zjankone, S. P.** See **Zjankone, S.**
- Zjawn-Winkowska, Zofia** (with Grén, Jerzy) Numerical problems of Bayesian estimation of exponential econometric models. (Polish. Russian and English summaries) *Przeglad Statyst.* 26 (1979), no. 1-2, 49-65 (1980). (Authors' summary) **81b:62149** 62P20
- Zjukov, M. E.** Distribution of certain functionals for a random walk whose jumps are bounded below. (Russian) *Ukrain. Mat. Ž.* 31 (1979), no. 5, 543-547, 620. (M. S. Sgibnev) **81j:60082** 60J15
- (with Ešov, I. I.) Distribution of certain functionals for a random walk with jumps bounded from below and absorbing boundary. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* 1980, no. 8, 15-17, 86. (Pierre Crépeau) **81m:60129** 60J15
- Zjuzin, Ju. V.** An example of an algebraic curve in C^2 , such that its complement has fundamental group with elements of finite order. (Russian) *Funkcional. Anal. i Prilozh.* 14 (1980), no. 1, 57. (Anatoly Libgober) **81d:57001** 57M05 (14H20, 14H30)
- Zjuzin-Zimčenko, A. A.** Measures of criticality in a network model in the case of limited resources. (Russian) *Kibernet. i Vyčisl. Tehn. No. 44* (1979), 66-78, 115. (Authors' summary) **81d:90065** 90B35 (90B15)
- Zjur'kov, V. M.** Limit sets of mappings of class BL^p and bicompact Royden extensions.

- (Russian) Questions in the metric theory of mappings and its application (Proc. Fifth Colloq. Quasiconformal Mappings, Generalizations Appl., Donetsk, 1976) (Russian), pp. 36-45, 182, "Naukova Dumka", Kiev, 1978. (I. A. Volynec) **81b:30031** 30C60 (31B15)
- Zlamal, Miloš** (with Lesaint, P.) Convergence of the nonconforming Wilson element for arbitrary quadrilateral meshes. *Numer. Math.* **36** (1980/81), no. 1, 33-52. (J. P. Babary) **81a:65171** 65N30
- A finite element solution of the nonlinear heat equation. (French summary) *RAIRO Anal. Numér.* **14** (1980), no. 2, 203-216. (A. O. Garder) **81f:65089** 65N30
- Zlatev, I. S.** Quasiprobability distributions in quantum mechanics and quantity-operators correspondences. *C. R. Acad. Bulgare Sci.* **31** (1978), no. 12, 1549-1552. (Tuan W. Chen) **81b:81006** 81C20
- Zlatev, Zahari** (with Thomsen, Per Grove) Two-parameter families of predictor-corrector methods for the solution of ordinary differential equations. *BIT* **19** (1979), no. 4, 503-517. (E. L. Albassy) **81f:65064** 65L05
- Zlatev, V.** (with Horvatic, B.) Perturbation expansion for the asymmetric Anderson Hamiltonian. (German summary) *Phys. Status Solidi (B)* **99** (1980), no. 1, 251-266. (Authors' summary) **81c:82052** 82A55
- Zlata, A. N.** Some theorems on expansion in homogeneous solutions for a cylinder. (Russian. Armenian and English summaries) *Izv. Akad. Nauk Armjan. SSR Ser. Meh.* **32** (1979), no. 5, 16-24, 77. (A. S. Silbergleit) **81h:35003** 35C10 (73C99)
- Zlatev, Pavel** A characterization of some Boolean powers. *Arch. Math. (Basel)* **33** (1979/80), no. 2, 133-143. (S. Comer) **81m:08004** 08A05 (03C05)
- Zlupko, P. P.** Some projection-iteration methods for the approximation construction of implicit functions. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A* **No. 12** (1979), 979-981, 1068. (Janusz Mika) **81g:65076** 65J10 (47H15, 58C15)
- Zlobec, S.** (with Ben-Israel, Adi) Duality in convex programming: a linearization approach. (German and Russian summaries) *Math. Operationsforsch. Statist. Ser. Optim.* **10** (1979), no. 2, 171-178. (Carl G. Looney) **81f:90085** 90C25
- Zlotkiewicz, Elżbieta** (with Lewandowski, Zdzisław; Libera, Richard) Values assumed by Gelfer functions. (Polish and Russian summaries) *Ann. Univ. Mariae Curie-Skłodowska Sect. A* **31** (1977), 75-84 (1979). (James A. Hummel) **81c:30023** 30C70 (30C45)
- Zlotnik, A. A.** Estimate of the rate of convergence in $V_2(Q_7)$ of projection-difference schemes for parabolic equations. (Russian) *Vestnik Moskov. Univ. Ser. VY Vysl. Mat. Kibernet.* **1980**, no. 1, 27-35, 72. (M. Zlamal) **81c:65101** 65N30
- On the rate of convergence of the projection-difference scheme with a splitting operator for parabolic equations. (Russian) *Ž. Vychisl. Mat. i Mat. Fiz.* **20** (1980), no. 2, 422-432, 551. (E. Schechter) **81k:65111** 65N05 (65N10)
- Zlotov, A. V.** A combinatorial algorithm for the construction of a network with a discontinuous cost function. (Russian) *Ekonom. i Mat. Metody* **14** (1978), no. 4, 783-787. (József Grabowski) **81f:90049** 90B10
- Zlotnik, N. L.** Uniform convergence of parabolic and cubic splines. (Russian) *The theory of the approximation of functions* (Proc. Internat. Conf., Kahuga, 1975) (Russian), pp. 188-190, "Nauka", Moscow, 1977. (Gheorghe Micula) **81b:41029** 41A15
- Zlotnik, T. S.** (with Reppina, L. G.) On the theory of convergence for infinite numerical series. (Russian) *Ukrain. Mat. Ž.* **31** (1979), no. 2, 182-186, 223. (M. Tomić) **81b:40004** 40A05
- Zlotnik, V. A.** (with Gud'z, L. A.) Some classes of univalent functions in the disc $|z| < 1$ and in the domain $|z| > 1$. (Russian) *Mathematical analysis and probability theory* (Russian), pp. 59-63, 210, "Naukova Dumka", Kiev, 1978. (D. M. Campbell) **81b:30025** 30C45
- (with Korobkova, I. K.) The order of starlikeness of a class of α -convex functions for $\alpha=2$. (Russian) *Mathematical analysis and probability theory* (Russian), pp. 63-66, 211, "Naukova Dumka", Kiev, 1978. (Olga Beresiewicz-Rajca) **81b:30027** 30C45
- (with Jakubenko, O. A.) A generalization of the Mocanu-Reade theorem on the boundary of α -convexity of a class of star functions. (Russian) *Mathematical analysis and probability theory* (Russian), pp. 70-74, 211, "Naukova Dumka", Kiev, 1978. (Olga Beresiewicz-Rajca) **81b:30026** 30C45
- (with Pohilevič, V. O.) α -convex functions for $\alpha < 0$. (Russian) *Ukrain. Mat. Ž.* **31** (1979), no. 4, 431-433, 478. (Olga Beresiewicz-Rajca) **81c:30026** 30C45
- Zlotnik, E. M.** The structure of finite groups with uniquely generated normal subgroups. (Russian) *Problems of group theory and homological algebra*, No. 1 (Russian), pp. 59-71, *Jaroslavl. Gos. Univ., Jaroslavl*, 1977. (Ja. G. Berković) **81c:20010** 20D25
- Finite groups having an irreducible complex character with a class of zeros. (Russian) *Dokl. Akad. Nauk SSSR* **247** (1979), no. 4, 788-791. (Gerhard Pazderski) **81g:20020** 20C15
- Zlotnik, Roman** (with Musiel, Marek) Estimation for some classes of Gaussian Markov processes. *Mathematical statistics and probability theory* (Proc. Sixth Internat. Conf., Włsa, 1978), pp. 318-329, *Lecture Notes in Statist.*, 2, Springer, New York, 1980. (Steffen Lauritzen) **81j:62171a** 62M05
- (with Musiel, Marek) Estimation of regression parameters of Gaussian Markov processes. *Mathematical statistics and probability theory* (Proc. Sixth Internat. Conf., Włsa, 1978), pp. 330-341, *Lecture Notes in Statist.*, 2, Springer, New York, 1980. (Steffen Lauritzen) **81j:62171b** 62M05
- A characterization of best linear unbiased estimators in the general linear model. *Mathematical statistics and probability theory* (Proc. Sixth Internat. Conf., Włsa, 1978), pp. 365-373, *Lecture Notes in Statist.*, 2, Springer, New York, 1980. (Lubomir Kubáček) **81j:62132** 62J05 (62F10)
- Zlotnik, S. V.** A geometric criterion of strong linear convexity. (Russian) *Funkcional. Anal. i Priložen.* **13** (1979), no. 3, 83-84. (Harold P. Boas) **81k:32015** 32E25 (32F99)
- Zlotnik, M.** The perturbed sine-Gordon equation. *Acta Phys. Polon. B* **10** (1979), no. 11, 951-958. (George Leibbrandt) **81c:81037** 81C05 (35Q20)
- Kinetic free-body propagator by exact inversion. *J. Phys. A* **13** (1980), no. 7, 2375-2381. (Author's summary) **81c:81177** 81Hxx
- Exact solution of the Schrödinger and Klein-Gordon equations for generalised Hulthén potentials. *J. Phys. A* **14** (1981), no. 2, 383-394. (Author's summary) **81c:81018** 81C05 (33A35, 35Q20)
- The harmonic quadrupole oscillator and its anharmonic multipole descendants. *Phys. Lett. A* **81** (1981), no. 4, 203-206. (Author's summary) **81m:81019** 81C05 (40A15)
- Za, Felipe** (with Alvarez, Hugo) Weak estimates for the parabolic Hardy-Littlewood maximal function through unbounded sets in \mathbb{R}^n . *Indiana Univ. Math. J.* **29** (1980), no. 4, 513-521. (J. Marshall Ash) **81k:42018** 42B25
- Zobel, Robert** Zum Begriff der Borelmeßbarkeit. *Nagoya Math. J.* **78** (1980), 57-63. (A. Appert) **81b:28006** 28A20
- Zobin, N. M.** Letter to the editors: "The noncoincidence of the spaces S^p and $S_q \cap S^p$ ($\alpha > 0, \beta > 1$)" [Funktional. Anal. i Priložen. **7** (1973), no. 1, 72-73; MR **47** #3963]. (Russian) *Funkcional. Anal. i Priložen.* **13** (1979), no. 4, 97. (O. John) **81a:46040** 46F05 (46E35)
- (with Zobina, V. G.) Interpolation in spaces of holomorphic functions. (Russian) *Teor. Funkcii Funkcional. Anal. i Priložen.* **No. 31** (1979), 55-56, 166. (Editors) **81b:32004** 32D99 (32E30, 46E35)
- Zobina, V. G.** Interpolation in spaces with given symmetries and uniqueness of sufficient collections. (Russian. Georgian and English summaries) *Soobšč. Akad. Nauk Gruz. SSR* **93** (1979), no. 2, 301-303. (Jóran Bergh) **81b:46005** 46M35
- Duality in interpolation of operators. (Russian. Georgian and English summaries) *Soobšč. Akad. Nauk Gruz. SSR* **95** (1979), no. 1, 45-48. (M. Z. Berkolaiko) **81j:46113** 46M35
- (with Zobin, N. M.) Interpolation in spaces of holomorphic functions. (Russian) *Teor. Funkcii Funkcional. Anal. i Priložen.* **No. 31** (1979), 55-56, 166. (Editors) **81b:32004** 32D99 (32E30, 46E35)
- Zobris, Albert L.** (with Manacher, Glenn K.) Neither the greedy nor the Delaunay triangulation of a planar point set approximates the optimal triangulation. *Inform. Process. Lett.* **9** (1979), no. 1, 31-34. (From the text) **81c:68049** 68C25
- Zogolev, E. A.** See Problems of numerical analysis and systems programming. **81j:65010**
- Zogova, T. B.** A quasigroup generated by a class of two-parameter families of two-dimensional planes in P_3 . (Russian) *Izv. Vysl. Učebn. Zaved. Matematika* **1980**, no. 2, 63-66. (M. A. Akivis) **81f:53009** 53A20 (53A60)
- Zohar, Shaul** ★Faster Fourier transformation: the algorithm of S. Winograd. JPL Publication **78**, 104. California Institute of Technology, Jet Propulsion Laboratory, Pasadena, Calif., 1979. vi+93 pp. (Editors) **81d:65075** 65T05 (42-04, 94A11)
- A prescription of Winograd's discrete Fourier transform algorithm. *IEEE Trans. Acoust. Speech Signal Process.* **27** (1979), no. 4, 409-421. (Author's summary) **81a:94011** 94A11 (65R10)
- Zollars, Richard L.** (with Krantz, William B.) Nonparallel flow effects on the stability of film flow down a right circular cone. *J. Fluid Mech.* **96** (1980), no. 3, 585-601. (Authors' summary) **81a:76028** 76E99
- Zoller, P.** (with Leubner, C.) Gauge invariant interpretation of multiphoton transition probabilities. *J. Phys. B* **13** (1980), no. 18, 3613-3617. (Authors' summary) **81c:81192** 81K05
- Zolotarev, V. M.** Ideal metrics in the problems of probability theory and mathematical statistics. *Austral. J. Statist.* **21** (1979), no. 3, 193-208. (David Pollard) **81c:6004a** 60B11
- Properties and relations of certain types of metrics. (Russian. English summary) *Studies in mathematical statistics*, 3. *Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* **87** (1979), 18-35, 206, 212. (V. J. Paulauskas) **81c:60006** 60B05 (60B10)
- Corrigenda: "Ideal metrics in the problems of probability theory and mathematical statistics". *Austral. J. Statist.* **22** (1980), no. 1, 97. (Editors) **81c:6004b** 60B11
- See also Lukacs, Eugene. **81c:60025**
- Zolotareva, S. Ju.** (with Efimov, A. V.) Multiplicative Fourier integral and its discrete analogues. (Russian. English summary) *Anal. Math.* **5** (1979), no. 3, 179-199. (W. R. Madych) **81j:42045** 42C10 (20C99, 43A25, 44A55, 94A11)
- Zolotarevskii, V. A.** Approximate solution of systems of singular integro-differential equations. (Russian) *Contemporary questions of applied mathematics and programming* (Russian), pp. 50-54, 167, "Štitska", Kishinev, 1979. (Author's summary) **81c:65125** 65R20
- (with Seičuk, V. N.) Solution of systems of nonlinear integral equations by the moment method. (Russian) *Izv. Vysl. Učebn. Zaved. Matematika* **1980**, no. 7, 79-82. (V. V. Ivanov) **81m:65204** 65R20 (45G05)
- Zolotuhin, V. F.** On the elimination of solutions of the Bellman-Johnson problem that are known to be nonoptimal. *Izv. Akad. Nauk SSSR Tehn. Kibernet.* **1979**, no. 1, 44-51, 219 (Russian); translated as *Eng. Cybernetics* **17** (1979), no. 1, 38-45 (1980). (Author's summary) **81a:90103** 90B35
- Zolotuhin, L. A.** (with Latyev, K. P.) Asymptotic representation of the average number of paired elements in the order statistics of a two-dimensional sample. (Russian. English summary) *Studies in statistical estimation theory*, II. *Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* **79** (1978), 4-10, 97, 99-101. (Sándor Csörgő) **81c:60045** 60F99 (62G30)
- Zolotuhin, V. F.** See Zolotuhin, V. F.
- Zoltek, Stanley M.** Nonnegative curvature operators: some nontrivial examples. *J. Differential Geom.* **14** (1979), no. 2, 303-315. (Francesco Mercuri) **81m:53037** 53B99 (15A75)
- A normal form for a special class of curvature operators. *Proc. Amer. Math. Soc.* **79** (1980), no. 4, 614-618. (S. I. Husain) **81f:53018** 53B20 (15A75)
- Zolters, Andris A.** (with Ross, G. Terry; Soland, Richard M.) The bounded interval generalized assignment model. *Naval Res. Logist. Quart.* **27** (1980), no. 4, 625-633. (Authors' summary) **81m:90063** 90B35
- le din' Zon See Le Din' Zon
- Zoppoli, R.** (with Casalino, G.; Davoli, F.) Optimal control of information structures. *Recent developments in variable structure systems, economics and biology* (Proc. US-Italy Sem., Taormina, 1977), pp. 93-117, *Lecture Notes in Econom. and Math. Systems*, 162, Springer, Berlin, 1978. (Y. C. Ho) **81j:90151** 90D35 (90B99, 94A15)
- Zorbas, John** Cluster properties for Coulomb scattering. *Rev. Math. Phys.* **16** (1979), no. 3, 409-419. (Author's summary) **81c:81112** 81F10
- Zurif, L. M.** (with Terebusko, I. I.) Application of the method of characteristic series to qualitative investigation of the dynamics of elastic pipelines. (Russian) *Mat. Metody i Fiz.-Mat. Polja* **No. 11** (1980), 115-117, 124. (Authors' summary) **81g:73094** 73K99
- Zerilescu, Dan** (with Săciu, Ion) ★Numere aleatoare. (Romanian) [Random numbers] Aplicații în economie, industrie și studii fenomenelor naturale. [Applications in economy, industry and the study of natural phenomena] With an English summary. Editura Academiei Republicii Socialiste România, Bucharest, 1978. 251 pp. (A. Spătaru)

- 81h:65012 65C10 (65C05, 65U05)
- Zorski, Henryk. See *Trends in applications of pure mathematics to mechanics*, 81a:73003
- Zorich, G. T. A rod and crack problem. (Russian) Singular integrals, integral equations and their applications. *Trudy Tbiliss. Mat. Inst. Razmadze Akad. Nauk Gruz. SSR* 61 (1979), 55-59. (M. Sokolowski) 81d:73091 73M05
- Zürcher, Helmut. Koatomare Moduln. *Math. Z.* 170 (1980), no. 3, 221-232. (T. S. Shores) 81g:16033 16A51 (13F05)
- Zou, Zhen Long (with Liu, Yu Fen) The Lorentz gauge field on the Riemannian space and its spherically symmetric static exact solutions. *Acta Phys. Polon. B* 10 (1979), no. 10, 893-899. (L. K. Patel) 81b:83003 83C20 (53B50)
- Zowe, Jochen (with Ben-Tal, Aharon; Teboulle, Marc) Second order necessary optimality conditions for semi-infinite programming problems. *Semi-infinite programming (Proc. Workshop, Bad Honnef, 1978)*, pp. 17-30. *Lecture Notes in Control and Information Sci.*, 15, Springer, Berlin, 1979. (V. F. Dem'janov) 81c:90072 90C30 (26B05)
- (with Maurer, Helmut) First and second order necessary and sufficient optimality conditions for infinite-dimensional programming problems. *Math. Programming* 16 (1979), no. 1, 98-110. (K. Swarp) 81c:90093 90C30 (49B50)
- Žukhrai, V. A. (with Višnevskii, V. M.; Žarkih, V. A.; Petuhova, N. V.) Analysis of algorithms for interfacing a large and small electronic computer in remotely operated queueing systems. I. *Avtomat. i Telemekh.* 1979, no. 3, 150-164. (Russian. English summary); translated as *Automat. Remote Control* 40 (1979), no. 3, part 2, 448-459. (D. C. McNickle) 81f:68051a 68C15 (60K25)
- (with Višnevskii, V. M.; Žarkih, V. A.; Petuhova, N. V.) Analysis of algorithms for interfacing a large and small electronic computer in remotely operated queueing systems. II. *Avtomat. i Telemekh.* 1979, no. 7, 156-165. (Russian. English summary); translated as *Automat. Remote Control* 40 (1979), no. 7, part 2, 1072-1079. (D. C. McNickle) 81f:68051b 68C15 (60K25)
- Zachlische, Hans-Ulrich (with Artzig, Jutta) Nichtnegative Supermartingale und Martingale. Eine Verallgemeinerung des Satzes von Girsanov. *Wiss. Z. Tech. Hochsch. Leuna-Merseburg* 21 (1979), no. 1, 42-50. (M. P. Erlöv) 81c:60064 60H05 (60C30, 60C44)
- Zahid, László (with Strátila, Šerban) ★Lectures on von Neumann algebras. Translated from the Romanian by Silviu Teleman. Revision of the 1975 original. *Editura Academiei, Bucharest; Abacus Press, Tunbridge Wells*, 1979. 478 pp. ISBN 0-85626-109-2 (E. Störmer) 81j:46089 46Lxx
- (with Găvruta, Ioana) A minimum modulus theorem and applications to ultradifferential operators. *Ark. Mat.* 17 (1979), no. 1, 153-166. (Olaf von Grudzinski) 81c:46030 46F10 (30C80)
- Žukhov, N. Ž. ★Одномерные упруго-пластические волны при сложном нагружении. (Russian) [One-dimensional elastoplastic waves in the case of complex loading] With an introduction by H. A. Rahmatulin. "Nauka" Kazah. SSR, Alma-Ata, 1979. 160 pp. (R. Kodnár) 81f:73014 73D35 (73E99)
- (with Erzanov, Ž. S.; Tleukenov, S. K.) On the study of cylindrical waves on a cross section with viscous friction. (Russian. Kazakh summary) *Izv. Akad. Nauk Kazah. SSR Ser. Fiz.-Mat.* 1980, no. 1, 32-37, 92. (Boris Pavlovich Belinskii and Alexander Alenicyan) 81h:73015 73D25 (45P05)
- Zuhayr, M. S. (with Yeh, J. J.) Photon statistics in multiphoton absorption and emission processes. *Phys. Rev. A* (3) 21 (1980), no. 5, 1624-1631. (Authors' summary) 81a:81132 81K05 (81G45)
- Zuhov, S. V. Singular optimal controls in systems of hyperbolic equations. (Russian) *Asymptotic methods of nonlinear mechanics (Russian)*, pp. 58-65, 195. *Akad. Nauk Ukrain. SSR, Inst. Mat., Kiev*, 1979. (Author's summary) 81f:49021 49B22 (35L55, 93C20)
- Application of asymptotic methods to optimal problems described by quasiperbolic equations. (Russian) *Akad. Nauk Ukrain. SSR Inst. Mat. Preprint No. 20* (1979), 20 pp. (Author's introduction) 81d:49016 49B22 (73K12)
- The maximum principle for a quasiperbolic equation. (Russian) *Ukrain. Mat. Ž.* 32 (1980), no. 3, 382-384. (From the text) 81c:49005 49A22 (35L99)
- Zuhov, V. M. (with Černý, G. G.) Boundary layer on a moving surface. Non-self-similar solutions. A translation of Nekotorye Voprosy Meh. Špion. Sred. 1978, 48-54. *Fluid Mech.—Soviet Res.* 8 (1979), no. 6, 50-57 (1980). (Authors' introduction) 81g:76040 76D10
- Zuhovko, V. V. Standard program algebras. (Russian. English summary) *Dokl. Akad. Nauk Ukrain. SSR Ser. A No. 10* (1979), 846-848, 881. (Author's summary) 81d:68017 68B05 (03B25)
- Zuber, E. K. (with Anderson, Bill D.) Convergence of generalized power series. *Mathematica (Cluj)* 20(43) (1978), no. 1, 93-96. (From the introduction) 81j:30012 30B99
- Zuber, J. B. (with Itzykson, C.) The planar approximation. II. *J. Math. Phys.* 21 (1980), no. 3, 411-421. (Authors' summary) 81a:81068 81E99 (81G05)
- Zuhov, A. M. Inequalities for restricted transition probabilities and their applications. (Russian) *Mat. Sb. (N.S.)* 109(151) (1979), no. 4, 491-532, 647. (D. A. Darling) 81a:60074 60J10
- A probabilistic proof of a geometric theorem. (Russian) *Mat. Zametki* 26 (1979), no. 6, 957-959, 974. (W. J. Firey) 81m:26007 26B15 (52A40)
- Zuhov, L. M. Universal quasistatic deformations for incompressible isotropic solids with memory. *Izv. Akad. Nauk SSSR Meh. Toed. Tela* 14 (1979), no. 3, 57-62. (Russian); translated as *Mech. Solids* 14 (1979), no. 3, 50-55. (From the introduction) 81c:73013 73C50
- Zuhov, S. V. Stability of periodic modes of relay systems with hysteresis. (Russian) *Mat. Fiz. No. 25* (1979), 30-35, 118. (Author's summary) 81f:93024 93D05 (93D20)
- Zuhov, V. I. On a question of the optimal profile of an air foil in a flow of an ideal incompressible fluid. (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 20 (1980), no. 1, 241-245, 263. (Author's summary) 81b:76007 76B05
- Zuhov, V. M. On the theory of a nonclosed generalized Green matrix. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1979, no. 1, 21-26. (M. Švec) 81d:34023 34B27
- gandini Zucco, Andrea See Gandini Zucco, Andrea
- Zuzenka, A. A. (with Nesterov, V. S.; Andrijušenko, V. K.; Dobrjanskii, V. A.) ★Математическое моделирование при оптимизации селекционно-генетических исследований. (Russian) [Mathematical simulation when optimizing breeding-genetics investigations] With an English summary. "Štince", Kishinev, 1980. 106 pp. (Publisher's description) 81h:92012 92A10
- Zucker, Steven M. An example of L_2 cohomology and Hodge theory for noncompact manifolds. *Partial differential equations and geometry (Proc. Conf., Park City, Utah, 1977)*, pp. 313-319. *Lecture Notes in Pure and Appl. Math.*, 48, Dekker, New York, 1979. (Aroldo Kaplan) 81j:58004 58A14 (32L99)
- Hodge theory with degenerating coefficients. L_2 cohomology in the Poincaré metric. *Ann. of Math. (2)* 109 (1979), no. 3, 415-476. (Philip Griffiths) 81a:14002 14C30 (14D05, 14D20, 32G20)
- (with Cox, David A.) Intersection numbers of sections of elliptic surfaces. *Invent. Math.* 53 (1979), no. 1, 1-44. (R. Mandelbaum) 81c:14023 14J25 (14D99, 14G25)
- Zuckerman, Dror A diffusion model for the control of a multipurpose reservoir system. *Naval Res. Logist. Quart.* 26 (1979), no. 4, 579-586. (Stanley R. Pliska) 81h:93028 93C20 (49A36)
- A note on the: "Optimal replacement time of damaged devices" [J. Appl. Probability 15 (1978), no. 1, 153-161; MR 57 #5045] by M. Abdel Hamed and I. N. Shimi. *Naval Res. Logist. Quart.* 27 (1980), no. 3, 521-524. (H. Taylor) 81j:90089 90B25
- Optimal replacement under additive damage and self-restoration. (French summary) *RAIRO Rech. Opér.* 14 (1980), no. 2, 115-127. (S. M. Pandit) 81h:90069 90B25 (60K20)
- (with Tapiero, Charles S.) Optimum claims truncation of an insurance firm with a compound Poisson claim process: a diffusion approximation. (French summary) *RAIRO Rech. Opér.* 14 (1980), no. 2, 129-136. (Jean Lemaire) 81f:62154 62P05 (90A09)
- (with Tapiero, Charles S.) Random vehicle dispatching with options and optimal fleet size. *Transportation Res. Part B* 14 (1980), no. 4, 361-368. (Peter Purdue) 81m:90064 90B35
- Zuckerman, Gregg J. Continuous cohomology and unitary representations of real reductive groups. *Ann. of Math. (2)* 107 (1978), no. 3, 495-516. (D. Miličević) 81c:22025 22E45 (22E41)
- Coherent translation of characters of semisimple Lie groups. *Proceedings of the International Congress of Mathematicians (Helsinki, 1978)*, pp. 721-724. *Acad. Sci. Fennica, Helsinki*, 1980. (A. U. Klimyk) 81f:22025 22E46
- Zuckerman, Herbert S. (with Niven, Ivan) ★An introduction to the theory of numbers. Fourth edition. *John Wiley & Sons, New York-Chichester-Brisbane*, 1980. xii+335 pp. ISBN 0-471-02851-7 (J. B. Roberts) 81j:10001 10-01
- Zuckermann, M. J. (with Pink, D. A.; Georgallias, A.) Phase transition and critical indices of a phospholipid bilayer model. *Z. Phys. B* 40 (1980/81), no. 1-2, 103-110. (Authors' summary) 81k:92016 92A09 (82A25)
- Zuev, L. A. Control of partially observable systems in the presence of small random perturbations. (Russian) *Theory of random processes, No. 7 (Russian)*, pp. 27-37, 130. "Naukova Dumka", Kiev, 1979. (S. M. Hrisanov) 81a:93114 93E20 (93B05)
- Optimization of a class of stochastic systems with small random perturbations depending on the control. (Russian) *Theory of random processes, No. 7 (Russian)*, pp. 37-44, 130. "Naukova Dumka", Kiev, 1979. (M. V. Kartalov) 81g:93135 93E20 (93E05)
- e-optimal control of a stochastic linear regulator. (Russian) *Theory of random processes, No. 8 (Russian)*, pp. 59-65, 125. "Naukova Dumka", Kiev, 1980. (H.-J. Engelbert) 81j:93067 93E20
- Programmed control of certain partially observable stochastic systems. (Russian) *Theory of random processes, No. 8 (Russian)*, pp. 65-73, 125. "Naukova Dumka", Kiev, 1980. (H.-J. Engelbert) 81j:93068 93E20
- Žuhovickii, E. M. (with Geršuni, G. Z.; Ljubimov, D. V.) Stability of stationary convective flow of a mixture in a vertical porous layer. *Izv. Akad. Nauk SSSR Meh. Židk. Gaza* 1980, no. 1, 150-157. (Russian); translated as *Fluid Dynamics* 15 (1980), no. 1, 122-127. (From the summary) 81f:76020 76E15 (76S05)
- nguen hik Zui See Nguyen Hik Zui
- do Zui Čin' See Do Zui Čin'
- ha Zui Hoai See Ha Zui Hoai
- ngo Zui Kan See Ngo Zui Kan
- Zuhov, Ju. G. (with Muhin, E. G.) Possibilities of dialogue solution of the problem of analysis of the reliability of complex systems. (Russian) *Stochastic optimization models. Akad. Nauk Ukrain. SSR Inst. Kibernet. Preprint* 1979, no. 13, 20-29, 54. (Authors' summary) 81d:90052 90B25
- Žuhov, V. V. (with Lokai, V. I.) Solution of the steady-state heat conduction problem by a probability method. *Izv. Vysš. Učebn. Zaved. Aviacion. Tehn.* 1979, no. 3, 33-38. (Russian); translated as *Soviet Aeronaut.* 22 (1979), no. 3, 25-29. (Authors' summary) 81f:80008 80A20
- nguen Zui Tien See Nguyen Zui Tien
- Žuk, K. D. (with Vasil'ev, V. P.) On the determination of controllability for one of the subclasses of logical-dynamical control systems. (Russian. English summary) *Kibernetika (Kiev)* 1978, no. 2, 78-82. 81g:93015 93B05
- Žuk, V. I. (with Ryžov, O. S.) Internal waves in the boundary layer with self-induced pressure. (French summary) *J. Mécanique* 19 (1980), no. 3, 561-580. (Authors' summary) 81f:76061 76J99 (76D10)
- Žuk, V. V. Some sharp inequalities between best approximations of periodic functions and moduli of continuity of higher order. (Russian. English summary) *Vestnik Leningrad. Univ. Mat. Meh. Astronom.* 1978, vyp. 4, 35-42, 150. (N. T. Anisimova) 81c:41042 41A50 (41A17)
- (with Natanson, G. I.) On the question of approximation in an integral metric of functions specified on an interval. (Russian. English summary) *Vestnik Leningrad. Univ. Mat. Meh. Astronom.* 1979, vyp. 3, 16-26, 121. (Z. Rubinstein) 81d:41004 41A10 (41A17)
- (with Natanson, G. I.) Constants in direct theorems of approximation theory. (Russian. English summary) *Vestnik Leningrad. Univ. Mat. Meh. Astronom.* 1980, vyp. 2, 5-9, 123. (A. A. Ligon) 81c:42004 42A10 (41A44, 42A50)
- Žukov, A. V. On the averaged equations of the dynamics of plane gravitating gas disks. (Russian) *Dokl. Akad. Nauk SSSR* 252 (1980), no. 4, 821-824. (A. S. Baranov) 81j:85002 85A15
- Žukov, I. A. (with Nagornii, L. Ja.) Solution of large systems of nonlinear equations by the method of decomposition using the matrix expansion method. (Russian) *Voprosy Vyčisl.*

- i Prikl. Mat. (Tashkent) No. 58 (1979), 39-45, 120. (G. D. Mal'trovskii) 81h:65051*
65H10
- Zakhar, S. A.** Time complexity in the operation of a two-way parser. *Kibernetika (Kiev) 1979, no. 4, 105-111 (Russian); translated as Cybernetics 15 (1979), no. 4, 552-558 (1980). (From the text) 81d:68118* 68F25 (68C25)
- Zakhar, G. S.** Asymptotic representation of the solution of a differential equation with a large parameter in a Banach space in the case of a finite system of multiple eigenvalues. (Russian) *Approximate methods for investigating differential equations and their applications, No. 4 (Russian), pp. 31-40, 133-134, Kulbysev. Gos. Univ., Kiybyshev, 1978. (Snezhana Hristova) 81k:34044* 34E05 (34G10)
- Zakova, N. I.** The Carleman problem for a polygon. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika 1979, no. 7, 31-40. (N. K. Karapet'yan) 81m:30040* 30E25
(with Šapiro, Ja. L.; Igošin, V. A.) Fiberings on some classes of Riemannian manifolds. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika 1979, no. 7, 93-96. (D. I. Papuc) 81k:53042* 53C20
Markuševič's problem for an annulus. (Russian) *Vestnik Beloruss. Gos. Univ. Ser. I 1979, no. 3, 72-74, 94. (Zbigniew Binderman) 81j:30072* 30E25
- Zakovskii, E. L.** The nonentropy principle and regularization of linear systems. (Russian) *Dokl. Akad. Nauk SSSR 246 (1979), no. 5, 1041-1045. (O. A. Glonti) 81c:94015* 94A17
- Zakovskii, V. I.** (with Stojanov, N. V.) A coalition three-person differential game. (Russian. Bulgarian and English summaries) *Godišnik Visš. Učebn. Zaved. Priložna Mat. 13 (1977), no. 4, 29-52 (1978). (E. G. Al'breht) 81j:90136* 90D25
(with Tynjanskii, N. T.) Differential games with a nonzero sum (a cooperative variant). (Russian) *Mathematical analysis, Vol. 17 (Russian), pp. 3-112, 272, Akad. Nauk SSSR, Vsesojuz. Inst. Nauch. i Tehn. Informacii, Moscow, 1979. (J. M. Skowroński) 81g:90109* 90D25 (90D12)
(with Molostvov, V. S.; Stojanov, N. V.) A coalition differential game of three persons. (Russian) *Problems of stability of motion, analytical mechanics and control of motion (Third All-Union Conference, Irkutsk, 1977) (Russian), pp. 218-226, 325, "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. (W. H. Ruckle) 81k:90110* 90D25
- Zakowski, Tomasz** (with Jackowski, Stefan) P-free linear representations of P-solvable finite groups. *Algebraic topology, Aarhus 1978 (Proc. Sympos., Univ. Aarhus, Aarhus, 1978), pp. 458-464, Lecture Notes in Math., 763, Springer, Berlin, 1979. (P. Fong) 81g:20017* 20C15 (20D10)
- Zalchauer, W.** (with Hackl, H.; Wacker, H.) Aufwandsoptimale Schrittweitensteuerung bei Einbettungsmethoden. *Vorträge der Wissenschaftlichen Jahrestagung der Gesellschaft für Angewandte Mathematik und Mechanik, Teil I (Brussels, 1978). Z. Angew. Math. Mech. 59 (1979), no. 3, T62-T63. (From the introduction) 81k:65058* 65H05
(with Hackl, H.; Wacker, H.) Aufwandsoptimale Schrittweitensteuerung bei Einbettungsmethoden. *Numerical methods of approximation theory, Vol. 5 (Conf., Math. Res. Inst., Oberwolfach, 1979), pp. 125-143, Internat. Ser. Numer. Math., 52, Birkhäuser, Basel, 1980. (H. Schwetlick) 81k:65051* 65H10
- Zamachev, L.** Construction of the solution of an initial-boundary value problem for a system with the aid of a selection operator. (Russian) *Vestnik Akad. Nauk Kazah. SSR 1978, no. 11, 72-75. (A. M. Il'in) 81j:35023* 35C05
(with Kulekeev, K. D.) Fundamental solution of the operator $\partial/\partial t - \Delta$ and its application to the solution of conjugacy problems for a system. (Russian) *Theoretical and applied problems of mathematics and mechanics (Russian), pp. 88-94, 241, "Nauka" Kazah. SSR, Alma-Ata, 1979. (A. P. Soldatov) 81k:35067* 35K45 (35K50)
- Zamino, B.** Supergravity. (French summary) *Problèmes théoriques liés aux nouvelles particules (Montpellier, 1977), pp. 371-388, Colloques Nat. CNRS, 937, CNRS, Paris, 1978. (Kenneth Dunn) 81g:83064* 83E99 (81G20)
- Zand, Joseph D.** (with Thomas, John D.) A note on the theory of immanants. *Rend. Circ. Mat. Palermo (2) 28 (1979), no. 1, 143-150. (D. Livingstone) 81i:15008* 15A15 (20C30, 65F99)
(with Wallace, G. L.) Electromagnetic theory in general relativity. VI. The Poynting vector and zilch tensor. *Tensor (N.S.) 33 (1979), no. 3, 322-328. (P. C. Vaidya) 81j:83027* 83C50
(with Wilkes, J. M.) Maxwell's equations and Méray's theorem. *Tensor (N.S.) 34 (1980), no. 1, 58-62. (Gérard A. Maugin) 81e:78017* 78A25 (53B50, 83C50)
- Zanegg, Alfred** Entwicklung des additiven Riemann'schen Integrals bzw. dessen Inversen nach iterierten Produktintegralen. Eine Umkehrung zur Peanoreihenentwicklung des multiplikativen Riemann'schen Integrals. *Ber. Math.-Statist. Sect. Forsch. Graz No. 108 (1979), ii+29 pp. (A. Revuz) 81d:26003* 26A42 (46H99)
- Can van Zang** See **Can Van Zang**
- du' Zang** See **Din' Zang**
- huang din' Zang** See **Hoang Din' Zang**
- Zaparov, T. M.** A uniform local theorem. (Russian) *Limit theorems, random processes and their applications (Russian), pp. 105-114, 232-233, "Fan", Tashkent, 1979. (J. Galambos) 81j:10025* 10B15 (10K99)
- Zapalk, B. M.** Invariant derivation of the Einstein-Maxwell equations via the method of differential forms. (Russian) *Dokl. Akad. Nauk UzSSR 1980, no. 4, 37-39. (I. Vaisman) 81m:83034* 83C50
- Zaruev, Ju. T.** Properties of an estimate for the mean number of direct descendants of a particle in a branching process with immigration. (Russian) *Random processes and mathematical statistics (Russian), pp. 48-55, 186, "Fan", Tashkent, 1978. (E. Seneta) 81c:60092* 60J80
- Zaraviev, I. V.** Univalent functions and Teichmüller spaces. (Russian) *Dokl. Akad. Nauk SSSR 250 (1980), no. 5, 1047-1050. (B. N. Apanasov) 81b:30085* 30F35
- Zaravka, Lucyna** (with Marcinkiewicz, Helena) Some remarks on Galois correspondence. *Demonstratio Math. 13 (1980), no. 2, 421-425. (Editors) 81m:06001* 08A02 (04A05)
- Zarubko, I. G.** Spectral density estimates obtained by a time shift. (Russian) *Dokl. Akad. Nauk SSSR 246 (1979), no. 4, 801-805. (M. A. Mirzamedov) 81c:62106* 62M15
(with Truf, N. N.) An estimate of the spectral densities of stationary processes. (Russian. Lithuanian and English summaries) *Litovsk. Mat. Sb. 19 (1979), no. 1, 67-85, 230. (M. A. Mirzamedov) 81c:62107* 62M15
(with Isakova, G. A.) Gaussian smoothing of statistics for the spectral density of a homogeneous random field. (Russian. English summary) *Vesci Akad. Nauk BSSR Ser. Fiz.-Mat. Nauk 1980, no. 2, 48-54, 141. (A. I. Ponomarenko) 81m:62176* 62M15 (60G60)
- Zurek, W. H.** Stochastic evolution of Schwarzschild black hole in a radiation heat bath. *Phys. Lett. A 77 (1980), no. 6, 399-403. (Author's summary) 81m:83029* 83C45 (83C15)
- Zurek-Eigenes, Maria** Sur une définition de remplissage de l'équation de translation. *Wyż. Szkoła Ped. Krakow. Rocznik Nauk.-Dydakt. Prace Mat. No. 9 (1979), 191-193. (Z. Mosznar) 81d:39006* 39B50 (08A99)
- Žurba, V. V.** (with Čeremisin, F. G.) Recent advances in the numerical solution of the Boltzmann equation. *Information processing 80 (Proc. IFIP Congr., Tokyo/Melbourne, 1980), pp. 735-740, IFIP Congress Ser., 8, North-Holland, Amsterdam, 1980. (See 81i:68009)* 62A40 (65P05, 76P05)
- Zuse, Konrad** Some remarks on the history of computing in Germany. *A history of computing in the twentieth century, pp. 611-627, Academic Press, New York, 1980. (See 81i:68002)* 68-03 (01A65)
Petri-nets from the engineer's viewpoint. *Net theory and applications (Proc. Adv. Course General Net Theory Processes Systems, Hamburg, 1979), pp. 441-479, Lecture Notes in Comput. Sci., 84, Springer, Berlin, 1980. (Bolesław Mikolajczak) 81j:68073* 68D90 (68B20, 94C99)
See also **Czaderna, Karl-Heinz** 81f:68003
- Zusman, L. D.** Outer-sphere electron transfer in polar solvents. *Chem. Phys. 49 (1980), no. 2, 295-304. (Author's summary) 81g:82060* 82A50
- Zvára, Karel** On exact confidence regions for linear regression functions. (German and Russian summaries) *Math. Operationsforsch. Statist. Ser. Statist. 10 (1979), no. 1, 55-62. (V. K. Srivastava) 81a:62067* 62J05 (62F25)
- Zvengrowski, Peter** Iterated absolute differences. *Math. Mag. 52 (1979), no. 1, 36-40. (R. N. Mohapatra) 81c:40001* 40A05 (13F20)
- (with Shastri, Anant R.; Williams, Jeffrey George) Kinks in general relativity. *Internat. J. Theoret. Phys. 19 (1980), no. 1, 1-23. (George S. Whiston) 81k:83035* 83C99
(with Gilbert, Shirley) S¹-invariant homotopy of spheres. *Osaka J. Math. 17 (1980), no. 3, 603-617. (Shichirō Oka) 81k:55022* 55Q52 (55Q45)
- Zverev, V. Ju.** The principle of complexity in production-type hierarchical structures. (Russian) *Avtomat. Upravl. i Vychisl. Tekhnika No. 12 (1978), 169-194, 294-295. (Jerzy Jaroń) 81e:90098* 90C31 (93A13)
- Zviróv, E. I.** (with Akbarov, R.) The Riemann problem for piecewise-meromorphic functions with given principal parts on Riemann surfaces. (Russian) *Vestnik Beloruss. Gos. Univ. Ser. I 1979, no. 1, 46-49, 86. (V. B. Dybin) 81k:30046* 30E25
- Zvjagina, R. A.** (with Bulavskii, V. A.) Transformation of the multiplicative form of a matrix with hierarchical block structure. (Russian) *Optimizacija No. 22(39) (1978), 53-68, 155. (F. Szidarovszky) 81c:90054* 90C08
Systems of linear equations with hierarchical symmetric block structure of matrices. (Russian) *Optimizacija No. 22(39) (1978), 69-82, 155. (F. Szidarovszky) 81d:65014* 65F05
- Zvonilov, V. I.** Strengthened Petrovskii and Arnol'd inequalities for curves of odd degree. (Russian) *Funkcional. Anal. i Priložen. 13 (1979), no. 4, 31-39, 96. (V. M. Harlamov) 81d:14018* 14H45 (14G30, 14H99)
- Zwart, Ph. B.** (with Boothby, W. M.) On compact, homogeneous symplectic manifolds. (French summary) *Ann. Inst. Fourier (Grenoble) 30 (1980), no. 1, vi-vii, 129-157. (O. Kowalski) 81g:53040* 53C30 (53C15)
- Zweerus, J. R.** (with van der Sluis, A.) An appraisal of some methods for computing Cauchy principal values of integrals. *Numerische Integration (Tagung, Math. Forschungsinst., Oberwolfach, 1978), pp. 264-287, Internat. Ser. Numer. Math., 45, Birkhäuser, Basel, 1979. (Authors' summary) 81i:65023* 65D30
- van Zwet, W. R.** (with Oosterhoff, J.) A note on contiguity and Hellinger distance. *Contributions to statistics, pp. 157-166, Reidel, Dordrecht, 1979. (A. Spätaru) 81m:60037* 60F05 (62E20, 62F05)
The Edgeworth expansion for linear combinations of uniform order statistics. *Proceedings of the Second Prague Symposium on Asymptotic Statistics (Hradec Králové, 1978), pp. 93-101, North-Holland, Amsterdam, 1979. (S. Panchapakesan) 81g:62041* 62E20 (62G30)
(with Bickel, P. J.) On a theorem of Hoeffding. *Asymptotic theory of statistical tests and estimation (Proc. Adv. Internat. Sympos., Univ. North Carolina, Chapel Hill, N.C., 1979), pp. 307-324, Academic Press, New York, 1980. (Yosef Rinott) 81f:60026* 60E15 (62E15)
A strong law for linear functions of order statistics. *Ann. Probab. 8 (1980), no. 5, 986-990. (Jon A. Wellner) 81j:60043* 60F15 (62G30)
- Zwick, Walter** The relaxation method for solving balance equations. (Russian) *Seminar on Numerical Methods for Solving Balance Equations (Berlin, 1980) (Russian), pp. 150-164, Rep. 1980, 5, Akad. Wiss. DDR, Berlin, 1980. (See 81j:65013)* 76D99 (65N99)
- Zwonek, Malgorzata** (with Serafin, Stanisław) Some remarks on congruences in multiplicative systems. *Wyż. Szkoła Ped. Krakow. Rocznik Nauk.-Dydakt. Prace Mat. No. 9 (1979), 147-158. (G. Čupona) 81g:20104* 20L05
- Zyablov, V. V.** See **Zjablov, V. V.**
- Zyckowski, M.** (with Leipholz, H. H. E.; Huseyin, K.) ★Stability of elastic structures. Edited by Leipholz. CISM Courses and Lectures, 238. Springer-Verlag, Vienna, 1978. vii+291 pp. ISBN 3-211-81473-6 (Hilmi Demiryay) 81e:73001 73-02
- Zygmunt, Jan** (with Hawranek, Jacek) A theorem on the degree of complexity of some sentential logics. *Polish Acad. Sci. Inst. Philos. Sociol. Bull. Sect. Logic 9 (1980), no. 2, 67-70. (Editors) 81k:03062* 03B99
- Zykov, A. A.** Some consequences of the assumption of the falsity of Hadwiger's conjecture. (Russian) *Contemporary questions of applied mathematics and programming (Russian), pp. 55-61, 167-168, "Stinca", Kishinev, 1979. (W. J. Firey) 81e:05074* 05C15
- Zylberberg, A.** (with Henry, C.) Planning algorithms to deal with increasing returns. *Rev. Econom. Stud. 45 (1978), no. 1, 67-75. (Authors' introduction) 81f:90004* 90A05 (90A11)

KEY INDEX

- Aachen** ★Theoretical computer science. Held at Aachen, 1979. 4th GI (Gesellschaft für Informatik) Conference. Edited by Klaus Weihrauch. Lecture Notes in Computer Science, 67. Springer-Verlag, Berlin-New York, 1979. vii + 324 pp. ISBN 3-540-09118-1 (Editors) 81i:60013 68-06
- Aarhus** ★Algebraic topology, Aarhus 1978. Proceedings of a Symposium held at the University of Aarhus, Aarhus, August 7-12, 1978. Edited by Johan Louis Dupont and Ib Henning Madsen. Lecture Notes in Mathematics, 763. Springer-Verlag, Berlin-New York, 1979. vi + 695 pp. ISBN 3-540-09721-X (Editors) 81i:55001 55-06 (18F25, 57-06)
- ★Abstracts. The 18th Scandinavian Congress of Mathematicians. Held in Aarhus, August 18-22, 1980. Various Publications Series, 38. Aarhus Universitet, Matematisk Institut, Aarhus, 1980. iii + 144 pp. (Editors) 81m:00005 00A10
- Abelian groups** ★Symposia Mathematica. Vol. XXIII. Conference on Abelian Groups and their Relationship to the Theory of Modules held at the Istituto Nazionale di Alta Matematica Francesco Severi (INdAM), Rome, December 12-16, 1977. Academic Press, London-New York, 1979. 457 pp. (Editors) 81a:20005 20-06 (16-06)
- Abstract software specifications** ★Abstract software specifications. Proceedings of the Winter School held at the Technical University of Denmark, Copenhagen, January 22-February 2, 1979. Edited by Dines Bjørner. Lecture Notes in Computer Science, 86. Springer-Verlag, Berlin-New York, 1980. xii + 567 pp. ISBN 3-540-10007-5 (Editors) 81i:68002 68-06
- Abstracts:**
- Conference of the Indian Mathematical Society Abstracts of papers presented at the 42nd Conference of the Indian Mathematical Society. Math. Student 45 (1977), no. 2, 7-62 (1979). (Editors) 81j:00007 00A10
- Scandinavian Congress of Mathematicians** ★Abstracts. The 18th Scandinavian Congress of Mathematicians. Held in Aarhus, August 18-22, 1980. Various Publications Series, 38. Aarhus Universitet, Matematisk Institut, Aarhus, 1980. iii + 144 pp. (Editors) 81a:00005 00A10
- Seminar on Universal Algebra** ★Материалы Семинара "Универсальная Алгебра". (Russian) [Abstracts of the Seminar on Universal Algebra] Held at Baku, September 1976. "Elm", Baku, 1979. 23 pp. (Editors) 81j:00001 08-06 (06-06, 20-06)
- ACM Symposium:**
- Principles of Programming Languages** ★Conference Record of the Sixth Annual ACM Symposium on Principles of Programming Languages. Held in San Antonio, Tex., January 29-31, 1979. Association for Computing Machinery (ACM), New York, 1979. iv + 290 pp. (Editors) 81i:68005 68-06 (68B10)
- Theory of Computing** ★Conference Record of the Eleventh Annual ACM Symposium on Theory of Computing. Held in Atlanta, Ga., April 30-May 2, 1979. Association for Computing Machinery (ACM), New York, 1979. vii + 368 pp. ISBN 0-89791-003-6 (Editors) 81a:68004 68-06
- ★ACM-SIGACT Symposium on the Theory of Computing. Held in San Diego, Calif., May 1-3, 1978. Edited by Richard Lipton, E. K. Blum and A. V. Aho. J. Comput. System Sci. 20 (1980), no. 2. Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], New York-London, 1980. pp. 117-276. (Editors) 81i:68004 68-06
- ★Conference Proceedings of the Twelfth Annual ACM Symposium on Theory of Computing. Papers presented at the Symposium held in Los Angeles, Calif., April 18-30, 1980. Association for Computing Machinery (ACM), New York, 1980. v + 447 pp. ISBN 0-89791-017-6 (Editors) 81i:68006 68-06
- Acoustics** ★8e Symposium International sur l'Acoustique Non Linéaire. (French) [8th International Symposium on Nonlinear Acoustics] Held at the École Nationale Supérieure de Chimie de Paris, Paris, July 3-6, 1978. J. Physique 40 (1979), no. 11 suppl. Colloque C-8. Société Française de Physique, Orsay, 1979. pp. i-iv and C8-1-C8-365. (Editors) 81i:76033 76Q05
- Acta Physica Austriaca Suppl.** ★Facts and prospects of gauge theories. Proceedings of the XVII. Internationale Universitätswochen für Kernphysik held at Schladming, February 21-March 3, 1978. Edited by Paul Urban. Acta Physica Austriaca Supplement, XIX. Springer-Verlag, Vienna, 1978. v + 889 pp. ISBN 3-211-81514-7 (Editors) 81b:81001 81-06 (81E10)
- Adaptive control** ★Methods and applications in adaptive control. Proceedings of an International Symposium held at the Ruhr-Universität Bochum, Bochum, March 20-21, 1980. Edited by H. Unbehauen. Lecture Notes in Control and Information Sciences, 24. Springer-Verlag, Berlin-New York, 1980. vi + 309 pp. ISBN 3-540-10226-4 (Editors) 81i:93038 93C40 (93-06)
- Adaptive control systems** ★Адаптивные системы управления. (Russian) [Adaptive control systems] Edited by V. I. Ivanenko and V. A. Labkovskii. Akad. Nauk Ukrain. SSR, Inst. Kibernet., Kiev, 1978. 98 pp. (Editors) 81i:93001 93-06
- Adaptive processes** ★Proceedings of the 1978 IEEE Conference on Decision and Control including the 17th Symposium on Adaptive Processes. Held in San Diego, Calif., January 10-12, 1979. Institute of Electrical and Electronics Engineers, New York, 1979. xii + 1461 pp. (Editors) 81a:93001 93-06
- ★Proceedings of the 18th IEEE Conference on Decision & Control. Vol. 1, 2. Including the 18th Symposium on Adaptive Processes. Held in Fort Lauderdale, Fla., December 12-14, 1979. Institute of Electrical and Electronics Engineers, Inc. (IEEE), New York, 1979. xx + 1077 pp. (Editors) 81i:93002 93-06
- Adaptive systems and their applications** ★Адаптивные системы и их приложения. (Russian) [Adaptive systems and their applications] Edited by A. V. Medvedev. "Nauka" Sibirsk. Otdel., Novosibirsk, 1978. 191 pp. (Editors) 81j:62006 62-06
- Advanced technology** ★Advanced technology. Edited by Boris Rybak. Proceedings of the NATO Summer School held in Paris, June 30-July 13, 1978. NATO Advanced Study Institute Series, Ser. E: Applied Sciences, 31. Sijthoff & Noordhoff, Alphen aan den Rijn-Germantown, Md., 1979. x + 703 pp. ISBN 90-286-0299-2 (Editors) 81a:72001 92-06
- Advances in applied mechanics** ★Advances in applied mechanics. Vol. 18. Edited by Chia Shun Yih. Academic Press [Harcourt Brace Jovanovich, Publishers], New York-London, 1978. vii + 353 pp. ISBN 0-12-002181-1 (Editors) 81a:76003 76-06 (73-06)
- Advances in computers** ★Advances in computers. Vol. 18. Edited by Marshall C. Yovits. Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], New York-London, 1979. xiii + 308 pp. ISBN 0-12-012118-2 (From the preface) 81i:68004 68-06 (68Bxx, 68G10, 94A05)
- ★Advances in computers. Vol. 19. Edited by Marshall C. Yovits. Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], New York-London, 1980. x + 351 pp. ISBN 0-12-012119-0 (Editors) 81i:68003 68-06
- Advances in geometric programming** ★Advances in geometric programming. Edited by Mordecai Avriel. Mathematical Concepts and Methods in Science and Engineering, 21. Plenum Press, New York-London, 1980. x + 460 pp. ISBN 0-306-40381-1 (Editors) 81i:90096 90C30
- Algebra** ★Теоретические и прикладные вопросы дифференциальных уравнений и алгебры. (Russian) [Theoretical and applied questions of differential equations and algebra] Edited by A. N. Šarkovskii. "Naukova Dumka", Kiev, 1978. 272 pp. (Editors) 81a:00013 00A10
- ★Atas da 5ª Escola de Álgebra. [Proceedings of the 5th School of Algebra] Held in Rio de Janeiro, July 17-28, 1978. Sociedade Brasileira de Matemática, Rio de Janeiro, 1978. v + 199 pp. (Editors) 81c:00004 00A10
- ★Геометрические методы в задачах анализа и алгебры. (Russian) [Geometric methods in problems of analysis and algebra] Edited by A. V. Černavskii. Jaroslavl. Gos. Univ., Yaroslavl, 1978. 184 pp. (Editors) 81i:53001 53-06 (57-06, 58-06)
- ★Вычисления в алгебре и комбинаторике. (Russian) [Computations in algebra and combinatorial analysis] Применение ЭВМ в алгебраических и теоретико-комбинаторных исследованиях. [Application of computers in algebraic and combinatorial investigations] Edited by L. A. Kalužnin, A. A. Stognii [A. O. Stognii] and Z. V. Bogemskaja. Akad. Nauk Ukrain. SSR, Inst. Kibernet., Kiev, 1978. 219 pp. (Editors) 81m:20003 20-06 (05-06)
- ★Материалы Конференции "Методы Алгебры и Функционального Анализа при Исследовании Семейств Операторов". (Russian) [Proceedings of a Conference on the Methods of Algebra and Functional Analysis in the Study of Families of Operators] Held in Tartu, November 24-26, 1978. Dedicated to G. Kangro on the occasion of the sixty-fifth anniversary of his birth. Tartu. Gos. Univ., Tartu, 1978. 116 pp. (Editors) 81m:47001 47-06 (00A10, 01A70, 40-06)
- ★Beiträge zur Algebra und Geometrie. 8. (German) [Contributions to Algebra and Geometry. 8.] Edited by Ott-Heinrich Keller, Otto Krötenheerdt, Elgács Tamás Schmidt and Ludwig Stammer. Wiss. Beitr. Martin-Luther-Univ. Halle-Wittenberg M 12 (1979). VEB Deutscher Verlag der Wissenschaften, Berlin, 1979. pp. 1-151. (Editors) 81b:00005 00A10
- ★Олимпиады Алгебра. Комбинаторика. (Russian) [Olympiads. Algebra. Combinatorial analysis] Edited by L. Ja. Savčev. "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. 177 pp. (Editors) 81i:00004 00A05 (03-01, 05-01, 10-01)
- ★Séminaire d'Algèbre Paul Dubreil et Marie-Paule Malliavin. (French) [Algebra Seminar Paul Dubreil and Marie-Paule Malliavin] Held in Paris, 1979. Edited by Marie-Paule Malliavin [Marie-Paule Malliavin-Bramet]. Lecture Notes in Mathematics, 795. Springer-Verlag, Berlin-New York, 1980. v + 433 pp. ISBN 3-540-09980-8 (Editors) 81i:16001 16-06 (13-06, 17-06)
- ★Ring theory and algebra. III. Proceedings of the Third Oklahoma Conference held at the University of Oklahoma, Norman, Okla., March 15-17, 1979. Edited by Bernard R. McDonald. Lecture Notes in Pure and Applied Mathematics, 55. Marcel Dekker, Inc., New York, 1980. xvi + 422 pp. ISBN 0-8247-1158-0 (Editors) 81i:16001 16-06
- ★Современная алгебра. (Russian) [Modern algebra] Группы и их гомоморфизмы. [Groupoids and their homomorphisms] Edited by E. S. Ljapin. Leningrad. Gos. Ped. Inst., Leningrad, 1980. 160 pp. (Editors) 81i:20001 20-06
- ★Handbook of applicable mathematics. Vol. I. Algebra. Edited by Walter Ledermann and Steven Vajda. A Wiley-Interscience Publication. John Wiley & Sons, Ltd., Chichester, 1980. xix + 524 pp. ISBN 0-471-27704-5 (H. B. Griffiths) 81m:00004 00A06
- ★Специальные вопросы алгебры и топологии. (Russian) [Special questions of algebra and topology] Edited by L. G. Mustafae and R. A. Baimanov. "Elm", Baku, 1980. 122 pp. (Editors) 81m:20005 20-06 (08-06, 54H15)
- Algebra. Topology. Geometry** ★Алгебра. Топология. Геометрия. Том 17. (Russian) [Algebra. Topology. Geometry. Vol. 17] Edited by R. V. Gamkrelidze. Итоги Науки и Техники. [Progress in Science and Technology] Akad. Nauk SSSR, Vsesoiuz. Inst. Nauch. i Tehn. Informacii, Moscow, 1979. 308 pp. (loose errata). (Editors) 81i:20001 20-06 (54F45)
- Algebraic analysis** ★Recent development of algebraic analysis. (Japanese) Proceedings of a Symposium held at the Research Institute for Mathematical Sciences, Kyoto University, Kyoto, July 2-5, 1979. Sūrikaiseikenkyūsho Kōkyūroku No. 361 (1979). Kyoto University, Research Institute for Mathematical Sciences, Kyoto, 1979. pp. i-iii and 1-183. (Editors) 81m:50001 58-06 (35-06, 81-06)
- Algebraic coding theory and applications** ★Algebraic coding theory and applications.

Lectures from the Summer School held at the International Centre for Mechanical Sciences (CISM), Udine, July 1978. Edited by Giuseppe Longo. CISM Courses and Lectures, 258. Springer-Verlag, Vienna, 1979. x + 528 pp. ISBN 3-211-81544-9 (E. M. Gabidulin) 81b:94026 94Bxx (94-02)

Algebraic computation ★Symbolic and algebraic computation. EUROSAM '79, an International Symposium held in Marseille, June 1979. Edited by Edward W. Ng. Lecture Notes in Computer Science, 72. Springer-Verlag, Berlin-New York, 1979. xv + 557 pp. ISBN 3-540-09519-5 (Editors) 81b:68005 68-06 (68C20)

Algebraic geometry ★Proceedings of the International Symposium on Algebraic Geometry. A Taniguchi Symposium. Held at Kyoto University, Kyoto, January 10-14, 1977. Edited by Masayoshi Nagata. Kinokuniya Book Store Co., Ltd., Tokyo, 1978. xiv + 737 pp. (Editors) 81c:14082 14-06

★Studies in algebraic geometry. Edited by A. Seidenberg. MAA Studies in Mathematics, 20. Mathematical Association of America, Washington, D.C., 1980. xi + 143 pp. ISBN 0-88385-120-2 (Editors) 81b:14001 14-06

Algebraic invariants of dynamic systems ★Алгебраические инварианты динамических систем. (Russian) [Algebraic invariants of dynamic systems] Edited by B. A. Ščerbakov. Mat. Issled. No. 55 (1980). "Stižnca", Kishinev, 1980. pp. 1-152. (Editors) 81j:34081 34C35 (53A55)

Algebraic structures ★Алгебраические структуры. (Russian) [Algebraic structures] Edited by V. A. Andrunakievich. Mat. Issled. No. 56 (1980). "Stižnca", Kishinev, 1980. pp. 1-164. (Editors) 81c:00003 00A10 (08-06)

Algebraic topology ★Algebraic topology. Aarhus 1978. Proceedings of a Symposium held at the University of Aarhus, Aarhus, August 7-12, 1978. Edited by Johan Louis Dupont and Ib Henning Madsen. Lecture Notes in Mathematics, 763. Springer-Verlag, Berlin-New York, 1979. vi + 695 pp. ISBN 3-540-09721-X (Editors) 81b:55001 55-06 (18F25, 57-06)

Algebraische Modelle, Kategorien und Gruppoide ★Algebraische Modelle, Kategorien und Gruppoide. (German) [Algebraic models, categories and groupoids] Edited by Hans-J. Hoehnke. Studien zur Algebra und ihre Anwendungen [Studies in Algebra and its Applications], 7. Akademie-Verlag, Berlin, 1979. vi + 178 pp. (Editors) 81b:18001 18-06 (20-06, 68-06)

Algorithms ★Модели. Алгоритмы. Принятие решений. (Russian) [Models. Algorithms. Decision making] Edited by I. Š. Pinskič. "Nauka", Moscow, 1979. 252 pp. (Editors) 81a:62003 62-06

★Исследования по теории алгоритмов и математической логике. (Russian) [Studies in the theory of algorithms and mathematical logic] Edited by A. A. Markov and V. I. Homič. "Nauka", Moscow, 1979. 135 pp. (Editors) 81b:03003 03-06

Algorithms and automata ★Алгоритмы и автоматы. (Russian) [Algorithms and automata] Edited by M. M. Arslanov. Kazan. Gos. Univ., Kazan, 1978. 111 pp. (Editors) 81b:68001 68-06 (68Cxx)

All-Union Conference:

Cetaev, Stability of Motion, Analytical Mechanics and Control of Motion ★Динамика управляемых систем. (Russian) [Dynamics of control systems] Papers presented at the Third All-Union Cetaev Conference, dedicated to the memory of N. G. Cetaev on the occasion of the seventy-fifth anniversary of his birth, held in Irkutsk, June 20-25, 1977. Edited by V. M. Matrosov and S. V. Eliseev. "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. 344 pp. (Editors) 81c:93003 93-06

★Проблемы устойчивости движения, аналитической механики и управления движением. (Russian) [Problems of stability of motion, analytical mechanics and control of motion] Papers presented at the Third All-Union Cetaev Conference, dedicated to the memory of N. G. Cetaev on the occasion of the seventy-fifth anniversary of his birth, held in Irkutsk, June 20-25, 1977. Edited by V. M. Matrosov and A. N. Pančenkov [A. M. Pančenkov]. "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. 328 pp. (Editors) 81c:93002 93-06 (34-06, 58-06, 70E99, 70H99, 73H99, 90-06)

Asymptotic Methods in Nonlinear Mechanics ★Асимптотические методы в теории нелинейных колебаний. (Russian) [Asymptotic methods in the theory of nonlinear oscillations] Proceedings of the All-Union Conference on Asymptotic Methods in Nonlinear Mechanics held in Kaciveli, April 22-25, 1977. Edited by Ju. A. Mitropol'skii [Ju. O. Mitropol'skii]. "Naukova Dumka", Kiev, 1979. 279 pp. (Editors) 81a:34002 34-06 (34C15, 34Exx)

Problems of Theoretical Cybernetics ★IV Всесоюзная конференция по проблемам теоретической кибернетики. (Russian) [Fourth All-Union Conference on Problems of Theoretical Cybernetics] Abstracts of papers presented at the Conference held at Novosibirsk, August 30-September 1, 1977. Akad. Nauk SSSR Sibirsk. Otdel., Inst. Mat., Novosibirsk, 1977. 210 pp. (Editors) 81b:93001 93-06 (68-06, 90-06)

Theory of Invariance and its Application ★Теория инвариантности и ее применение. Часть 1. (Russian) [Theory of invariance and its application. Part 1] Proceedings of the Fifth All-Union Conference held in Kiev, October 1976. Edited by A. I. Kuhtenko. "Naukova Dumka", Kiev, 1979. 460 pp. (Editors) 81b:93001a 93-06

★Теория инвариантности и ее применение. Часть 2. (Russian) [Theory of invariance and its application. Part 2] Proceedings of the Fifth All-Union Conference held in Kiev, October 1976. Edited by A. I. Kuhtenko. "Naukova Dumka", Kiev, 1979. 440 pp. (Editors) 81b:93001b 93-06

Variational-Difference Methods in Mathematical Physics ★Вариационно-разностные методы в математической физике. (Russian) [Variational-difference methods in mathematical physics] Proceedings of the All-Union Conference held in Novosibirsk, 1977. Edited by G. I. Marčuk. Akad. Nauk SSSR Sibirsk. Otdel., Vychisl. Centr., Novosibirsk, 1978. 230 pp. (Editors) 81b:65007 65-06

All-Union Congress:

Theoretical and Applied Mechanics ★Современные проблемы теоретической и прикладной механики. (Russian) [Current problems in theoretical and applied mechanics] Proceedings of the Fourth All-Union Congress on Theoretical and Applied Mechanics held in Kiev, May 21-28, 1976. Edited by G. S. Pisarenko. "Naukova Dumka", Kiev, 1978. 412 pp. (Editors) 81b:70001 70-06 (73-06, 76-06)

All-Union School-Seminar:

Statistical Hydroacoustics ★Труды седьмой Всесоюзной школы-семинара по статистической гидроакустике. (Russian) [Proceedings of the Seventh All-Union School-Seminar on Statistical Hydroacoustics] Held at L'vov, September 4-9, 1975. Edited by V. V. Ol'sevskii and N. G. Zagoruiko. Akad. Nauk SSSR Sibirsk. Otdel., Inst. Mat., Novosibirsk, 1977. 327 pp. (Editors) 81a:00010 76-06 (93E11)

All-Union Seminar:

Turbulent Flows ★Third All-Union Seminar on Turbulent Flows. Part I. Held in Zvenigorod, December 25-29, 1974. Fluid Mech.—Soviet Res. 7 (1978), no. 1. (1979). Scripta Publishing Co., Silver Spring, Md., 1979. pp. 1-167. (Editors) 81d:76004 76-06 (76Fxx)

★Third All-Union Seminar on Turbulent Flows. Part II. Held in Zvenigorod, December 25-29, 1974. Fluid Mech.—Soviet Res. 7 (1978), no. 2. (1979). Scripta Publishing Co., Silver Spring, Md., 1979. pp. i and 1-160. (Editors) 81d:76005 76-06 (76Fxx)

American Mathematical Society Translations, Ser. 2 ★American Mathematical Society Translations. Ser. 2, Vol. 115. Twelve papers in analysis. A translation of *Mathematical programming and related questions* (Proc. Seventh Winter School, Drobych, 1974) (Russian). Central. Ekonom. Mat. Inst. Akad. Nauk SSSR, Moscow, 1976. Edited by Lev J. Leifmann. American Mathematical Society Translations, Series 2, 115. American Mathematical Society, Providence, R.I., 1980. v + 202 pp. ISBN 0-8218-3065-1 (Editors) 81m:00006 00A10

Amsterdam ★Interfaces between computer science and operations research. Proceedings of a Symposium held at the Mathematisch Centrum, Amsterdam, September 7-10, 1976. Edited by J. K. Lenstra, A. H. G. Rinnooy Kan and P. van Emde Boas. Mathematical Centre Tracts, 99. Mathematisch Centrum, Amsterdam, 1978. viii + 231 pp. ISBN 90-6196-170-X (L. E. Trotter, Jr.) 81f:68001 68-02 (68C25, 90B35, 90C10)

★Topological structures. II. Part 1. Proceedings of a Symposium on Topology and Geometry held in Amsterdam, October 31-November 2, 1978. Edited by P. C. Baayen and J. van Mill. Mathematical Centre Tracts, 115. Mathematisch Centrum, Amsterdam, 1979. x + 189 pp. ISBN 90-6196-185-8 (Editors) 81a:54001a 54-06 (55-06, 57-06)

★Topological structures. II. Part 2. Proceedings of a Symposium on Topology and Geometry held in Amsterdam, October 31-November 2, 1978. Edited by P. C. Baayen and J. van Mill. Mathematical Centre Tracts, 116. Mathematisch Centrum, Amsterdam, 1979. pp. i-iv and 191-393. ISBN 90-6196-186-6 (Editors) 81a:54001b 54-06 (55-06, 57-06)

★Colloquium: Numerical Treatment of Integral Equations. Papers presented at the Mathematical Centre, Amsterdam, October, 1978-May, 1979. Edited by H. J. J. te Riele. MC Syllabus, 41. Mathematisch Centrum, Amsterdam, 1979. vii + 259 pp. (loose errata). ISBN 90-6196-189-0 (Editors) 81c:65004 65-06 (65R20)

★Representations of locally compact groups with applications. Part I, II. Colloquium held at the Mathematical Centre, Amsterdam, academic year 1977/78. Edited by T. H. Koornwinder. MC Syllabus, 38. Mathematisch Centrum, Amsterdam, 1979. iv + 496 pp. ISBN 90-6196-161-0, 90-6196-181-5 (A. U. Klimyk) 81k:22001 22-02 (20Cxx, 22D10, 22E70, 43A05, 81C40)

Analyse harmonique sur les groupes de Lie ★Analyse harmonique sur les groupes de Lie. II. (French) [Harmonic analysis on Lie groups. II] Séminaire Nancy-Strasbourg 1976-1978. Edited by Pierre Eymard, Jacques Feraut, Gérard Schiffmann and Reiji Takahashi. Lecture Notes in Mathematics, 739. Springer-Verlag, Berlin-New York, 1979. vi + 646 pp. ISBN 3-540-09536-5 (Editors) 81c:22002 22-06 (43-06)

Analysing time series ★Analysing time series. Proceedings of the International Conference (ITSM) held in Guernsey, October 22-26, 1979. Edited by Oliver D. Anderson. North-Holland Publishing Co., Amsterdam-New York, 1980. vi + 419 pp. ISBN 0-444-85464-9 (Editors) 81f:62002 62-06

Analysis ★Геометрические методы в задачах анализа и алгебры. (Russian) [Geometric methods in problems of analysis and algebra] Edited by A. V. Černavskii. Jaroslavl. Gos. Univ., Yaroslavl, 1978. 184 pp. (Editors) 81d:53001 53-06 (57-06, 58-06)

★Global analysis. Proceedings of the Biennial Seminar of the Canadian Mathematical Congress held at the University of Calgary, Calgary, Alta., June 12-27, 1978. Edited by M. Gromala and J. E. Marsden. Lecture Notes in Mathematics, 755. Springer-Verlag, Berlin-New York, 1979. vii + 377 pp. ISBN 3-540-09703-1 (Editors) 81a:58001 58-06

★Автоматизация анализа и распознавания изображений. I. (Russian) [Automation, analysis and pattern recognition. I] Методы и средства. [Methods and means] Edited by G. G. Gromov. "Zinatne", Riga, 1979. 267 pp. (Editors) 81c:68110 68G10 (68-06)

★Geometry and analysis. Papers dedicated to the memory of V. K. Patodi. Indian Academy of Sciences, Bangalore; Tata Institute of Fundamental Research, Bombay, 1980. iv + 166 pp. (1 plate). (Editors) 81b:58005 58-06

★Séminaire Pierre Lelong-Henri Skoda (Analyse). Années 1978/79. (French) Edited by Pierre Lelong and Henri Skoda. Lecture Notes in Mathematics, 822. Springer-Verlag, Berlin-New York, 1980. viii + 356 pp. ISBN 3-540-10241-8 (Editors) 81j:32003 32-06

★American Mathematical Society Translations. Ser. 2, Vol. 115. Twelve papers in analysis. A translation of *Mathematical programming and related questions* (Proc. Seventh Winter School, Drobych, 1974) (Russian). Central. Ekonom. Mat. Inst. Akad. Nauk SSSR, Moscow, 1976. Edited by Lev J. Leifmann. American Mathematical Society Translations, Series 2, 115. American Mathematical Society, Providence, R.I., 1980. v + 202 pp. ISBN 0-8218-3065-1 (Editors) 81m:00006 00A10

Analysis and computation of fixed points ★Analysis and computation of fixed points. Proceedings of a Symposium held at the Mathematics Research Center, University of Wisconsin, Madison, Wis., May 7-8, 1979. Edited by Stephen M. Robinson. Publication of the Mathematics Research Center, University of Wisconsin, 43. Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], New York-London, 1980. ix + 413 pp. ISBN 0-12-590240-9 (Editors) 81f:65003 65-06 (90-06)

Analysis and control of systems ★Analyse et contrôle de systèmes. (French) [Analysis and control of systems] Papers from the Seminar organized by the Institut de Recherche d'Informatique et d'Automatique (IRIA) held in Rocquencourt, 1978. Institut de

Recherche d'Informatique et d'Automatique (IRIA), Rocquencourt, 1978. 272 pp.
ISBN 2-7261-0209-3 (Editors) 81m:93003 93-06

Analysis and optimisation of stochastic systems ★Analysis and optimisation of stochastic systems. Proceedings of the International Conference held at the University of Oxford, Oxford, September 6-8, 1978. Edited by O. L. R. Jacobs, M. H. A. Davis, M. A. H. Dempster, C. J. Harris and P. C. Parks. The Institute of Mathematics and its Applications Conference Series. Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], London-New York, 1980. xiv + 573 pp. *ISBN 0-12-378680-0 (Editors) 81j:93069 93E20 (93E11)*

Analytic functions ★Analytic functions, Kozubnik 1979. Proceedings of the Seventh Conference held at Kozubnik, April 19-25, 1979. Edited by Julian Ławrynowicz. Lecture Notes in Mathematics, 798. Springer-Verlag, Berlin-New York, 1980. x + 476 pp. *ISBN 3-540-09985-9 (Editors) 81d:32001 32-06 (30-06)*

★Граничные свойства аналитических функций, сингулярные интегральные уравнения и некоторые вопросы гармонического анализа. (Russian) [Boundary properties of analytic functions, singular integral equations and some questions of harmonic analysis] Edited by B. V. Hvedelidze. Trudy Tbilisi. Mat. Inst. Razmadze Akad. Nauk Gruzii. SSR 65 (1980). "Mecniereba", Tbilisi, 1980. pp. 1-142. (Editors) 81j:30002 30-06

Analytic number theory and the theory of functions ★Аналитическая теория чисел и теория функций. 2. (Russian) [Analytic number theory and the theory of functions. 2] Edited by A. B. Venkov and L. A. Tahtadzhian. Zap. Naučn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI) 91 (1979). "Nauka" Leningrad. Otdel., Leningrad, 1979. pp. 1-184. (Editors) 81a:10003 10-06

★Аналитическая теория чисел и теория функций. 3. (Russian) [Analytic number theory and the theory of functions. 3] Edited by G. V. Kuz'mina and O. M. Fomenko. Zap. Naučn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI) 100 (1980). "Nauka" Leningrad. Otdel., Leningrad, 1980. pp. 1-179. (Editors) 81m:10003 10-06 (30-06)

Analytic varieties and various problems on stratified spaces ★Analytic varieties and various problems on stratified spaces. (Japanese) Proceedings of a Symposium held at the Research Institute for Mathematical Sciences, Kyoto University, Kyoto, May 22-25, 1978. Shūrikaiseikenshū Kokyūroku No. 372 (1979). Kyoto University, Research Institute for Mathematical Sciences, Kyoto, 1979. pp. i-ii and 1-307. (Editors) 81m:32001 32-06 (81-06)

Analytical mechanics ★Динамика управляемых систем. (Russian) [Dynamics of control systems] Papers presented at the Third All-Union Četaev Conference, dedicated to the memory of N. G. Četaev on the occasion of the seventy-fifth anniversary of his birth, held in Irkutsk, June 20-25, 1977. Edited by V. M. Matrosov and S. V. Eliseev. "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. 344 pp. (Editors) 81c:93003 93-06

★Проблемы устойчивости движения, аналитической механики и управления движением. (Russian) [Problems of stability of motion, analytical mechanics and control of motion] Papers presented at the Third All-Union Četaev Conference, dedicated to the memory of N. G. Četaev on the occasion of the seventy-fifth anniversary of his birth, held in Irkutsk, June 20-25, 1977. Edited by V. M. Matrosov and A. N. Pančenkova [A. M. Pančenkova]. "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. 328 pp. (Editors) 81c:93002 93-06 (34-06, 58-06, 70E99, 70H99, 73H99, 90-06)

Analytical methods of probability theory ★Аналитические методы в теории вероятностей. (Russian) [Analytical methods of probability theory] Edited by V. S. Koroljuk. "Naukova Dumka", Kiev, 1979. 156 pp. (Editors) 81a:60003 60-06

Analytical and numerical approaches to asymptotic problems in analysis ★Analytical and numerical approaches to asymptotic problems in analysis. Proceedings of the Conference held at the University of Nijmegen, Nijmegen, June 9-13, 1980. Edited by O. Axelsson, L. S. Frank and A. van der Sluis. North-Holland Mathematics Studies, 47. North-Holland Publishing Co., Amsterdam-New York, 1981. xvi + 381 pp. *ISBN 0-444-86131-9 (Editors) 81m:65005 65-06 (35-06, 92-06)*

Anniversary:
Birth of Āryabhaṭa I ★Proceedings of the Symposium on the 1500th Birth Anniversary of Āryabhaṭa I. Held in New Delhi, November 2-4, 1976. Indian J. Hist. Sci. 12 (1977). no. 2:83-244. *Indian National Science Academy, New Delhi, 1977. pp. 83-245. (Editors) 81a:01008 01A32*
Birth of N. G. Četaev ★Динамика управляемых систем. (Russian) [Dynamics of control systems] Papers presented at the Third All-Union Četaev Conference, dedicated to the memory of N. G. Četaev on the occasion of the seventy-fifth anniversary of his birth, held in Irkutsk, June 20-25, 1977. Edited by V. M. Matrosov and S. V. Eliseev. "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. 344 pp. (Editors) 81c:93003 93-06

★Проблемы устойчивости движения, аналитической механики и управления движением. (Russian) [Problems of stability of motion, analytical mechanics and control of motion] Papers presented at the Third All-Union Četaev Conference, dedicated to the memory of N. G. Četaev on the occasion of the seventy-fifth anniversary of his birth, held in Irkutsk, June 20-25, 1977. Edited by V. M. Matrosov and A. N. Pančenkova [A. M. Pančenkova]. "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. 328 pp. (Editors) 81c:93002 93-06 (34-06, 58-06, 70E99, 70H99, 73H99, 90-06)

Birth of Elwin Bruno Christoffel See Stark, Eberhard L., 81j:01044
Birth of Albert Einstein ★Einstein Symposium, Berlin. (German) On the occasion of the 100th anniversary of his birthday, held March 25-30, 1979. Edited by H. Nelkowski, A. Hermann, H. Poser, R. Schrader and R. Seiler. Lecture Notes in Physics, 100. Springer-Verlag, Berlin-New York, 1979. viii + 550 pp. *ISBN 3-540-09718-X (Editors) 81c:83001 83-06 (01A70)*

★General relativity. An Einstein centenary survey. Edited by S. W. Hawking and W. Israel. Cambridge University Press, Cambridge-New York, 1979. xviii + 919 pp. *ISBN 0-521-22285-0 (Michael P. Ryan, Jr.) 81i:83002 83-06 (53Cxx, 58Fxx, 83Cxx)*

★Einstein. A centenary volume. Edited by Anthony Philip French. Harvard University Press, Cambridge, Mass., 1979. xx + 332 pp. (11 plates). *ISBN 0-435-58200-3 (H. Treder) 81c:01053 01A70 (01A60, 83-03)*

Albert Einstein (on the occasion of the 100th anniversary of his birth). (Azerbaijani) Izv. Akad. Nauk Azerbajdz. SSR Ser. Fiz.-Tehn. Mat. Nauk 1979, no. 1, 121. (Editors) 81m:01085 01A70

See also Laurikainen, K. V., 81m:01064

Anniversary: (continued)

Birth of Leopold Fejér See Mitropol'skii, Ju. O.; et al., 81j:01040

Birth of Carl Friedrich Gauss See Michling, Horst, 81a:01048

Birth of Gunnar Kangro ★Материалы Конференции "Методы Алгебры и Функционального Анализа при Исследованиях Семейств Операторов". (Russian) [Proceedings of a Conference on the Methods of Algebra and Functional Analysis in the Study of Families of Operators] Held in Tartu, November 24-26, 1978. Dedicated to G. Kangro on the occasion of the sixty-fifth anniversary of his birth. Tartu. Gos. Univ., Tartu, 1978. 116 pp. (Editors) 81m:47001 47-06 (00A10, 01A70, 40-06)

Birth of Leon Lichtenstein ★Lichtenstein-Festkolloquium. Held at the Karl-Marx-Universität, Leipzig, December 7-9, 1978, on the 100th anniversary of the birth of Leon Lichtenstein. Wiss. Z. Karl-Marx-Universität Leipzig Math.-Natur. Reihe 29 (1980), no. 1, 1-70. Karl-Marx-Universität, Leipzig, 1980. pp. i-iv and 1-76. (Editors) 81c:01001 01-06

Birth of Friedrich Riesz See Mitropol'skii, Ju. O.; et al., 81j:01040

Birth of G. N. Šebuev See Cyganova, N. Ja., 81m:01030

Birth of Duncan Sommerville See Rosenfeld, B. A., 81a:01040

Birth of Marko Švec See Kurzwel, Jarošlav, 81m:01062

Dutch Mathematical Society See Baayen, P. C., 81i:01016

Order of Lenin Institute of Control Problems The Institute of Control Problems: forty years. Automat. i Telemekh. 1979, no. 6, 5-20. (Russian); translated as Automat. Remote Control 40 (1979), no. 6, part 1, 785-796. (Editors) 81a:01046 01A74

Annual review of fluid mechanics ★Annual review of fluid mechanics. Vol. 12. Edited by Milton Van Dyke, J. V. Wehausen and John L. Lumley. Annual Reviews Inc., Palo Alto, Calif., 1980. iv + 490 pp. (1 plate). *ISBN 0-8243-0712-7 (Editors) 81a:76001 76-02*

Antigonish, N.S. ★Recent advances in group theory and their application to spectroscopy. Proceedings of the NATO Advanced Study Institute held at St. Francis Xavier University, Antigonish, N.S., August 6-20, 1978. Edited by John C. Donini. NATO Advanced Study Institute Series, Ser. B: Physics, 43. Plenum Press, New York-London, 1979. xii + 692 pp. *ISBN 0-306-40172-X (Editors) 81a:81006 81-06 (81C40, 81G40, 81G50)*

Antwerp ★Ring theory, Antwerp 1980. Proceedings of the Conference held at the University of Antwerp, Antwerp, May 6-9, 1980. Edited by F. van Oystaeyen. Lecture Notes in Mathematics, 825. Springer-Verlag, Berlin-New York, 1980. vii + 209 pp. *ISBN 3-540-10246-9 (Editors) 81i:16002 16-06*

Application of functional analysis in approximation theory ★Применение функционального анализа в теории приближений. (Russian) [Application of functional analysis in approximation theory] Edited by V. N. Nikol'skii. Kalinin. Gos. Univ., Kalinin, 1979. 164 pp. (Editors) 81k:41001 41-06

★Применение функционального анализа в теории приближений. (Russian) [Application of functional analysis to approximation theory] Edited by V. N. Nikol'skii. Kalinin. Gos. Univ., Kalinin, 1980. 162 pp. (Editors) 81m:46001 46-06

Application of the methods of functional analysis to problems of mathematical physics and numerical analysis ★Применение методов функционального анализа к задачам математической физики и вычислительной математики. (Russian) [Application of the methods of functional analysis to problems of mathematical physics and numerical analysis] Papers of a School-Seminar on the Application of the Methods of Functional Analysis, 1978. Edited by V. N. Vragov. Akad. Nauk SSSR Sibirsk. Otdel., Inst. Mat., Novosibirsk, 1979. 165 pp. (Editors) 81j:35001 35-06

Application and numerical solution of integral equations ★The application and numerical solution of integral equations. Proceedings of a Seminar held at the Australian National University, Canberra, November 29, 1978. Edited by Robert S. Anderssen, Frank R. de Hoog and Mark A. Lukas. Monographs and Textbooks on Mechanics of Solids and Fluids (Mechanics: Analysis), 6. Sijthoff & Noordhoff, Alphen aan den Rijn-Germantown, Md., 1980. x + 259 pp. *ISBN 90-286-0450-2 (Editors) 81i:45001 45-06 (65-06)*

Applications of graph theory ★Applications of graph theory. Edited by Robin J. Wilson and Lowell W. Beineke. Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], London-New York, 1979. xii + 423 pp. *ISBN 0-12-75840-4 (F. Harary) 81c:05050 05Cxx (00A69, 05-02)*

Applications of Lie-admissible algebras in physics ★Applications of Lie-admissible algebras in physics. Vol. I, II. Edited by Hyo Chul Myung, Susumu Okubo and Ruggero Maria Santilli. Hadronic Press, Inc., Norantum, Mass., 1978. iv + 601 pp. (Editors) 81c:81040 81C40 (17-06)

Applications of mathematics in system theory ★Proceedings of the International Symposium on Applications of Mathematics in System Theory. I. Held at the University of Braşov, Braşov, December 27-30, 1978. Edited by C. L. Simionescu and I. Benko. Universitatea din Braşov, Braşov, 1979. ii + 339 pp. (Editors) 81j:93006 93-06 (49-06, 65-06, 90-06, 92-06)

★Proceedings of the International Symposium on Applications of Mathematics in System Theory. II. Held at the University of Braşov, Braşov, December 27-30, 1978. Edited by C. L. Simionescu and I. Benko. Universitatea din Braşov, Braşov, 1979. 376 pp. (Editors) 81j:93006 93-06 (49-06, 65-06, 90-06, 92-06)

Applications of pure mathematics to mechanics ★Trends in applications of pure mathematics to mechanics. Vol. II. Papers presented at the Second Symposium held in Kozubnik, September, 1977. Edited by Henryk Zorski. Monographs and Studies in Mathematics, 5. Pitman Publishing, Ltd., London-San Francisco, Calif., 1979. viii + 341 pp. *ISBN 0-273-08421-6 (Editors) 81a:73003 73-06*

Applications of statistics and probability in soil and structural engineering ★Applications of statistics and probability in soil & structural engineering. Vol. I, II. Proceedings of the Third International Conference (ICASP3) held in Sydney, January 29-February 2, 1979. Edited by Owen G. Ingles. Unisearch, Ltd., Kensington, 1979. Vol. I: 427 pp.; Vol. II: pp. 429-849. *ISBN 0-909796-08-4, 0-909796-09-2 (Editors) 81b:62002a 62-06*

★Applications of statistics & probability in soil & structural engineering. Vol. III. Proceedings of the Third International Conference (ICASP3) held in Sydney, January 29-February 2, 1979. Edited by Owen G. Ingles. Unisearch, Ltd., Kensington, 1979. 468 pp. *ISBN 0-909796-10-6 (Editors) 81b:62002b 62-06*

Applied game theory ★Applied game theory. Proceedings of a Conference at the Institute for Advanced Studies, Vienna, June 13-16, 1978. Edited by S. J. Brams, A. Schotter and G. Schwödiner. IHS-Studies, I. Physica Verlag, Würzburg, 1979. 447 pp. *ISBN 3-7908-0208-5 (Editors) 81c:90001 90-06 (90Dxx)*

- Applied information technology** ★EURO IFIP 79. Proceedings of the European Conference on Applied Information Technology of the International Federation for Information Processing held in London, September 25-28, 1979. Edited by P. A. Samet. North-Holland Publishing Co., Amsterdam-New York, 1979. xiv + 754 pp. ISBN 0-444-85370-7 (Editors) 81c:68003 68-06 (94-06)
- Applied inverse problems** ★Applied inverse problems. Edited by P. C. Sabatier. Lecture Notes in Physics, 85. Springer-Verlag, Berlin-New York, 1978. v + 425 pp. ISBN 3-540-09094-0 (Editors) 81a:00024 00A69 (00A10, 35R25)
- Applied mathematics** ★Вопросы прикладной математики. (Russian) [Questions in applied mathematics] Edited by B. A. Bel'jukov. Sibirsk. Energet. Inst. Sibirsk. Otdel. Akad. Nauk SSSR, Irkutsk, 1977. 180 pp. (Editors) 81a:90008 90-06
- ★Сборник по вопросам механики и прикладной математики. (Russian) [Collection of questions on mechanics and applied mathematics] Edited by V. A. Sapa. Kazah. Gos. Univ., Alma-Ata, 1978. 226 pp. (Editors) 81a:00007 00A10
- ★Численные методы оптимизации (прикладная математика). (Russian) [Numerical methods of optimization (applied mathematics)] Edited by O. I. Artem'eva and B. A. Bel'jukov. Akad. Nauk SSSR Sibirsk. Otdel., Energet. Inst., Irkutsk, 1978. 184 pp. (Editors) 81d:65003 65-06
- ★Современные вопросы прикладной математики и программирования. (Russian) [Contemporary questions of applied mathematics and programming] Edited by B. A. Šterbakov. "Ština", Kishinev, 1979. 176 pp. (Editors) 81a:00008 00A10 (90-06)
- ★Information linkage between applied mathematics and industry. II. Proceedings of the Second Annual Workshop held in Monterey, Calif., February 22-24, 1979. Edited by Arthur L. Schoenstadt, Frank D. Faulkner, Richard Franke and I. Bert Russak. Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], New York-London, 1980. xii + 293 pp. ISBN 0-12-628750-3 (Editors) 81j:93004 93-06
- Applied mechanics** ★Advances in applied mechanics. Vol. 18. Edited by Chia Shun Yih. Academic Press [Harcourt Brace Jovanovich, Publishers], New York-London, 1978. vii + 353 pp. ISBN 0-12-002018-1 (Editors) 81a:76003 76-06 (73-06)
- Applied mechanics. Applications of mathematical methods in the natural sciences** ★Прикладная механика. Применения математических методов в естественных науках. (Russian) [Applied mechanics. Applications of mathematical methods in the natural sciences] Edited by V. A. Sapa. Kazah. Gos. Univ., Alma-Ata, 1979. 177 pp. (Editors) 81b:00004 00A10
- Applied stochastic processes** ★Applied stochastic processes. Proceedings of the Conference held at the University of Georgia, Athens, Ga., May 15-19, 1978. Edited by G. Adomian. Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], New York-London, 1980. ix + 301 pp. ISBN 0-12-044380-5 (Editors) 81j:60001 60-06
- Approximate methods for investigating differential equations and their applications** ★Приближенные методы исследования дифференциальных уравнений и их приложения. Вып. 4. (Russian) [Approximate methods for investigating differential equations and their applications. No. 4] Edited by V. V. Strygin. Kulbytev. Gos. Univ., Kuybyshev, 1978. 140 pp. (Editors) 81c:34004 34-06
- Approximate and qualitative methods in the theory of differential and functional-differential equations** ★Приближенные и качественные методы теории дифференциальных и дифференциально-функциональных уравнений. (Russian) [Approximate and qualitative methods in the theory of differential and functional-differential equations] Edited by A. N. Šarkovskii. Akad. Nauk Ukrain. SSR, Inst. Mat., Kiev, 1979. 112 pp. (Editors) 81b:34001 34-06 (65-06)
- Approximate solution of random equations** ★Approximate solution of random equations. Edited by A. T. Bharucha-Reid. North Holland Series in Probability and Applied Mathematics. North-Holland Publishing Co., New York-Amsterdam, 1979. ix + 242 pp. ISBN 0-444-00344-4 (Editors) 81j:60002 60-06 (47Hxx)
- Approximation of functions by polynomials and splines** ★Приближение функций полиномами и сплайнами. (Russian) [Approximation of functions by polynomials and splines] Edited by S. B. Stečkin. Trudy Mat. Inst. Steklov. 145 (1980). "Nauka", Moscow, 1980. pp. 1-252. (Editors) 81b:41001 41-06 (41A10, 41A15)
- Approximation methods for Navier-Stokes problems** ★Approximation methods for Navier-Stokes problems. Proceedings of the Symposium held at the University of Paderborn, Paderborn, September 9-15, 1979. Edited by R. Rautmann. Lecture Notes in Mathematics, 771. Springer-Verlag, Berlin-New York, 1980. xvi + 581 pp. ISBN 3-540-09734-1 (Editors) 81a:76004 76-06
- Approximation in Theorie und Praxis** ★Approximation in Theorie und Praxis. (German) [Approximation in theory and practice] Proceedings of a Symposium held in Siegen, January 31-February 2, 1979. Edited by Günter Meinardus. Bibliographisches Institut, Mannheim, 1979. 304 pp. ISBN 3-411-01567-5 (Editors) 81a:41002 41-06
- Approximation theory** ★Proceedings of the Conference on Approximation Theory. (Chinese) Held at Hangzhou, April 23-30, 1978. Hangzhou University Press, Hangzhou, 1978. iii + 152 pp. (Editors) 81a:41002 41-06
- ★Применение функционального анализа в теории приближений. (Russian) [Application of functional analysis in approximation theory] Edited by V. N. Nikol'skii. Kalinin. Gos. Univ., Kalinin, 1979. 164 pp. (Editors) 81k:41001 41-06
- ★Numerical methods of approximation theory. Vol. 5. Excerpts of a Conference held at the Mathematical Research Institute, Oberwolfach, March 18-24, 1979. Edited by Lothar Collatz, Günter Meinardus and H. Werner. International Series of Numerical Mathematics, 52. Birkhäuser Verlag, Basel-Boston, Mass., 1980. 337 pp. ISBN 3-7643-1103-7 (Editors) 81d:65002 65-06 (41-06)
- ★Approximation theory. III. Proceedings of a Conference honoring Professor George G. Lorentz held at the University of Texas, Austin, Tex., January 8-12, 1980. Edited by E. W. Cheney. Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], New York-London, 1980. xxiii + 944 pp. ISBN 0-12-171050-5 (Editors) 81m:41001 41-06
- ★Применение функционального анализа в теории приближений. (Russian) [Application of functional analysis to approximation theory] Edited by V. N. Nikol'skii. Kalinin. Gos. Univ., Kalinin, 1980. 162 pp. (Editors) 81m:46001 46-06
- Arcata, Calif.** ★Proceedings of the West Coast Conference on Combinatorics, Graph Theory and Computing. Held at Humboldt State University, Arcata, Calif., September 5-7, 1979. Edited by Phyllis Z. Chinn and D. McCarthy. Congressus Numerantium, XXVI. Utilitas Mathematica Publishing, Inc., Winnipeg, Man., 1980. vi + 322 pp. ISBN 0-919628-26-5 (Editors) 81l:05006 05-06 (68-06)
- Arithmetic** ★Modèles de l'arithmétique. (French) [Models of arithmetic] Papers presented at the Seminar held at the University of Paris VII, Paris, 1977. Edited by K. McAlon. Astérisque, 73. Société Mathématique de France, Paris, 1980. 155 pp. (Editors) 81j:03006 03-06 (03F30, 03H15)
- Artificial intelligence** ★Reconnaissance des formes et intelligence artificielle. Tome I, II, III. (French) [Recognition of shapes and artificial intelligence. Vol. I, II, III] Second AFCET-IRIA Congress held in Toulouse, September 12-14, 1979. Institut de Recherche d'Informatique et d'Automatique (IRIA), Rocquencourt, 1979. Vol. I: 423 pp.; Vol. II: 426 pp.; Vol. III: 368 pp. ISBN 2-7621-0212-3 (Editors) 81j:68007 68-06 (62-06, 92-06)
- Astérisque** ★Temps locaux. (French) [Local times] Exposé du Séminaire J. Azéma-M. Yor. Held at the Université Pierre et Marie Curie, Paris, 1976-1977. With an English summary. Astérisque, 52.53. Société Mathématique de France, Paris, 1978. ii + 223 pp. (Michael Sharpe) 81b:60042 60G44 (60G48, 60J55)
- ★Analyse des systèmes. (French) [Systems analysis] Conference held in Bordeaux, September 11-16, 1978. Astérisque, 75.76. Société Mathématique de France, Paris, 1980. 248 pp. (Editors) 81f:93002 93-06
- ★Journées sur les Marches Aléatoires. (French) [Conference on Random Walks] Held at Kleebach, March 5-10, 1979. Astérisque, 74. Société Mathématique de France, Paris, 1980. 201 pp. (Editors) 81g:60001 60-06
- ★Modèles de l'arithmétique. (French) [Models of arithmetic] Papers presented at the Seminar held at the University of Paris VII, Paris, 1977. Edited by K. McAlon. Astérisque, 73. Société Mathématique de France, Paris, 1980. 155 pp. (Editors) 81j:03006 03-06 (03F30, 03H15)
- Asymptotic analysis** ★Asymptotic analysis. From theory to application. Edited by F. Verhulst. Lecture Notes in Mathematics, 711. Springer-Verlag, Berlin-New York, 1979. iii + 240 pp. ISBN 3-540-09245-5 (Editors) 81a:00005 00A10
- Asymptotic methods of nonlinear mechanics** ★Асимптотические методы нелинейной механики. (Russian) [Asymptotic methods of nonlinear mechanics] Edited by Ju. A. Mitropol'skii [Ju. O. Mitropol'skii]. Akad. Nauk Ukrain. SSR, Inst. Mat., Kiev, 1979. 200 pp. (Editors) 81a:34003 34-06
- Asymptotic methods in systems theory** ★Асимптотические методы в теории систем. Вып. 9. (Russian) [Asymptotic methods in systems theory. No. 9] Edited by A. N. Pančukov. Irkutsk. Gos. Univ., Irkutsk, 1976. 248 pp. (Editors) 81c:93001 93-06 (49-06, 76-06)
- Asymptotic methods in the theory of nonlinear oscillations** ★Асимптотические методы в теории нелинейных колебаний. (Russian) [Asymptotic methods in the theory of nonlinear oscillations] Proceedings of the All-Union Conference on Asymptotic Methods in Nonlinear Mechanics held in Kaciveli, April 22-25, 1977. Edited by Ju. A. Mitropol'skii [Ju. O. Mitropol'skii]. "Naukova Dumka", Kiev, 1979. 279 pp. (Editor) 81a:34002 34-06 (34C15, 34Exx)
- Asymptotic statistics** ★Proceedings of the Second Prague Symposium on Asymptotic Statistics. Held in Hradec Králové, August 21-25, 1978. Edited by Petr Mandl and Marie Hušková. North-Holland Publishing Co., Amsterdam-New York; Society of Czechoslovak Mathematicians and Physicists, Prague, 1979. 340 pp. ISBN 0-444-85375-8 (Editors) 81c:62005 62-06 (60-06, 94-06)
- Asymptotic theory of statistical tests and estimation** ★Asymptotic theory of statistical tests and estimation. In honor of Wassily Hoeffding. Proceedings of an Advanced International Symposium held at the University of North Carolina, Chapel Hill, N.C., April 16-18, 1979. Edited by Indra Mohan Chakravarti. With an appendix by Peter Clifford. Academic Press [Harcourt Brace Jovanovich, Publishers], New York-London-Toronto, Ont., 1980. xiv + 350 pp. ISBN 0-12-166650-6 (Editors) 81c:62004 62-06 (60-06)
- Asymptotics** ★Singular perturbations and asymptotics. Proceedings of an Advanced Seminar held at the Mathematics Research Center, University of Wisconsin, Madison, Wis., May 28-30, 1980. Edited by Richard E. Meyer and Seymour V. Parter. Publication of the Mathematics Research Center, University of Wisconsin, 45. Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], New York-London, 1980. ix + 409 pp. ISBN 0-12-493260-6 (Editors) 81m:34001 34-06 (34Exx)
- Athens, Ga.** ★Applied stochastic processes. Proceedings of the Conference held at the University of Georgia, Athens, Ga., May 15-19, 1978. Edited by G. Adomian. Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], New York-London, 1980. ix + 301 pp. ISBN 0-12-044380-5 (Editors) 81j:60001 60-06
- Athens, Ohio** ★The Proceedings of the 1979 Topology Conference. Held at Ohio University, Athens, Ohio, 1979. Edited by Włodzimierz Kuperberg, G. M. Reed and Philip Zenor. Topology Proc. 4 (1979), no. 1. (1980). Auburn University, Mathematics Department, Auburn, Ala., 1980. pp. 1-338. (Editors) 81h:54001 54-06
- ★The Proceedings of the 1979 Topology Conference. Held at Ohio University, Athens, Ohio, 1979. Edited by Włodzimierz Kuperberg, G. M. Reed and Philip Zenor. Topology Proc. 4 (1979), no. 2. (1980). Auburn University, Mathematics Department, Auburn, Ala., 1980. pp. 339-645. (Editors) 81k:54001 54-06 (55-06)
- Atlanta, Ga., 1979** ★Conference Record of the Eleventh Annual ACM Symposium on Theory of Computing. Held in Atlanta, Ga., April 30-May 2, 1979. Association for Computing Machinery (ACM), New York, 1979. vii + 368 pp. ISBN 0-89791-003-6 (Editors) 81a:68004 68-06
- Austin, Tex.** ★Computational methods in nonlinear mechanics. Proceedings of the TICOM Second International Conference held at the University of Texas, Austin, Tex., March 26-29, 1979. Edited by J. Tinsley Oden. North-Holland Publishing Co., Amsterdam-New York, 1980. viii + 539 pp. ISBN 0-444-85382-0 (Editors) 81e:73002 73-06 (65N30)
- ★Approximation theory. III. Proceedings of a Conference honoring Professor George G. Lorentz held at the University of Texas, Austin, Tex., January 8-12, 1980. Edited by E. W. Cheney. Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], New York-London, 1980. xxiii + 944 pp. ISBN 0-12-171050-5 (Editors) 81m:41001 41-06
- Automata** ★Алгоритмы и автоматы. (Russian) [Algorithms and automata] Edited by M. M. Arslanov. Kazan. Gos. Univ., Kazan, 1978. 111 pp. (Editor) 81b:68001 68-06 (68Cxx)
- Automata, languages and programming** ★Automata, languages and programming. Sixth Colloquium (ICALP 79) held in Graz, July 16-20, 1979. Edited by Hermann A. Maurer.

- Lecture Notes in Computer Science, 71. Springer-Verlag, Berlin-New York, 1979. ix + 684 pp. ISBN 3-540-09510-1 (Editors) 81c:68002 68-06
- ★Automata, languages and programming. Proceedings of the Seventh International Colloquium held at Noordwijkerhout, July 14-18, 1980. Edited by J. W. de Bakker and J. van Leeuwen. Lecture Notes in Computer Science, 85. Springer-Verlag, Berlin-New York, 1980. viii + 671 pp. ISBN 3-540-10003-2 (From the preface) 81c:68004 68-06
- Automata theory in application to the design of discrete devices and systems ★Теория автоматов в применении к проектированию дискретных устройств и систем. (Russian) [Automata theory in application to the design of discrete devices and systems] Proceedings of Symposia held in Jachranka, April 18-23, 1977 and in Donovaly, May 8-13, 1978. Tanulmányok—MTA Számítástech. Automat. Kutató Int. Budapest No. 99 (1979) (1980). MTA Számítástech. Automat. Kutató Intézet, Budapest, 1980. pp. 1-246. (Editors) 81a:68005 68-06
- Automated deduction ★5th Conference on Automated Deduction. Held at Les Arcs, July 8-11, 1980. Edited by Wolfgang Bibel and Robert Kowalski. Lecture Notes in Computer Science, 87. Springer-Verlag, Berlin-New York, 1980. vii + 385 pp. ISBN 3-540-10009-1 (Editors) 81c:68006 68-06 (03B35)
- Automatic control systems ★Разработка математических и технических средств автоматизированных систем управления. (Russian) [Processing of software and hardware for automatic control systems] Edited by V. I. Skurikhin, N. I. Tukalevskaja and V. E. Kravchenko. Akad. Nauk Ukrain. SSR, Inst. Kibernet., Kiev, 1978. 110 pp. (Editors) 81a:90007 90-06
- Automation, analysis and pattern recognition ★Автоматизация анализа и распознавания изображений. 1. (Russian) [Automation, analysis and pattern recognition. 1] Методы и средства. [Methods and means] Edited by G. G. Gromov. "Zinatne", Riga, 1979. 267 pp. (Editors) 81c:68110 68G10 (68-06)
- Bad Honnef ★Graph-grammars and their application to computer science and biology. Papers presented at an International Workshop held in Bad Honnef, October 30-November 3, 1978. Edited by Volker Claus, Hartmut Ehrig and Grzegorz Rozenberg. Lecture Notes in Computer Science, 73. Springer-Verlag, Berlin-New York, 1979. vii + 477 pp. ISBN 3-540-09525-X (Editors) 81a:68005 68-06 (92A05)
- Baku ★Материалы Семинара "Универсальная Алгебра". (Russian) [Abstracts of the Seminar on Universal Algebra] Held at Baku, September 1976. "Elm", Baku, 1979. 23 pp. (Editors) 81j:00001 08-06 (06-06, 20-06)
- Balatonseminar ★Special issue on large elastic deformation of discrete systems. Lectures presented at the Euromech 69' International Colloquium held in Balatonseminar, April 13-15, 1977. Acta Tech. Acad. Sci. Hungar. 87 (1978), no. 1-2. (1979). Akadémiai Kiadó (Publishing House of the Hungarian Academy of Sciences), Budapest, 1978. pp. 1-210. (Editors) 81a:73002 73-06
- Banach spaces ★Notes in Banach spaces. Edited by H. Elton Lacey. University of Texas Press, Austin, Tex., 1980. ii + 439 pp. ISBN 0-292-75520-1 (Editors) 81m:46002 46-06
- Barcelona ★Proceedings of the First World Conference on Mathematics at the Service of Man. Vol. I. Held in Barcelona in 1977. Edited by A. Ballester, N. Batle and E. Trillas. Universidad Politécnica, Escuela Técnica Superior de Arquitectura, Departamento de Matemáticas, Barcelona, 1980. v + 650 pp. (Editors) 81m:90003a 90-06 (93-06)
- ★Proceedings of the First World Conference on Mathematics at the Service of Man. Vol. II. Held in Barcelona in 1977. Edited by A. Ballester, N. Batle and E. Trillas. Universidad Politécnica, Escuela Técnica Superior de Arquitectura, Departamento de Matemáticas, Barcelona, 1980. ii + 681 pp. (Editors) 81m:90003b 90-06 (93-06)
- Bari ★A survey on the theoretical and numerical trends in nonlinear analysis. I. Proceedings of the Third Seminar on Functional Analysis and its Applications (S.A.F.A. III) held in Bari, September 27-October 5, 1978. Confer. Sem. Mat. Univ. Bari No. 158-162 (1979). Editori Laterza, Bari, 1979. pp. i-iv and 1-180. (Editors) 81h:00007 00A10
- ★A survey on the theoretical and numerical trends in nonlinear analysis. II. Proceedings of the Third Seminar on Functional Analysis and its Applications (S.A.F.A. III) held in Bari, September 27-October 5, 1978. Confer. Sem. Mat. Univ. Bari No. 163-168 (1979) (1980). Editori Laterza, Bari, 1980. pp. 181-398. (Editors) 81h:47055 47Hxx (65-06)
- Bayesian analysis in economic theory and time series analysis ★Bayesian analysis in economic theory and time series analysis. The 1977 Savage Dissertation Award Theses. Studies in Bayesian Econometrics, 2. North-Holland Publishing Co., Amsterdam-New York, 1980. xi + 180 pp. ISBN 0-444-85414-2 (Editors) 81h:62190 62P20 (90A20)
- Behavior of systems in random media ★Поведение систем в случайных средах. (Russian) [Behavior of systems in random media] Edited by I. I. Gihman and Ju. N. Lin'kov [Ju. M. Lin'kov]. Akad. Nauk Ukrain. SSR, Inst. Kibernet., Kiev, 1979. 95 pp. (Editors) 81m:60001 60-06 (62-06, 93-06)
- Beiträge: Algebra und Geometrie ★Beiträge zur Algebra und Geometrie. 8. (German) [Contributions to Algebra and Geometry. 8] Edited by Ott-Heinrich Keller, Otto Krötenheerd, Elégus Tamas Schmidt and Ludwig Stammeler. Wiss. Beitr. Martin-Luther-Univ. Halle-Wittenberg M 12 (1979). VEB Deutscher Verlag der Wissenschaften, Berlin, 1979. pp. 1-151. (Editors) 81h:00005 00A10
- Bergamo ★Nonlinear optimization. Theory and algorithms. Proceedings of the International Summer School held at the University of Bergamo, Bergamo, September 1979, and repeated at the Hatfield Polytechnic, Hatfield, July 1980. Edited by L. C. W. Dixon, E. Spedicato and G. P. Szegő. Birkhäuser, Boston, Mass., 1980. vi + 486 pp. ISBN 3-7643-3020-1 (Editors) 81j:65006 65-06
- Berlin ★Einstein Symposium, Berlin. (German) On the occasion of the 100th anniversary of his birthday, held March 25-30, 1979. Edited by H. Nelkowi, A. Hermann, H. Poser, R. Schrader and R. Seiler. Lecture Notes in Physics, 100. Springer-Verlag, Berlin-New York, 1979. viii + 550 pp. ISBN 3-540-09718-X (Editors) 81c:83001 83-06 (01A70)
- ★Proceedings in Operations Research. 8. (German) Papers of the Seventh Annual Meeting of the Deutsche Gesellschaft für Operations Research (DGOR) held at the Freie Universität Berlin, Berlin, October 4-6, 1978. Edited by K.-W. Gaede, D. B. Pressmar, Ch. Schneeweß, K.-P. Schuster and O. Seifert. Physica Verlag, Würzburg, 1979. 700 pp. ISBN 3-7908-0212-3 (Editors) 81c:90003b 90-06 (62-06)
- ★Fundamentals of numerical computation (computer-oriented numerical analysis). Proceedings of a Conference held at the Technical University of Berlin, Berlin, June 5-8, 1979. Edited by Götz Alefeld and Rolf Dieter Grigoriuff. Computing Supplementum, 2. Springer-Verlag, Vienna, 1980. ii + 229 pp. ISBN 3-211-81566-X (Editors) 81j:65005 65-06
- ★Семинар: Численные Методы Решения Уравнений Баланса. (Russian) [Seminar on Numerical Methods for Solving Balance Equations] Papers presented at the Seminar held in Berlin, October 20-25, 1980. Report 1980, 5. Akademie der Wissenschaften der DDR, Zentralinstitut für Mathematik und Mechanik, Berlin, 1980. iv + 164 pp. (Editors) 81j:65013 65-06
- ★Systems analysis and simulation, 1980. Proceedings of the International Symposium held in Berlin, September 1-5, 1980. Edited by Achim Sydow. Mathematical Research, 5. Akademie-Verlag, Berlin, 1980. 496 pp. (Editors) 81j:93009 93-06 (68-06, 90-06, 92-06)
- ★Discrete structures and algorithms. Proceedings of the Workshop WG 79, Fifth Conference on Graphtheoretic Concepts in Computer Science held in Berlin, June 21-23, 1979. Edited by Uwe Pape. Carl Hanser Verlag, Munich, 1980. xi + 268 pp. ISBN 3-446-13135-3 (Editors) 81m:68002 68-06
- Bibliography: Aronszajn, Nachman See Szeptycki, Pawel, 81m:0.076
- Babbage, Charles See Van Sinderen, Alfred W., 81m:21105
- Bajraktarević, Mahmut See Maravić, Manojlo; et al., 81i:01013
- Banach, Stefan ★Œuvres. Vol. II. Travaux sur l'analyse fonctionnelle. Edited by Czesław Bessaga, Stanisław Mazur, Władysław Orlicz, Aleksander Pełczyński, Stefan Rolewicz and Wiesław Żelazko. With an article by Pełczyński and Bessaga. PWN—Éditions Scientifiques de Pologne, Warsaw, 1979. 470 pp. (1 plate). ISBN 83-01-00393-6 (G. J. O. Jameson) 81f:46001 46-02 (01A75, 46Bxx)
- Biot, Maurice Anthony Professor Maurice Anthony Biot: a biographical note. J. Math. Phys. Sci. 14 (1980), no. 1, A-1-A-18 (1 plate). (Editors) 81f:01040 01A70
- Bogoljubov, N. N. See Vladimirov, V. S.; et al., 81g:01020
- Boncompagni, Baldassare Boncompagni papers in the library of Trinity College, Dublin. Historia Math. 6 (1979), no. 2, 207-208. (Editors) 81j:01050 01A75
- Bowen, Rufus See Sullivan, Dennis, 81h:01049
- Brauer, Richard Dagobert See Brauer, Richard, 81i:01017a
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- de Fermat, Pierre See Ribenboim, Paulo, 81f:10023
- Fisher, Ronald Aylmer Publications of R. A. Fisher. R. A. Fisher: an appreciation, pp. 192-208, Lecture Notes in Statist., 1, Springer, New York, 1980. (See 81c:01034) 01A70 (62-03)
- Futik, Svatopluk See Marthin, Jean; et al., 81m:01067
- Fulkerson, Delbert Ray See Billera, Louis J.; et al., 81c:01024a
- Gheorghević, Stefan I. See Ene, Horia I., 81c:01025a and Jacob, Calus, 81c:01025b
- Gödel, Kurt Kurt Gödel (1906-1978). (Bulgarian) Fiz.-Mat. Spis. B'lgar. Akad. Nauk. 21(54) (1978), no. 4, 325-327 (1979). (Editors) 81m:01098 01A70
- Kurt Gödel, 1906-1978. (Spanish) Gaceta Mat. (1) (Madrid) 30 (1978), no. 3-4, 59-64. (Editors) 81h:01055 01A70
- See also Wang, Hao, 81h:01015
- Günther, Gotthard See Ditticher, Joseph; et al., 81h:03009
- Helly, Eduard See Butzer, P. L.; et al., 81k:01028
- Ivanov, V. K. See Krasovskii, N. N.; et al., 81g:01019b
- Jahn, Hermann Arthur See Landsberg, Peter T., 81m:01063
- Kepler, Johannes See Hoppe, Johannes, 81c:01036 and List, Martha, 81h:01012
- Kepi, Balvraj See Drábek, Karel, 81m:01047
- Knuth, Előd Előd Knuth. (Hungarian) Mat. Lapok 27 (1976), no. 1-2, 193-194 (1978). (Editors) 81m:01006 01A70
- Kurczyn, Stanisław Stanisław Kurczyn (1947-1978). (Polish) Arch. Automat. Telemek. 23 (1978), no. 4, 511-512. (Editors) 81f:01044 01A70
- Kurokuma, Eiichi Biography of Eiichi Kurokuma. (Japanese) Bull. Yamagata Univ. Natur. Sci. 9 (1979), no. 4, i-ii (1 plate). (Editors) 81h:01052 01A70
- Kuzmecz, B. G. See Grigor'jan, A. T., 81m:01053
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- Murray, Francis Joseph Retirement of Francis Joseph Murray. Duke Math. J. 47 (1980), no. 4, 983-985. (Editors) 81m:01090 01A70
- Naimark, M. A. Mark Aronovič Naimark. (Russian) Uspehi Mat. Nauk 35 (1980), no. 4(214), 135-140. (Editors) 81m:01091 01A70
- Pascal, Blaise See Strel'cova, G. Ja., 81d:01034
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- Patodi, Vijay Kumar Vijay Kumar Patodi. Geometry and analysis, pp. i-iii, Indian Acad. Sci., Bangalore, 1980. (Editors) 81m:01002 01A70
- Peirce, Charles S. See Emsle, Carolyn, 81j:01047
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Bibliography: (continued)

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- Reissner, Eric List of publications of Eric Reissner. *Mechanics today*, Vol. 5, pp. 561-569, Pergamon, Oxford, 1980. (Editors) 81m:01067 01A70
- Révész, Pál List of scientific works of Pál Révész awarded the State Prize in 1978. (Hungarian) *Mat. Lapok* 27 (1976), no. 1-2, 24-26 (1978). (Editors) 81m:01088 01A70
- Ridder, Jacob See Westermann, L. R. J., 81m:01082
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- Samar'skii, A. A. See Tihonov, A. N.; et al., 81m:01078
- Sansone, Giovanni Giovanni Sansone. (Russian) *Differentsial'nye Uravneniya* 16 (1980), no. 10, 1906-1913. (Editors) 81k:01057 01A70
- Schwinger, Julian See Schwinger, Julian, 81b:01023
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- Suppes, Patrick Bibliography of Patrick Suppes. *Patrick Suppes*, pp. 235-258, Profiles, 1, Reidel, Dordrecht, 1979. (See 80m:01040) 01A70
- Švec, Marko See Kurzwel, Jarošlav, 81m:01062
- Turán, Pál List of publications of Paul Turán. P. Turán memorial volume. *J. Approx. Theory* 29 (1980), no. 1, 14-22. (Editors) 81m:01089 01A70
- Vidler, Ivan See Dobrovole, Danica; et al., 81k:01032
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- History of science and its cultural influences One hundred fifth critical bibliography of the history of science and its cultural influences (to January 1980). Edited by John Neu. *Isis* 71 (1980), no. 260, 5-295. (From the text) 81j:01051 01A75 (00A20)
- Interval mathematics See Garloff, Jürgen; et al., 81k:65048
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- Bielefeld** ★The permutation group in physics and chemistry. Edited by Jürgen Hinze. Symposium held at the University of Bielefeld, Bielefeld, July, 1978. Lecture Notes in Chemistry, 12. Springer-Verlag, Berlin-New York, 1979. vi+230 pp. ISBN 3-540-09707-4 (Editors) 81a:81004 81-06 (81C40)
- ★Burnside groups. Proceedings of a Workshop held at the University of Bielefeld, Bielefeld, June-July 1977. Lecture Notes in Mathematics, 806. Springer-Verlag, Berlin-New York, 1980. ii+274 pp. ISBN 3-540-10006-7 (Editors) 81j:20002 20-06
- ★Proceedings of the Conference on Kristallographische Gruppen. Part I. Held at the Universität Bielefeld, Bielefeld, September 2-16, 1979. Edited by A. W. M. Dress and J. Neubüser. *Match* No. 9 (1980). *Max-Planck-Institut für Kohlenforschung, Institut für Strahlenchemie, Mülheim*, 1980. pp. i-iv and 1-261. (Editors) 81k:20002 20-06 (20H15)
- Bifurcation** ★Functional differential equations and bifurcation. Proceedings of a Conference held at the Instituto de Ciências Matemáticas de São Carlos, Universidade de São Paulo, São Carlos, July 2-7, 1979. Edited by Antonio Fernandes Izé. Lecture Notes in Mathematics, 799. Springer-Verlag, Berlin-New York, 1980. xxii+409 pp. ISBN 3-540-09966-7 (Editors) 81j:34004 34-06 (45-06)
- Bifurcation and nonlinear eigenvalue problems** ★Bifurcation and nonlinear eigenvalue problems. Proceedings of a Session held at the Université de Paris XIII, Villetaneuse, October 2-4, 1978. Edited by C. Bardos, J. M. Lasry and M. Schatzman. Lecture Notes in Mathematics, 782. Springer-Verlag, Berlin-New York, 1980. viii+296 pp. ISBN 3-540-09758-9 (Editors) 81k:35001 35-06 (00A69, 35B32, 58E07)
- Bifurcation phenomena in mathematical physics and related topics** ★Bifurcation phenomena in mathematical physics and related topics. Proceedings of the NATO Advanced Study Institute held at Cargèse, June 24-July 7, 1979. Edited by Claude Bardos and Daniel Bessis. NATO Advanced Study Institute Series. Ser. C: Mathematical and Physical Sciences, 54. D. Reidel Publishing Co., Dordrecht-Boston, Mass.-London, 1980. ix+596 pp. ISBN 90-277-1086-4 (Editors) 81f:00012 00A69 (35-06, 58-06, 81-06, 82-06)
- Bifurcation problems and their numerical solution** ★Bifurcation problems and their numerical solution. Proceedings of the Workshop held at the University of Dortmund, Dortmund, January 15-17, 1980. Edited by H. D. Mittelmann and H. Weber. International Series of Numerical Mathematics, 54. Birkhäuser Verlag, Basel-Boston, Mass., 1980. iii+243 pp. ISBN 3-7643-1204-1 (Editors) 81i:58003 58-06 (65-06)

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- de Arriqubar, Nicolas See Vilaplana, J.-P., 81m:01081
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- Biot, Maurice Anthony Professor Maurice Anthony Biot: a biographical note. *J. Math. Phys. Sci.* 14 (1980), no. 1, A-1-A-18 (1 plate). (Editors) 81i:01040 01A70
- Bogoljubov, N. N. See Vladimirov, V. S.; et al., 81g:01020b; Aleksandrov, P. S.; et al., 81g:01020c; Logunov, A. A.; et al., 81g:01020d and Davydov, A. S.; et al., 81g:01020e
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- Einstein, Albert Albert Einstein (on the occasion of the 100th anniversary of his birth). (Azerbaijani) *Izv. Akad. Nauk Azerbaidžan. SSR Ser. Fiz.-Tehn. Mat. Nauk* 1979, no. 1, 121. (Editors) 81i:01085 01A70
- See also Debnath, Lokenath; et al., 81d:01021; Sen, K. K., 81j:01043 and Laurikainen, K. V., 81m:01064
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- Kuronuma, Eiichi Biography of Eiichi Kuronuma. (Japanese) *Bull. Yamagata Univ. Natur. Sci.* 9 (1979), no. 4, i-ii (1 plate). (Editors) 81k:01052 01A70
- Kuznetsov, B. G. See Grigor'jan, A. T., 81m:01053
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- Mitropol'skii, Ju. A. 60th birthday of the Ukrainian SSR Academy of Science's Academician Ju. A. Mitropol'skii. (Russian) *Gosizdat Visš. Učebn. Zased. Tehn. Meh.* 11 (1976), no. 1, 7-9 (1978). (Editors) 81i:01041b 01A70
- Jurij Oleksivovič Mitropol'skii (on the occasion of his sixtieth birthday). (Ukrainian) *Visnik K'iev. Univ. Ser. Mat. Meh. No. 19* (1977), 143-144. (Editor) 81f:01041a 01A70
- Moore, E. H. See Whyburn, Lucille, 81m:01083
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- Murray, Francis Joseph Retirement of Francis Joseph Murray. *Duke Math. J.* 47 (1980), no. 4, 983-985. (Editors) 81m:01090 01A70
- Naimark, M. A. Mark Aronovič Naimark. (Russian) *Uspehi Mat. Nauk* 35 (1980), no. 4(214), 135-140. (Editors) 81m:01091 01A70
- Newton, Isaac See Wussing, Hans, 81d:01025
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- Reissner, Eric Dedication. *Mechanics today*, Vol. 5, pp. viii-x (1 plate), Pergamon, Oxford, 1980. (Editors) 81m:01092 01A70
- Riesz, Friedrich See Mitropol'skii, Ju. O.; et al., 81j:01040
- Rozdestvenskii, B. L. Boris Leonidovič Rozdestvenskii. (Russian) *Čisl. Metody Meh. Splōn. Sredy* 9 (1978), no. 7 *Vjazkaja Židkost*, 7-8. (Editors) 81a:01029 01A70
- Samar'skii, A. A. Aleksandr Andrejevič Samar'skii (on the occasion of his sixtieth birthday). (Russian) *Žyčisl. Mat. i Mat. Fiz.* 19 (1979), no. 2, 275-276. (Editors) 81m:01094 01A70
- See also Tihonov, A. N.; et al., 81m:01078
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- Suppes, Patrick See Suppes, Patrick, (See 80m:01040)
- Turán, Pál Paul Turán (1910-1976). *Acta Arith.* 37 (1980), 1. (Editors) 81m:01093 01A70
- Zuse, Konrad See Czuderna, Karl-Heinz, 81f:68003
- Mathematicians** ★Biographien bedeutender Mathematiker. (German) [Biographies of important mathematicians] Eine Sammlung von Biographien. [A collection of biographies] Edited by Hans Wussing and Wolfgang Arnold. Second edition. *Volk und Wissen Volkseigener Verlag, Berlin*, 1978. 534 pp. (Editors) 81g:01002a 01-01
- ★Biographien bedeutender Mathematiker. (German) [Biographies of important mathematicians] Eine Sammlung von Biographien. [A collection of biographies] Edited by Hans Wussing and Wolfgang Arnold. *Aulis Verlag Deubner & Co. KG, Cologne*, 1978. 534 pp. ISBN 3-7614-0366-6 (Editors) 81g:01002b 01-01
- Biological growth** ★Conference on Models of Biological Growth and Spread. Mathematical theories and applications. Held in Heidelberg, July 16-21, 1979. Adv. in Appl. Probab. 12 (1980), no. 3, 543-573. *Applied Probability Trust, Sheffield*, 1980. pp. 543-823. (Editors) 81e:92001 92A05

Biology ★Graph-grammars and their application to computer science and biology.

Papers presented at an International Workshop held in Bad Honnef, October 30–November 3, 1978. Edited by Volker Claus, Hartmut Ehrig and Grzegorz Rozenberg. *Lecture Notes in Computer Science*, 73. Springer-Verlag, Berlin-New York, 1979. vii + 477 pp. ISBN 3-540-09525-X (Editors) 81a:68005 68-06 (92A05)

★Nonlinear oscillations in biology. Proceedings of the Tenth Summer Seminar on Applied Mathematics held at the University of Utah, Salt Lake City, Utah, June 12–23, 1978. Edited by Frank C. Hoppensteadt. *Lectures in Applied Mathematics*, 17. American Mathematical Society, Providence, R.I., 1979. x + 253 pp. ISBN 0-8218-1117-7 (Editors) 81a:92002 92-06 (34-06, 58-06)

★Mathematical modelling in biology and ecology. Proceedings of a Symposium held in Pretoria, July 5–6, 1979. Edited by Wayne M. Getz. *Lecture Notes in Biomathematics*, 33. Springer-Verlag, Berlin-New York, 1980. viii + 355 pp. ISBN 3-540-09735-X (Editors) 81a:92001 92-06

Birthday

Aronszajn, Nachman See Szeptycki, Pawel, 81m:01076

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Cabassi, A. L. See Tezadze, G. N.; et al., 81f:01038
Cooper, William Wager ★Quantitative planning and control. Essays in honor of William Wager Cooper on the occasion of his 65th birthday. Edited by Yuji Ijiri and Andrew B. Whinston. *Academic Press [Harcourt Brace Jovanovich, Publishers]*, New York-London, 1979. xxx + 344 pp. (1 plate). ISBN 0-12-370450-2 (Editors) 81b:90002 90Axx

Curry, Haskell B. ★To H. B. Curry: essays on combinatory logic, lambda calculus and formalism. Edited by J. P. Seldin and J. R. Hindley. *Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers]*, London-New York, 1980. xxv + 606 pp. (1 plate). ISBN 0-12-349050-2 (Editors) 81j:03005 03-06 (03B40)

Delone, B. N. See Monastyrskii, M. I., 81f:01033
Forder, Henry George ★H. G. Forder 90th birthday volume. *Math. Chronicle* 9 (1980), i–iii, 1–143. University of Auckland, Department of Mathematics, Mathematical Chronicle Committee, Auckland, 1980. pp. i–iii and 1–179. (Editors) 81d:01026 01A70

Hohenberg, Fritz See Vogler, H., 81c:01030

Ivanov, V. K. See Norden, A. P.; et al., 81g:01019a and Krasovskii, N. N.; et al., 81g:01019b

Kepr, Borivoj See Drábek, Karel, 81m:01047

Kleene, Stephen C. ★The Kleene Symposium. Proceedings of the Symposium held at the University of Wisconsin, Madison, Wis., June 18–24, 1978. Edited by Jon Barwise [K. Jon Barwise], H. Jerome Keisler and Kenneth Kunen. *Studies in Logic and the Foundations of Mathematics*, 101. North-Holland Publishing Co., Amsterdam-New York, 1980. xx + 425 pp. (1 plate). ISBN 0-444-85345-6 (Editors) 81j:03009 03-06

Kuznetsov, B. G. See Grigorian, A., 81k:01036 and Grigor'yan, A. T., 81m:01053
Lorentz, George G. ★Approximation theory. III. Proceedings of a Conference honoring Professor George G. Lorentz held at the University of Texas, Austin, Tex., January 8–12, 1980. Edited by E. W. Cheney. *Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers]*, New York-London, 1980. xxiii + 944 pp. ISBN 0-12-171050-5 (Editors) 81m:41001 41-06

Mitropol'skii, Ju. A. 60th birthday of the Ukrainian SSR Academy of Science's Academician Ju. A. Mitropol'skii. (Russian) *Godišnik Viss. Učebn. Zaved. Tehn. Meh.* 11 (1976), no. 1, 7–9 (1978). (Editors) 81f:01041b 01A70
Jurij Oleksaiovich Mitropol'skii (on the occasion of his sixtieth birthday). (Ukrainian) *Viznik Kiiv. Univ. Ser. Mat. Meh.* No. 19 (1977), 143–144. (Editors) 81f:01041a 01A70

Nikol'skii, S. M. ★Theory of numbers, mathematical analysis and their applications. A collection of papers dedicated to Academician Ivan Matveevich Vinogradov on his eighty-fifth birthday. A translation of *Trudy Mat. Inst. Steklov* 142 (1976). Edited by S. M. Nikol'skii. *Proc. Steklov Inst. Math.* 1979, no. 3. American Mathematical Society, Providence, R.I., 1979. pp. i–vi and 1–289 (1 plate). (Editors) 81a:00014 00A10 (10-06)

Pedersen, Olaf ★Special issue dedicated to Olaf Pedersen on his sixtieth birthday. *Centaurus* 24 (1980). *Munksgaard, Copenhagen*, 1980. pp. 1–368 (1 plate). (Editors) 81e:01003 01-06 (01A70)

Pill, Milan See Jankovský, Zdeněk, 81m:01057

Rožděstvenskii, B. L. Boris Leonidovich Rožděstvenskii. (Russian) *Čisl. Metody Meh. Splošn. Sredy* 9 (1978), no. 7 *Vyskajka Židkost'*, 7–8. (Editors) 81a:01029 01A70
Samarskii, A. A. Aleksandr Andreevich Samarskii (on the occasion of his sixtieth birthday). (Russian) *Ž. Vyčisl. Mat. i Mat. Fiz.* 19 (1979), no. 2, 275–276. (Editors) 81m:01094 01A70

See also Tihonov, A. N.; et al., 81m:01078

Sul'din, A. V. See Norden, A. P.; et al., 81m:01071

Black mathematicians and their works ★Black mathematicians and their works. Edited by Virginia K. Newell, Joella H. Gipson, L. Waldo Rich and Beauregard Stubblefield. *Dorrance & Co., Andover, Pa.*, 1980. xvi + 327 pp. ISBN 0-8059-2556-2, 0-8059-2677-1 (Editors) 81e:00004 00A10 (01A80)

Blackburn, Va. ★New perspectives on Galileo. Edited by Robert E. Butts and Joseph C. Pitt. University of Western Ontario Series in Philosophy of Science, 14. D. Reidel Publishing Co., Dordrecht-Boston, Mass., 1978. xvi + 262 pp. ISBN 90-277-0859-2, 90-277-0891-6 (N. Swerdlow) 81a:01013 01A45 (01A70)

Blażewko ★Functional differential systems and related topics. Proceedings of the First International Conference held at Blażewko, May 19–26, 1979. Edited by M. Kisielewicz. *Higher College of Engineering, Institute of Mathematics and Physics, Zielona Góra*, 1980. 340 pp. (Editors) 81j:34005 34-06

Boca Raton, Fla. ★Proceedings of the Tenth Southeastern Conference on Combinatorics, Graph Theory and Computing. Vols. I, II. Held at the Florida Atlantic University, Boca Raton, Fla., April 2–6, 1979. Edited by Frederick Hoffman, David McCarthy, Ronald C. Mullin and Ralph G. Stanton. *Congressus Numerantium*, XXIII–XXIV. *Utilitas Mathematica Publishing, Inc., Winnipeg, Man.*, 1979. Vol. I: xii + 467 pp.; Vol. II: pp. xiii–xx and 469–939. ISBN 0-919628-23-0, 0-919628-24-9 (Editors) 81b:05004 05-06

Bochum ★Methods and applications in adaptive control. Proceedings of an International Symposium held at the Ruhr-Universität Bochum, Bochum, March 20–21, 1980. Edited by H. Unbehauen. *Lecture Notes in Control and Information Sciences*, 24. Springer-Verlag, Berlin-New York, 1980. vi + 309 pp. ISBN 3-540-10226-4 (Editors) 81k:93038 93C40 (93-06)

Boise, Idaho ★Ordered groups. Proceedings of the Conference held at Boise State University, Boise, Idaho, October 16–20, 1978. Edited by Jo E. Smith, G. Otis Kenny and Richard N. Ball. *Lecture Notes in Pure and Applied Mathematics*, 62. Marcel Dekker, Inc., New York, 1980. x + 174 pp. ISBN 0-8247-6943-0 (Editors) 81m:06001 06-06

Bonn ★GI–9. Jahrestagung. (German) Held in Bonn, October 1–5, 1979. Edited by K. H. Böhlting and P. P. Spies. *Informatik-Fachberichte [Technical Reports on Information Science]*, 19. Springer-Verlag, Berlin-New York, 1979. xii + 690 pp. ISBN 3-540-09664-7 (Editors) 81m:68004 68-06

★Quantitative approximation. Proceedings of an International Symposium held in Bonn, August 20–24, 1979. Edited by Ronald A. DeVore and Karl Scherer. *Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers]*, New York-London, 1980. xi + 324 pp. ISBN 0-12-313650-0 (Editors) 81b:41001 41-06 (65-06)

★Special topics of applied mathematics. Functional analysis, numerical analysis and optimization. Proceedings of the Seminar held at the Gesellschaft für Mathematik und Datenverarbeitung (GMD), Bonn, October 8–10, 1979. Edited by Jens Frehse, Diethard Pallaschke and Ulrich Trottenberg. *North-Holland Publishing Co., Amsterdam-New York*, 1980. viii + 248 pp. ISBN 0-444-86035-5 (Editors) 81j:46003 46-06 (00A10, 49-06, 65-06)

Bordeaux ★Synergetics. Far from equilibrium. Proceedings of the Conference Far from Equilibrium: Instabilities and Structures held in Bordeaux, September 27–29, 1978. Edited by Adolphe Pacault and Christian Vidal. *Springer Series in Synergetics*, 3. Springer-Verlag, Berlin-New York, 1979. x + 175 pp. ISBN 3-540-09304-4 (Editors) 81a:82002 82-06 (58F13, 80A30, 82A25, 92A09)

★Analyse des systèmes. (French) [Systems analysis] Conference held in Bordeaux, September 11–16, 1978. *Astérisque*, 75.76. *Société Mathématique de France, Paris*, 1980. 248 pp. (Editors) 81f:93002 93-06

Boston, Mass. ★Women and the mathematical mystique. Proceedings of the Eighth Annual Hyman Blumberg Symposium on Research in Early Childhood Education held in Boston, Mass., February 1976. Edited by Lynn H. Fox, Linda Brody and Dianne Tobin. *Studies of Intellectual Precocity*, 5. Johns Hopkins University Press, Baltimore, Md., 1980. xi + 211 pp. ISBN 0-8018-2341-2 (Editors) 81j:00005 00A05 (01A80)

Boundary and interior layers—computational and asymptotic methods ★Boundary and interior layers—computational and asymptotic methods. Proceedings of the BAIL I Conference held at Trinity College, Dublin, June 3–6, 1980. Edited by J. J. H. Miller. *Boole Press, Din Laoghaire*, 1980. xi + 425 pp. ISBN 0-906783-01-1 (Editors) 81j:76001 76-06 (65-06)

Boundary properties of analytic functions, singular integral equations and some questions of harmonic analysis ★Граничные свойства аналитических функций, сингулярные интегральные уравнения и некоторые вопросы гармонического анализа. (Russian) [Boundary properties of analytic functions, singular integral equations and some questions of harmonic analysis] Edited by B. V. Hvedelidze. *Trudy Tbiliss. Mat. Inst. Razmadze Akad. Nauk Gruzii. SSR* 65 (1980), "Mecniereba", Tbilisi, 1980. pp. 1–142. (Editors) 81g:30002 30-06

Boundary value problems ★Дифференциальные и интегральные уравнения. Краевые задачи. (Russian) [Differential and integral equations. Boundary value problems] A collection of articles dedicated to the memory of I. N. Vekua. Edited by R. A. Kordzadze. *Tbilis. Gos. Univ., Tbilisi*, 1979. 304 pp. (1 plate). (Editors) 81j:73002 73-06 (30-06, 35-06)

Boundary value problems of mathematical physics ★Краевые задачи математической физики. (Russian) [Boundary value problems of mathematical physics] Edited by Ju. A. Mitropol'skii [Ju. O. Mitropol'skii]. *Akad. Nauk Ukrain. SSR, Inst. Mat., Kiev*, 1978. 182 pp. (Editors) 81a:00006 65-06

★Краевые задачи математической физики. 10. (Russian) [Boundary value problems of mathematical physics. 10] Edited by O. A. Ladyženskaja, S. M. Nikol'skii and E. A. Volkov. *Trudy Mat. Inst. Steklov.* 147 (1980), "Nauka" Leningrad. Otdel., Leningrad, 1980. pp. 1–204. (Editors) 81a:35001 35-06

Boundary value problems of mathematical physics and related questions in the theory of functions ★Краевые задачи математической физики и смежные вопросы теории функций. 12. (Russian) [Boundary value problems of mathematical physics and related questions in the theory of functions. 12] Edited by O. A. Ladyženskaja. *Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 96 (1980), "Nauka" Leningrad. Otdel., Leningrad, 1980. pp. 1–312. (Editors) 81f:35002 35-06

Boundary value problems for nonstationary equations ★Краевые задачи для нестационарных уравнений. (Russian) [Boundary value problems for nonstationary equations] Edited by I. K. Naval. *Mat. Issled.* No. 58 (1980), "Štince", Kishinev, 1980. pp. 1–146. (Editors) 81e:35002 35-06

Brasov ★Proceedings of the International Symposium on Applications of Mathematics in System Theory. I. Held at the University of Brasov, Brasov, December 27–30, 1978. Edited by C. L. Simionescu and I. Benkő. *Universitatea din Brasov, Brasov*, 1979. ii + 339 pp. (Editors) 81j:93006a 93-06 (49-06, 65-06, 90-06, 92-06)

★Proceedings of the International Symposium on Applications of Mathematics in System Theory. II. Held at the University of Brasov, Brasov, December 27–30, 1978. Edited by C. L. Simionescu and I. Benkő. *Universitatea din Brasov, Brasov*, 1979. 376 pp. (Editors) 81j:93006b 93-06 (49-06, 65-06, 90-06, 92-06)

Bremen ★Structure of topological categories. Proceedings of a Conference held at the University of Bremen, September 2–5, 1978. Edited by Horst Herrlich, Rudolf Eberhard Hoffmann, Hans-Eberhard Porst and Manfred Bernd Wischnewsky. *Mathematik—Arbeitspapiere [Mathematics—Publications]*, 18. *Universität Bremen, Bremen*, 1979. iv + 252 pp. (Editors) 81a:18001 18-06 (18B30, 54B30)

Bressanone ★Dynamical systems. Lectures presented at the C.I.M.E. Summer School held in Bressanone, June 19–27, 1978. *Progress in Mathematics*, 8. *Birkhäuser, Boston, Mass.*, 1980. viii + 289 pp. ISBN 3-7643-3024-4 (Editors) 81f:58004 58-06

Brussels ★Kinetic logic: a Boolean approach to the analysis of complex regulatory systems. Proceedings of the EMBO Course "Formal Analysis of Genetic Regulation"

- held in Brussels, September 6-16, 1977. Edited by René Thomas. Lecture Notes in Biomathematics, 29. Springer-Verlag, Berlin-New York, 1979. xiii + 507 pp. ISBN 3-540-09556-X (Editors) **81b:9204a** 92A09 (93A20, 94C10)
- Budapest** ★Survey of mathematical programming. Vol. 1. Proceedings of the Ninth International Mathematical Programming Symposium held in Budapest, August 23-27, 1976. Edited by András Prékopa. North-Holland Publishing Co., Amsterdam-Oxford-New York, 1979. 550 pp. ISBN 0-444-85033-3 (Editors) **81g:90004a** 90-06
- ★Survey of mathematical programming. Vol. 2. Proceedings of the Ninth International Mathematical Programming Symposium held in Budapest, August 23-27, 1976. Edited by András Prékopa. North-Holland Publishing Co., Amsterdam-Oxford-New York, 1979. 590 pp. ISBN 0-444-85033-3 (Editors) **81g:90004b** 90-06
- ★Survey of mathematical programming. Vol. 3. Proceedings of the Ninth International Mathematical Programming Symposium held in Budapest, August 23-27, 1976. Edited by András Prékopa. North-Holland Publishing Co., Amsterdam-Oxford-New York, 1979. 414 pp. ISBN 0-444-85033-3 (Editors) **81g:90004c** 90-06
- ★Topology. Vol. I. II. Proceedings of the Fourth Colloquium held in Budapest, August 7-11, 1978. Edited by A. Császár. Colloquia Mathematica Societatis János Bolyai, 23. North-Holland Publishing Co., Amsterdam-New York, 1980. 1260 pp. ISBN 0-444-85406-1 (Editors) **81i:54001** 54-06 (57-06)
- Burnside groups** ★Burnside groups. Proceedings of a Workshop held at the University of Bielefeld, Bielefeld, June-July 1977. Lecture Notes in Mathematics, 806. Springer-Verlag, Berlin-New York, 1980. ii + 274 pp. ISBN 3-540-10006-7 (Editors) **81j:20002** 20-06
- Cachan** ★Théorie de l'information. (French) [Information theory] Développements récents et applications. [Recent developments and applications] Proceedings of the International CNRS Colloquium on Recent Developments in Information Theory and their Applications held at Cachan, July 4-8, 1977. Colloques Internationaux du Centre National de la Recherche Scientifique [International Colloquia of the CNRS], 276. Éditions du Centre National de la Recherche Scientifique (CNRS), Paris, 1978. 506 pp. ISBN 2-222-02258-4 (Editors) **81c:94001** 94-06 (68H05)
- Cahiers du Séminaire d'Histoire des Mathématiques** ★Cahiers du Séminaire d'Histoire des Mathématiques. I. (French) Edited by René Taton and Pierre Dugac. Institut Henri Poincaré, Paris, 1980. 121 pp. (Editors) **81j:01001** 01-06 (01A60)
- Calculation of three-dimensional constructions** ★Расчет пространственных конструкций. Вып. 18. (Russian) [Calculation of three-dimensional constructions. No. 18] Edited by S. A. Alekseev, V. V. Bolotin and V. V. Novozhilov. "Stroizdat", Moscow, 1979. 167 pp. (Editors) **81h:73043** 73K99
- Calculus** ★Complex analysis, microlocal calculus and relativistic quantum theory. Proceedings of the International Colloquium held at the Centre de Physique, Les Houches, September 3-13, 1979. Edited by Daniel Ingolnitzer. Lecture Notes in Physics, 126. Springer-Verlag, Berlin-New York, 1980. viii + 502 pp. ISBN 3-540-09996-4 (Editors) **81c:81003** 81-06 (32-06, 35-06, 58-06, 82-06)
- Calgary, Alta.** ★Global analysis. Proceedings of the Biennial Seminar of the Canadian Mathematical Congress held at the University of Calgary, Calgary, Alta., June 12-27, 1978. Edited by M. Grmela and J. E. Marsden. Lecture Notes in Mathematics, 755. Springer-Verlag, Berlin-New York, 1979. vii + 377 pp. ISBN 3-540-09703-1 (Editors) **81a:58001** 58-06
- Cambridge** ★Surveys in combinatorics. Proceedings of the Seventh British Combinatorial Conference held in Cambridge, August 13-17, 1979. Edited by Béla Bollobás. London Mathematical Society Lecture Note Series, 38. Cambridge University Press, Cambridge-New York, 1979. vii + 261 pp. ISBN 0-521-22846-8 (Editors) **81b:05005** 05-06
- Cambridge, Mass.** ★Proceedings of the Second Workshop on Lie-Admissible Formulations. Part A. Review papers. Held at the Science Center, Harvard University, Cambridge, Mass., August 1-8, 1979. Hadronic J. 2 (1979), no. 6, 1252-2018. Hadronic Press, Inc., Nonantum, Mass., 1979. pp. 1252-2023. (Editors) **81a:81005a** 81-06 (17-06)
- ★Proceedings of the Second Workshop on Lie-Admissible Formulations. Part B. Research papers. Held at the Science Center, Harvard University, Cambridge, Mass., August 1-8, 1979. Hadronic J. 3 (1979/80), no. 1. Hadronic Press, Inc., Nonantum, Mass., 1980. pp. 1-725. (Editors) **81a:81005b** 81-06 (17-06)
- Canberra** ★The application and numerical solution of integral equations. Proceedings of a Seminar held at the Australian National University, Canberra, November 29, 1978. Edited by Robert S. Anderssen, Frank R. de Hoog and Mark A. Lukas. Monographs and Textbooks on Mechanics of Solids and Fluids (Mechanics: Analysis), 6. Sijthoff & Noordhoff, Alphen aan den Rijn-Germantown, Md., 1980. x + 259 pp. ISBN 90-286-0450-2 (Editors) **81f:45001** 45-06 (65-06)
- Carbondale, Ill.** ★Number theory, Carbondale 1979. Proceedings of the Southern Illinois Number Theory Conference, held at Southern Illinois University, Carbondale, Ill., March 30-31, 1979. Edited by Melvyn B. Nathanson. Lecture Notes in Mathematics, 751. Springer-Verlag, Berlin-New York, 1979. iv + 342 pp. ISBN 3-540-09559-4 (Editors) **81a:10004** 10-06
- ★Modeling and differential equations in biology. Papers presented at a Conference held at Southern Illinois University, Carbondale, Ill., June 5-9, 1978. Edited by T. A. Burton. Lecture Notes in Pure and Applied Mathematics, 58. Marcel Dekker, Inc., New York, 1980. viii + 277 pp. ISBN 0-8247-1075-4 (Editors) **81i:92002** 92-06
- Cargèse** ★Hadron structure and lepton-hadron interactions. Proceedings of the Cargèse Summer Institute held in Cargèse, July, 1977. Edited by Maurice Lévy, Jean-Louis Basdevant, David Speiser, Jacques Weyers, Raymond Gastmans and Jean Zinn-Justin. NATO Advanced Study Institute Series, Ser. B: Physics, 39. Plenum Press, New York-London, 1979. viii + 736 pp. ISBN 0-306-40072-3 (Editors) **81a:81002** 81-06 (81G05, 81G15)
- ★Intrinsic stochasticity in plasmas. International Workshop held at the Institut d'Études Scientifiques de Cargèse, Cargèse, June 17-23, 1979. Edited by Guy Laval and Dominique Gresillon. École Polytechnique, Palaiseau; distributed by Les Éditions de Physique, Orsay, 1979. 443 pp. ISBN 2-7302-0016-9 (Editors) **81e:76006** 76X05 (58F13, 78A35, 82A45)
- ★Bifurcation phenomena in mathematical physics and related topics. Proceedings of the NATO Advanced Study Institute held at Cargèse, June 24-July 7, 1979. Edited by Claude Bardos and Daniel Bessis. NATO Advanced Study Institute Series. Ser. C: Mathematical and Physical Sciences, 54. D. Reidel Publishing Co., Dordrecht-Boston, Mass.-London, 1980. ix + 596 pp. ISBN 90-277-1086-4 (Editors) **81f:00012** 00A69 (35-06, 58-06, 81-06, 82-06)
- Catalogues of graphs and digraphs** See Read, Ronald C.; et al., **81h:95117**
- Categories** ★Algebraische Modelle, Kategorien und Gruppoide. (German) [Algebraic models, categories and groupoids] Edited by Hans-J. Hochstetler. Studien zur Algebra und ihre Anwendungen [Studies in Algebra and its Applications], 7. Akademie-Verlag, Berlin, 1979. vi + 178 pp. (Editors) **81b:18001** 18-06 (20-06, 68-06)
- Celestial mechanics** ★Proceedings of the Sixth Conference on Mathematical Methods in Celestial Mechanics. Part I. Held at the Mathematisches Forschungsinstitut, Oberwolfach, August 14-19, 1978. Celestial Mech. 21 (1980), no. 1. D. Reidel Publishing Co., Dordrecht-Boston, Mass., 1980. pp. 1-125 (one plate). (Editors) **81a:70011a** 70-06 (70F15)
- ★Proceedings of the Sixth Conference on Mathematical Methods in Celestial Mechanics. Part II. Held at the Mathematisches Forschungsinstitut, Oberwolfach, August 14-19, 1978. Celestial Mech. 21 (1980), no. 2. D. Reidel Publishing Co., Dordrecht-Boston, Mass., 1980. pp. 129-250. (Editors) **81a:70011b** 70-06 (70F15)
- Chantilly** ★Leibniz à Paris (1672-1676). Tome I. (French) [Leibniz in Paris (1672-1676). Vol. I] Les sciences. [The sciences] Symposium of the G. W. Leibniz Society (Hannover) and of the Centre National de la Recherche Scientifique (CNRS) (Paris) held in Chantilly, November 14-18, 1976. Edited by Albert Heinekamp and Dieter Mettler. Studia Leibnitiana Supplementa, XVII. Franz Steiner Verlag GmbH, Wiesbaden, 1978. i + 242 pp. ISBN 3-515-02838-2 (Editors) **81m:01022a** 01A45 (01A70)
- ★Leibniz à Paris (1672-1676). Tome II. (French) [Leibniz in Paris (1672-1676). Vol. II] La philosophie de Leibniz. [The philosophy of Leibniz] Symposium of the G. W. Leibniz Society (Hannover) and of the Centre National de la Recherche Scientifique (CNRS) (Paris) held in Chantilly, November 14-18, 1976. Edited by Albert Heinekamp, Dieter Mettler and Ingeborg von Wilucki. Studia Leibnitiana Supplementa, XVIII. Franz Steiner Verlag GmbH, Wiesbaden, 1978. i + 171 pp. ISBN 3-515-02839-0 (Editors) **81m:01022b** 01A45 (01A70)
- Chapel Hill, N.C.** ★Asymptotic theory of statistical tests and estimation. In honor of Wassily Hoeffding. Proceedings of an Advanced International Symposium held at the University of North Carolina, Chapel Hill, N.C., April 16-18, 1979. Edited by Indra Mohan Chakravarti. With an appendix by Peter Clifford. Academic Press [Harcourt Brace Jovanovich, Publishers], New York-London-Toronto, Ont., 1980. xiv + 350 pp. ISBN 0-12-166650-6 (Editors) **81c:62004** 62-06 (68-06)
- Chemistry** ★The permutation group in physics and chemistry. Edited by Jürgen Hinz. Symposium held at the University of Bielefeld, Bielefeld, July, 1978. Lecture Notes in Chemistry, 12. Springer-Verlag, Berlin-New York, 1979. vi + 230 pp. ISBN 3-540-09707-4 (Editors) **81a:81004** 81-06 (81C40)
- Circuits** ★Thirteenth Asilomar Conference on Circuits, Systems & Computers. Held in Pacific Grove, Calif., November 5-7, 1979. Edited by Shu-Park Chan. IEEE Computer Society, New York, 1980. xiv + 615 pp. (Editors) **81m:93004** 93-06 (68-06, 94-06)
- Classical and quantum aspects of completely integrable nonlinear systems** ★Classical and quantum aspects of completely integrable nonlinear systems. (Japanese) Proceedings of a Symposium held at the Research Institute for Mathematical Sciences, Kyoto University, Kyoto, November 19-22, 1979. Sūrikaiseikikenkyūsho Kōkyūroku No. 375 (1980). Kyoto University, Research Institute for Mathematical Sciences, Kyoto, 1980. pp. i-iii and 1-184. (Editors) **81m:35001** 35-06 (58-06, 81-06, 82-06)
- Clayton** ★Semigroups. Proceedings of the Conference held at Monash University, Clayton, October 27-30, 1979. Edited by T. E. Hall, P. R. Jones and G. B. Preston. Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], New York-London, 1980. x + 255 pp. ISBN 0-12-319450-4 (Editors) **81i:20074** 20Mxx (20-06)
- Coding** ★Теория кодирования и сложность вычислений. (Russian) [Theory of coding and complexity of calculations] Edited by I. Ja. Akuskiĭ and V. M. Amerbaev. "Nauka" Kazah. SSR, Alma-Ata, 1980. 228 pp. (Editors) **81i:68014** 68-06
- Coding theory** ★Algebraic coding theory and applications. Lectures from the Summer School held at the International Centre for Mechanical Sciences (CISM), Udine, July 1978. Edited by Giuseppe Longo. CISM Courses and Lectures, 258. Springer-Verlag, Vienna, 1979. x + 528 pp. ISBN 3-211-81544-9 (E. M. Gabidulin) **81k:94026** 94Bxx (94-02)
- Collection:**
- Einstein** ★Эйнштейновский сборник, 1977. (Russian) [Einstein collection, 1977] Edited by U. I. Frankfort, V. L. Ginzburg and B. G. Kuznetsov. "Nauka", Moscow, 1980. 327 pp. (Editors) **81m:01095** 01A70 (83-03)
- Ergodic theory** ★A collection of invited papers on ergodic theory. Dedicated to the memory of Shlomo Horowitz. Israel J. Math. 33 (1979), no. 3-4. (1980). Weizmann Science Press of Israel, Jerusalem, 1979. pp. i-ii and 177-388. (Editors) **81b:28001** 28-06 (28Dxx)
- Geometry** ★Сборник работ по геометрии. II. (Russian) [Collection of articles on geometry. II] Алгебраические и геометрические свойства многообразий. [Algebraic and geometric properties of manifolds] Dedicated to A. I. Chanturi on the occasion of his seventieth birthday. Edited by G. S. Čogošvili. Trudy Tbiliss. Mat. Inst. Razmadze Akad. Nauk Gruzii. SSR 64 (1980). "Mecniereba", Tbilisi, 1980. pp. 1-134. (Editors) **81g:53001** 53-06
- Number theory** ★Сборник работ по теории чисел. 4. (Russian) [Collection of articles on number theory. 4] Вопросы представления чисел квадратичными формами. [Questions on the representation of numbers by quadratic forms] Edited by N. P. Vekua and B. V. Hvedelidze. Trudy Tbiliss. Mat. Inst. Razmadze Akad. Nauk Gruzii. SSR 63 (1980). "Mecniereba", Tbilisi, 1980. pp. 1-72. (Editors) **81c:10002** 10-06
- Questions on mechanics and applied mathematics** ★Сборник по вопросам механики и прикладной математики. (Russian) [Collection of questions on mechanics and applied mathematics] Edited by V. A. Sapa. Kazah. Gos. Univ., Alma-Ata, 1978. 226 pp. (Editors) **81a:00007** 00A10

College Park, Md. ★Euclidean harmonic analysis. Proceedings of Seminars held at the University of Maryland, College Park, Md., 1979. Edited by John J. Benedetto. Lecture Notes in Mathematics, 779. Springer-Verlag, Berlin-New York, 1980. i+177 pp. ISBN 3-540-09748-1 (Editors) 81d:42002 42-06

Colloque:

Analyse Harmonique et Complexe ★Colloque d'Analyse Harmonique et Complexe. (French) [Colloquium on complex and harmonic analysis] Held at La Garde-Freinet, June 20-25, 1977. Université d'Aix-Marseille I, UER de Mathématiques, Marseille, 1977. vii+154 pp. (not consecutively paged). (Editors) 81c:32001 32-06 (42-06)

Colloques Internationaux du Centre National de la Recherche Scientifique ★Théorie de l'information. (French) [Information theory] Développements récents et applications. [Recent developments and applications] Proceedings of the International CNRS Colloquium on Recent Developments in Information Theory and their Applications held at Cachan, July 4-8, 1977. Colloques Internationaux du Centre National de la Recherche Scientifique [International Colloquia of the CNRS], 276. Éditions du Centre National de la Recherche Scientifique (CNRS), Paris, 1978. 506 pp. ISBN 2-222-02258-4 (Editors) 81c:94001 94-06 (68H05)

Colloquia Mathematica Societatis János Bolyai ★Topology. Vol. I, II. Proceedings of the Fourth Colloquium held in Budapest, August 7-11, 1978. Edited by Á. Császár. Colloquia Mathematica Societatis János Bolyai, 23. North-Holland Publishing Co., Amsterdam-New York, 1980. 1260 pp. ISBN 0-444-85406-1 (Editors) 81c:54001 54-06 (57-06)

★Numerical methods. Papers from the Third Colloquium held at Keszthely, September 5-10, 1977. Edited by Pál Rózsa. Colloquia Mathematica Societatis János Bolyai, 22. North-Holland Publishing Co., Amsterdam-New York, 1980. 631 pp. ISBN 0-444-85407-X (Editors) 81c:65008 65-06

Colloquium:

Lichtenstein ★Lichtenstein-Festkolloquium. Held at the Karl-Marx-Universität, Leipzig, December 7-9, 1978, on the 100th anniversary of the birth of Leon Lichtenstein. Wiss. Z. Karl-Marx-Univ. Leipzig Math.-Natur. Reihe 29 (1980), no. 1. 1-70. Karl-Marx-Universität, Leipzig, 1980. pp. i-iv and 1-76. (Editors) 81c:01001 01-06

Automata, Languages and Programming ★Automata, languages and programming. Sixth Colloquium (ICALP 79) held in Graz, July 16-20, 1979. Edited by Hermann A. Maurer. Lecture Notes in Computer Science, 71. Springer-Verlag, Berlin-New York, 1979. ix+684 pp. ISBN 3-540-09510-1 (Editors) 81c:68002 68-06

★Automata, languages and programming. Proceedings of the Seventh International Colloquium held at Noordwijkerhout, July 14-18, 1980. Edited by J. W. de Bakker and J. van Leeuwen. Lecture Notes in Computer Science, 85. Springer-Verlag, Berlin-New York, 1980. viii+671 pp. ISBN 3-540-10003-2 (From the preface) 81c:68004 68-06

CNRS, Recent Developments in Information Theory and their Applications ★Théorie de l'information. (French) [Information theory] Développements récents et applications. [Recent developments and applications] Proceedings of the International CNRS Colloquium on Recent Developments in Information Theory and their Applications held at Cachan, July 4-8, 1977. Colloques Internationaux du Centre National de la Recherche Scientifique [International Colloquia of the CNRS], 276. Éditions du Centre National de la Recherche Scientifique (CNRS), Paris, 1978. 506 pp. ISBN 2-222-02258-4 (Editors) 81c:94001 94-06 (68H05)

Combinatorics ★Combinatorics 79. Part I. Proceedings of the Colloquium held at the University of Montreal, Montreal, Que., June 11-16, 1979. Edited by M. Deza and I. G. Rosenberg. Ann. Discrete Math. 8 (1980). North-Holland Publishing Co., Amsterdam-New York, 1980. pp. i-xxii and 1-309. (Editors) 81c:05001a 05-06

★Combinatorics 79. Part II. Proceedings of the Colloquium held at the University of Montreal, Montreal, Que., June 11-16, 1979. Edited by M. Deza and I. G. Rosenberg. Ann. Discrete Math. 9 (1980). North-Holland Publishing Co., Amsterdam-New York, 1980. pp. i-vii and 1-309. (Editors) 81c:05001b 05-06

Complex Analysis, Microlocal Calculus and Relativistic Quantum Theory ★Complex analysis, microlocal calculus and relativistic quantum theory. Proceedings of the International Colloquium held at the Centre de Physique, Les Houches, September 3-13, 1979. Edited by Daniel Iagolnitzer. Lecture Notes in Physics, 126. Springer-Verlag, Berlin-New York, 1980. viii+502 pp. ISBN 3-540-09996-4 (Editors) 81c:81003 81-06 (32-06, 35-06, 58-06, 82-06)

Differential Geometry ★Proceedings of the IV International Colloquium on Differential Geometry. Held at the University of Santiago de Compostela, Santiago de Compostela, September 18-21, 1978. Cursos y Congresos de la Universidad de Santiago de Compostela [Courses and Conferences of the University of Santiago de Compostela], 15. Universidad de Santiago de Compostela, Departamento de Geometría y Topología, Santiago de Compostela, 1979. ix+294 pp. ISBN 84-7191-148-5 (Editors) 81b:53001 53-06 (58-06)

Eurochem ★Special issue on large elastic deformation of discrete systems. Lectures presented at the Eurochem 69th International Colloquium held in Balatonszemes, April 13-15, 1977. Acta Tech. Acad. Sci. Hungar. 87 (1978), no. 1-2. (1979). Akadémiai Kiadó (Publishing House of the Hungarian Academy of Sciences), Budapest, 1978. pp. 1-210. (Editors) 81c:73002 73-06

Graph Theory and its Applications ★Beiträge zur Graphentheorie und deren Anwendungen. (German) [Contributions to graph theory and its applications] International Colloquium held in Oberhof, April 10-16, 1977. Technische Hochschule Ilmenau, Ilmenau, 1977. 320 pp. (Editors) 81c:05040 05Cxx (05-06)

International Astronomical Union ★Stellar turbulence. Proceedings of Colloquium 51 of the International Astronomical Union held at the University of Western Ontario, London, Ont., August 27-30, 1979. Edited by D. F. Gray and J. L. Linsky. Lecture Notes in Physics, 114. Springer-Verlag, Berlin-New York, 1980. viii+308 pp. ISBN 3-540-09737-6 (Editors) 81c:85001 85-06 (76F99)

Logic ★Logic Colloquium '78. Proceedings of the Colloquium held in Mons, August 24-September 1, 1978. Edited by Maurice Boffa, Dirk van Dalen and Kenneth McAlloon. Studies in Logic and the Foundations of Mathematics, 97. North-Holland Publishing Co., Amsterdam-New York, 1979. x+434 pp. ISBN 0-444-85378-2 (Editors) 81c:03001 03-06

Colloquium: (continued)

★Recursion theory: its generalisations and applications. Proceedings of Logic Colloquium '79 held at the University of Leeds, Leeds, August 5-14, 1979. Edited by F. R. Drake and S. S. Wainer. London Mathematical Society Lecture Note Series, 45. Cambridge University Press, Cambridge-New York, 1980. iv+319 pp. ISBN 0-521-23543-X (Editors) 81j:03007 03-06 (03Dxx, 68-06)

Logic in Programming See Santa-Tóth, Edit; et al., 81d:68016

Numerical Methods ★Numerical methods. Papers from the Third Colloquium held at Keszthely, September 5-10, 1977. Edited by Pál Rózsa. Colloquia Mathematica Societatis János Bolyai, 22. North-Holland Publishing Co., Amsterdam-New York, 1980. 631 pp. ISBN 0-444-85407-X (Editors) 81c:65008 65-06

Numerical Treatment of Integral Equations ★Colloquium: Numerical Treatment of Integral Equations. Papers presented at the Mathematical Centre, Amsterdam, October, 1978-May, 1979. Edited by H. J. J. te Riele. MC Syllabus, 41. Mathematisch Centrum, Amsterdam, 1979. vii+259 pp. (loose errata). ISBN 90-6196-189-0 (Editors) 81c:65004 65-06 (65R20)

Potential Theory ★Potential theory. Copenhagen 1979. Proceedings of a Colloquium held in Copenhagen, May 14-18, 1979. Edited by Christian Berg, Gunnar Forst and Bent Fuglede. Lecture Notes in Mathematics, 787. Springer-Verlag, Berlin-New York, 1980. viii+319 pp. ISBN 3-540-09967-0 (Editors) 81c:31001 31-06

Representations of Locally Compact Groups with Applications ★Representations of locally compact groups with applications. Part I, II. Colloquium held at the Mathematical Centre, Amsterdam, academic year 1977/78. Edited by T. H. Koornwinder. MC Syllabus, 38. Mathematisch Centrum, Amsterdam, 1979. iv+496 pp. ISBN 90-6196-161-0, 90-6196-181-5 (A. U. Klimyk) 81c:22001 22-02 (20Cxx, 22D10, 22E70, 43A05, 81C40)

Topology ★Topology. Vol. I, II. Proceedings of the Fourth Colloquium held in Budapest, August 7-11, 1978. Edited by Á. Császár. Colloquia Mathematica Societatis János Bolyai, 23. North-Holland Publishing Co., Amsterdam-New York, 1980. 1260 pp. ISBN 0-444-85406-1 (Editors) 81c:54001 54-06 (57-06)

Combinatorial analysis ★Вычисления в алгебре и комбинаторике. (Russian) [Computations in algebra and combinatorial analysis] Применение ЭВМ в алгебраических и теоретико-комбинаторных исследованиях. [Application of computers in algebraic and combinatorial investigations] Edited by L. A. Kaluznin, A. A. Stognij [A. O. Stognij] and Z. V. Bogomskaja. Akad. Nauk Ukrain. SSR, Inst. Kibernet., Kiev, 1978. 219 pp. (Editors) 81c:20003 20-06 (05-06)

★Олимпиада. Алгебра. Комбинаторика. (Russian) [Olympiads. Algebra. Combinatorial analysis] Edited by L. Ja. Savelev. "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. 177 pp. (Editors) 81c:00004 00A05 (03-01, 05-01, 10-01)

Combinatorial mathematics, optimal designs and their applications ★Combinatorial mathematics, optimal designs and their applications. Proceedings of the Symposium on Combinatorial Mathematics and Optimal Design held at Colorado State University, Fort Collins, Colo., June 5-9, 1978. Edited by J. Srivastava. Ann. Discrete Math. 6 (1980). North-Holland Publishing Co., Amsterdam-New York, 1980. pp. i-viii and 1-391. (Editors) 81c:05005 05-06

Combinatorial optimization ★Combinatorial optimization. Edited by Manfred W. Padberg. With a 205 item bibliography. Math. Programming Stud. No. 12 (1980). North-Holland Publishing Co., Amsterdam, 1980. pp. i-vii and 1-221. (Editors) 81c:90051 90Cxx

★Combinatorial optimization. II. Proceedings of the Conference held at the University of East Anglia, Norwich, July 9-12, 1979. Edited by V. J. Rayward-Smith. Math. Programming Stud. No. 13 (1980). North-Holland Publishing Co., Amsterdam-New York, 1980. pp. i-viii and 1-142. (Editors) 81c:90003 90-06 (05-06, 68-06)

Combinatorics ★Packing and covering in combinatorics. Edited by A. Schrijver. Mathematical Centre Tracts, 106. Mathematisch Centrum, Amsterdam, 1979. v+313 pp. ISBN 90-6196-180-7 (R. A. Brualdi) 81c:05001 05-02 (05B40)

★Proceedings of the Tenth Southeastern Conference on Combinatorics, Graph Theory and Computing. Vols. I, II. Held at the Florida Atlantic University, Boca Raton, Fla., April 2-6, 1979. Edited by Frederick Hoffman, David McCarthy, Ronald C. Mullin and Ralph G. Stanton. Congressus Numerantium, XXIII-XXIV. Utilitas Mathematica Publishing, Inc., Winnipeg, Man., 1979. Vol. I: xii+467 pp.; Vol. II: pp. xiii-xx and 469-939. ISBN 0-919628-23-0, 0-919628-24-9 (Editors) 81b:05004 05-06

★Surveys in combinatorics. Proceedings of the Seventh British Combinatorial Conference held in Cambridge, August 13-17, 1979. Edited by Béla Bollobás. London Mathematical Society Lecture Note Series, 38. Cambridge University Press, Cambridge-New York, 1979. vii+261 pp. ISBN 0-521-22846-8 (Editors) 81b:05005 05-06

★Graph theory and combinatorics. Proceedings of the Conference held at the Open University, Milton Keynes, May 12, 1978. Edited by Robin J. Wilson. Research Notes in Mathematics, 34. Pitman (Advanced Publishing Program), San Francisco, Calif.-London, 1979. ii+148 pp. ISBN 0-273-08435-6 (Editors) 81b:05004 05-06

★Proceedings of the West Coast Conference on Combinatorics, Graph Theory and Computing. Held at Humboldt State University, Arcata, Calif., September 5-7, 1979. Edited by Phyllis Z. Chinn and D. McCarthy. Congressus Numerantium, XXVI. Utilitas Mathematica Publishing, Inc., Winnipeg, Man., 1980. vi+322 pp. ISBN 0-919628-26-5 (Editors) 81c:05006 05-06 (68-06)

★Combinatorics 79. Part I. Proceedings of the Colloquium held at the University of Montreal, Montreal, Que., June 11-16, 1979. Edited by M. Deza and I. G. Rosenberg. Ann. Discrete Math. 8 (1980). North-Holland Publishing Co., Amsterdam-New York, 1980. pp. i-xxii and 1-309. (Editors) 81c:05001a 05-06

★Combinatorics 79. Part II. Proceedings of the Colloquium held at the University of Montreal, Montreal, Que., June 11-16, 1979. Edited by M. Deza and I. G. Rosenberg. Ann. Discrete Math. 9 (1980). North-Holland Publishing Co., Amsterdam-New York, 1980. pp. i-vii and 1-309. (Editors) 81c:05001b 05-06

Combinatorics, representation theory and statistical methods in groups ★Combinatorics, representation theory and statistical methods in groups. Young Day Proceedings. Edited by T. V. Narayana, R. M. Mathsen and J. G. Williams. Lecture Notes in Pure and Applied Mathematics, 57. Marcel Dekker, Inc., New York, 1980. xii+170 pp. ISBN 0-8247-6937-6 (Editors) 81c:05003 05-06 (01A70, 20-06)

Combinatory logic ★To H. B. Curry: essays on combinatory logic, lambda calculus and

- formalism. Edited by J. P. Seldin and J. R. Hindley. *Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], London-New York*, 1980. xxv + 606 pp. (1 plate). ISBN 0-12-349050-2 (Editors) **81j:30065** 03-06 (03B40)
- Compact groups** ★Representations of locally compact groups with applications. Part I, II. Colloquium held at the Mathematical Centre, Amsterdam, academic year 1977/78. Edited by T. H. Koornwinder. MC Syllabus, 38. *Mathematisch Centrum, Amsterdam*, 1979. iv + 496 pp. ISBN 90-6196-161-0, 90-6196-181-5 (A. U. Klimyk) **81k:22001** 22-02 (22Cxx, 22D10, 22E70, 43A05, 81C40)
- Complementarity problems** ★Variational inequalities and complementarity problems. Theory and applications. Proceedings of an International School of Mathematics on Variational Inequalities and Complementarity Problems in Mathematical Physics and Economics held in Erice, June 19-30, 1978. Edited by R. W. Cottle, F. Giannessi and J.-L. Lions. A Wiley-Interscience Publication. *John Wiley & Sons, Ltd., Chichester*, 1980. xvii + 408 pp. ISBN 0-471-27610-3 (Editors) **81d:49001** 49-06 (49A29, 90-06, 90C33)
- Complex analysis** ★Colloque d'Analyse Harmonique et Complexe. (French) [Colloquium on complex and harmonic analysis] Held at La Garde-Freinet, June 20-25, 1977. *Université d'Aix-Marseille I, UER de Mathématiques, Marseille*, 1977. vii + 154 pp. (not consecutively pagged). (Editors) **81a:32001** 32-06 (42-06)
- Complex analysis, microlocal calculus and relativistic quantum theory** ★Complex analysis, microlocal calculus and relativistic quantum theory. Proceedings of the International Colloquium held at the Centre de Physique, Les Houches, September 3-13, 1979. Edited by Daniel Jagolinzer. Lecture Notes in Physics, 126. *Springer-Verlag, Berlin-New York*, 1980. viii + 502 pp. ISBN 3-540-09996-4 (Editors) **81e:81003** 81-06 (32-06, 35-06, 58-06, 82-06)
- Complex approximation** ★Complex approximation. Proceedings of the Conference held in Quebec, July 3-8, 1978. Edited by Bernard Aupetit. *Progress in Mathematics*, 4. *Birkhäuser, Boston, Mass.*, 1980. ix + 118 pp. ISBN 3-7643-3004-X (Editors) **81d:30065** 30E10 (32-06)
- Complex regulatory systems** ★Kinetic logic: a Boolean approach to the analysis of complex regulatory systems. Proceedings of the EMBO Course "Formal Analysis of Genetic Regulation" held in Brussels, September 6-16, 1977. Edited by René Thomas. Lecture Notes in Biomathematics, 29. *Springer-Verlag, Berlin-New York*, 1979. xiii + 507 pp. ISBN 3-540-09556-X (Editors) **81k:92046** 92A09 (93A20, 94C10)
- Computat** ★Computat 1980. Proceedings of the Fourth Symposium in Computational Statistics held in Edinburgh, 1980. Edited by Marjorie M. Barritt and David Wishart. *Physica Verlag, Vienna*, 1980. 632 pp. ISBN 3-7908-0229-8 (Editors) **81j:62007** 62-06 (90-06)
- Computation in econometric models** ★Computation in econometric models. Edited by Warren T. Dent. *J. Econometrics* 12 (1980), no. 1. *North-Holland Publishing Co., Amsterdam*, 1980. pp. 1-102. (Editors) **81b:62003** 62-06
- Computational and mathematical linguistics** ★Computational and mathematical linguistics. Proceedings of the International Conference on Computational Linguistics held in Pisa, August 27-September 1, 1973. Edited by A. Zampolli and N. Calzolari. *Biblioteca dell' "Archivum Romanicum"*, Serie II: Linguistica [Library of the "Archivum Romanicum", Series II: Linguistics], 36. *Leo S. Olshchki Editore, Florence*, 1977. pp. 351-793. (Editors) **81b:68085** 68Fxx (68-06)
- Computational methods and computer software** ★Вычислительные методы и математическое обеспечение ЭВМ. (Russian) [Computational methods and computer software] Edited by A. N. Čekalin and E. V. Ermolin. *Kazan. Univ., Kazan*, 1979. 120 pp. (Editors) **81j:65004** 65-06
- Computational methods in nonlinear fluid mechanics** ★Special issue: computational methods in nonlinear fluid mechanics. *Comput. & Fluids* 8 (1980), no. 2. *Pergamon Press, Oxford-New York-Toronto, Ont.*, 1980. pp. i-iii and 155-274. (Editors) **81d:76002** 76-04
- Computational methods in nonlinear mechanics** ★Computational methods in nonlinear mechanics. Proceedings of the TICOM Second International Conference held at the University of Texas, Austin, Tex., March 26-29, 1979. Edited by J. Tinsley Oden. *North-Holland Publishing Co., Amsterdam-New York*, 1980. viii + 539 pp. ISBN 0-444-85382-0 (Editors) **81c:73002** 73-06 (65N30)
- Computational probability** ★Computational probability. Proceedings of the Actuarial Research Conference held at Brown University, Providence, R.I., August 28-30, 1975. Edited by P. M. Kahn. *Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers]*, New York-London, 1980. xi + 340 pp. ISBN 0-12-394680-8 (Editors) **81k:60005** 60-04 (62P05, 65U05, 92-06)
- Computational statistics** ★Compstat 1980. Proceedings of the Fourth Symposium in Computational Statistics held in Edinburgh, 1980. Edited by Marjorie M. Barritt and David Wishart. *Physica Verlag, Vienna*, 1980. 632 pp. ISBN 3-7908-0229-8 (Editors) **81j:62007** 62-06 (90-06)
- Computations in algebra and combinatorial analysis** ★Вычисления в алгебре и комбинаторике. (Russian) [Computations in algebra and combinatorial analysis] Применение ЭВМ в алгебраических и теоретико-комбинаторных исследованиях. [Application of computers in algebraic and combinatorial investigations] Edited by L. A. Kaluznin, A. A. Stognii [A. O. Stognii] and Z. V. Bogemskaja. *Akad. Nauk Ukrain. SSR, Inst. Kibernet., Kiev*, 1978. 219 pp. (Editors) **81m:20003** 20-06 (05-06)
- Computations for least absolute values estimation** ★Computations for least absolute values estimation. Edited by J. E. Gentle. *Comm. Statist. B—Simulation Comput.* 6 (1977), no. 4, 313-437. *Marcel Dekker, Inc., New York-Basel*, 1978. pp. iii-vi, 313-446. (Kenneth N. Berk) **81h:62127** 62J05 (65U05)
- Computer graphics** ★Mathematical methods in computer graphics and design. Proceedings of the Conference held at the University of Leicester, Leicester, September 28, 1978. Edited by K. W. Brodrie. The Institute of Mathematics and its Applications Conference Series. *Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers]*, London-New York, 1980. xi + 147 pp. ISBN 0-12-134880-6 (Editors) **81i:68010** 68-06 (51-04)
- Computer science** ★Interfaces between computer science and operations research. Proceedings of a Symposium held at the Mathematisch Centrum, Amsterdam, September 7-10, 1976. Edited by J. K. Lenstra, A. H. G. Rinnooy Kan and P. van Emde Boas. *Mathematical Centre Tracts*, 99. *Mathematisch Centrum, Amsterdam*, 1978. viii + 231 pp. ISBN 90-6196-170-X (L. E. Trotter, Jr.) **81f:68001** 68-02 (68C25, 90B35, 90C10)
- ★Graph-grammars and their application to computer science and biology. Papers presented at an International Workshop held in Bad Honnef, October 30-November 3, 1978. Edited by Volker Claus, Hartmut Ehrig and Grzegorz Rozenberg. *Lecture Notes in Computer Science*, 73. *Springer-Verlag, Berlin-New York*, 1979. vii + 477 pp. ISBN 3-540-09525-X (Editors) **81a:68005** 68-06 (92A05)
- ★Mathematical foundations of computer science, 1979. Proceedings of the 8th Symposium held in Olomouc, September 3-7, 1979. Edited by Jiří Bečvář. *Lecture Notes in Computer Science*, 74. *Springer-Verlag, Berlin-New York*, 1979. ix + 580 pp. ISBN 3-540-09526-8 (Editors) **81c:68004** 68-06
- ★Theoretical computer science. Held at Aachen, 1979. 4th GI (Gesellschaft für Informatik) Conference. Edited by Klaus Weihrauch. *Lecture Notes in Computer Science*, 67. *Springer-Verlag, Berlin-New York*, 1979. vii + 324 pp. ISBN 3-540-09118-1 (Editors) **81i:68013** 68-06
- ★GI—9. Jahrestagung. (German) Held in Bonn, October 1-5, 1979. Edited by K. H. Böhring and P. P. Spies. *Informatik-Fachberichte [Technical Reports on Information Science]*, 19. *Springer-Verlag, Berlin-New York*, 1979. xii + 690 pp. ISBN 3-540-09664-7 (Editors) **81m:68004** 68-06
- ★21st Annual Symposium on Foundations of Computer Science. *Institute of Electrical and Electronics Engineers, Inc. (IEEE), New York*, 1980. vi + 421 pp. (Editors) **81i:68008** 68-06
- ★Mathematical foundations of computer science, 1980. Proceedings of the Ninth Symposium held in Rydzyna, September 1-5, 1980. Edited by P. Dembiński. *Lecture Notes in Computer Science*, 88. *Springer-Verlag, Berlin-New York*, 1980. viii + 723 pp. ISBN 3-540-10027-X (Editors) **81k:68003** 68-06
- ★Discrete structures and algorithms. Proceedings of the Workshop WG 79, Fifth Conference on Graphtheoretic Concepts in Computer Science held in Berlin, June 21-23, 1979. Edited by Uwe Pape. *Carl Hanser Verlag, Munich*, 1980. xi + 268 pp. ISBN 3-446-13135-3 (Editors) **81m:68002** 68-06
- Computer software** ★Вычислительные методы и математическое обеспечение ЭВМ. (Russian) [Computational methods and computer software] Edited by A. N. Čekalin and E. V. Ermolin. *Kazan. Univ., Kazan*, 1979. 120 pp. (Editors) **81j:65004** 65-06
- Computer systems** ★Performance of computer systems. Proceedings of the Fourth International Symposium on Modelling and Performance Evaluation of Computer Systems held in Vienna, February 6-8, 1979. Edited by Mátys Arató, Alexandre Butrimenko and E. Gelenbe. *North-Holland Publishing Co., Amsterdam-New York*, 1979. ix + 565 pp. ISBN 0-444-85332-4 (Editors) **81a:68006** 68-06
- ★Теоретические вопросы проектирования вычислительных систем. (Russian) [Theoretical questions of design of computer systems] Edited by A. A. Letičevskii and A. B. Godlevskii. *Akad. Nauk Ukrain. SSR, Inst. Kibernet., Kiev*, 1980. 102 pp. (Editors) **81j:68011** 68-06
- Computer technology** ★Управление техническими и организационными системами с применением вычислительной техники. (Russian) [Control of technical and organizational systems by application of computer technology] Edited by Ja. Z. Cypkin. *"Nauka", Moscow*, 1979. 232 pp. (Editors) **81e:90001** 90-06 (68-06)
- Computers** ★Advances in computers. Vol. 18. Edited by Marshall C. Yovits. *Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers]*, New York-London, 1979. xiii + 308 pp. ISBN 0-12-012118-2 (From the preface) **81f:68004** 68-06 (68Bxx, 68G10, 94A05)
- ★Advances in computers. Vol. 19. Edited by Marshall C. Yovits. *Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers]*, New York-London, 1980. x + 351 pp. ISBN 0-12-012119-0 (Editors) **81i:68003** 68-06
- ★Proceedings of the 1980 Army Numerical Analysis and Computers Conference. Held at the NASA Ames Research Center, Moffett Field, Calif., February 20-21, 1980. ARO Report 80, 3. *U. S. Army Research Office, Research Triangle Park, N.C.*, 1980. xiv + 481 pp. (Editors) **81m:65007** 65-06 (68-06)
- ★Mechanika i komputer. Tom 2. (Polish) [Mechanics and computers. Vol. 2] Metoda elementów skończonych w teorii konstrukcji. [The finite element method in construction theory]. *Państwowe Wydawnictwo Naukowe (PWN), Warsaw*, 1980. 298 pp. ISBN 83-01-01151-3 (Editors) **81m:73008** 73-06
- ★Thirtieth Asilomar Conference on Circuits, Systems & Computers. Held in Pacific Grove, Calif., November 5-7, 1979. Edited by Shu Park Chan. *IEEE Computer Society, New York*, 1980. xiv + 615 pp. (Editors) **81m:93004** 93-06 (68-06, 94-06)
- Computers in aerodynamics** ★Special issue: computers in aerodynamics. *Comput. & Fluids* 8 (1980), no. 1. *Pergamon Press, Oxford-New York-Toronto, Ont.*, 1980. pp. i-iii and 1-154. (Editors) **81d:76003** 76-04
- Computing** ★Proceedings of the Tenth Southeastern Conference on Combinatorics, Graph Theory and Computing. Vols. I, II. Held at the Florida Atlantic University, Boca Raton, Fla., April 2-6, 1979. Edited by Frederick Hoffman, David McCarthy, Ronald C. Mullin and Ralph G. Stanton. *Congressus Numerantium*, XXIII-XXIV. *Utilitas Mathematica Publishing, Inc., Winnipeg, Man.*, 1979. Vol. I: xii + 467 pp.; Vol. II: pp. xiii-xx and 469-939. ISBN 0-919628-23-0, 0-919628-24-9 (Editors) **81i:05004** 05-06
- ★FTCS-9. The Ninth Annual International Symposium on Fault-Tolerant Computing held at Madison, Wis., June 20-22, 1979. Digest of papers. *IEEE Computer Society, New York*, 1979. xi + 235 pp. (Editors) **81m:94001** 94-06
- ★Proceedings of the West Coast Conference on Combinatorics, Graph Theory and Computing. Held at Humboldt State University, Arcata, Calif., September 5-7, 1979. Edited by Phyllis Z. Chinn and D. McCarthy. *Congressus Numerantium*, XXVI. *Utilitas Mathematica Publishing, Inc., Winnipeg, Man.*, 1980. vi + 322 pp. ISBN 0-919628-26-5 (Editors) **81i:05006** 05-06 (68-06)
- ★A history of computing in the twentieth century. A collection of essays. Edited by N. Metropolis, J. Howlett and Gian-Carlo Rota. *Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers]*, New York-London, 1980. xix + 659 pp. ISBN 0-12-491650-3 (A. D. Booth) **81i:68002** 68-03 (01A60)
- ★Proceedings of the Ninth Manitoba Conference on Numerical Mathematics and Computing. Held at the University of Manitoba, Winnipeg, Man., September 27-29, 1979. Edited by G. H. J. Van Rees and H. C. Williams. *Congressus Numerantium*, XXVII. *Utilitas Mathematica Publishing, Inc., Winnipeg, Man.*, 1980. ix + 434 pp. ISBN 0-919628-27-3 (Editors) **81j:65011** 65-06 (05-06)
- ★Conference Proceedings of the Twelfth Annual ACM Symposium on Theory of

Computing. Papers presented at the Symposium held in Los Angeles, Calif., April 18-30, 1980. *Association for Computing Machinery (ACM), New York, 1980. v+447 pp. ISBN 0-89791-017-6 (Editors) 81i:68006 68-06*

★FTCS-10. The 10th International Symposium on Fault-Tolerant Computing held in Kyoto, October 1-3, 1980. Digest of papers. *IEEE Computer Society, New York, 1980. xix+381 pp. (Editors) 81m:94002 94-06*

Computing methods in applied sciences and engineering. ★Computing methods in applied sciences and engineering. Proceedings of the Fourth International Symposium held at Versailles, December 10-14, 1979. Edited by R. Glowinski and J.-L. Lions. *North-Holland Publishing Co., Amsterdam-New York, 1980. ix+724 pp. ISBN 0-444-86008-8 (Editors) 81h:65001 65-06 (00A69, 76-06)*

Concurrent computation. ★Semantics of concurrent computation. Proceedings of the International Symposium held at Evian, July 2-4, 1979. Edited by Gilles Kahn. *Lecture Notes in Computer Science, 70. Springer-Verlag, Berlin-New York, 1979. vi+368 pp. ISBN 3-540-09511-X (Editors) 81e:68002 68-06 (68B10)*

Conference:

Цетев, Stability of Motion, Analytical Mechanics and Control of Motion ★ДИНАМИКА управляемых систем. (Russian) [Dynamics of control systems] Papers presented at the Third All-Union Cetaev Conference, dedicated to the memory of N. G. Cetaev on the occasion of the seventy-fifth anniversary of his birth, held in Irkutsk, June 20-25, 1977. Edited by V. M. Matrosov and S. V. Eliseev. "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. 344 pp. (Editors) 81e:93003 93-06

★Проблемы устойчивости движения, аналитической механики и управления движением. (Russian) [Problems of stability of motion, analytical mechanics and control of motion] Papers presented at the Third All-Union Cetaev Conference, dedicated to the memory of N. G. Cetaev on the occasion of the seventy-fifth anniversary of his birth, held in Irkutsk, June 20-25, 1977. Edited by V. M. Matrosov and A. N. Pančenko [A. M. Pančenko]. "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. 328 pp. (Editors) 81e:93002 93-06 (34-06, 58-06, 70E99, 70H99, 73H99, 90-06)

Actuarial Research, Computational Probability ★Computational probability.

Proceedings of the Actuarial Research Conference held at Brown University, Providence, R.I., August 28-30, 1975. Edited by P. M. Kahn. *Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], New York-London, 1980. xi+340 pp. ISBN 0-12-394680-8 (Editors) 81k:60005 60-04 (62P05, 65U05, 92-06)*

Analysing Time Series ★Analysing time series. Proceedings of the International Conference (ITSM) held in Guernsey, October 22-26, 1979. Edited by Oliver D. Anderson. *North-Holland Publishing Co., Amsterdam-New York, 1980. vi+419 pp. ISBN 0-444-85464-9 (Editors) 81f:62002 62-06*

Analysis and Optimisation of Stochastic Systems ★Analysis and optimisation of stochastic systems. Proceedings of the International Conference held at the University of Oxford, Oxford, September 6-8, 1978. Edited by O. L. R. Jacobs, M. H. A. Davis, M. A. H. Dempster, C. J. Harris and P. C. Parks. The Institute of Mathematics and its Applications Conference Series. *Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], London-New York, 1980. xiv+573 pp. ISBN 0-12-378680-0 (Editors) 81j:93069 93E20 (93E11)*

Analytic Functions ★Analytic functions, Kozubnik 1979. Proceedings of the Seventh Conference held at Kozubnik, April 19-25, 1979. Edited by Julian Lawrynowicz. *Lecture Notes in Mathematics, 798. Springer-Verlag, Berlin-New York, 1980. x+476 pp. ISBN 3-540-09985-9 (Editors) 81d:32001 32-06 (30-06)*

Analytical and Numerical Approaches to Asymptotic Problems in Analysis ★Analytical and numerical approaches to asymptotic problems in analysis. Proceedings of the Conference held at the University of Nijmegen, Nijmegen, June 9-13, 1980. Edited by O. Axelsson, L. S. Frank and A. van der Sluis. *North-Holland Mathematics Studies, 47. North-Holland Publishing Co., Amsterdam-New York, 1981. xvi+381 pp. ISBN 0-444-86131-9 (Editors) 81m:65005 65-06 (35-06, 92-06)*

Applications of Statistics and Probability in Soil and Structural Engineering

★Applications of statistics & probability in soil & structural engineering. Vol. I, II. Proceedings of the Third International Conference (ICASP3) held in Sydney, January 29-February 2, 1979. Edited by Owen G. Ingles. *Unisearch, Ltd., Kensington, 1979. Vol. I: 427 pp.; Vol. II: pp. 429-849. ISBN 0-909796-08-4, 0-909796-09-2 (Editors) 81b:62002a 62-06*

★Applications of statistics & probability in soil & structural engineering. Vol. III. Proceedings of the Third International Conference (ICASP3) held in Sydney, January 29-February 2, 1979. Edited by Owen G. Ingles. *Unisearch, Ltd., Kensington, 1979. 468 pp. ISBN 0-909796-10-6 (Editors) 81b:62002b 62-06*

Applied Game Theory ★Applied game theory. Proceedings of a Conference at the Institute for Advanced Studies, Vienna, June 13-16, 1978. Edited by S. J. Brams, A. Schotter and G. Schwödiauer. *IHS-Studies, I. Physica Verlag, Würzburg, 1979. 447 pp. ISBN 3-7908-0208-5 (Editors) 81c:90001 90-06 (90Dxx)*

Applied Statistics ★Interactive statistics. Proceedings of the Applied Statistics Conference held at Macquarie University, Sydney, February 8-9, 1979. Edited by Don McNeil. *North-Holland Publishing Co., Amsterdam-New York, 1979. x+254 pp. ISBN 0-444-85412-6 (Editors) 81f:62003 62-06*

Applied Stochastic Processes ★Applied stochastic processes. Proceedings of the Conference held at the University of Georgia, Athens, Ga., May 15-19, 1978. Edited by G. Adomian. *Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], New York-London, 1980. ix+301 pp. ISBN 0-12-044380-5 (Editors) 81j:60001 60-06*

Approximation Theory ★Proceedings of the Conference on Approximation Theory. (Chinese) Held at Hangzhou, April 23-30, 1978. *Hangzhou University Press, Hangzhou, 1978. iii+152 pp. (Editors) 81m:41002 41-06*

★Approximation theory. III. Proceedings of a Conference honoring Professor George G. Lorentz held at the University of Texas, Austin, Tex., January 8-12, 1980. Edited by E. W. Cheney. *Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], New York-London, 1980. xxiii+944 pp. ISBN 0-12-171050-5 (Editors) 81m:41001 41-06*

Army Mathematicians ★Transactions of the Twenty-Sixth Conference of Army Mathematicians. Held in Hanover, N.H., June 10-12, 1980. ARO Report 81, I. U. S. Army Research Office, Research Triangle Park, N.C., 1981. xii+400 pp. (Editors) 81m:00008 00A10

Conference: (continued)

Army Numerical Analysis and Computers ★Proceedings of the 1980 Army Numerical Analysis and Computers Conference. Held at the NASA Ames Research Center, Moffett Field, Calif., February 20-21, 1980. ARO Report 80, 3. U. S. Army Research Office, Research Triangle Park, N.C., 1980. xiv+481 pp. (Editors) 81m:65007 65-06 (68-06)

Asilomar, Circuits, Systems and Computers ★Thirteenth Asilomar Conference on Circuits, Systems & Computers. Held in Pacific Grove, Calif., November 5-7, 1979. Edited by Shu Park Chan. *IEEE Computer Society, New York, 1980. xiv+615 pp. (Editors) 81m:93004 93-06 (68-06, 94-06)*

Automated Deduction ★5th Conference on Automated Deduction. Held at Les Arcs, July 8-11, 1980. Edited by Wolfgang Bibel and Robert Kowalski. *Lecture Notes in Computer Science, 87. Springer-Verlag, Berlin-New York, 1980. vii+385 pp. ISBN 3-540-10009-1 (Editors) 81i:68006 68-06 (03B35)*

Boundary and Interior Layers—Computational and Asymptotic Methods ★Boundary and interior layers—computational and asymptotic methods. Proceedings of the BAII 1 Conference held at Trinity College, Dublin, June 3-6, 1980. Edited by J. J. H. Miller. *Boole Press, Dún Laoghaire, 1980. xi+425 pp. ISBN 0-906783-01-1 (Editors) 81j:76001 76-06 (65-06)*

Brazilian, Mathematical Logic ★Proceedings of the Third Brazilian Conference on Mathematical Logic. Held at the Institute of Mathematics, Federal University of Pernambuco, Recife, December 17-22, 1979. Edited by Ayda I. Arruda, Newton C. A. da Costa and Antonio-Mario Sette. *Sociedade Brasileira de Lógica, São Paulo, 1980. vi+336 pp. (Editors) 81m:03005 03-06*

British Combinatorial ★Surveys in combinatorics. Proceedings of the Seventh British Combinatorial Conference held in Cambridge, August 13-17, 1979. Edited by Béla Bollobás. *London Mathematical Society Lecture Note Series, 38. Cambridge University Press, Cambridge-New York, 1979. vii+261 pp. ISBN 0-521-22846-8 (Editors) 81b:05005 05-06*

College of Transport Engineering ★6. Vedecká Konferencia Vysoké školy Dopravnej. (Slovak) [Sixth Scientific Conference of the College of Transport Engineering] Held at the College of Transport Engineering, Žilina, 1979. Edited by Pavol Grellák. *College of Transport Engineering, Žilina, 1979. 201 pp. (Editors) 81j:34002 34-06*

Combinatorial Optimization ★Combinatorial optimization. II. Proceedings of the Conference held at the University of East Anglia, Norwich, July 9-12, 1979. Edited by V. J. Rayward-Smith. *Math. Programming Stud. No. 13 (1980). North-Holland Publishing Co., Amsterdam-New York, 1980. p. i-viii and 1-142. (Editors) 81i:90003 90-06 (05-06, 68-06)*

Complex Approximation ★Complex approximation. Proceedings of the Conference held in Quebec, July 3-8, 1978. Edited by Bernard Aupetit. *Progress in Mathematics, 4. Birkhäuser, Boston, Mass., 1980. ix+118 pp. ISBN 3-7643-3004-X (Editors) 81d:30065 30E10 (32-06)*

Computational Linguistics ★Computational and mathematical linguistics. Proceedings of the International Conference on Computational Linguistics held in Pisa, August 27-September 1, 1973. Edited by A. Zampolli and N. Calzolari. *Biblioteca dell' "Archivum Romanicum", Serie II: Linguistica [Library of the "Archivum Romanicum", Serie II: Linguistics], 36. Leo S. Olshchki Editore, Florence, 1977. pp. 351-793. (Editors) 81i:60005 68Fxx (68-06)*

Computational Methods in Nonlinear Mechanics ★Computational methods in nonlinear mechanics. Proceedings of the TICOM Second International Conference held at the University of Texas, Austin, Tex., March 26-29, 1979. Edited by J. Tinsley Oden. *North-Holland Publishing Co., Amsterdam-New York, 1980. viii+539 pp. ISBN 0-444-85382-0 (Editors) 81e:73002 73-06 (65N30)*

Constructive Methods for Nonlinear Boundary Value Problems and Nonlinear Oscillations ★Constructive methods for nonlinear boundary value problems and nonlinear oscillations. Proceedings of the Conference held at the Mathematical Research Institute, Oberwolfach, November 19-25, 1978. Edited by J. Albrecht, L. Collatz and K. Kirchgässner. *International Series of Numerical Mathematics, 48. Birkhäuser Verlag, Basel-Boston, Mass., 1979. 190 pp. ISBN 3-7643-1098-7 (Editors) 81a:65006 65-06*

Convergence Structures ★Proceedings of the Conference on Convergence Structures. Held at Cameron University, Lawton, Okla., April 18-19, 1980. Edited by C. Riecke. *Cameron University, Department of Mathematics, Lawton, Okla., 1980. ii+173 pp. (Editors) 81m:54003 54-06*

Crystallographic Groups ★Proceedings of the Conference on Kristallografische Gruppen. Part I. Held at the Universität Bielefeld, Bielefeld, September 2-16, 1979. Edited by A. W. M. Dress and J. Neubüser. *Match No. 9 (1980). Max-Planck-Institut für Kohlenforschung, Institut für Strahlenchemie, Mülheim, 1980. pp. i-iv and 1-261. (Editors) 81k:20002 20-06 (20H15)*

Decision Problems in Algebra ★Word problems. II. The Oxford book. Outgrowth of a Conference on Decision Problems in Algebra held in Oxford, Summer 1976. Edited by S. I. Adian [S. I. Adjan], William W. Boone and Graham Higman. *Studies in Logic and the Foundations of Mathematics, 95. North-Holland Publishing Co., Amsterdam-New York, 1980. x+578 pp. (1 plate). ISBN 0-444-85343-X (Editors) 81f:03056 03D40 (03-06, 20-06, 20F10)*

Design of Experiments ★Proceedings of the Twenty-Fifth Conference on the Design of Experiments. Held in Natick, Mass., October 17-19, 1979. ARO Report 80, 2. U. S. Army Research Office, Research Triangle Park, N.C., 1980. xxix+243 pp. (Editors) 81k:65009a 65C05

Differential Equations ★Differential equations. Proceedings of the Eighth Fall Conference held at Oklahoma State University, Stillwater, Okla., October, 1979. Edited by Shair Ahmad, Marvin Keener and A. C. Lazer. *Academic Press [Harcourt Brace Jovanovich, Publishers], New York-London-Toronto, Ont., 1980. ix+278 pp. ISBN 0-12-045550-1 (Editors) 81e:34005 34-06*

Differential Equations and Numerical Mathematics ★Дифференциальные уравнения с частными производными. (Russian) [Partial differential equations] Proceedings of a Conference on Differential Equations and Numerical Mathematics held at Novosibirsk, September 26-28, 1978. Edited by S. K. Godunov. "Nauka" Sibirsk. Otdel., Novosibirsk, 1980. 256 pp. (errata insert). (Editors) 81m:35002 35-06

Dynamical Critical Phenomena and Related Topics ★Dynamical critical phenomena

Conference: (continued)

- and related topics. Proceedings of the International Conference held at the University of Geneva, Geneva, April 2-6, 1979. Edited by Charles P. Enz. Lecture Notes in Physics, 104. Springer-Verlag, Berlin-New York, 1979. xii + 390 pp. ISBN 3-540-09523-3 (Editors) **81i:82002** 82-06 (82A25)
- European, Applied Information Technology** ★EURO IFIP 79. Proceedings of the European Conference on Applied Information Technology of the International Federation for Information Processing held in London, September 25-28, 1979. Edited by P. A. Samet. North-Holland Publishing Co., Amsterdam-New York, 1979. xiv + 754 pp. ISBN 0-444-85370-7 (Editors) **81c:68003** 68-06 (94-06)
- Far from Equilibrium: Instabilities and Structures** ★Synergetics. Far from equilibrium. Proceedings of the Conference Far from Equilibrium: Instabilities and Structures held in Bordeaux, September 27-29, 1978. Edited by Adolphe Pacault and Christian Vidal. Springer Series in Synergetics, 3. Springer-Verlag, Berlin-New York, 1979. x + 175 pp. ISBN 3-540-09304-4 (Editors) **81a:82002** 82-06 (58F13, 80A30, 82A25, 92A09)
- Fault-Tolerant Computing** ★FTCS-8. The Eighth Annual International Conference on Fault-Tolerant Computing held in Toulouse, June 21-23, 1978. Digest of papers. IEEE Computer Society, New York, 1978. xvii + 226 pp. (Editors) **81b:94002** 94-06 (68-06)
- Finite Element Methods** ★Finite element methods in engineering. Proceedings of the Third International Conference held at the University of New South Wales, Sydney, July 2-6, 1979. Edited by A. P. Kabsila and V. A. Pulmano. Unisearch, Ltd., Kensington, 1979. xiv + 802 pp. ISBN 0-85841-150-4 (Editors) **81a:65007** 65-06
- Franco-Southeast Asian Mathematical** ★Proceedings of the First Franco-Southeast Asian Mathematical Conference, Singapore, May 1979. Vol. II. Held in Singapore, May 1979. Southeast Asian Bull. Math. 1979, Special Issue b. Southeast Asian Mathematical Society, Singapore, 1979. pp. 173-302. (Editors) **81g:00004** 00A10
- Functional Analysis** ★Functional analysis: surveys and recent results. II. Proceedings of the Second Conference on Functional Analysis held at the University of Paderborn, Paderborn, January 31-February 4, 1979. Edited by Klaus-Dieter Bierstedt and Benno Fuchssteiner. North-Holland Mathematics Studies, 38. Notas de Matemática [Mathematical Notes], 68. North-Holland Publishing Co., Amsterdam-New York, 1980. xii + 342 pp. ISBN 0-444-85403-7 (Editors) **81a:46004** 46-06
- Functional Differential Equations and Bifurcation** ★Functional differential equations and bifurcation. Proceedings of a Conference held at the Instituto de Ciências Matemáticas de São Carlos, Universidade de São Paulo, São Carlos, July 2-7, 1979. Edited by Antonio Fernandes Izé. Lecture Notes in Mathematics, 799. Springer-Verlag, Berlin-New York, 1980. xxii + 409 pp. ISBN 3-540-09966-7 (Editors) **81j:34004** 34-06 (45-06)
- Functional Differential Systems and Related Topics** ★Functional differential systems and related topics. Proceedings of the First International Conference held at Białeńsk, May 19-26, 1979. Edited by M. Kisielewicz. Higher College of Engineering, Institute of Mathematics and Physics, Zielona Góra, 1980. 340 pp. (Editors) **81j:34005** 34-06
- Fundamentals of Numerical Computation** ★Fundamentals of numerical computation (computer-oriented numerical analysis). Proceedings of a Conference held at the Technical University of Berlin, Berlin, June 5-8, 1979. Edited by Götz Alefeld and Rolf Dieter Grigoriuff. Computing Supplementum, 2. Springer-Verlag, Vienna, 1980. ii + 229 pp. ISBN 3-211-81566-X (Editors) **81j:65005** 65-06
- Geometry and Differential Geometry** ★Geometry and differential geometry. Proceedings of a Conference held at the University of Haifa, Haifa, March 18-23, 1979. Edited by R. Artzy and I. Vaisman. Lecture Notes in Mathematics, 792. Springer-Verlag, Berlin-New York, 1980. vi + 443 pp. ISBN 3-540-09976-X (Editors) **81i:53003** 53-06
- Gesellschaft für Informatik, Formal Model for Information Systems** ★Formale Modelle für Informationssysteme. (German) [Formal model for information systems] GI (Gesellschaft für Informatik) Conference held in Tutzing, May 24-26, 1979. Edited by Heinrich C. Mayr and Bernd E. Meyer. Informatik-Fachberichte [Technical Reports on Information Science], 21. Springer-Verlag, Berlin-New York, 1979. vi + 265 pp. ISBN 3-540-09773-2 (Editors) **81m:68003** 68-06
- Gesellschaft für Informatik, Theoretical Computer Science** ★Theoretical computer science. Held at Aachen, 1979. 4th GI (Gesellschaft für Informatik) Conference. Edited by Klaus Weihrauch. Lecture Notes in Computer Science, 67. Springer-Verlag, Berlin-New York, 1979. vii + 324 pp. ISBN 3-540-09118-1 (Editors) **81i:68013** 68-06
- Global Theory of Dynamical Systems** ★Global theory of dynamical systems. Proceedings of the International Conference held at Northwestern University, Evanston, Ill., June 18-22, 1979. Edited by Zbigniew Nitecki and Clark Robinson. Lecture Notes in Mathematics, 819. Springer-Verlag, Berlin-New York, 1980. ix + 499 pp. ISBN 3-540-10236-1 (Editors) **81j:58002** 58-06
- Graph Theory and Combinatorics** ★Graph theory and combinatorics. Proceedings of the Conference held at the Open University, Milton Keynes, May 12, 1978. Edited by Robin J. Wilson. Research Notes in Mathematics, 34. Pitman (Advanced Publishing Program), San Francisco, Calif.-London, 1979. ii + 148 pp. ISBN 0-273-08435-6 (Editors) **81c:05004** 05-06
- Graphtheoretic Concepts in Computer Science** ★Discrete structures and algorithms. Proceedings of the Workshop WG 79, Fifth Conference on Graphtheoretic Concepts in Computer Science held in Berlin, June 21-23, 1979. Edited by Uwe Pape. Carl Hanser Verlag, Munich, 1980. xi + 268 pp. ISBN 3-446-13135-3 (Editors) **81m:68002** 68-06
- Harmonic Analysis** ★Harmonic analysis, Iraklion 1978. Proceedings of a Conference held at the University of Crete, Iraklion, July, 1978. Edited by Nicholas Petridis, Stylianos K. Pichorides and Nicolas Varopoulos. Lecture Notes in Mathematics, 781. Springer-Verlag, Berlin-New York, 1980. iv + 213 pp. ISBN 3-540-09756-2 (Editors) **81c:42001** 42-06 (43-06, 46-06)
- Indian Mathematical Society** Abstracts of papers presented at the 42nd Conference of the Indian Mathematical Society. Math. Student 45 (1977), no. 2, 7-62 (1979). (Editors) **81j:00007** 00A10

Conference: (continued)

- Jena, Frege** ★Begriffsschrift—Jenaer Frege-Konferenz. (German) [Begriffsschrift—Jena Frege Conference] Held at Friedrich-Schiller-Universität, Jena, May 7-11, 1979. Edited by Franz Bolck. Friedrich-Schiller-Universität, Jena, 1979. iii + 548 pp. (Editors) **81m:03002** 03-06 (01A70, 68-06)
- Manitoba, Numerical Mathematics and Computing** ★Proceedings of the Ninth Manitoba Conference on Numerical Mathematics and Computing. Held at the University of Manitoba, Winnipeg, Man., September 27-29, 1979. Edited by G. H. J. Van Rees and H. C. Williams. Congressus Numerantium, XXVII. Utilitas Mathematica Publishing, Inc., Winnipeg, Man., 1980. ix + 434 pp. ISBN 0-919628-27-3 (Editors) **81j:65011** 65-06 (05-06)
- Mathematical Methods in Celestial Mechanics** ★Proceedings of the Sixth Conference on Mathematical Methods in Celestial Mechanics. Part I. Held at the Mathematisches Forschungsinstitut, Oberwolfach, August 14-19, 1978. Celestial Mech. 21 (1980), no. 1. D. Reidel Publishing Co., Dordrecht-Boston, Mass., 1980. pp. 1-125 (one plate). (Editors) **81a:70001a** 70-06 (70F15)
- ★Proceedings of the Sixth Conference on Mathematical Methods in Celestial Mechanics. Part II. Held at the Mathematisches Forschungsinstitut, Oberwolfach, August 14-19, 1978. Celestial Mech. 21 (1980), no. 2. D. Reidel Publishing Co., Dordrecht-Boston, Mass., 1980. pp. 129-250. (Editors) **81a:70001b** 70-06 (70F15)
- Mathematical Methods in Computer Graphics and Design** ★Mathematical methods in computer graphics and design. Proceedings of the Conference held at the University of Leicester, Leicester, September 28, 1978. Edited by K. W. Brodie. The Institute of Mathematics and its Applications Conference Series. Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], London-New York, 1980. xi + 147 pp. ISBN 0-12-134880-6 (Editors) **81i:68010** 68-06 (51-04)
- Mathematical Methods in Physics** ★Proceedings of the Conference on Mathematical Methods in Physics. Part A. Theoretical physics. Held at Mysore, August 28-31, 1978. Matscience Report, 96. Institute of Mathematical Sciences, Madras, 1979. iii + ii + 310 pp. (Editors) **81c:00014a** 00A69
- ★Proceedings of the Conference on Mathematical Methods in Physics. Part B. Differential equations. Held at Mysore, August 28-31, 1978. Matscience Report, 96. Institute of Mathematical Sciences, Madras, 1979. ii + 155 pp. (Editors) **81c:00014b** 00A69
- Mathematical Modeling** ★Proceedings of the First International Conference on Mathematical Modeling. Vol. I, II, III, IV, V. Held in St. Louis, Mo., August 29-September 1, 1977. Edited by Xavier J. R. Avula. University of Missouri-Rolla, Department of Engineering Mechanics, Rolla, Mo., 1977. x + 2646 pp. (Editors) **81i:90005** 90-06 (92-06, 93-06)
- ★Proceedings of the Second International Conference on Mathematical Modeling. Vol. I, II. Held at St. Louis, Mo., July 11-13, 1979. Edited by Xavier J. R. Avula, Richard Bellman, Yudel L. Luke and A. K. Rigler. University of Missouri-Rolla, Rolla, Mo., 1980. xi + 1310 pp. (Editors) **81j:00027** 00A69 (00A10)
- Mathematical Modelling of Turbulent Diffusion in the Environment** ★Mathematical modelling of turbulent diffusion in the environment. Proceedings of the Conference held at the University of Liverpool, Liverpool, September 12-13, 1978. Edited by C. J. Harris. The Institute of Mathematics and its Applications Conference Series. Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], London-New York, 1979. xvi + 500 pp. ISBN 0-12-328350-7 (Editors) **81j:76051** 76F99 (76-06, 80A20)
- Mathematical Physics** ★Mathematical problems in theoretical physics. Proceedings of the International Conference on Mathematical Physics held in Lausanne, August 20-25, 1979. Edited by Konrad Osterwalder. Lecture Notes in Physics, 116. Springer-Verlag, Berlin-New York, 1980. viii + 412 pp. ISBN 3-540-09964-6 (Editors) **81i:81003** 81-06
- Mathematical Programming** ★Studies on mathematical programming. Based on papers presented at the Third Conference on Mathematical Programming held at Mafra, January 31-February 6, 1975. Edited by A. Prékopa. Mathematical Methods of Operations Research, 1. Akadémiai Kiadó [Publishing House of the Hungarian Academy of Sciences], Budapest, 1980. 200 pp. ISBN 963-05-1854-6 (Editors) **81i:90009** 90-06
- ★Mathematical programming at Oberwolfach. Proceedings of a Conference held at the Mathematisches Forschungsinstitut, Oberwolfach, May 6-12, 1979. Edited by Heinz König, Bernhard Korte and Klaus Ritter. Math. Programming Stud. No. 14 (1981). North-Holland Publishing Co., Amsterdam-New York, 1981. pp. i-viii and 1-257. (Editors) **81i:90001** 49-06 (90-06)
- Mathematical Statistics and Probability Theory** ★Mathematical statistics and probability theory. Proceedings of the Sixth International Conference held in Włocławek, December 7-13, 1978. Edited by Witold Klonecki, Andrzej Kozek and Jan Rosiński. Lecture Notes in Statistics, 2. Springer-Verlag, New York-Heidelberg, 1980. xxii + 373 pp. ISBN 0-387-90493-X (Editors) **81g:62006** 62-06 (60-06)
- Mathematical Studies of Information Processing** ★Mathematical studies of information processing. Proceedings of the International Conference held in Kyoto, August 23-26, 1978. Edited by E. K. Blum, M. Paul and S. Takasu. Lecture Notes in Computer Science, 75. Springer-Verlag, Berlin-New York, 1979. viii + 629 pp. ISBN 3-540-09541-1 (Editors) **81i:68006** 68-06
- Mathematics at the Service of Man** ★Proceedings of the First World Conference on Mathematics at the Service of Man. Vol. I. Held in Barcelona in 1977. Edited by A. Ballester, N. Batle and E. Trillas. Universidad Politécnica, Escuela Técnica Superior de Arquitectura, Departamento de Matemáticas, Barcelona, 1980. v + 650 pp. (Editors) **81m:90003a** 90-06 (93-06)
- ★Proceedings of the First World Conference on Mathematics at the Service of Man. Vol. II. Held in Barcelona in 1977. Edited by A. Ballester, N. Batle and E. Trillas. Universidad Politécnica, Escuela Técnica Superior de Arquitectura, Departamento de Matemáticas, Barcelona, 1980. ii + 681 pp. (Editors) **81m:90003b** 90-06 (93-06)
- Measure Theory** ★Measure theory, Oberwolfach 1979. Proceedings of a Conference held at Oberwolfach, July 1-7, 1979. Edited by Dietrich Kölzow. Lecture Notes in

Conference: (continued)

- Mathematics, 794. *Springer-Verlag, Berlin-New York*, 1980. xv + 573 pp. ISBN 3-540-09979-4 (Editors) 81d:28001 28-06 (46-06, 60-06)
- Methods of Algebra and Functional Analysis in the Study of Families of Operators** ★Материалы Конференции "Методы Алгебры и Функционального Анализа при Исследовании Семейств Операторов". (Russian) [Proceedings of a Conference on the Methods of Algebra and Functional Analysis in the Study of Families of Operators] Held in Tartu, November 24-26, 1978. Dedicated to G. Kangro on the occasion of the sixty-fifth anniversary of his birth. *Tartu. Gos. Univ., Tartu*, 1978. 116 pp. (Editors) 81m:47001 47-06 (00A10, 01A70, 40-06)
- Midwest, Differential and Integral Equations** ★Differential and integral equations. Proceedings of the Seventh Midwest Conference held at the University of Missouri, Rolla, Mo., November 3-4, 1978. Edited by L. J. Grimm, O. R. Plummer and S. Y. Trimble. *University of Missouri-Rolla, Rolla, Mo.*, 1980. iv + 117 pp. (Editors) 81j:34003 34-06
- Midwestern Mechanics** ★Proceedings of the 16th Midwestern Mechanics Conference. Held at Kansas State University, Manhattan, Kan., September 19-21, 1979. Edited by S. C. Sinha, P. G. Kirmser and C. L. D. Huang. Developments in Mechanics, 10. *Kansas State University, College of Engineering, Manhattan, Kan.*, 1979. ix + 321 pp. (loose errata). (Editors) 81m:73010 73-06
- Modeling and Differential Equations in Biology** ★Modeling and differential equations in biology. Papers presented at a Conference held at Southern Illinois University, Carbondale, Ill., June 5-9, 1978. Edited by T. A. Burton. Lecture Notes in Pure and Applied Mathematics, 58. *Marcel Dekker, Inc., New York*, 1980. viii + 277 pp. ISBN 0-8247-1075-4 (Editors) 81j:92002 92-06
- Models of Biological Growth and Spread** ★Conference on Models of Biological Growth and Spread. Mathematical theories and applications. Held in Heidelberg, July 16-21, 1979. Adv. in Appl. Probab. 12 (1980), no. 3, 543-573. *Applied Probability Trust, Sheffield*, 1980. pp. 543-823. (Editors) 81e:92001 92A05
- Multiple Criteria Decision Making, Theory and Application** ★Multiple criteria decision making, theory and application. Proceedings of the Third Conference held at Hagen/Königswinter, August 20-24, 1979. Edited by Günter Gattner and Tomáš Gál. Lecture Notes in Economics and Mathematical Systems, 177. *Springer-Verlag, Berlin-New York*, 1980. xvi + 570 pp. ISBN 3-540-09963-8 (Editors) 81c:90002 90-06 (92A25)
- Multivariate Statistical Inference** ★Multivariate statistical analysis. Proceedings of the Second Conference on Multivariate Statistical Inference held at Dalhousie University, Halifax, N.S., October 5-7, 1979. Edited by R. P. Gupta. *North-Holland Publishing Co., Amsterdam-New York*, 1980. viii + 289 pp. ISBN 0-444-86019-3 (Editors) 81m:62005 62-06
- New Approaches to Nonlinear Problems in Dynamics** ★New approaches to nonlinear problems in dynamics. Proceedings of a Conference held in Pacific Grove, Calif., December 9-14, 1979. Edited by Philip J. Holmes. *Society for Industrial and Applied Mathematics (SIAM), Philadelphia, Pa.*, 1980. xii + 529 pp. ISBN 0-89871-167-3 (Editors) 81h:00006 00A69 (34Cxx, 58Fxx)
- Nonholonomic Spaces** ★Lucrările Conferinței Naționale de Spații Neolonomice. (Romanian) [Proceedings of the National Conference on Nonholonomic Spaces] Held at Iași, May 28-30, 1976. *Editura Academiei Republicii Socialiste România, Bucharest*, 1979. 176 pp. (Editors) 81b:53002 53-06
- Nonlinear Partial Differential Equations in Engineering and Applied Science** ★Nonlinear partial differential equations in engineering and applied science. Proceedings of a Conference held at the University of Rhode Island, Kingston, R.I., June 4-8, 1979. Edited by Robert L. Sternberg, Anthony J. Kalinowski and John S. Papadakis. Lecture Notes in Pure and Applied Mathematics, 54. *Marcel Dekker, Inc., New York-Basel*, 1980. xvi + 480 pp. ISBN 0-8247-6996-1 (Editors) 81d:35002 35-06
- Numerical Analysis** ★Numerical analysis. Proceedings of the 8th Biennial Conference held at the University of Dundee, Dundee, June 26-29, 1979. Edited by G. A. Watson. Lecture Notes in Mathematics, 773. *Springer-Verlag, Berlin-New York*, 1980. x + 184 pp. ISBN 3-540-09740-6 (Editors) 81b:65005 65-06
- Numerical Methods of Approximation Theory** ★Numerical methods of approximation theory. Vol. 5. Excerpts of a Conference held at the Mathematical Research Institute, Oberwolfach, March 18-24, 1979. Edited by Lothar Collatz, Günter Meinardus and H. Werner. International Series of Numerical Mathematics, 52. *Birkhäuser Verlag, Basel-Boston, Mass.*, 1980. 337 pp. ISBN 3-7643-1103-7 (Editors) 81d:65002 65-06 (41-06)
- Numerical Methods in Geomechanics** ★Numerical methods in geomechanics. Aachen 1979. Vol. IV. Additional contributions. Proceedings of the Third International Conference held in Aachen, April 2-6, 1979. Edited by W. Witke. A. A. Balkema, Rotterdam, 1980. i-vi and 1255-1550 pp. ISBN 90-6191-044-7 (Editors) 81m:73009 73-06
- Numerical Simulation of Fluid Dynamic Systems** ★Numerical simulation of fluid motion. Proceedings of an International Conference on the Numerical Simulation of Fluid Dynamic Systems held at Monash University, Melbourne, 1976. Edited by John Noye. *North-Holland Publishing Co., Amsterdam-New York*, 1978. ix + 580 pp. ISBN 0-444-85035-X (P. C. Jain) 81a:76005 76-06 (65P05)
- Numerical Techniques for Stochastic Systems** ★Numerical techniques for stochastic systems. Papers based on lectures presented at the Conference held at Gargnano, September 1979. Edited by Francesco Archetti and Marco Cugiani. *North-Holland Publishing Co., Amsterdam-New York*, 1980. viii + 406 pp. ISBN 0-444-86000-2 (Editors) 81f:93067 93E03 (93-06)
- Oklahoma, Ring Theory and Algebra** ★Ring theory and algebra. III. Proceedings of the Third Oklahoma Conference held at the University of Oklahoma, Norman, Okla., March 15-17, 1979. Edited by Bernard R. McDonald. Lecture Notes in Pure and Applied Mathematics, 55. *Marcel Dekker, Inc., New York*, 1980. xvi + 422 pp. ISBN 0-8247-1158-0 (Editors) 81h:16001 16-06
- Ordered Groups** ★Ordered groups. Proceedings of the Conference held at Boise State University, Boise, Idaho, October 16-20, 1978. Edited by Jo E. Smith, G. Otis Kenny and Richard N. Ball. Lecture Notes in Pure and Applied Mathematics, 62. *Marcel Dekker, Inc., New York*, 1980. x + 174 pp. ISBN 0-8247-6943-0 (Editors) 81m:06001 06-06

Conference: (continued)

- Partial Differential Equations** ★Journées "Équations aux Dérivées Partielles". (French) [Conference on Partial Differential Equations] Held at Saint Jean de Monts, June 2-6, 1980. *Société Mathématique de France, Paris*, 1980. 72 pp. (not consecutively pagged). (Editors) 81j:35002 35-06 (32-06)
- Pattern Recognition** ★Proceedings of the Fourth International Joint Conference on Pattern Recognition. Held in Kyoto, November 7-10, 1978. *Institute of Electrical and Electronics Engineers, New York*, 1979. xxii + 1166 pp. (Editors) 81a:68095 68G10 (68-06)
- Probability, Stochastic Processes and Statistical Mechanics** ★Proceedings of the Conference on Probability, Stochastic Processes and Statistical Mechanics. Held at Mysore, March 26-29, 1979. Edited by N. R. Ranganathan and R. Sridhar. *Matscience Report, 97. Institute of Mathematical Sciences, Madras*, 1979. iii + 202 pp. (Editors) 81j:60003 60-06 (81D05)
- Quantum Theory and the Structures of Time and Space** ★Quantum theory and the structures of time and space. Vol. 2. In memoriam Werner Heisenberg. Papers presented at the Second Conference held in Tutzing, July 12-15, 1976. Edited by L. Castell, M. Drieschner and C. F. von Weizsäcker. *Carl Hanser Verlag, Munich*, 1977. 252 pp. ISBN 3-446-12459-4 (Editors) 81j:81002a 81-06
- ★Quantum theory and the structures of time and space. Vol. 3. Papers presented at the Third Conference held in Tutzing, July 1978. Edited by L. Castell and C. F. von Weizsäcker. *Carl Hanser Verlag, Munich*, 1979. 200 pp. ISBN 3-446-12911-1 (Editors) 81j:81002b 81-06
- Random Walks** ★Journées sur les Marches Aléatoires. (French) [Conference on Random Walks] Held at Kleebach, March 5-10, 1979. *Astérisque, 74. Société Mathématique de France, Paris*, 1980. 201 pp. (Editors) 81j:60001 60-06
- Ring Theory** ★Ring theory. Antwerp 1980. Proceedings of the Conference held at the University of Antwerp, Antwerp, May 6-9, 1980. Edited by F. van Oystaeyen. *Lecture Notes in Mathematics, 825. Springer-Verlag, Berlin-New York*, 1980. vii + 209 pp. ISBN 3-540-10246-9 (Editors) 81i:16002 16-06
- Santa Cruz, Finite Groups** ★The Santa Cruz Conference on Finite Groups. Held at the University of California, Santa Cruz, Calif., June 25-July 20, 1979. Edited by Bruce Cooperstein and Geoffrey Mason. Proceedings of Symposia in Pure Mathematics, 37. *American Mathematical Society, Providence, R.I.*, 1980. xviii + 634 pp. ISBN 0-8218-1440-0 (Editors) 81m:20004 20-06 (20Dxx)
- Scheveningen, Differential Equations** ★Geometrical approaches to differential equations. Proceedings of the Fourth Scheveningen Conference on Differential Equations held at Scheveningen, August 26-31, 1979. Edited by Rodolfo Martini. *Lecture Notes in Mathematics, 810. Springer-Verlag, Berlin-New York*, 1980. vii + 339 pp. ISBN 3-540-10018-0 (Editors) 81j:35002 35-06 (58-06)
- Semigroups** ★Semigroups. Proceedings of the Conference held at Monash University, Clayton, October 27-30, 1979. Edited by T. E. Hall, P. R. Jones and G. B. Preston. *Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], New York-London*, 1980. x + 255 pp. ISBN 0-12-319450-4 (Editors) 81b:20074 20Mxx (20-06)
- Semigroups in Honor of Alfred H. Clifford** ★Proceedings of the Conference on Semigroups in honor of Alfred H. Clifford. Held at Tulane University, New Orleans, La., September 1-3, 1978. Edited by William R. Neco. Reprints and Lecture Notes in Mathematics. *Tulane University, New Orleans, La.*, 1979. viii + 240 pp. (Editors) 81a:20004 20-06 (06F05)
- Southeastern, Combinatorics, Graph Theory and Computing** ★Proceedings of the Tenth Southeastern Conference on Combinatorics, Graph Theory and Computing. Vols. I, II. Held at the Florida Atlantic University, Boca Raton, Fla., April 2-6, 1979. Edited by Frederick Hoffman, David McCarthy, Ronald C. Mullin and Ralph G. Stanton. Congressus Numerantium, XXIII-XXIV. *Utilitas Mathematica Publishing, Inc., Winnipeg, Man.*, 1979. Vol. I: xii + 467 pp.; Vol. II: pp. xiii-xx and 469-939. ISBN 0-919628-23-0, 0-919628-24-9 (Editors) 81b:05004 05-06
- Southern Illinois Number Theory** ★Number theory, Carbondale 1979. Proceedings of the Southern Illinois Number Theory Conference, held at Southern Illinois University, Carbondale, Ill., March 30-31, 1979. Edited by Melvyn B. Nathanson. *Lecture Notes in Mathematics, 751. Springer-Verlag, Berlin-New York*, 1979. iv + 342 pp. ISBN 3-540-09559-4 (Editors) 81a:10004 10-06
- Spanish-Portuguese, Mathematical** ★Actas de las Primeras Jornadas Matemáticas Hispano-Lusitanas. (Spanish) [Proceedings of the First Spanish-Portuguese Mathematical Conference] Held in Madrid, April 24-28, 1973. *Consejo Superior de Investigaciones Científicas, Madrid*, 1977. 687 pp. (1 plate). ISBN 94-00-03607-7 (Editors) 81j:00009 00A10
- ★Trabajos sobre triples. (Spanish) [Papers on triples] Papers presented at the Seventh Spanish-Portuguese Mathematical Conference held in San Felú de Guixols, May 26-30, 1980. *Álgebra, 26. Universidad de Santiago de Compostela, Departamento de Álgebra y Fundamentos, Santiago de Compostela*, 1980. 90 pp. ISBN 84-7191-177-9 (Editors) 81j:18002 18-06
- Statistics** ★Recent developments in statistical inference and data analysis. Proceedings of the International Conference in Statistics held at the Institute of Statistical Mathematics, Tokyo, November 28-30, 1979. Edited by Kameo Matsui. *North-Holland Publishing Co., Amsterdam-New York*, 1980. ix + 364 pp. ISBN 0-444-86104-1 (Editors) 81j:62009 62-06
- Stochastic Processes and their Applications** ★Ninth Conference on Stochastic Processes and their Applications. Held at Northwestern University, Evanston, Ill., August 6-10, 1979. Adv. in Appl. Probab. 12 (1980), no. 2, 263-318. *Applied Probability Trust, Sheffield*, 1980. pp. 263-541. (Editors) 81b:60001 60-06
- Stochastic Programming** ★Stochastic programming. Proceedings of an International Conference held at the University of Oxford, Oxford, July 15-17, 1974. Edited by M. A. H. Dempster. The Institute of Mathematics and its Applications Conference Series. *Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], London-New York*, 1980. xiii + 573 pp. ISBN 0-12-08250-8 (Editors) 81j:90094 90C15 (90-06)
- Structure of Topological Categories** ★Structure of topological categories. Proceedings of a Conference held at the University of Bremen, September 2-5, 1978. Edited by Horst Herrlich, Rudolf-Eberhard Hoffmann, Hans-Eberhard Porst and Manfred Bernd Wischnewsky. *Mathematik—Arbeitspapiere [Mathematics—Publications]*, 18. *Universität Bremen, Bremen*, 1979. iv + 252 pp. (Editors) 81a:18001 18-06 (18B30, 54B30)

Conference: (continued)

Systems Analysis ★Analyse des systèmes. (French) [Systems analysis] Conference held in Bordeaux, September 11-16, 1978. *Astérisque*, 75, 76. *Société Mathématique de France, Paris*, 1980. 248 pp. (Editors) **81f:93002** 93-06

Systems Theory in Immunology ★Systems theory in immunology. Proceedings of the Working Conference held in Rome, May 1978. Edited by Carlo Bruni, Gino Doria, Giorgio Koch and Roberto Strom. *Lecture Notes in Biomathematics*, 32. *Springer-Verlag, Berlin-New York*, 1979. xi + 273 pp. ISBN 3-540-09728-7 (Editors) **81c:92801** 92-06 (92A07)

Topology ★The Proceedings of the 1979 Topology Conference. Held at Ohio University, Athens, Ohio, 1979. Edited by Włodzimierz Kuperberg, G. M. Reed and Phillip Zenor. *Topology Proc.* 4 (1979), no. 1. (1980). *Auburn University, Mathematics Department, Auburn, Ala.*, 1980. pp. 1-338. (Editors) **81h:54001** 54-06

★The Proceedings of the 1979 Topology Conference. Held at Ohio University, Athens, Ohio, 1979. Edited by Włodzimierz Kuperberg, G. M. Reed and Phillip Zenor. *Topology Proc.* 4 (1979), no. 2. (1980). *Auburn University, Mathematics Department, Auburn, Ala.*, 1980. pp. 339-645. (Editors) **81h:54001** 54-06 (55-06)

Vector Bundles and Differential Equations ★Vector bundles and differential equations. Proceedings of a Conference held in Nice, June 12-17, 1979. Edited by André Hirschowitz. *Progress in Mathematics*, 7. *Birkhäuser, Boston, Mass.*, 1980. v + 249 pp. ISBN 3-7643-3022-8 (Editors) **81i:14002** 14-06 (81E10)

West Coast Combinatorics, Graph Theory and Computing ★Proceedings of the West Coast Conference on Combinatorics, Graph Theory and Computing. Held at Humboldt State University, Arcata, Calif., September 5-7, 1979. Edited by Phyllis Z. Chinn and D. McCarthy. *Congressus Numerantium*, XXVI. *Utilitas Mathematica Publishing, Inc., Winnipeg, Man.*, 1980. vi + 322 pp. ISBN 0-919628-26-5 (Editors) **81i:05006** 05-06 (68-06)

Conference Record:

ACM Symposium on Principles of Programming Languages ★Conference Record of the Sixth Annual ACM Symposium on Principles of Programming Languages. Held in San Antonio, Tex., January 29-31, 1979. *Association for Computing Machinery (ACM), New York*, 1979. iv + 290 pp. (Editors) **81f:68005** 68-06 (68B10)

Congress:

AFCEC-IRIA ★Reconnaissance des formes et intelligence artificielle. Tome I, II, III. (French) [Recognition of shapes and artificial intelligence. Vol. I, II, III] Second AFCEC-IRIA Congress held in Toulouse, September 12-14, 1979. *Institut de Recherche d'Informatique et d'Automatique (IRIA), Rocquencourt*, 1979. Vol. I: 423 pp.; Vol. II: 426 pp.; Vol. III: 368 pp. ISBN 2-7621-0212-3 (Editors) **81j:68007** 68-06 (62-06, 92-06)

IMACS, Simulation of Systems ★Simulation of systems '79. Proceeding of the 9th IMACS Congress held in Sorrento, September 24-28, 1979. Edited by L. Dekker, G. Savastano and G. C. Vansteenkiste. *North-Holland Publishing Co., Amsterdam-New York*, 1980. xvi + 1169 pp. ISBN 0-444-86123-8 (Editors) **81j:68009** 68-06 (90-06, 93-06)

Mathematicians ★Special issue: International Congress of Mathematicians, 1978. (Japanese) *Sūgaku* 31 (1979), no. 1, 1-94. *Mathematical Society of Japan, Tokyo*, 1979. pp. 1-96. (Editors) **81a:00011** 00A10 (01A65)

Scandinavian Mathematicians ★Abstracts. The 18th Scandinavian Congress of Mathematicians. Held in Aarhus, August 18-22, 1980. Various Publications Series, 38. *Aarhus Universitet, Matematisk Institut, Aarhus*, 1980. iii + 144 pp. (Editors) **81m:00005** 00A10

Congressus Numerantium ★Proceedings of the Tenth Southeastern Conference on Combinatorics, Graph Theory and Computing. Vols. I, II. Held at the Florida Atlantic University, Boca Raton, Fla., April 2-6, 1979. Edited by Frederick Hoffman, David McCarthy, Ronald C. Mullin and Ralph G. Stanton. *Congressus Numerantium*, XXIII-XXIV. *Utilitas Mathematica Publishing, Inc., Winnipeg, Man.*, 1979. Vol. I: xii + 467 pp.; Vol. II: pp. xiii-xx and 469-939. ISBN 0-919628-23-0, 0-919628-24-9 (Editors) **81h:05004** 05-06

Constanța ★Variational inequalities and optimization problems. Proceedings of a Summer School held at Constanța, August 20-30, 1979. Edited by Dan Pascali. *Ministerul Educației și Învățământului, Institutul de Învățământ Superior, Constanța*, 1979. vi + 344 pp. (Editors) **81i:49001** 49-06 (65-06)

Construction and analysis of information transmission systems ★Построение и анализ систем передачи информации. (Russian) [Construction and analysis of information transmission systems] Edited by E. L. Bloh. "Nauka", Moscow, 1980. 144 pp. (Editors) **81i:94001** 94-06 (62L20)

Constructive methods for nonlinear boundary value problems and nonlinear oscillations

★Constructive methods for nonlinear boundary value problems and nonlinear oscillations. Proceedings of the Conference held at the Mathematical Research Institute, Oberwolfach, November 19-25, 1978. Edited by J. Albrecht, L. Collatz and K. Kirchgässner. *International Series of Numerical Mathematics*, 48. *Birkhäuser Verlag, Basel-Boston, Mass.*, 1979. 190 pp. ISBN 3-7643-1098-7 (Editors) **81a:65006** 65-06

Constructive theory of functions and functional analysis ★Конструктивная теория функций и функциональный анализ. Вып. 2. (Russian) [Constructive theory of functions and functional analysis. No. 2] Edited by A. N. Šerstnev. *Kazan. Gos. Univ., Kazan*, 1979. 124 pp. (Editors) **81j:46002** 46-06 (00A10, 41-06, 45-06, 65-06)

Contemporary questions of applied mathematics and programming ★Современные вопросы прикладной математики и программирования. (Russian) [Contemporary questions of applied mathematics and programming] Edited by B. A. Ščerbakov. "Štiinca", Kishinev, 1979. 176 pp. (Editors) **81a:00008** 00A10 (90-06)

Continuum mechanics ★Исследования по упругости и пластичности. Вып. 13. (Russian) [Studies in elasticity and plasticity. No. 13] Актуальные проблемы механики сплошных сред. [Current problems of continuum mechanics] Edited by N. F. Morozov and K. F. Černyš. *Leningrad. Univ., Leningrad*, 1980. 320 pp. (Editors) **81k:73002** 73-06 (76F99, 78A25)

Continuum physics ★Seminar on Numerical Analysis and its Applications to Continuum Physics. Held in Rio de Janeiro, March 24-28, 1980. *Coleção Atas, Sociedade Brasileira de Matemática, 12. Sociedade Brasileira de Matemática, Rio de Janeiro*, 1980. ii + 216 pp. (Editors) **81i:65003** 65-06

Contributions to geometry ★Contributions to geometry. Proceedings of the Geometry Symposium held in Siegen, June 28-July 1, 1978. Edited by Jürgen Tölke and Jörg M. Wills. *Birkhäuser Verlag, Basel-Boston, Mass.*, 1979. 406 pp. ISBN 3-7643-1048-0 (Editors) **81h:52002** 52-06 (53-06)

Contributions to graph theory and its applications ★Beiträge zur Graphentheorie und deren Anwendungen. (German) [Contributions to graph theory and its applications] International Colloquium held in Oberhof, April 10-16, 1977. *Technische Hochschule Ilmenau, Ilmenau*, 1977. 320 pp. (Editors) **81k:05040** 05Cxx (05-06)

Contributions in probability and mathematical statistics, teaching of mathematics and analysis ★Contribuciones en probabilidad y estadística matemática, enseñanza de la matemática y análisis. (Spanish) [Contributions in probability and mathematical statistics, teaching of mathematics and analysis] Dedicated to Professor Alfonso Guirao Martín on the occasion of his academic retirement. *Grindley Ediciones, Granada*, 1979. viii + 307 pp. (1 plate). ISBN 84-338-0110-4 (Editors) **81d:00001** 00A10 (60-06, 90-06)

Contributions to statistics ★Contributions to statistics. Jaroslav Hájek Memorial Volume. Edited by Jana Jurečková. *D. Reidel Publishing Co., Dordrecht-Boston, Mass.-London*, 1979. 317 pp. (1 plate). ISBN 90-277-0883-5 (Editors) **81h:62004** 62-06

Control and dynamic systems ★Control and dynamic systems. Vol. 16. *Advances in theory and application*. Edited by C. T. Leondes. *Academic Press [Harcourt Brace Jovanovich, Publishers], New York-London-Toronto, Ont.*, 1980. xvii + 371 pp. ISBN 0-12-012716-4 (Editors) **81j:93002** 93-06 (49-06)

Control of motion ★Проблемы устойчивости движения, аналитической механики и управления движением. (Russian) [Problems of stability of motion, analytical mechanics and control of motion] Papers presented at the Third All-Union Četaev Conference, dedicated to the memory of N. G. Četaev on the occasion of the seventy-fifth anniversary of his birth, held in Irkutsk, June 20-25, 1977. Edited by V. M. Matrosov and A. N. Pančenkova [A. M. Pančenkova]. "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. 328 pp. (Editors) **81e:93002** 93-06 (34-06, 58-06, 70E99, 70H99, 73H99, 90-06)

Control of objects with distributed parameters ★Управление объектами с распределенными параметрами. (Russian) [Control of objects with distributed parameters] Edited by Ju. I. Samoilenko and V. A. Tkačenko. *Akad. Nauk Ukrain. SSR, Inst. Kibernet.*, Kiev, 1977. 100 pp. (Editors) **81a:93058a** 93C99

Control processes ★Математическое моделирование процессов планирования и управления. (Russian) [Mathematical modeling of planning and control processes] Edited by Ju. N. Pečerskiĭ. *Mat. Issled.* No. 60 (1980). "Štiinca", Kishinev, 1980. pp. 1-76. (Editors) **81g:90003** 90-06

Control systems ★Адаптивные системы управления. (Russian) [Adaptive control systems] Edited by V. I. Ivanenko and V. A. Labkovskii. *Akad. Nauk Ukrain. SSR, Inst. Kibernet.*, Kiev, 1978. 98 pp. (Editors) **81c:93001** 93-06

★Дискретные системы управления. (Russian) [Discrete control systems] Edited by V. M. Kuncević and V. P. Jakovlev. *Akad. Nauk Ukrain. SSR, Inst. Kibernet.*, Kiev, 1978. 87 pp. (Editors) **81g:93115a** 93E11

★Динамика управляемых систем. (Russian) [Dynamics of control systems] Papers presented at the Third All-Union Četaev Conference, dedicated to the memory of N. G. Četaev on the occasion of the seventy-fifth anniversary of his birth, held in Irkutsk, June 20-25, 1977. Edited by V. M. Matrosov and S. V. Eliseev. "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. 344 pp. (Editors) **81c:93003** 93-06

★Proceedings of the 18th IEEE Conference on Decision & Control. Vol. 1, 2. Including the 18th Symposium on Adaptive Processes. Held in Fort Lauderdale, Fla., December 12-14, 1979. *Institute of Electrical and Electronics Engineers, Inc. (IEEE), New York*, 1979. xx + 1077 pp. (Editors) **81k:93002** 93-06

Control of technical and organizational systems by application of computer technology ★Управление техническими и организационными системами с применением вычислительной техники. (Russian) [Control of technical and organizational systems by application of computer technology] Edited by Ja. Z. Cypkin. "Nauka", Moscow, 1979. 232 pp. (Editors) **81e:90001** 90-06 (68-06)

Convection dominated flows ★Finite element methods for convection dominated flows. Papers presented at the Winter Annual Meeting of the American Society of Mechanical Engineers held in New York, December 2-7, 1979. Edited by Thomas J. R. Hughes. *AMD, 34. American Society of Mechanical Engineers (ASME), New York*, 1979. v + 224 pp. (Editors) **81e:76001** 76-06 (65N30)

Convergence structures ★Proceedings of the Conference on Convergence Structures. Held at Cameron University, Lawton, Okla., April 18-19, 1980. Edited by C. Rickie. *Cameron University, Department of Mathematics, Lawton, Okla.*, 1980. ii + 173 pp. (Editors) **81m:54003** 54-06

Convex analysis and mathematical economics ★Convex analysis and mathematical economics. Proceedings of a Symposium held at the University of Tilburg, Tilburg, February 20, 1978. Edited by Jacobus Kriens. *Lecture Notes in Economics and Mathematical Systems*, 168. *Springer-Verlag, Berlin-New York*, 1979. v + 136 pp. ISBN 3-540-09247-1 (Editors) **81j:90001** 90-06 (49-06)

Copenhagen ★Potential theory, Copenhagen 1979. Proceedings of a Colloquium held in Copenhagen, May 14-18, 1979. Edited by Christian Berg, Gunnar Forst and Bent Fuglede. *Lecture Notes in Mathematics*, 787. *Springer-Verlag, Berlin-New York*, 1980. viii + 319 pp. ISBN 3-540-09967-0 (Editors) **81i:31001** 31-06

★Abstract software specifications. Proceedings of the Winter School held at the Technical University of Denmark, Copenhagen, January 22-February 2, 1979. Edited by Dines Bjørner. *Lecture Notes in Computer Science*, 86. *Springer-Verlag, Berlin-New York*, 1980. xii + 567 pp. ISBN 3-540-10007-5 (Editors) **81k:68002** 68-06

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Mersenne, Marin See Targosz, Karolina, **81c:01017**

Pauli, Wolfgang See Pauli, Wolfgang, **81c:01034**

W. Sierpiński and N. N. Luzin Letters from W. Sierpiński to N. N. Luzin. (Russian) *Istor.-Mat. Issled.* No. 24 (1979), 366-373, 389. (Esther R. Phillips) **81a:01038** 01A70

Cosmology ★Physics of the expanding universe. Proceedings of the Cracow School on

- Cosmology held at Jodlow Dwór, September 1978. Edited by M. Demiański. Lecture Notes in Physics, 109. Springer-Verlag, Berlin-New York, 1979. iv + 210 pp. ISBN 3-540-09562-4 (Editors) **81b:83044** 83F05
- Covariance** ★Special issue on covariance. Edited by Walter T. Federer. Comm. Statist. A—Theory Methods **8** (1979), no. 8. Marcel Dekker, Inc., New York-Basel, 1979. pp. 719-854. (George W. Williams) **81e:62081** 62J10
- Crystallographic groups** ★Proceedings of the Conference on Kristallographische Gruppen. Part I. Held at the Universität Bielefeld, Bielefeld, September 2-16, 1979. Edited by A. W. M. Dress and J. Neubüser. Match No. 9 (1980). Max-Planck-Institut für Kohlenforschung, Institut für Strahlenchemie, Mülheim, 1980. pp. i-iv and 1-261. (Editors) **81k:20002** 20-06 (20H15)
- Cubature formulas** ★Теория кубатурных формул и приложения функционального анализа к задачам математической физики. (Russian) [Theory of cubature formulas and the application of functional analysis to problems of mathematical physics] Edited by S. V. Uspenskii. Труды Семинара С. Л. Соболева, No. 1 [Proceedings of the S. L. Sobolev Seminar, No. 1], 1976. Akad. Nauk SSSR Sibirs. Otdel., Inst. Mat., Novosibirsk, 1976. 168 pp. (Editors) **81a:65009** 65-06
- ★Теория кубатурных формул и приложения функционального анализа к задачам математической физики. (Russian) [Theory of cubature formulas and the application of functional analysis to problems of mathematical physics] Edited by S. V. Uspenskii. Труды Семинара С. Л. Соболева, No. 1 [Proceedings of the S. L. Sobolev Seminar, No. 1], 1978. Akad. Nauk SSSR Sibirs. Otdel., Inst. Mat., Novosibirsk, 1978. 168 pp. (one plate). (Editors) **81a:65010** 65-06
- ★Теория кубатурных формул и приложения функционального анализа к задачам математической физики. (Russian) [Theory of cubature formulas and the application of functional analysis to problems of mathematical physics] Edited by S. V. Uspenskii. Труды Семинара С. Л. Соболева, No. 1 [Proceedings of the S. L. Sobolev Seminar, No. 1], 1979. Akad. Nauk SSSR Sibirs. Otdel., Inst. Mat., Novosibirsk, 1979. 156 pp. (Editors) **81f:35006** 35-06 (65-06)
- Current problems in mathematics** ★Современные проблемы математики. Том 14. (Russian) [Current problems in mathematics. Vol. 14] Edited by R. V. Gamkrelidze. Итоги Науки и Техники. [Progress in Science and Technology] Akad. Nauk SSSR, Vsesojuz. Inst. Nauch. i Tehn. Informacii, Moscow, 1979. 256 pp. (loose errata). (Editors) **81d:60001** 60-06
- ★Современные проблемы математики. Том 15. (Russian) [Current problems in mathematics. Vol. 15] Edited by R. V. Gamkrelidze. Итоги Науки и Техники. [Progress in Science and Technology] Akad. Nauk SSSR, Vsesojuz. Inst. Nauch. i Tehn. Informacii, Moscow, 1980. 228 pp. (loose errata). (Editors) **81e:81004** 81-06
- Current problems in theoretical and applied mechanics** ★Современные проблемы теоретической и прикладной механики. (Russian) [Current problems in theoretical and applied mechanics] Proceedings of the Fourth All-Union Congress on Theoretical and Applied Mechanics held in Kiev, May 21-28, 1976. Edited by G. S. Pisarenko. "Naukova Dumka", Kiev, 1978. 412 pp. (Editors) **81b:70001** 70-06 (73-06, 76-06)
- Cybernetics** ★IV Всесоюзная конференция по проблемам теоретической кибернетики. (Russian) [Fourth All-Union Conference on Problems of Theoretical Cybernetics] Abstracts of papers presented at the Conference held at Novosibirsk, August 30-September 1, 1977. Akad. Nauk SSSR Sibirs. Otdel., Inst. Mat., Novosibirsk, 1977. 210 pp. (Editors) **81b:93001** 93-06 (68-06, 90-06)
- ★Вероятностные методы и кибернетика. Вып. 14. (Russian) [Probabilistic methods and cybernetics. No. 14] Edited by R. G. Buharaev. Kazan. Gos. Univ., Kazan, 1978. 111 pp. (Editors) **81a:68007** 68-06
- ★Вероятностные методы и кибернетика. Вып. XV. (Russian) [Probabilistic methods and cybernetics. No. XV] Edited by Ju. V. Golunkov. Kazan. Univ., Kazan, 1979. 95 pp. (Editors) **81d:03003** 03-06 (68Cxx)
- ★Progress in cybernetics and systems research. Vol. VII. General systems methodology, organization and management, cognition and learning. Edited by Franz R. Pichler and F. de P. Hanika. Hemisphere Publishing Corp., Washington, D.C.-London, 1980. x + 393 pp. ISBN 0-89116-195-3 (Editors) **81i:90006** 90-06 (92-06, 93-06)
- Cybernetics collection** ★Кибернетический сборник. Новая серия. Вып. 15. (Russian) [Cybernetics collection. New series. No. 15] A collection of translations edited by O. B. Lupanov. "Mir", Moscow, 1978. 224 pp. (Editors) **81i:68007** 68-06 (94-06)
- ★Кибернетический сборник. Новая серия. Вып. 16. (Russian) [Cybernetics collection. New series. No. 16] A collection of translations edited by O. B. Lupanov. "Mir", Moscow, 1979. 215 pp. (Editors) **81i:68005** 68-06 (94C10)
- Data analysis** ★Recent developments in statistical inference and data analysis. Proceedings of the International Conference in Statistics held at the Institute of Statistical Mathematics, Tokyo, November 28-30, 1979. Edited by Kameo Matusita. North-Holland Publishing Co., Amsterdam-New York, 1980. ix + 364 pp. ISBN 0-444-86104-1 (Editors) **81j:62009** 62-06
- Data base architecture** ★Data base architecture. Proceedings of the Fifth IFIP Working Conference held in Venice, June 26-29, 1979. Edited by G. Brachi and G. M. Nijssen. North-Holland Publishing Co., Amsterdam-New York, 1979. x + 341 pp. ISBN 0-444-85384-7 (Editors) **81b:68005** 68B05 (68H05)
- Data processing and adaptation in automated systems of control of technological processes** ★Обработка информации и адаптация в АСУ технологическими процессами. (Russian) [Data processing and adaptation in automated systems of control of technological processes] Edited by V. P. Živogljadov and A. L. Skripko. "Ilim", Frunze, 1979. 82 pp. (Editors) **81e:93002** 93-06
- Decision and control** ★Proceedings of the 1978 IEEE Conference on Decision and Control including the 17th Symposium on Adaptive Processes. Held in San Diego, Calif., January 10-12, 1979. Institute of Electrical and Electronics Engineers, New York, 1979. xii + 1461 pp. (Editors) **81a:93001** 93-06
- Decision information** ★Decision information. Edited by Chris P. Tsokos and Robert M. Thrall. Academic Press [Harcourt Brace Jovanovich, Publishers], New York-London-Toronto, Ont., 1979. x + 528 pp. ISBN 0-12-702250-3 (Editors) **81e:93001** 93-06 (90D35)
- Decision making** ★Multiple criteria decision making, theory and application. Proceedings of the Third Conference held at Hagen/Königswinter, August 20-24, 1979. Edited by Günter Fandel and Tomás Gál. Lecture Notes in Economics and Mathematical Systems, 177. Springer-Verlag, Berlin-New York, 1980. xvi + 570 pp. ISBN 3-540-09963-8 (Editors) **81e:90002** 90-06 (92A25)
- Decision problems in algebra** ★Word problems. II. The Oxford book. Outgrowth of a Conference on Decision Problems in Algebra held in Oxford, Summer 1976. Edited by S. I. Adjan [S. I. Adjan], William W. Boone and Graham Higman. Studies in Logic and the Foundations of Mathematics, 95. North-Holland Publishing Co., Amsterdam-New York, 1980. x + 578 pp. (1 plate). ISBN 0-444-85343-X (Editors) **81f:03056** 03D40 (03-06, 20-06, 20F10)
- Decision theory** ★Foundations and applications of decision theory. Vol. I. Theoretical foundations. Papers from an International Workshop held at the University of Western Ontario, London, Ont., 1975. Edited by C. A. Hooker, J. J. Leach and E. F. McClennen. University of Western Ontario Series in Philosophy of Science, 13. D. Reidel Publishing Co., Dordrecht-Boston, Mass., 1978. xxiii + 446 pp. ISBN 90-277-0842-8 (Editors) **81a:90002a** 90A05
- ★Foundations and applications of decision theory. Vol. II. Epistemic and social applications. Papers from an International Workshop held at the University of Western Ontario, London, Ont., 1975. Edited by C. A. Hooker, J. J. Leach and E. F. McClennen. University of Western Ontario Series in Philosophy of Science, 13. D. Reidel Publishing Co., Dordrecht-Boston, Mass., 1978. xxiii + 208 pp. ISBN 90-277-0844-4 (Editors) **81a:90002b** 90A05
- Delft** ★Теоретическая и прикладная механика. (Russian) [Theoretical and applied mechanics] Труды XIV Международного Конгресса ИУТАМ. [Proceedings of the 14th IUTAM Congress] Held at Delft, August 30-September 4, 1976. Papers translated from the English. Edited by G. K. Mikhailov. With a preface by M. A. Lavrent'ev. "Mir", Moscow, 1979. 767 pp. (Editors) **81k:76048** 76N15 (70K99, 73M99, 86A10)
- Design of experiments** ★Proceedings of the Twenty-Fifth Conference on the Design of Experiments. Held in Natick, Mass., October 17-19, 1979. ARO Report 80, 2. U. S. Army Research Office, Research Triangle Park, N.C., 1980. xxix + 243 pp. (Editors) **81k:65009a** 65C05
- Design of interpreters** ★Проектирование транслирующих процессоров. (Russian) [Design of interpreters] Edited by Ju. N. Pečerskii. Mat. Issled. No. 59 (1980). "Sinteca", Kishinev, 1980. pp. 1-60. (Editors) **81a:68001** 68-06
- Developments in statistics** ★Developments in statistics. Vol. 3. Edited by Paruchuri R. Krishnaiah. Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], New York-London, 1980. xiv + 254 pp. ISBN 0-12-426603-7 (Editors) **81k:62005** 62-06
- Dictionary** ★Encyclopedic dictionary of mathematics. Vol. I. Abel to multivariate analysis. Translated from the second Japanese edition. Edited by Shōkichi Iyanaga and Yukiyoichi Kawada. Translation reviewed by Kenneth O. May. With a foreword by Saunders Mac Lane. MIT Press, Cambridge, Mass.-London, 1977. xv + 883 pp. ISBN 0-262-09016-3 (J. S. Joel) **81d:00003a** 00A20
- ★Encyclopedic dictionary of mathematics. Vol. II. Networks to zeta functions. Translated from the second Japanese edition. Edited by Shōkichi Iyanaga and Yukiyoichi Kawada. Translation reviewed by Kenneth O. May. MIT Press, Cambridge, Mass.-London, 1977. pp. 885-1750. ISBN 0-262-09016-3 (J. S. Joel) **81d:00003b** 00A20
- Dictionary:**
- Computer networks See Marószki, József; et al. **81f:68009**
- English-German See Pfeil, Traute. **81m:00011**
- Net theory See Genrich, Hartmann J.; et al. **81g:68004**
- Russian-Polish ★Wielki słownik techniczny rosyjsko-polski. (Polish) [Great Russian-Polish technical dictionary] Sixth edition, revised and augmented. Edited by Maria Martin, Mieczysław Boratyn, Janina Janusziewicz, Anna Murawska, Jan Szarski and Elżbieta Tabaczekiewicz. Wydawnictwa Naukowo-Techniczne (WNT), Warsaw, 1980. xvi + 1152 pp. ISBN 83-204-0034-1 (Editors) **81m:00012** 00A20
- Difference and variational-difference methods** ★Разностные и вариационно-разностные методы. (Russian) [Difference and variational-difference methods] Proceedings of the Second Seminar on Methods of Numerical and Applied Mathematics held in Novosibirsk, 1977. Edited by G. I. Marčuk. Akad. Nauk SSSR Sibirs. Otdel., Vychisl. Centr, Novosibirsk, 1977. 161 pp. (Editors) **81b:65003a** 65-06 (65Q05)
- Differential equations** ★Некоторые вопросы дифференциальных и интегральных уравнений и их приложения. Вып. 2. (Russian) [Some questions of differential and integral equations and their applications. No. 2] Edited by G. V. Tomakii. Yakutsk. Gos. Univ., Yakutsk, 1977. 192 pp. (Editors) **81b:34002** 34-06
- ★Теоретические и прикладные вопросы дифференциальных уравнений и алгебра. (Russian) [Theoretical and applied questions of differential equations and algebra] Edited by A. N. Šarkovskii. "Naukova Dumka", Kiev, 1978. 272 pp. (Editors) **81a:00013** 00A10
- ★Приближенные методы исследования дифференциальных уравнений и их приложения. Вып. 4. (Russian) [Approximate methods for investigating differential equations and their applications. No. 4] Edited by V. V. Strygin. Kuzylov. Gos. Univ., Kuzylov, 1978. 140 pp. (Editors) **81c:34004** 34-06
- ★Обратные задачи для дифференциальных уравнений математической физики. (Russian) [Inverse problems for differential equations of mathematical physics] Edited by M. M. Lavrent'ev. Akad. Nauk SSSR Sibirs. Otdel., Vychisl. Centr, Novosibirsk, 1978. 162 pp. (Editors) **81j:35003** 35-06
- ★Приближенные и качественные методы теории дифференциальных и дифференциально-функциональных уравнений. (Russian) [Approximate and qualitative methods in the theory of differential and functional-differential equations] Edited by A. N. Šarkovskii. Akad. Nauk Ukrain. SSR, Inst. Mat., Kiev, 1979. 112 pp. (Editors) **81b:34001** 34-06 (65-06)
- ★Proceedings of the Conference on Mathematical Methods in Physics. Part B. Differential equations. Held at Mysore, August 28-31, 1978. Matscience Report, 96. Institute of Mathematical Sciences, Madras, 1979. ii + 155 pp. (Editors) **81e:00014b** 00A69
- ★Differential equations. Proceedings of the Eighth Fall Conference held at Oklahoma State University, Stillwater, Okla., October, 1979. Edited by Shair Ahmad, Marvin Keener and A. C. Lazer. Academic Press [Harcourt Brace Jovanovich, Publishers], New York-London-Toronto, Ont., 1980. ix + 278 pp. ISBN 0-12-045550-1 (Editors) **81c:34005** 34-06
- ★Vector bundles and differential equations. Proceedings of a Conference held in Nice, June 12-17, 1979. Edited by André Hirschowitz. Progress in Mathematics, 7. Birkhäuser, Boston, Mass., 1980. v + 249 pp. ISBN 3-7643-3022-8 (Editors) **81i:14002** 14-06 (81E10)

- ★Geometrical approaches to differential equations. Proceedings of the Fourth Scheveningen Conference on Differential Equations held at Scheveningen, August 26-31, 1979. Edited by Rodolfo Martini. Lecture Notes in Mathematics, 810. Springer-Verlag, Berlin-New York, 1980. vii + 339 pp. ISBN 3-540-10018-0 (Editors) 81i:35002 35-06 (58-06)
- ★Functional differential equations and bifurcation. Proceedings of a Conference held at the Instituto de Ciências Matemáticas de São Carlos, Universidade de São Paulo, São Carlos, July 2-7, 1979. Edited by Antonio Fernandes Izé. Lecture Notes in Mathematics, 799. Springer-Verlag, Berlin-New York, 1980. xxii + 409 pp. ISBN 3-540-09966-7 (Editors) 81j:34004 34-06 (45-06)
- Differential equations and their applications ★Дифференциальные уравнения и их приложения. (Russian) [Differential equations and their applications] Edited by M. S. Salakhitdinov. "Fan", Tashkent, 1979. 170 pp. (Editors) 81i:35003 35-06
- Differential equations in biology ★Modeling and differential equations in biology. Papers presented at a Conference held at Southern Illinois University, Carbondale, Ill., June 5-9, 1978. Edited by T. A. Burton. Lecture Notes in Pure and Applied Mathematics, 58. Marcel Dekker, Inc., New York, 1980. viii + 277 pp. ISBN 0-8247-1075-4 (Editors) 81i:52002 92-06
- Differential equations with deviating argument ★Дифференциальные уравнения с отклоняющимся аргументом. (Russian) [Differential equations with deviating argument] Edited by V. I. Rozikov and G. D. Kurdevanidze. Univ. Druzhby Narodov im. Patrisa Lumumby, Moscow, 1979. 87 pp. (Editors) 81m:34004 34Kxx
- Differential geometry ★Proceedings of the IV International Colloquium on Differential Geometry. Held at the University of Santiago de Compostela, Santiago de Compostela, September 18-21, 1978. Cursos y Congresos de la Universidad de Santiago de Compostela [Courses and Conferences of the University of Santiago de Compostela], 15. Universidad de Santiago de Compostela, Departamento de Geometría y Topología, Santiago de Compostela, 1979. ix + 294 pp. ISBN 84-7191-148-5 (Editors) 81b:53001 53-06 (58-06)
- ★Geometry and differential geometry. Proceedings of a Conference held at the University of Haifa, Haifa, March 18-23, 1979. Edited by R. Artzy and I. Vaisman. Lecture Notes in Mathematics, 792. Springer-Verlag, Berlin-New York, 1980. vi + 443 pp. ISBN 3-540-09976-X (Editors) 81i:53003 53-06
- Differential geometry of homogeneous spaces ★Дифференциальная геометрия однородных пространств. (Russian) [Differential geometry of homogeneous spaces] Edited by V. I. Maslov. Irkutsk. Gos. Univ., Irkutsk, 1979. 180 pp. (Editors) 81i:53002 53-06
- Differential and integral equations ★Differential and integral equations. Proceedings of the Seventh Midwest Conference held at the University of Missouri, Rolla, Mo., November 3-4, 1978. Edited by L. J. Grimm, O. R. Plummer and S. Y. Trimble. University of Missouri-Rolla, Rolla, Mo., 1980. iv + 117 pp. (Editors) 81j:34003 34-06
- Differential and integral equations. Boundary value problems ★Дифференциальные и интегральные уравнения. Краевые задачи. (Russian) [Differential and integral equations. Boundary value problems] A collection of articles dedicated to the memory of I. N. Vekua. Edited by R. A. Kordzadze. Tbilis. Gos. Univ., Tbilisi, 1979. 304 pp. (1 plate). (Editors) 81j:73002 73-06 (30-06, 35-06)
- Differential, noncooperative, cooperative and statistical games ★Дифференциальные, бескоординатные, кооперативные и статистические игры. (Russian) [Differential, noncooperative, cooperative and statistical games] Edited by V. O. Aikenzay. Kalinin. Gos. Univ., Kalinin, 1979. 108 pp. (Editors) 81m:90110 90Dxx (90-06)
- Diffraction and propagation of waves ★Проблемы дифракции и распространения волн. Вып. 17. (Russian) [Problems in the diffraction and propagation of waves. No. 17] Edited by E. M. Gjunninen. Leningrad. Univ., Leningrad, 1979. 216 pp. (Editors) 81c:78006 78A45 (78A40)
- Direct numerical simulation of gas flows ★Прямое численное моделирование течений газа. (Russian) [Direct numerical simulation of gas flows] Edited by O. M. Beloserkovskii. Численный эксперимент в газовой динамике. [Numerical experiment in gas dynamics] Akad. Nauk SSSR, Vychisl. Centr, Moscow, 1978. 176 pp. (Jaroslav Jelen) 81j:76004 76N15 (65P05, 76P05, 76Z05)
- Discrete control systems ★Дискретные системы управления. (Russian) [Discrete control systems] Edited by V. M. Kuncovitch and V. P. Jakovlev. Akad. Nauk Ukrain. SSR, Inst. Kibernet., Kiev, 1978. 87 pp. (Editors) 81g:93115a 93E11
- Discrete structures and algorithms ★Discrete structures and algorithms. Proceedings of the Workshop WG 79, Fifth Conference on Graphtheoretic Concepts in Computer Science held in Berlin, June 21-23, 1979. Edited by Uwe Pape. Carl Hanser Verlag, Munich, 1980. xi + 268 pp. ISBN 3-446-13135-3 (Editors) 81m:68002 68-06
- Discrete systems ★Special issue on large elastic deformation of discrete systems. Lectures presented at the Euromech 69th International Colloquium held in Balatonszécsény, April 13-15, 1977. Acta Tech. Acad. Sci. Hungar. 87 (1978), no. 1-2 (1979). Akadémiai Kiadó (Publishing House of the Hungarian Academy of Sciences), Budapest, 1978. pp. 1-210. (Editors) 81a:73002 73-06
- ★Теория автоматов в применении к проектированию дискретных устройств и систем. (Russian) [Automata theory in application to the design of discrete devices and systems] Proceedings of Symposia held in Jachranka, April 18-23, 1977 and in Donovaly, May 8-13, 1978. Tanulmányok—MTA Számítástech. Automat. Kutató Int. Budapest No. 99 (1979) (1980). MTA Számítástech. Automat. Kutató Intézet, Budapest, 1980. pp. 1-246. (Editors) 81i:68005 68-06
- Distributed-parameter systems ★Simulation of distributed-parameter and large-scale systems. Proceedings of the IMACS European Simulation Meeting held at the University of Patras, Patras, October 2-4, 1979. Edited by S. G. Tzafestas. North-Holland Publishing Co., Amsterdam-New York, 1980. ix + 380 pp. ISBN 0-444-85447-9 (Editors) 81c:93004 93-06
- Doctoral students of Pál Turán List of doctoral students of Pál Turán. P. Turán memorial volume. J. Approx. Theory 29 (1980), no. 1, 13. (Editors) 81m:01096 01A70
- Donovaly ★Теория автоматов в применении к проектированию дискретных устройств и систем. (Russian) [Automata theory in application to the design of discrete devices and systems] Proceedings of Symposia held in Jachranka, April 18-23, 1977 and in Donovaly, May 8-13, 1978. Tanulmányok—MTA Számítástech. Automat. Kutató Int. Budapest No. 99 (1979) (1980). MTA Számítástech. Automat. Kutató Intézet, Budapest, 1980. pp. 1-246. (Editors) 81i:68005 68-06
- Dortmund ★Bifurcation problems and their numerical solution. Proceedings of the Workshop held at the University of Dortmund, Dortmund, January 15-17, 1980. Edited by H. D. Mittelman and H. Weber. International Series of Numerical Mathematics, 54. Birkhäuser Verlag, Basel-Boston, Mass., 1980. iii + 243 pp. ISBN 3-7643-1204-1 (Editors) 81i:58003 58-06 (65-06)
- Dublin ★Boundary and interior layers—computational and asymptotic methods. Proceedings of the BAIL I Conference held at Trinity College, Dublin, June 3-6, 1980. Edited by J. J. H. Miller. Boole Press, Dún Laoghaire, 1980. xi + 425 pp. ISBN 0-906783-01-1 (Editors) 81j:76001 76-06 (65-06)
- Dubrovnik ★Global and large scale system models. Proceedings of the Center for Advanced Studies (CAS) International Summer Seminar held in Dubrovnik, August 21-26, 1978. Edited by Branislav Lazarević. Lecture Notes in Control and Information Sciences, 19. Springer-Verlag, Berlin-New York, 1979. viii + 232 pp. ISBN 3-540-09637-X (Editors) 81a:93009 93A15 (93-06)
- Dundee ★Numerical analysis. Proceedings of the 8th Biennial Conference held at the University of Dundee, Dundee, June 26-29, 1979. Edited by G. A. Watson. Lecture Notes in Mathematics, 773. Springer-Verlag, Berlin-New York, 1980. x + 184 pp. ISBN 3-540-09740-6 (Editors) 81b:65005 65-06
- Durham, N.C. ★Fuzzy sets. Theory and applications to policy analysis and information systems. Proceedings of the Symposium on Policy Analysis and Information Systems held at Duke University, Durham, N.C., June 28-30, 1980. Edited by Paul P. Wang and S. K. Chang. Plenum Press, New York-London, 1980. ix + 413 pp. ISBN 0-306-40557-1 (Editors) 81h:03105 03E72 (03-06, 90A05, 94D05)
- Durham, N.H. ★First Workshop on Grand Unification. Held at the University of New Hampshire, Durham, N.H., April 10-12, 1980. Edited by Paul H. Frampton, Sheldon L. Glashow and Asim Yildiz. Lie Groups: History, Frontiers and Applications, XI. Mah Sci Press, Brookline, Mass., 1980. ix + 370 pp. ISBN 0-915692-31-7 (Editors) 81j:81066 81G20
- Dynamic optimization and mathematical economics ★Dynamic optimization and mathematical economics. Edited by Pan Tai Liu. Mathematical Concepts and Methods in Science and Engineering, 19. Plenum Press, New York-London, 1980. x + 269 pp. ISBN 0-306-40245-9 (Editors) 81a:90001 90-06
- Dynamic systems ★Алгебраические инварианты динамических систем. (Russian) [Algebraic invariants of dynamic systems] Edited by B. A. Šerbakov. Mat. Issled. No. 55 (1980). "Sitiica", Kishinev, 1980. pp. 1-152. (Editors) 81j:34081 34C35 (53A55)
- ★Control and dynamic systems. Vol. 16. Advances in theory and application. Edited by C. T. Leondes. Academic Press [Harcourt Brace Jovanovich, Publishers], New York-London-Toronto, Ont., 1980. xvii + 371 pp. ISBN 0-12-012716-4 (Editors) 81j:93002 93-06 (49-06)
- Dynamical critical phenomena and related topics ★Dynamical critical phenomena and related topics. Proceedings of the International Conference held at the University of Geneva, Geneva, April 2-6, 1979. Edited by Charles P. Enz. Lecture Notes in Physics, 104. Springer-Verlag, Berlin-New York, 1979. xii + 390 pp. ISBN 3-540-09523-3 (Editors) 81i:82002 82-06 (82A25)
- Dynamical systems ★Nonlinear evolution equations and dynamical systems. Proceedings of the Meeting held at the University of Lecce, Lecce, June 20-23, 1979. Edited by M. Boiti, F. Pempinelli and G. Soliani. Lecture Notes in Physics, 120. Springer-Verlag, Berlin-New York, 1980. vi + 368 pp. ISBN 3-540-09971-9 (Editors) 81i:35004 35-06 (58-06, 70-06, 76-06)
- ★Dynamical systems. Lectures presented at the C.I.M.E. Summer School held in Bressanone, June 19-27, 1978. Progress in Mathematics, 8. Birkhäuser, Boston, Mass., 1980. viii + 289 pp. ISBN 3-7643-3024-4 (Editors) 81i:58004 58-06
- ★Global theory of dynamical systems. Proceedings of the International Conference held at Northwestern University, Evanston, Ill., June 18-22, 1979. Edited by Zbigniew Nitecki and Clark Robinson. Lecture Notes in Mathematics, 819. Springer-Verlag, Berlin-New York, 1980. ix + 499 pp. ISBN 3-540-10236-1 (Editors) 81j:58002 58-06
- ★Modelling of dynamical systems. Vol. 1. Edited by Harold Nicholson. IEE Control Engineering Series, 12. Peter Peregrinus, Ltd., Stevenage, 1980. xi + 227 pp. ISBN 0-906048-38-9 (Editors) 81m:93005 93-06
- Dynamics ★New approaches to nonlinear problems in dynamics. Proceedings of a Conference held in Pacific Grove, Calif., December 9-14, 1979. Edited by Philip J. Holmes. Society for Industrial and Applied Mathematics (SIAM), Philadelphia, Pa., 1980. xii + 529 pp. ISBN 0-89871-167-3 (Editors) 81h:00006 00A69 (34Cxx, 58Fxx)
- Dynamics of control systems ★Динамика управляемых систем. (Russian) [Dynamics of control systems] Papers presented at the Third All-Union Četaev Conference, dedicated to the memory of N. G. Četaev on the occasion of the seventy-fifth anniversary of his birth, held in Irkutsk, June 20-25, 1977. Edited by V. M. Matrosov and S. V. Eliseev. "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. 344 pp. (Editors) 81c:93003 93-06
- Dynamics and instability of fluid interfaces ★Dynamics and instability of fluid interfaces. Proceedings of a Meeting held at the Technical University of Denmark, Lyngby, May 1978. Edited by T. S. Sørensen. Lecture Notes in Physics, 105. Springer-Verlag, Berlin-New York, 1979. v + 315 pp. ISBN 3-540-09524-1 (Editors) 81j:76045 76E99
- Dynamics and modelling of reactive systems ★Dynamics and modelling of reactive systems. Proceedings of the Advanced Seminar held at the Mathematics Research Center, University of Wisconsin, Madison, Wis., October 22-24, 1979. Edited by Warren E. Stewart, W. Harmon Ray and Charles C. Conley. Publication of the Mathematics Research Center, University of Wisconsin, 44. Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], New York-London, 1980. xi + 413 pp. ISBN 0-12-669550-4 (Editors) 81i:80001 80-06 (80A30)
- Earth sciences ★Statistics and earth sciences—the challenge for the 80's and statistical problems in exploration and resource evaluation of energy fuels. Papers presented at sessions held as part of the American Statistical Association Annual Meeting, Washington, D.C., August 13-16, 1979. Edited by Richard B. MacCammon. J. Internat. Assoc. Math. Geol. 12 (1980), no. 5. Plenum Press, New York-London, 1980. pp. 415-522. (Editors) 81j:86001 86-06
- Ecology ★Mathematical modelling in biology and ecology. Proceedings of a Symposium held in Pretoria, July 5-6, 1979. Edited by Wayne M. Getz. Lecture Notes in Biomathematics, 33. Springer-Verlag, Berlin-New York, 1980. viii + 355 pp. ISBN 3-540-09735-X (Editors) 81i:92001 92-06

Econometric models ★Computation in econometric models. Edited by Warren T. Dent. J. Econometrics 12 (1980), no. 1. North-Holland Publishing Co., Amsterdam, 1980. pp. 1-102. (Editors) **81b:62003** 62-06

Econometrics ★Experimental design in econometrics. Edited by D. J. Aigner and C. N. Morris. J. Econometrics 11 (1979), no. 1. North-Holland Publishing Co., Amsterdam, 1979. pp. 1-205. (Editors) **81b:62005** 62-06 (62Kxx, 62P20)

Economic systems ★Модели и методы исследования экономических систем. (Russian) [Models and methods of investigating economic systems] Edited by E. L. Berljand and B. G. Mirkin. "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. 224 pp. (Editors) **81a:90006** 90-06

Economic theory ★General equilibrium, growth, and trade. Essays in honor of Lionel McKenzie. Edited by Jerry R. Green and José Alexandre Scheinkman. Economic Theory, Econometrics, and Mathematical Economics. Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], New York-London, 1979. xv+401 pp. ISBN 0-12-298750-0 (Editors) **81m:90004** 90Axx

★Bayesian analysis in economic theory and time series analysis. The 1977 Savage Dissertation Award Theses. Studies in Bayesian Econometrics, 2. North-Holland Publishing Co., Amsterdam-New York, 1980. xi+180 pp. ISBN 0-444-85414-2 (Editors) **81b:62190** 62P20 (90A20)

Economics ★Dynamic optimization and mathematical economics. Edited by Pan Tai Liu. Mathematical Concepts and Methods in Science and Engineering, 19. Plenum Press, New York-London, 1980. x+269 pp. ISBN 0-306-40245-9 (Editors) **81a:90001** 90-06

Edinburgh ★Comstat 1980. Proceedings of the Fourth Symposium in Computational Statistics held in Edinburgh, 1980. Edited by Marjorie M. Barritt and David Wishart. Physica Verlag, Vienna, 1980. 632 pp. ISBN 3-7908-0229-8 (Editors) **81j:62007** 62-06 (90-06)

Eigenvalue problems ★Bifurcation and nonlinear eigenvalue problems. Proceedings of a Session held at the University of Paris XIII, Villeneuve, October 2-4, 1978. Edited by C. Bardos, J. M. Lasry and M. Schatzman. Lecture Notes in Mathematics, 782. Springer-Verlag, Berlin-New York, 1980. viii+296 pp. ISBN 3-540-09758-9 (Editors) **81c:35001** 35-06 (00A69, 35B32, 58E07)

Einstein ★Einstein. A centenary volume. Edited by Anthony Philip French. Harvard University Press, Cambridge, Mass., 1979. xx+332 pp. (11 plates). ISBN 0-435-58200-3 (H. Treder) **81k:01053** 01A70 (01A60, 83-03)

Albert Einstein: his influence on physics, philosophy and politics ★Albert Einstein: his influence on physics, philosophy and politics. Edited by Peter C. Aichelburg and Roman U. Sexl. Friedr. Vieweg & Sohn, Braunschweig, 1979. xv+220 pp. ISBN 3-528-08425-1 (H. Treder) **81f:01039** 01A70 (83-03, 83-06)

El Escorial ★Fourier analysis. Proceedings of a Seminar held at El Escorial, June 17-23, 1979. Edited by Miguel de Guzmán and Ireneo Peral. Asociación Matemática Española [Spanish Mathematical Association], 1. Asociación Matemática Española, Madrid, 1980. iii+200 pp. ISBN 84-300-2172-8 (Editors) **81f:42001** 42-06

Elastic bodies ★Zagadnienia termomechaniki ciał sprężystych. (Polish) [Problems of the thermomechanics of elastic bodies] Edited and with English papers translated by Józef Ignaczak. Zakład Narodowy im. Ossolińskich—Wydawnictwo Polskie Akademii Nauk (Ossolinum), Wrocław, 1978. 274 pp. (Vadim Komkov) **81f:73001** 73-06 (73U05)

Elasticity ★Вопросы теории упругости и вязкоупругости. (Russian) [Problems in the theory of elasticity and viscoelasticity] Edited by G. B. Kuznetsov. Akad. Nauk SSSR, Ural. Nauch. Centr, Sverdlovsk, 1978. 126 pp. (Editors) **81c:73002** 73-06

★Исследования по упругости и пластичности. Вып. 13. (Russian) [Studies in elasticity and plasticity. No. 13] Актуальные проблемы механики сплошных сред. [Current problems of continuum mechanics] Edited by N. F. Morozov and K. F. Černý. Leningrad. Univ., Leningrad, 1980. 320 pp. (Editors) **81c:73002** 73-06 (76F99, 78A25)

★Некоторые задачи теории упругости. (Russian) [Some problems of the theory of elasticity] Edited by M. O. Bašelevskii. Tbilis. Gos. Univ., Inst. Prikl. Mat., Tbilisi, 1980. 151 pp. (Editors) **81m:73011** 73-06

Electrodynamics ★Численно-аналитические методы решения задач теплопроводности и электропроводности. (Russian) [Numerical-analytic methods for the solution of problems of heat conduction and electrodynamics] Edited and with a preface by Ju. A. Mitropol'skii [Ju. O. Mitropol'skii]. Akad. Nauk Ukrain. SSR, Inst. Mat., Kiev, 1979. 187 pp. (Editors) **81c:80004** 80A20 (78A25)

Electromagnetics ★Nonlinear electromagnetics. Edited by Piergiorgio L. E. Uslenghi. Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], New York-London, 1980. x+426 pp. ISBN 0-12-709660-4 (Editors) **81j:78001** 78-06 (35Q20, 76X05)

Elementary particles ★Theory of elementary particles extended in space-time. Edited by Hideki Yukawa. Progr. Theoret. Phys. Suppl. No. 67 (1979) (1980). Kyoto University, Kyoto, 1980. pp. i-ii and 1-334. (Editors) **81c:81007** 81-06 (81G25)

Encyclopedia ★Математическая энциклопедия. Том 1: А-Г. (Russian) [Mathematical encyclopedia. Vol. 1: A-G] Edited by I. M. Vinogradov, V. I. Bitjukov and Ju. V. Prohorov. "Soviet. Enciklopedija", Moscow, 1979. 1152 cols. (R. P. Boas, Jr.) **81c:0000a** 00A20

★Математическая энциклопедия. Том 2: Д-К. (Russian) [Mathematical encyclopedia. Vol. 2: D-K] Edited by I. M. Vinogradov, V. I. Bitjukov and Ju. V. Prohorov. "Soviet. Enciklopedija", Moscow, 1979. 1104 cols. (R. P. Boas, Jr.) **81c:0000b** 00A20

★Encyclopedic dictionary of mathematics. Vol. I. Abel to multivariate analysis. Translated from the second Japanese edition. Edited by Shōkichi Iyanaga and Yukiyoji Kawada. Translation reviewed by Kenneth O. May. With a foreword by Saunders Mac Lane. MIT Press, Cambridge, Mass.-London, 1977. xv+883 pp. ISBN 0-262-09016-3 (J. S. Joel) **81d:00003a** 00A20

★Encyclopedic dictionary of mathematics. Vol. II. Networks to zeta functions. Translated from the second Japanese edition. Edited by Shōkichi Iyanaga and Yukiyoji Kawada. Translation reviewed by Kenneth O. May. MIT Press, Cambridge, Mass.-London, 1977. pp. 885-1750. ISBN 0-262-09016-3 (J. S. Joel) **81d:00003b** 00A20

Endomorphisms ★Полугрупповые многообразия и полугруппы эндоморфизмов. (Russian) [Semigroup varieties and semigroups of endomorphisms] Edited by E. S. Ljapun. Leningrad. Gos. Ped. Inst., Leningrad, 1979. 160 pp. (Editors) **81b:20004** 20-06 (20Mxx)

Energetics approach to systems research ★Энергетический подход к исследованию систем. (Russian) [Energetics approach to systems research] Edited by B. V. Birjukov and V. A. Venikov. Voprosy Kibernet. (Moscow) No. 32 (1977). "Soviet. Radio", Moscow, 1977. pp. 1-160. (Editors) **81c:93005** 93A10 (93-06)

Engineering ★Applications of statistics & probability in soil & structural engineering. Vol. I, II. Proceedings of the Third International Conference (ICASP3) held in Sydney, January 29-February 2, 1979. Edited by Owen G. Ingles. Unisearch, Ltd., Kensington, 1979. Vol. I: 427 pp.; Vol. II: pp. 429-849. ISBN 0-909796-08-4, 0-909796-09-2 (Editors) **81b:62002a** 62-06

★Applications of statistics & probability in soil & structural engineering. Vol. III. Proceedings of the Third International Conference (ICASP3) held in Sydney, January 29-February 2, 1979. Edited by Owen G. Ingles. Unisearch, Ltd., Kensington, 1979. 468 pp. ISBN 0-909796-10-6 (Editors) **81b:62002b** 62-06

Engineering cybernetics ★Вопросы технической кибернетики. (Russian) [Questions of engineering cybernetics] Edited by Ju. A. Mahmudov. "Élm", Baku, 1979. 155 pp. (Editors) **81j:93007** 90-06 (93E03, 94-06)

★Техническая кибернетика. Том 11. (Russian) [Engineering cybernetics. Vol. 11] Edited by B. N. Petrov. Итоги Науки и Техники. [Progress in Science and Technology] Akad. Nauk SSSR, Vsesojuz. Inst. Nauch. i Tehn. Informacii, Moscow, 1979. 192 pp. (Editors) **81j:93003** 93-06

★Техническая кибернетика. Том 12. (Russian) [Engineering cybernetics. Vol. 12] Edited by Z. B. Golembó. Итоги Науки и Техники. [Progress in Science and Technology] Akad. Nauk SSSR, Vsesojuz. Inst. Nauch. i Tehn. Informacii, Moscow, 1980. 239 pp. (Editors) **81d:93003** 93-06 (68G05)

Equivariant homotopy ★Group actions on manifolds and equivariant homotopy. (Japanese) Proceedings of a Symposium held at the Research Institute for Mathematical Sciences, Kyoto University, Kyoto, June 5-7, 1979. Sūrikaiseikikenkyūsho Kōkyūroku No. 365 (1979). Kyoto University, Research Institute for Mathematical Sciences, Kyoto, 1979. pp. i-ii and 1-104. (Editors) **81m:57001** 57-06

Ergodic theory ★A collection of invited papers on ergodic theory. Dedicated to the memory of Shlomo Horowitz. Israel J. Math. 33 (1979), no. 3-4 (1980). Weizmann Science Press of Israel, Jerusalem, 1979. pp. i-ii and 177-388. (Editors) **81b:28001** 28-06 (28Dxx)

Erice ★Variational inequalities and complementarity problems. Theory and applications. Proceedings of an International School of Mathematics on Variational Inequalities and Complementarity Problems in Mathematical Physics and Economics held in Erice, June 19-30, 1978. Edited by R. W. Cottle, F. Giannessi and J.-L. Lions. A Wiley-Interscience Publication. John Wiley & Sons, Ltd., Chichester, 1980. xvii+408 pp. ISBN 0-471-27610-3 (Editors) **81d:49001** 49-06 (49A29, 90-06, 90C33)

★Hadronic matter at extreme energy density. Proceedings of a Workshop held at the Ettore Majorana Center, Erice, October 13-21, 1978. Edited by Nicola Cabibbo and Luigi Serotio. Ettore Majorana International Science Series: Physical Sciences, 2. Plenum Press, New York-London, 1980. ix+358 pp. ISBN 0-306-40303-X (Editors) **81c:81006** 81-06 (81G05)

Essays ★Combinatory logic, lambda calculus and formalism ★To H. B. Curry: essays on combinatory logic, lambda calculus and formalism. Edited by J. P. Seldin and J. R. Hindley. Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], London-New York, 1980. xxv+606 pp. (1 plate). ISBN 0-12-349050-2 (Editors) **81j:03005** 03-06 (03B40)

Estimation ★Asymptotic theory of statistical tests and estimation. In honor of Wassily Hoeffding. Proceedings of an Advanced International Symposium held at the University of North Carolina, Chapel Hill, N.C., April 16-18, 1979. Edited by Indra Mohan Chakravarti. With an appendix by Peter Clifford. Academic Press [Harcourt Brace Jovanovich, Publishers], New York-London-Toronto, Ont., 1980. xiv+350 pp. ISBN 0-12-166650-6 (Editors) **81c:62004** 62-06 (60-06)

Euclidean harmonic analysis ★Euclidean harmonic analysis. Proceedings of Seminars held at the University of Maryland, College Park, Md., 1979. Edited by John J. Benedetto. Lecture Notes in Mathematics, 779. Springer-Verlag, Berlin-New York, 1980. i+177 pp. ISBN 3-540-09748-1 (Editors) **81c:42002** 42-06

Euclidean quantum field theory ★Евклидова квантовая теория поля. (Russian) [Euclidean quantum field theory] Марковский подход. [The Markov approach] Translation from the English edited by R. A. Minlos. Edited by A. N. Kolmogorov and S. P. Novikov. Математика: Новое в Заграничной Hayke [Mathematics: Recent Publications in Foreign Science], 12. "Mir", Moscow, 1978. 288 pp. (Editors) **81f:81002** 81-06 (81Exx)

EURO IFIP ★EURO IFIP 79. Proceedings of the European Conference on Applied Information Technology of the International Federation for Information Processing held in London, September 25-28, 1979. Edited by P. A. Samet. North-Holland Publishing Co., Amsterdam-New York, 1979. xiv+754 pp. ISBN 0-444-85370-7 (Editors) **81c:68003** 68-06 (94-06)

Eurotech ★Special issue on large elastic deformation of discrete systems. Lectures presented at the Eurotech '69 International Colloquium held in Balatonszemes, April 13-15, 1977. Acta Tech. Acad. Sci. Hungar. 87 (1978), no. 1-2. (1979). Akadémiai Kiadó (Publishing House of the Hungarian Academy of Sciences), Budapest, 1978. pp. 1-210. (Editors) **81a:73002** 73-06

Evanston, Ill. ★Ninth Conference on Stochastic Processes and their Applications. Held at Northwestern University, Evanston, Ill., August 6-10, 1979. Adv. in Appl. Probab. 12 (1980), no. 2, 263-318. Applied Probability Trust, Sheffield, 1980. pp. 263-541. (Editors) **81b:60001** 60-06

★Global theory of dynamical systems. Proceedings of the International Conference held at Northwestern University, Evanston, Ill., June 18-22, 1979. Edited by Zbigniew Nitecki and Clark Robinson. Lecture Notes in Mathematics, 819. Springer-Verlag, Berlin-New York, 1980. ix+499 pp. ISBN 3-540-10236-1 (Editors) **81j:58002** 58-06

Evian ★Semantics of concurrent computation. Proceedings of the International Symposium held at Evian, July 2-4, 1979. Edited by Gilles Kahn. Lecture Notes in Computer Science, 70. Springer-Verlag, Berlin-New York, 1979. vi+368 pp. ISBN 3-540-09511-X (Editors) **81c:68002** 68-06 (68B10)

Existence of solutions, stability and informability in game theory ★Существование

- решений, устойчивость и информированность в теории игр. (Russian) [Existence of solutions, stability and informedness in game theory] Edited by V. N. Lagunov. *Kalinin. Gos. Univ., Kalinin*, 1979. 114 pp. (Editors) **81j:90149** 90D25
- Experimental design in econometrics** ★Experimental design in econometrics. Edited by D. J. Aigner and C. N. Morris. *J. Econometrics* 11 (1979), no. 1. *North-Holland Publishing Co., Amsterdam*, 1979. pp. 1-205. (Editors) **81b:62095** 62-06 (62Kxx, 62P20)
- Experimental number theory** ★Experimental number theory. (Japanese) Proceedings of a Symposium held at the Research Institute for Mathematical Sciences, Kyoto University, Kyoto, October 15-17, 1979. *Sirikaikisenkyūsho Kōkyūroku* No. 371 (1979). *Kyoto University, Research Institute for Mathematical Sciences, Kyoto*, 1979. pp. i-iv and 1-116. (Editors) **81m:10004** 10-06
- Experimental physics** ★Некоторые вопросы экспериментальной и теоретической физики. (Russian) [Problems in experimental and theoretical physics] Edited by G. B. Abdullaev and T. G. Kerimova. "Elm", *Baku*, 1977. 268 pp. (Vladimir Sipe) **81d:82069a** 82A70 (81Hxx, 82A65)
- Expert estimates** ★Экспертные оценки. (Russian) [Expert estimates] Edited by B. G. Litvak and Ju. N. Tjurin. *Voprosy Kibernet.* (Moscow) No. 58 (1979). *Akad. Nauk SSSR, Nauch. Sovet po Kompleksnoi Probleme "Kibernetika"*, Moscow, 1979. pp. 1-199. (Editors) **81f:90001** 90-06
- Facts and prospects of gauge theories** ★Facts and prospects of gauge theories. Proceedings of the XVII. Internationale Universitätswochen für Kernphysik held at Schlading, February 21-March 3, 1978. Edited by Paul Urban. *Acta Physica Austriaca Supplement*, XIX. *Springer-Verlag, Vienna*, 1978. v + 889 pp. ISBN 3-211-81514-7 (Editors) **81b:81091** 81-06 (81E10)
- al-Fārabi and the development of science and culture in the countries of the Orient** ★al-Fārabi в развитии науки и культуры стран востока. (Russian) [al-Fārabi and the development of science and culture in the countries of the Orient] Abstracts of papers from an International Scientific Conference dedicated to the 1100th anniversary of the birth of al-Fārabi (Abū Naṣr Muḥammad ibn Muḥammad al-Fārabi). Edited by A. H. Kasyanov. "Nauka" *Kazakh SSR, Alma-Ata*, 1975. 112 pp. (Editors) **81c:01007** 01A30 (01A70)
- Fault-tolerant computing** ★FTCS-8. The Eighth Annual International Conference on Fault-Tolerant Computing held in Toulouse, June 21-23, 1978. Digest of papers. *IEEE Computer Society, New York*, 1978. xvii + 226 pp. (Editors) **81b:94002** 94-06 (68-06)
- ★FTCS-10. The 10th International Symposium on Fault-Tolerant Computing held in Kyoto, October 1-3, 1980. Digest of papers. *IEEE Computer Society, New York*, 1980. xix + 381 pp. (Editors) **81m:94002** 94-06
- Field theory** ★Recent developments in particle and field theory. Lectures and seminars delivered at the Symposium on Particles and Fields held at Tübingen University, Tübingen, June 20-July 1, 1977. Edited by Walter Dittrich. *Friedr. Vieweg & Sohn, Braunschweig*, 1979. v + 422 pp. ISBN 3-528-08426-X (Editors) **81a:81007** 81-06 (81G05, 81M05)
- Finite element methods for convection dominated flows** ★Finite element methods for convection dominated flows. Papers presented at the Winter Annual Meeting of the American Society of Mechanical Engineers held in New York, December 2-7, 1979. Edited by Thomas J. R. Hughes. AMD, 34. *American Society of Mechanical Engineers (ASME), New York*, 1979. v + 224 pp. (Editors) **81c:76001** 76-06 (65N30)
- Finite element methods in engineering** ★Finite element methods in engineering. Proceedings of the Third International Conference held at the University of New South Wales, Sydney, July 2-6, 1979. Edited by A. P. Kabailla and V. A. Pulmano. *Unisearch, Ltd., Kensington*, 1979. xiv + 802 pp. ISBN 0-85841-150-4 (Editors) **81a:65007** 65-06
- Finite elements** ★Journées "Éléments Finis". Held at Rennes, May 12-14, 1975. *Université de Rennes, Rennes*, 1975. 286 pp. (not consecutively paged). (Editors) **81b:65004** 65-06 (65N30)
- Finite elements in electrical and magnetic field problems** ★Finite elements in electrical and magnetic field problems. Edited by M. V. K. Chari and P. P. Silvester. Wiley Series in Numerical Methods in Engineering. A Wiley-Interscience Publication. *John Wiley & Sons, Ltd., Chichester*, 1980. xii + 219 pp. ISBN 0-471-27578-6 (Editors) **81j:78009** 78A25 (65N30, 78A55)
- Finite groups** ★К теории конечных групп. (Russian) [On the theory of finite groups] Translated from the English by S. P. Demushkin. Edited by A. I. Kostrikin. Математика: Новое в Зарубежной Науке [Mathematics: Recent Publications in Foreign Science], 16. "Mir", Moscow, 1979. 200 pp. (Editors) **81e:20020** 20Dxx
- ★The Santa Cruz Conference on Finite Groups. Held at the University of California, Santa Cruz, Calif., June 25-July 20, 1979. Edited by Bruce Cooperstein and Geoffrey Mason. Proceedings of Symposia in Pure Mathematics, 37. *American Mathematical Society, Providence, R.I.*, 1980. xviii + 634 pp. ISBN 0-8218-1440-0 (Editors) **81m:20004** 20-06 (20Dxx)
- R. A. Fisher: an appreciation** ★R. A. Fisher: an appreciation. Edited by Stephen E. Fienberg and David V. Hinkley. Lecture Notes in Statistics, 1. *Springer-Verlag, New York-Heidelberg*, 1980. x + 208 pp. (3 plates). ISBN 0-387-90476-X (E. Seneta) **81k:01024** 01A60 (62-03)
- Fixed points** ★Analysis and computation of fixed points. Proceedings of a Symposium held at the Mathematics Research Center, University of Wisconsin, Madison, Wis., May 7-8, 1979. Edited by Stephen M. Robinson. Publication of the Mathematics Research Center, University of Wisconsin, 43. *Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], New York-London*, 1980. ix + 413 pp. ISBN 0-12-590240-9 (Editors) **81j:65003** 65-06 (90-06)
- Fluid dynamic systems** ★Numerical simulation of fluid motion. Proceedings of an International Conference on the Numerical Simulation of Fluid Dynamic Systems held at Monash University, Melbourne, 1976. Edited by John Noye. *North-Holland Publishing Co., Amsterdam-New York*, 1978. ix + 580 pp. ISBN 0-444-85035-X (P. C. Jain) **81a:76005** 76-06 (65P05)
- Fluid interfaces** ★Dynamics and instability of fluid interfaces. Proceedings of a Meeting held at the Technical University of Denmark, Lyngby, May 1978. Edited by T. S. Sørensen. Lecture Notes in Physics, 105. *Springer-Verlag, Berlin-New York*, 1979. v + 315 pp. ISBN 3-540-09524-1 (Editors) **81j:76045** 76E99
- Fluid mechanics** ★Annual review of fluid mechanics. Vol. 12. Edited by Milton Van Dyke, J. V. Wehausen and John L. Lumley. *Annual Reviews Inc., Palo Alto, Calif.*, 1980. iv + 490 pp. (1 plate). ISBN 0-8243-0712-7 (Editors) **81a:76001** 76-02
- Fluid motion** ★Numerical simulation of fluid motion. Proceedings of an International Conference on the Numerical Simulation of Fluid Dynamic Systems held at Monash University, Melbourne, 1976. Edited by John Noye. *North-Holland Publishing Co., Amsterdam-New York*, 1978. ix + 580 pp. ISBN 0-444-85035-X (P. C. Jain) **81a:76005** 76-06 (65P05)
- Formal model for information systems** ★Formale Modelle für Informationssysteme. (German) [Formal model for information systems] GI (Gesellschaft für Informatik) Conference held in Tutzing, May 24-26, 1979. Edited by Heinrich C. Mayr and Bernd E. Meyer. *Informatik-Fachberichte* [Technical Reports on Information Science], 21. *Springer-Verlag, Berlin-New York*, 1979. vi + 265 pp. ISBN 3-540-09773-2 (Editors) **81m:68003** 68-06
- Formalism** ★To H. B. Curry: essays on combinatory logic, lambda calculus and formalism. Edited by J. P. Seldin and J. R. Hindley. *Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], London-New York*, 1980. xxv + 606 pp. (1 plate). ISBN 0-12-349050-2 (Editors) **81j:03005** 03-06 (03B40)
- Fort Collins, Colo.** ★Combinatorial mathematics, optimal designs and their applications. Proceedings of the Symposium on Combinatorial Mathematics and Optimal Design held at Colorado State University, Fort Collins, Colo., June 5-9, 1978. Edited by J. Srivastava. *Ann. Discrete Math.* 6 (1980). *North-Holland Publishing Co., Amsterdam-New York*, 1980. pp. i-viii and 1-391. (Editors) **81i:05005** 05-06
- Fort Lauderdale, Fla.** ★Proceedings of the 18th IEEE Conference on Decision & Control. Vol. 1, 2. Including the 18th Symposium on Adaptive Processes. Held in Fort Lauderdale, Fla., December 12-14, 1979. *Institute of Electrical and Electronics Engineers, Inc. (IEEE), New York*, 1979. xx + 1077 pp. (Editors) **81k:93002** 93-06
- Fort Lee, Va.** ★Final Proceedings of the Sixteenth Annual U.S. Army Operations Research Symposium. Vol. I, II. Held in Fort Lee, Va., October 12-14, 1977. U.S. Government Printing Office, Washington, D.C., 1977. xviii + 1162 pp. (Editors) **81m:90002** 90-06
- Foundations and applications of decision theory** ★Foundations and applications of decision theory. Vol. I. Theoretical foundations. Papers from an International Workshop held at the University of Western Ontario, London, Ont., 1975. Edited by C. A. Hooker, J. J. Leach and E. F. McClenen. *University of Western Ontario Series in Philosophy of Science*, 13. D. Reidel Publishing Co., Dordrecht-Boston, Mass., 1978. xiii + 446 pp. ISBN 90-277-0842-8 (Editors) **81a:90002a** 90A05
- ★Foundations and applications of decision theory. Vol. II. Epistemic and social applications. Papers from an International Workshop held at the University of Western Ontario, London, Ont., 1975. Edited by C. A. Hooker, J. J. Leach and E. F. McClenen. *University of Western Ontario Series in Philosophy of Science*, 13. D. Reidel Publishing Co., Dordrecht-Boston, Mass., 1978. xiii + 208 pp. ISBN 90-277-0844-4 (Editors) **81a:90002b** 90A05
- Foundations of mathematics** ★Foundations of mathematics. (Japanese) Proceedings of a Symposium held at the Research Institute for Mathematical Sciences, Kyoto University, Kyoto, May 30-June 2, 1979. *Sirikaikisenkyūsho Kōkyūroku* No. 362 (1979). *Kyoto University, Research Institute for Mathematical Sciences, Kyoto*, 1979. pp. i-ii and 1-185. (Editors) **81m:03003** 03-06
- Foundations of radiation theory and quantum electrodynamics** ★Foundations of radiation theory and quantum electrodynamics. Edited by Asim Orhan Barut. *Plenum Press, New York-London*, 1980. x + 220 pp. ISBN 0-306-40277-7 (K. Wódkiewicz) **81i:81002** 81-02 (81L05)
- Fourier analysis** ★Fourier analysis. Proceedings of a Seminar held at El Escorial, June 17-23, 1979. Edited by Miguel de Guzmán and Irene Peral. *Asociación Matemática Española* [Spanish Mathematical Association], 1. *Asociación Matemática Española, Madrid*, 1980. iii + 200 pp. ISBN 84-300-2172-8 (Editors) **81f:42001** 42-06
- Free vortices** ★Высвращение движения жидкости. Устойчивость и отрыв пограничного слоя; свободные и вихревые вихри. (Russian) [Vortex motions in a fluid. Stability and separation of a boundary layer; free and quantum vortices] Translation from the English edited by V. N. Nikolaevskii and G. Ju. Stepanov. Механика: Новое в Зарубежной Науке [Mechanics: Recent Publications in Foreign Science], 21. "Mir", Moscow, 1979. 327 pp. (Editors) **81c:76018** 76C05 (76-06, 81-06)
- FTCS** ★FTCS-8. The Eighth Annual International Conference on Fault-Tolerant Computing held in Toulouse, June 21-23, 1978. Digest of papers. *IEEE Computer Society, New York*, 1978. xvii + 226 pp. (Editors) **81b:94002** 94-06 (68-06)
- ★FTCS-9. The Ninth Annual International Symposium on Fault-Tolerant Computing held at Madison, Wis., June 20-22, 1979. Digest of papers. *IEEE Computer Society, New York*, 1979. xi + 235 pp. (Editors) **81m:94001** 94-06
- ★FTCS-10. The 10th International Symposium on Fault-Tolerant Computing held in Kyoto, October 1-3, 1980. Digest of papers. *IEEE Computer Society, New York*, 1980. xix + 381 pp. (Editors) **81m:94002** 94-06
- Function spaces** ★Nonlinear analysis, function spaces and applications. Proceedings of a Spring School held in Horni Bradlo, May 21-26, 1978. Edited by Svatopluk Fučík and Alois Kufner. Teubner-Texte zur Mathematik. [Teubner Texts in Mathematics] *BSB B. G. Teubner Verlagsgesellschaft, Leipzig*, 1979. 224 pp. (Editors) **81c:46001** 46-06
- Function theory** ★Аналитическая теория чисел и теория функций 2. (Russian) [Analytic number theory and the theory of functions. 2] Edited by A. B. Venkov and L. A. Tahtadžian. Zap. Nauch. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI) 91 (1979). "Nauka" Leningrad. Otdel., Leningrad, 1979. pp. 1-184. (Editors) **81a:10003** 10-06
- ★Исследования по линейным операторам и теории функций. IX. (Russian) [Investigations on linear operators and the theory of functions. IX] Edited by N. K. Nikol'skii. Zap. Nauch. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI) 92 (1979). "Nauka" Leningrad. Otdel., Leningrad, 1979. pp. 1-328. (Editors) **81c:30001** 30-06
- ★Метрические вопросы теории функций. (Russian) [Metric questions of the theory of functions] Edited by G. D. Suvorov. "Naukova Dumka", Kiev, 1980. 164 pp. (Editors) **81j:30002** 30-06
- ★Аналитическая теория чисел и теория функций. 3. (Russian) [Analytic number theory and the theory of functions. 3] Edited by G. V. Kuz'mina and O. M. Fomenko. Zap. Nauch. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI) 100 (1980). "Nauka" Leningrad. Otdel., Leningrad, 1980. pp. 1-179. (Editors) **81m:10003** 10-06 (30-06)
- Functional analysis** ★Теория кубатурных формул и приложения функционального анализа к задачам математической физики. (Russian) [Theory of cubature formulas

and the application of functional analysis to problems of mathematical physics] Edited by S. V. Uspenskii. Труды Семинара С. Л. Соболева, No. 1 [Proceedings of the S. L. Sobolev Seminar, No. 1], 1976. *Akad. Nauk SSSR Sibirsk. Otdel., Inst. Mat., Novosibirsk*, 1976. 168 pp. (Editors) **81a:65009** 65-06

★Теория кубатурных формул и приложения функционального анализа к задачам математической физики. (Russian) [Theory of cubature formulas and the application of functional analysis to problems of mathematical physics] Edited by S. V. Uspenskii. Труды Семинара С. Л. Соболева, No. 1 [Proceedings of the S. L. Sobolev Seminar, No. 1], 1978. *Akad. Nauk SSSR Sibirsk. Otdel., Inst. Mat., Novosibirsk*, 1978. 168 pp. (one plate). (Editors) **81a:65010** 65-06

★Материалы Конференции "Методы Алгебры и Функционального Анализа при Исследовании Семейств Операторов". (Russian) [Proceedings of a Conference on the Methods of Algebra and Functional Analysis in the Study of Families of Operators] Held in Tartu, November 24-26, 1978. Dedicated to G. Kangro on the occasion of the sixty-fifth anniversary of his birth. *Tartu. Gos. Univ., Tartu*, 1978. 116 pp. (Editors) **81m:47001** 47-06 (00A10, 01A70, 40-06)

★A survey on the theoretical and numerical trends in nonlinear analysis. I. Proceedings of the Third Seminar on Functional Analysis and its Applications (S.A.F.A. III) held in Bari, September 27-October 5, 1978. Confer. Sem. Mat. Univ. Bari No. 158-162 (1979). *Editori Laterza, Bari*, 1979. pp. i-iv and 1-180. (Editors) **81b:00007** 00A10

★Функциональный анализ. Вып. 13. (Russian) [Functional analysis. No. 13] Edited by A. V. Strauss. Теория операторов. [Operator theory] *U'janovsk. Gos. Ped. Inst., U'janovsk*, 1979. 176 pp. (Editors) **81e:47002** 47-06 (46-06)

★Operator theory and functional analysis. Papers presented at the 1978 Summer Meeting of the American Mathematical Society held in Providence, R.I. Edited by I. Erdélyi. *Research Notes in Mathematics, 38. Pitman (Advanced Publishing Program), San Francisco, Calif.-London*, 1979. iv + 164 pp. ISBN 0-8224-8450-1 (Editors) **81e:47003** 47-06 (46-06)

★Теория кубатурных формул и приложения функционального анализа к задачам математической физики. (Russian) [Theory of cubature formulas and the application of functional analysis to problems of mathematical physics] Edited by S. V. Uspenskii. Труды Семинара С. Л. Соболева, No. 1 [Proceedings of the S. L. Sobolev Seminar, No. 1], 1979. *Akad. Nauk SSSR Sibirsk. Otdel., Inst. Mat., Novosibirsk*, 1979. 156 pp. (Editors) **81f:35006** 35-06 (65-06)

★Применение методов функционального анализа к задачам математической физики и вычислительной математики. (Russian) [Application of the methods of functional analysis to problems of mathematical physics and numerical analysis] Papers of a School-Seminar on the Application of the Methods of Functional Analysis, 1978. Edited by V. N. Vragov. *Akad. Nauk SSSR Sibirsk. Otdel., Inst. Mat., Novosibirsk*, 1979. 165 pp. (Editors) **81j:35001** 35-06

★Конструктивная теория функций и функциональный анализ. Вып. 2. (Russian) [Constructive theory of functions and functional analysis. No. 2] Edited by A. N. Šerstnev. *Kazan. Gos. Univ., Kazan*, 1979. 124 pp. (Editors) **81j:46002** 46-06 (00A10, 41-06, 45-06, 65-06)

★Применение функционального анализа в теории приближений. (Russian) [Application of functional analysis in approximation theory] Edited by V. N. Nikol'skii. *Kalinin. Gos. Univ., Kalinin*, 1979. 164 pp. (Editors) **81k:41001** 41-06

★A survey on the theoretical and numerical trends in nonlinear analysis. II. Proceedings of the Third Seminar on Functional Analysis and its Applications (S.A.F.A. III) held in Bari, September 27-October 5, 1978. Confer. Sem. Mat. Univ. Bari No. 163-168 (1979) (1980). *Editori Laterza, Bari*, 1980. pp. 181-398. (Editors) **81b:47055** 47Hxx (65-06)

★Special topics of applied mathematics. Functional analysis, numerical analysis and optimization. Proceedings of the Seminar held at the Gesellschaft für Mathematik und Datenverarbeitung (GMD), Bonn, October 8-10, 1979. Edited by Jens Frehse, Diethard Pallaschke and Ulrich Trottenberg. *North-Holland Publishing Co., Amsterdam-New York*, 1980. viii + 248 pp. ISBN 0-444-86035-5 (Editors) **81j:46003** 46-06 (00A10, 49-06, 65-06)

★Studies in functional analysis. Edited by R. G. Bartle. *MAA Studies in Mathematics, 21. Mathematical Association of America, Washington, D.C.*, 1980. xi + 227 pp. ISBN 0-88385-121-0 (Editors) **81j:46004** 46-06 (47-06)

★Функциональный анализ. Вып. 14. (Russian) [Functional analysis. No. 14] Спектральная теория. [Spectral theory] Edited by A. V. Strauss. *U'janovsk. Gos. Ped. Inst., U'janovsk*, 1980. 200 pp. (Editors) **81j:47002** 47-06 (46-06)

★Применение функционального анализа в теории приближений. (Russian) [Application of functional analysis to approximation theory] Edited by V. N. Nikol'skii. *Kalinin. Gos. Univ., Kalinin*, 1980. 162 pp. (Editors) **81m:46001** 46-06

★Séminaire d'Analyse Fonctionnelle, 1979-1980. (French) [Seminar on Functional Analysis, 1979-1980] *École Polytechnique, Centre de Mathématiques, Palaiseau*, 1980. 309 pp. (not consecutively pagged). (Editors) **81m:46003** 46-06

★Functional analysis: surveys and recent results ★Functional analysis: surveys and recent results. II. Proceedings of the Second Conference on Functional Analysis held at the University of Paderborn, Paderborn, January 31-February 4, 1979. Edited by Klaus-Dieter Bierstedt and Benno Fuchssteiner. *North-Holland Mathematics Studies, 38. Notas de Matemática [Mathematical Notes], 68. North-Holland Publishing Co., Amsterdam-New York*, 1980. xii + 342 pp. ISBN 0-444-85403-7 (Editors) **81a:46004** 46-06

★Functional differential equations ★Приближенные и качественные методы теории дифференциальных и дифференциально-функциональных уравнений. (Russian) [Approximate and qualitative methods in the theory of differential and functional-differential equations] Edited by A. N. Šarkovskii. *Akad. Nauk Ukrain. SSR, Inst. Mat., Kiev*, 1979. 112 pp. (Editors) **81b:34001** 34-06 (65-06)

★Functional differential equations and bifurcation ★Functional differential equations and bifurcation. Proceedings of a Conference held at the Instituto de Ciências Matemáticas de São Carlos, Universidade de São Paulo, São Carlos, July 2-7, 1979. Edited by Antonio Fernandes Izé. *Lecture Notes in Mathematics, 799. Springer-Verlag, Berlin-New York*, 1980. xii + 409 pp. ISBN 3-540-09966-7 (Editors) **81j:34004** 34-06 (45-06)

★Functional differential systems and related topics ★Functional differential systems and

related topics. Proceedings of the First International Conference held at Białystok, May 19-26, 1979. Edited by M. Kisielewicz. *Higher College of Engineering, Institute of Mathematics and Physics, Zielona Góra*, 1980. 340 pp. (Editors) **81j:34005** 34-06

★Functions ★Крайние задачи математической физики и смежные вопросы теории функций. 12. (Russian) [Boundary value problems of mathematical physics and related questions in the theory of functions. 12] Edited by O. A. Ladyženskaja. *Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 96 (1980), "Nauka" Leningrad. Otdel., Leningrad, 1980. pp. 1-312. (Editors) **81f:35002** 35-06

★Spectral theory of functions and operators. A translation of Trudy Mat. Inst. Steklov. 130 (1978). Edited by S. M. Nikol'skii. *Proc. Steklov Inst. Math.* 1979, no. 4. *American Mathematical Society, Providence, R.I.*, 1980. pp. i-v and 1-233. (Editors) **81j:00010** 00A10 (46-06, 47-06)

★Functions of sets ★Функции множества. (Russian) [Functions of sets] *Komi Gos. Ped. Inst., Syktyvkar*, 1977. 73 pp. (Editors) **81a:28001** 28-06

★Functions of several complex variables ★Fonctions de plusieurs variables complexes. IV. (French) [Functions of several complex variables. IV] Séminaire François Norguet, October 1977-June 1979. Edited by François Norguet. *Lecture Notes in Mathematics, 807. Springer-Verlag, Berlin-New York*, 1980. ix + 198 pp. ISBN 3-540-10015-6 (Editors) **81j:32002** 32-06

★Fundamentals of numerical computation (computer-oriented numerical analysis)

★Fundamentals of numerical computation (computer-oriented numerical analysis). Proceedings of a Conference held at the Technical University of Berlin, Berlin, June 5-8, 1979. Edited by Götz Alefeld and Rolf Dieter Grigorieff. *Computing Supplementum, 2. Springer-Verlag, Vienna*, 1980. ii + 229 pp. ISBN 3-211-81566-X (Editors) **81j:65005** 65-06

★Fuzzy set theory ★Proceedings of the International Seminar on Fuzzy Set Theory. Held at the Institut für Mathematik, Johannes Kepler Universität, Linz, September 24-29, 1979. Edited by Erich Peter Klement. *Johannes Kepler Universität, Linz*, 1980. i + 146 pp. (Siegfried Gottwald) **81m:03067** 03E72 (03-06, 28A99, 54A40, 60E99, 94D05)

★Fuzzy sets ★Fuzzy sets. Theory and applications to policy analysis and information systems. Proceedings of the Symposium on Policy Analysis and Information Systems held at Duke University, Durham, N.C., June 28-30, 1980. Edited by Paul P. Wang and S. K. Chang. *Plenum Press, New York-London*, 1980. ix + 413 pp. ISBN 0-306-40557-1 (Editors) **81b:03105** 03E72 (03-06, 90A05, 94D05)

★Game theory ★Applied game theory. Proceedings of a Conference at the Institute for Advanced Studies, Vienna, June 13-16, 1978. Edited by S. J. Brame, A. Schotter and G. Schwödiauer. *IHS—Studies, 1. Physica Verlag, Würzburg*, 1979. 447 pp. ISBN 3-7908-0208-5 (Editors) **81c:90001** 90-06 (90Dxx)

★Существование решений, устойчивость и информированность в теории игр. (Russian) [Existence of solutions, stability and informedness in game theory] Edited by V. N. Lagunov. *Kalinin. Gos. Univ., Kalinin*, 1979. 114 pp. (Editors) **81j:90149** 90D25

★Games ★Дифференциальные, бескоалиционные, кооперативные и статистические игры. (Russian) [Differential, noncooperative, cooperative and statistical games] Edited by V. O. Aikhenazy. *Kalinin. Gos. Univ., Kalinin*, 1979. 106 pp. (Editors) **81m:90110** 90Dxx (90-06)

★Gargano ★Numerical techniques for stochastic systems. Papers based on lectures presented at the Conference held at Gargano, September 1979. Edited by Francesco Archetti and Marco Cugiani. *North-Holland Publishing Co., Amsterdam-New York*, 1980. viii + 406 pp. ISBN 0-444-86000-2 (Editors) **81f:93067** 93E03 (93-06)

★Gas dynamics ★Прямое численное моделирование течений газа. (Russian) [Direct numerical simulation of gas flows] Edited by O. M. Belocerkovskii. Численный эксперимент в газовой динамике. [Numerical experiment in gas dynamics] *Akad. Nauk SSSR, Vyčisl. Centr, Moscow*, 1978. 176 pp. (Jaroslav Jelen) **81j:76004** 76N15 (65P05, 76P05, 76Z05)

★Численные методы в динамике разреженных газов. Вып. 4. (Russian) [Numerical methods in the dynamics of rarefied gases. No. 4] Edited by O. S. Rylov. *Akad. Nauk SSSR, Vyčisl. Centr, Moscow*, 1979. 135 pp. (Editors) **81j:7602a** 76P05 (65L05)

★Gauge theory ★Facts and prospects of gauge theories. Proceedings of the XVII. Internationale Universitätswochen für Kernphysik held at Schlading, February 21-March 3, 1978. Edited by Paul Urban. *Acta Physica Austriaca Supplement, XIX. Springer-Verlag, Vienna*, 1978. v + 889 pp. ISBN 3-211-81514-7 (Editors) **81b:81001** 81-06 (81E10)

★Geometrical and topological methods in gauge theories. Proceedings of the Canadian Mathematical Society Summer Research Institute held at McGill University, Montreal, Que., September 3-8, 1979. Edited by John Harnad and Steven Shnider. *Lecture Notes in Physics, 129. Springer-Verlag, Berlin-New York*, 1980. viii + 155 pp. ISBN 3-540-10010-5 (Editors) **81e:81005** 81-06 (53-06, 58-06, 81E10, 83C99)

★General equilibrium, growth, and trade ★General equilibrium, growth, and trade. Essays in honor of Lionel McKenzie. Edited by Jerry R. Green and José Alexandre Scheinkman. *Economic Theory, Econometrics, and Mathematical Economics. Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], New York-London*, 1979. xv + 401 pp. ISBN 0-12-298750-0 (Editors) **81m:90004** 90Axx

★General mechanics ★Общая механика. Том 4. (Russian) [General mechanics. Vol. 4] Edited by L. I. Sedov and G. K. Mikhailov. Итоги Наук и Техники. [Progress in Science and Technology] *Akad. Nauk SSSR, Vsesojuz. Inst. Nauch. i Tehn. Informacii, Moscow*, 1979. 143 pp. (Editors) **81k:70001** 70-06

★General relativity ★General relativity. An Einstein centenary survey. Edited by S. W. Hawking and W. Israel. *Cambridge University Press, Cambridge-New York*, 1979. xviii + 919 pp. ISBN 0-521-22285-0 (Michael P. Ryan, Jr.) **81i:83002** 83-06 (53Cxx, 58Fxx, 83Cxx)

★General relativity and gravitation ★General relativity and gravitation. Vol. 1. One hundred years after the birth of Albert Einstein. Edited by Alan Held. *Plenum Press, New York-London*, 1980. xix + 598 pp. (1 plate). ISBN 0-306-40265-3 (Editors) **81b:83003** 83-06 (01A70, 53-06)

★Genetic regulation ★Kinetic logic: a Boolean approach to the analysis of complex regulatory systems. Proceedings of the EMBO Course "Formal Analysis of Genetic Regulation" held in Brussels, September 6-16, 1977. Edited by René Thomas. *Lecture Notes in Biomathematics, 29. Springer-Verlag, Berlin-New York*, 1979. xiii + 507 pp.

- ISBN 3-540-09556-X (Editors) 81k:92046 92A09 (93A20, 94C10)
- Geneva** ★Dynamical critical phenomena and related topics. Proceedings of the International Conference held at the University of Geneva, Geneva, April 2-6, 1979. Edited by Charles P. Enz. Lecture Notes in Physics, 104. Springer-Verlag, Berlin-New York, 1979. xii + 390 pp. ISBN 3-540-09523-3 (Editors) 81k:82002 82-06 (82A25)
- Geodesics** ★Minimal submanifolds and geodesics. Proceedings of the Japan-United States Seminar held in Tokyo, September 19-22, 1977. Edited by Morio Obata. North-Holland Publishing Co., Amsterdam-New York, 1979. x + 292 pp. (1 plate). ISBN 0-444-85327-8 (Editors) 81d:53002 53-06
- Geomechanics** ★Numerical methods in geomechanics. Aachen 1979. Vol. IV. Additional contributions. Proceedings of the Third International Conference held in Aachen, April 2-6, 1979. Edited by W. Wittke. A. A. Balkema, Rotterdam, 1980. i-vi and 1255-1550 pp. ISBN 90-6191-044-7 (Editors) 81m:73009 73-06
- Geometric methods in problems of analysis and algebra** ★Геометрические методы в задачах анализа и алгебры. (Russian) [Geometric methods in problems of analysis and algebra] Edited by A. V. Černavskii. Yaroslavl Gos. Univ., Yaroslavl, 1978. 184 pp. (Editors) 81d:53001 53-06 (57-06, 58-06)
- Geometric programming** ★Advances in geometric programming. Edited by Mordecai Avriel. Mathematical Concepts and Methods in Science and Engineering, 21. Plenum Press, New York-London, 1980. x + 460 pp. ISBN 0-306-40381-1 (Editors) 81f:90096 90C30
- Geometric spaces** ★Теория нерегулярных кривых в различных геометрических пространствах. (Russian) [The theory of nonregular curves in various geometric spaces] Edited by M. A. Taiclin. Kazakh Gos. Univ., Alma-Ata, 1979. 136 pp. (Editors) 81c:00007 00A10 (03-06)
- Geometrical approaches to differential equations** ★Geometrical approaches to differential equations. Proceedings of the Fourth Scheveningen Conference on Differential Equations held at Scheveningen, August 26-31, 1979. Edited by Rodolfo Martini. Lecture Notes in Mathematics, 810. Springer-Verlag, Berlin-New York, 1980. vii + 339 pp. ISBN 3-540-10018-0 (Editors) 81k:35002 35-06 (58-06)
- Geometrical and topological methods in gauge theories** ★Geometrical and topological methods in gauge theories. Proceedings of the Canadian Mathematical Society Summer Research Institute held at McGill University, Montreal, Que., September 3-8, 1979. Edited by John Harnad and Steven Shnider. Lecture Notes in Physics, 129. Springer-Verlag, Berlin-New York, 1980. viii + 155 pp. ISBN 3-540-10010-5 (Editors) 81e:81005 81-06 (53-06, 58-06, 81E10, 83C99)
- Geometrography** ★Геометрография. Вып. 2. (Russian) [Geometrography. No. 2] Edited by L. N. Lihachev. Rīzsk. Politehn. Inst., Riga, 1977. 160 pp. (Editors) 81a:51001 51-06
- Geometry** ★Proceedings of the International Symposium on Algebraic Geometry. A Taniguchi Symposium. Held at Kyoto University, Kyoto, January 10-14, 1977. Edited by Masayoshi Nagata. Kinokuniya Book Store Co., Ltd., Tokyo, 1978. xiv + 737 pp. (Editors) 81e:14002 14-06
- ★Topological structures. II. Part 1. Proceedings of a Symposium on Topology and Geometry held in Amsterdam, October 31-November 2, 1978. Edited by P. C. Baayen and J. van Mill. Mathematical Centre Tracts, 115. Mathematisch Centrum, Amsterdam, 1979. x + 189 pp. ISBN 90-6196-185-8 (Editors) 81a:54001a 54-06 (55-06, 57-06)
- ★Topological structures. II. Part 2. Proceedings of a Symposium on Topology and Geometry held in Amsterdam, October 31-November 2, 1978. Edited by P. C. Baayen and J. van Mill. Mathematical Centre Tracts, 116. Mathematisch Centrum, Amsterdam, 1979. pp. i-vii and 191-393. ISBN 90-6196-186-6 (Editors) 81a:54001b 54-06 (55-06, 57-06)
- ★Beiträge zur Algebra und Geometrie. 8. (German) [Contributions to Algebra and Geometry. 8] Edited by Ott-Heinrich Keller, Otto Krötenheerd, Elégius Tamás Schmidt and Ludwig Stammer. Wiss. Beitr. Martin-Luther-Univ. Halle-Wittenberg M 12 (1979). VEB Deutscher Verlag der Wissenschaften, Berlin, 1979. pp. 1-151. (Editors) 81b:00005 00A10
- ★Contributions to geometry. Proceedings of the Geometry Symposium held in Siegen, June 28-July 1, 1978. Edited by Jürgen Tölke and Jörg M. Wills. Birkhäuser Verlag, Basel-Boston, Mass., 1979. 406 pp. ISBN 3-7643-1048-0 (Editors) 81b:52002 52-06 (53-06)
- ★Вопросы глобальной геометрии. (Russian) [Questions of global geometry] Edited by A. L. Verner. Leningrad Gos. Ped. Inst., Leningrad, 1979. 80 pp. (Editors) 81b:53003 53-06
- ★Алгебра. Топология. Геометрия. Том 17. (Russian) [Algebra. Topology. Geometry. Vol. 17] Edited by R. V. Gamkrelidze. Итоги Науки и Техники. [Progress in Science and Technology] Akad. Nauk SSSR, Vsesojuz. Inst. Nauch. i Tehn. Informacii, Moscow, 1979. 308 pp. (loose errata). (Editors) 81b:20001 20-06 (54F45)
- ★Проблемы геометрии. Том 11. (Russian) [Problems in geometry. Vol. 11] Edited by A. I. Mikhailov. Итоги Науки и Техники. [Progress in Science and Technology] Akad. Nauk SSSR, Vsesojuz. Inst. Nauch. i Tehn. Informacii, Moscow, 1980. 243 pp. (loose errata). (Editors) 81e:53003 53-06 (58-06)
- ★Сборник работ по геометрии. II. (Russian) [Collection of articles on geometry. II] Алгебраические и геометрические свойства многообразий. [Algebraic and geometric properties of manifolds] Dedicated to A. I. Čhatururi on the occasion of his seventieth birthday. Edited by G. S. Gogoi. Trudy Tbiliss. Mat. Inst. Razmadze Akad. Nauk Gruzii. SSR 64 (1980). "Mecniereba", Tbilisi, 1980. pp. 1-134. (Editors) 81g:53001 53-06
- Geometry and analysis** ★Geometry and analysis. Papers dedicated to the memory of V. K. Patodi. Indian Academy of Sciences, Bangalore; Tata Institute of Fundamental Research, Bombay, 1980. iv + 166 pp. (1 plate). (Editors) 81f:80005 58-06
- Geometry and differential geometry** ★Geometry and differential geometry. Proceedings of a Conference held at the University of Haifa, Haifa, March 18-23, 1979. Edited by R. Artzy and I. Vaisman. Lecture Notes in Mathematics, 792. Springer-Verlag, Berlin-New York, 1980. vi + 443 pp. ISBN 3-540-09976-X (Editors) 81f:53003 53-06
- Geometry of imbedded manifolds** ★Геометрия погруженных многообразий. (Russian) [Geometry of imbedded manifolds] Edited by V. T. Bazylev. Moskov. Gos. Ped. Inst., Moscow, 1978. 123 pp. (Editors) 81e:53002 53-06
- Geometry of the Laplace operator** ★Geometry of the Laplace operator. Proceedings of the Symposium in Pure Mathematics of the American Mathematical Society held at the University of Hawaii, Honolulu, Hawaii, March 27-30, 1979. Edited by Robert Osserman and Alan Weinstein. Proceedings of Symposia in Pure Mathematics, XXXVI. American Mathematical Society, Providence, R.I., 1980. vii + 323 pp. ISBN 0-8218-1439-7 (Editors) 81c:58002 58-06 (58G25)
- Gibbs states in statistical physics** ★Гиббсовские состояния в статистической физике. (Russian) [Gibbs states in statistical physics] Translation from the English edited by R. A. Minlos. Математика: Новое в Зарубежной Науке [Mathematics: Recent Publications in Foreign Science], 11. "Mir", Moscow, 1978. 256 pp. (Editors) 81f:82003 82-06
- Global analysis** ★Global analysis. Proceedings of the Biennial Seminar of the Canadian Mathematical Congress held at the University of Calgary, Calgary, Alta., June 12-27, 1978. Edited by M. Gromoll and J. E. Marsden. Lecture Notes in Mathematics, 753. Springer-Verlag, Berlin-New York, 1979. vii + 377 pp. ISBN 3-540-09703-1 (Editors) 81a:58001 58-06
- Global and large scale system models** ★Global and large scale system models. Proceedings of the Center for Advanced Studies (CAS) International Summer Seminar held in Dubrovnik, August 21-26, 1978. Edited by Branislav Lazarević. Lecture Notes in Control and Information Sciences, 19. Springer-Verlag, Berlin-New York, 1979. viii + 232 pp. ISBN 3-540-09637-X (Editors) 81a:93009 93A15 (93-06)
- Global theory of dynamical systems** ★Global theory of dynamical systems. Proceedings of the International Conference held at Northwestern University, Evanston, Ill., June 18-22, 1979. Edited by Zbigniew Nitecki and Clark Robinson. Lecture Notes in Mathematics, 819. Springer-Verlag, Berlin-New York, 1980. ix + 499 pp. ISBN 3-540-10236-1 (Editors) 81j:58002 58-06
- Graph-grammars and their application to computer science and biology** ★Graph-grammars and their application to computer science and biology. Papers presented at an International Workshop held in Bad Honnef, October 30-November 3, 1978. Edited by Volker Claus, Hartmut Ehrig and Grzegorz Rozenberg. Lecture Notes in Computer Science, 73. Springer-Verlag, Berlin-New York, 1979. vii + 477 pp. ISBN 3-540-09525-X (Editors) 81a:68005 68-06 (92A05)
- Graph theory** ★Beiträge zur Graphentheorie und deren Anwendungen. (German) [Contributions to graph theory and its applications] International Colloquium held in Oberhof, April 10-16, 1977. Technische Hochschule Ilmenau, Ilmenau, 1977. 320 pp. (Editors) 81k:05040 05Cxx (05-06)
- ★Selected topics in graph theory. Edited by Lowell W. Beineke and Robin J. Wilson. Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], London-New York, 1978. xii + 451 pp. ISBN 0-12-086250-6 (Jerald A. Kappel) 81e:05059 05Cxx (05-02)
- ★Proceedings of the Tenth Southeastern Conference on Combinatorics, Graph Theory and Computing. Vols. I, II. Held at the Florida Atlantic University, Boca Raton, Fla., April 2-6, 1979. Edited by Frederick Hoffman, David McCarthy, Ronald C. Mullin and Ralph G. Stanton. Congressus Numerantium, XXIII-XXIV. Utilitas Mathematica Publishing, Inc., Winnipeg, Man., 1979. Vol. I: xii + 467 pp.; Vol. II: pp. xiii-xx and 469-939. ISBN 0-919628-23-0, 0-919628-24-9 (Editors) 81b:05004 05-06
- ★Applications of graph theory. Edited by Robin J. Wilson and Lowell W. Beineke. Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], London-New York, 1979. xii + 423 pp. ISBN 0-12-757840-4 (F. Harary) 81h:05050 05Cxx (00A69, 05-02)
- ★Proceedings of the West Coast Conference on Combinatorics, Graph Theory and Computing. Held at Humboldt State University, Arcata, Calif., September 5-7, 1979. Edited by Phyllis Z. Chinn and D. McCarthy. Congressus Numerantium, XXVI. Utilitas Mathematica Publishing, Inc., Winnipeg, Man., 1980. vi + 322 pp. ISBN 0-919628-26-5 (Editors) 81i:05006 05-06 (68-06)
- Graph theory and combinatorics** ★Graph theory and combinatorics. Proceedings of the Conference held at the Open University, Milton Keynes, May 12, 1978. Edited by Robin J. Wilson. Research Notes in Mathematics, 34. Pitman (Advanced Publishing Program), San Francisco, Calif.-London, 1979. ii + 148 pp. ISBN 0-273-08435-6 (Editors) 81h:05004 05-06
- Gravitation** ★Quantum theory and gravitation. Proceedings of a Symposium held at Loyola University, New Orleans, La., May 23-26, 1979. Edited by A. R. Marlow. Academic Press [Harcourt Brace Jovanovich, Publishers], New York-London-Toronto, Ont., 1980. x + 267 pp. ISBN 0-12-473260-7 (Editors) 81d:83003 83-06 (81-06, 83C45)
- Gravitational radiation** ★Sources of gravitational radiation. Proceedings of the Workshop held at the Battelle Seattle Research Center, Seattle, Wash., July 24-August 4, 1978. Edited by Larry L. Smarr. Cambridge University Press, Cambridge-New York, 1979. xiii + 505 pp. ISBN 0-521-22778-X (Editors) 81j:83017 83C35 (83B05, 85A40)
- Gravitational radiation, collapsed objects and exact solutions** ★Gravitational radiation, collapsed objects and exact solutions. Proceedings of the Einstein Centenary Summer School held in Perth, January 1979. Edited by Cyril Edwards. Lecture Notes in Physics, 124. Springer-Verlag, Berlin-New York, 1980. vi + 487 pp. ISBN 3-540-09992-1 (Editors) 81i:83003 83-06 (83C35)
- Graz** ★Automata, languages and programming. Sixth Colloquium (ICALP 79) held in Graz, July 16-20, 1979. Edited by Hermann A. Maurer. Lecture Notes in Computer Science, 71. Springer-Verlag, Berlin-New York, 1979. ix + 684 pp. ISBN 3-540-09510-1 (Editors) 81c:68002 68-06
- ★11. Steiermärkisches Mathematisches Symposium. (German) [Eleventh Styrian Mathematical Symposium] Held in Graz, October 1-4, 1979. Ber. Math.-Statist. Sekt. Forsch. Graz No. 124-132 (1979). Forschungszentrum Graz, Mathematisch-Statistische Sektion, Graz, 1979. 218 pp. (not consecutively pagged). (Editors) 81j:00011 00A10
- Group actions on manifolds and equivariant homotopy** ★Group actions on manifolds and equivariant homotopy. (Japanese) Proceedings of a Symposium held at the Research Institute for Mathematical Sciences, Kyoto University, Kyoto, June 5-7, 1979. Sūrikaiseikenkyūsho Kōkyūroku No. 365 (1979). Kyoto University, Research Institute for Mathematical Sciences, Kyoto, 1979. pp. i-ii and 1-104. (Editors) 81m:57001 57-06

Group pursuit problem in linear differential n -person games ★Задача группового преследования в линейных дифференциальных играх многих лиц. (Russian) [The group pursuit problem in linear differential n -person games] Edited by I. S. Rapoport. Akad. Nauk Ukrain. SSR Inst. Kibernet. Preprint No. 47 (1979). Akad. Nauk Ukrain. SSR, Inst. Kibernet., Kiev, 1979. pp. 1-47. (Editors) 81a:90003 90D26 (90D25)

Group representations and harmonic analysis ★Group representations and harmonic analysis. (Japanese) Proceedings of a Symposium held at the Research Institute for Mathematical Sciences, Kyoto University, Kyoto, August 27-30, 1979. Sūrikaiseikikenkyūsho Kōkyūroku No. 368 (1979). Kyoto University, Research Institute for Mathematical Sciences, Kyoto, 1979. pp. i-iii and 1-240. (Editors) 81m:22002 22-06 (43-06)

Group theory ★Коупровская тетрадь (нерешенные вопросы теории групп). (Russian) [Kourkovskaya tetrad' (nereshennyye voprosy teorii grup)] Edited by V. D. Mazurov, Ju. I. Merzjakov and V. A. Curkin. Sixth augmented edition. Akad. Nauk SSSR Sibsk. Otdel., Inst. Mat., Novosibirsk, 1978. 99 pp. (Ju. I. Merzjakov) 81d:20001 20-XX

★Recent advances in group theory and their application to spectroscopy. Proceedings of the NATO Advanced Study Institute held at St. Francis Xavier University, Antigonish, N.S., August 6-20, 1978. Edited by John C. Donini. NATO Advanced Study Institute Series, Ser. B: Physics, 43. Plenum Press, New York-London, 1979. xii + 692 pp. ISBN 0-306-40172-X (Editors) 81a:81006 81-06 (81C40, 81G40, 81G50)

Groupoids ★Algebraische Modelle, Kategorien und Gruppoide. (German) [Algebraic models, categories and groupoids] Edited by Hans-J. Hoehnke. Studien zur Algebra und ihre Anwendungen [Studies in Algebra and its Applications]. 7. Akademie-Verlag, Berlin, 1979. vi + 178 pp. (Editors) 81b:18001 18-06 (20-06, 68-06)

★Современная алгебра. (Russian) [Modern algebra] Группоиды и их гомоморфизмы. [Groupoids and their homomorphisms] Edited by E. S. Ljapin. Leningrad. Gos. Ped. Inst., Leningrad, 1980. 160 pp. (Editors) 81e:20001 20-06

Groups ★Representations of locally compact groups with applications. Part I, II. Colloquium held at the Mathematical Centre, Amsterdam, academic year 1977/78. Edited by T. H. Koornwinder. MC Syllabus, 38. Mathematisch Centrum, Amsterdam, 1979. iv + 496 pp. ISBN 90-6196-161-0, 90-6196-181-5 (A. U. Klimyk) 81k:22001 22-02 (20Cxx, 22D10, 22E70, 43A05, 81C40)

★Combinatorics, representation theory and statistical methods in groups. Young Day Proceedings. Edited by T. V. Narayana, R. M. Mathsen and J. G. Williams. Lecture Notes in Pure and Applied Mathematics, 57. Marcel Dekker, Inc., New York, 1980. xii + 170 pp. ISBN 0-8247-6937-6 (Editors) 81h:05003 05-06 (01A70, 20-06)

Groups defined by properties of a system of subgroups ★Группы, определяемые свойствами системы подгрупп. (Russian) [Groups defined by properties of a system of subgroups] Edited by S. N. Černikov [S. M. Černikov]. Akad. Nauk Ukrain. SSR, Inst. Mat., Kiev, 1979. 156 pp. (Editors) 81d:20003 20-06

Guensey ★Analysing time series. Proceedings of the International Conference (ITSM) held in Guernsey, October 22-26, 1979. Edited by Oliver D. Anderson. North-Holland Publishing Co., Amsterdam-New York, 1980. vi + 419 pp. ISBN 0-444-85464-9 (Editors) 81i:62002 62-06

Gull Lake, Mich. ★Nuclear spectroscopy. Lecture notes from the Workshop held at Gull Lake, Mich., August 27-September 7, 1979. Edited by G. F. Bertsch and D. Kurath. Lecture Notes in Physics, 119. Springer-Verlag, Berlin-New York, 1980. vii + 250 pp. ISBN 3-540-09970-0 (Editors) 81j:81070 81G35

Hadron structure and lepton-hadron interactions ★Hadron structure and lepton-hadron interactions. Proceedings of the Cargèse Summer Institute held in Cargèse, July, 1977. Edited by Maurice Lévy, Jean-Louis Basdevant, David Speiser, Jacques Weyers, Raymond Gastmans and Jean Zinn-Justin. NATO Advanced Study Institute Series, Ser. B: Physics, 39. Plenum Press, New York-London, 1979. viii + 736 pp. ISBN 0-306-40072-3 (Editors) 81a:81002 81-06 (81G05, 81G15)

Hadronic matter at extreme energy density ★Hadronic matter at extreme energy density. Proceedings of a Workshop held at the Ettore Majorana Center, Erice, October 13-21, 1978. Edited by Nicola Cabibbo and Luigi Sertorio. Ettore Majorana International Science Series: Physical Sciences, 2. Plenum Press, New York-London, 1980. ix + 358 pp. ISBN 0-306-40303-X (Editors) 81e:81006 81-06 (81G05)

Hagen ★Multiple criteria decision making, theory and application. Proceedings of the Third Conference held at Hagen/Königswinter, August 20-24, 1979. Edited by Günter Fandel and Tomás Gál. Lecture Notes in Economics and Mathematical Systems, 177. Springer-Verlag, Berlin-New York, 1980. xvi + 570 pp. ISBN 3-540-09963-8 (Editors) 81c:90002 90-06 (92A25)

Haifa ★Geometry and differential geometry. Proceedings of a Conference held at the University of Haifa, Haifa, March 18-23, 1979. Edited by R. Artzy and I. Vaisman. Lecture Notes in Mathematics, 792. Springer-Verlag, Berlin-New York, 1980. vi + 443 pp. ISBN 3-540-09976-X (Editors) 81i:53003 53-06

Hallux, N.S. ★Multivariate statistical analysis. Proceedings of the Second Conference on Multivariate Statistical Inference held at Dalhousie University, Halifax, N.S., October 5-7, 1979. Edited by R. P. Gupta. North-Holland Publishing Co., Amsterdam-New York, 1980. viii + 289 pp. ISBN 0-444-86019-3 (Editors) 81m:62005 62-06

Hamburg ★Net theory and applications. Proceedings of the Advanced Course on General Net Theory of Processes and Systems held in Hamburg, October 8-9, 1979. Edited by Wilfried Brauer. Lecture Notes in Computer Science, 84. Springer-Verlag, Berlin-New York, 1980. xiii + 537 pp. ISBN 3-540-10001-6 (From the preface) 81f:68002 68-02 (68B20, 68D90)

Handbook:
Handbook of Applicable mathematics ★Handbook of applicable mathematics. Vol. I. Algebra. Edited by Walter Ledermann and Steven Vajda. A Wiley-Interscience Publication. John Wiley & Sons, Ltd., Chichester, 1980. xix + 524 pp. ISBN 0-471-27704-5 (H. B. Griffiths) 81m:00004 00A06

Large scale systems engineering applications ★Handbook of large scale systems engineering applications. Edited by Madan G. Singh and André Titi. North-Holland Publishing Co., Amsterdam-New York, 1979. x + 564 pp. ISBN 0-444-85283-2 (Editors) 81d:93004 93-06 (90-06)

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по специальным функциям с формулами, графиками и математическими таблицами. (Russian) [Handbook of mathematical functions with formulas, graphs and mathematical tables] Translated from the English by V. A. Ditsin and L. N. Karmazinaja. Edited by M. Abramovic [Milton Abramowitz] and I. Stigan [Irene A. Stegun]. With an introduction by M. Abramovic [M. Abramowitz]. "Nauka", Moscow, 1979. 831 pp. (Editors) 81j:00014 00A22 (33-01, 65A05)

Hangzhou ★Proceedings of the Conference on Approximation Theory. (Chinese) Held at Hangzhou, April 23-30, 1978. Hangzhou University Press, Hangzhou, 1978. iii + 152 pp. (Editors) 81m:41002 41-06

Hanover, N.H. ★Transactions of the Twenty-Sixth Conference of Army Mathematicians. Held in Hanover, N.H., June 10-12, 1980. ARO Report 81, 1. U. S. Army Research Office, Research Triangle Park, N.C., 1981. xii + 400 pp. (Editors) 81m:00006 00A10

Harmonic analysis ★Colloque d'Analyse Harmonique et Complexe. (French) [Colloquium on complex and harmonic analysis] Held at La Garde-Freinet, June 20-25, 1977. Université d'Aix-Marseille I, UER de Mathématiques, Marseille, 1977. vii + 154 pp. (not consecutively pagged). (Editors) 81a:32001 32-06 (42-06)

★Analyse harmonique sur les groupes de Lie. II. (French) [Harmonic analysis on Lie groups. II] Séminaire Nancy-Strasbourg 1976-1978. Edited by Pierre Eymard, Jacques Faraut, Gérard Schiffmann and Reiji Takahashi. Lecture Notes in Mathematics, 739. Springer-Verlag, Berlin-New York, 1979. vi + 646 pp. ISBN 3-540-09536-5 (Editors) 81c:22002 22-06 (43-06)

★Séminaire d'Analyse Harmonique, 1978-1979. (French) [Seminar on Harmonic Analysis, 1978-1979] Publications Mathématiques d'Orsay 79, 7. Université de Paris-Sud, Département de Mathématique, Orsay, 1979. iii + 63 pp. (Editors) 81j:43001 43-06 (42-06)

★Group representations and harmonic analysis. (Japanese) Proceedings of a Symposium held at the Research Institute for Mathematical Sciences, Kyoto University, Kyoto, August 27-30, 1979. Sūrikaiseikikenkyūsho Kōkyūroku No. 368 (1979). Kyoto University, Research Institute for Mathematical Sciences, Kyoto, 1979. pp. i-iii and 1-240. (Editors) 81m:22002 22-06 (43-06)

★Harmonic analysis, Iraklion 1978. Proceedings of a Conference held at the University of Crete, Iraklion, July, 1978. Edited by Nicholas Petridis, Stylianos K. Pichioris and Nicolas Varopoulos. Lecture Notes in Mathematics, 781. Springer-Verlag, Berlin-New York, 1980. iv + 213 pp. ISBN 3-540-09756-2 (Editors) 81c:42001 42-06 (43-06, 46-06)

★Euclidean harmonic analysis. Proceedings of Seminars held at the University of Maryland, College Park, Md., 1979. Edited by John J. Benedetto. Lecture Notes in Mathematics, 779. Springer-Verlag, Berlin-New York, 1980. i + 177 pp. ISBN 3-540-09748-1 (Editors) 81d:42002 42-06

★Граничные свойства аналитических функций, сингулярные интегральные уравнения и некоторые вопросы гармонического анализа. (Russian) [Boundary properties of analytic functions, singular integral equations and some questions of harmonic analysis] Edited by B. V. Hvedelidze. Trudy Tbilisi. Mat. Inst. Razmadze Akad. Nauk Gruz. SSR 65 (1980). "Mecniereba", Tbilisi, 1980. pp. 1-142. (Editors) 81g:30002 30-06

Heat conduction ★Численно-аналитические методы решения задач теплопроводности и электропроводности. (Russian) [Numerical-analytic methods for the solution of problems of heat conduction and electroconductivity] Edited and with a preface by Ju. A. Mitropol'skii [Ju. O. Mitropol'skii]. Akad. Nauk Ukrain. SSR, Inst. Mat., Kiev, 1979. 187 pp. (Editors) 81c:80004 80A20 (78A25)

Heavy-ion physics ★Theoretical methods in medium-energy and heavy-ion physics. Proceedings of the NATO Advanced Studies Institute on Theoretical Nuclear Physics held at the University of Wisconsin, Madison, Wis., June 12-23, 1978. Edited by K. W. McVoy and William Albert Friedman. NATO Advanced Study Institute Series, Ser. B: Physics, 38. Plenum Press, New York-London, 1978. xii + 749 pp. ISBN 0-306-40062-6 (M. J. Maczyński) 81b:81030 81G35 (81-06, 81F20)

Heidelberg ★Conference on Models of Biological Growth and Spread. Mathematical theories and applications. Held in Heidelberg, July 16-21, 1979. Adv. in Appl. Probab. 12 (1980), no. 3, 343-573. Applied Probability Trust, Sheffield, 1980. pp. 543-823. (Editors) 81e:92001 92A05

Helsinki ★Special issue: International Congress of Mathematicians, 1978. (Japanese) Sōgaku 31 (1979), no. 1, 1-94. Mathematical Society of Japan, Tokyo, 1979. pp. 1-96. (Editors) 81a:00011 00A10 (01A65)

Heuristic algorithms of optimization ★Эвристические алгоритмы оптимизации. (Russian) [Heuristic algorithms of optimization] Edited by Ju. A. Mamatov. Yaroslavl. Gos. Univ., Yaroslavl', 1978. 162 pp. (Editors) 81a:90004 90-06

High-energy physics in the Einstein centennial year ★High-energy physics in the Einstein centennial year. A part of the proceedings of Orbis Scientiae 1979 held at the University of Miami, Coral Gables, Fla., January 15-18, 1979. Edited by Behram Kursunoglu, Arnold Perlmutter, Frank Krausz and Linda F. Scott. Studies in the Natural Sciences, 16. Plenum Press, New York-London, 1979. viii + 525 pp. ISBN 0-306-40297-1 (Editors) 81a:81003 81-06 (81G25)

Die Hilbertschen Probleme ★Die Hilbertschen Probleme. (German) [The Hilbert problems] Second edition. Translated from the Russian. Edited by P. S. Alexandrov. Ostwalds Klassiker der Exakten Wissenschaften [Ostwald's Classics of the Exact Sciences], 252. Akademische Verlagsgesellschaft Geest & Portig K.-G., Leipzig, 1979. 302 pp. (Editors) 81b:01002 01-06 (00A05)

History of computing in the twentieth century ★A history of computing in the twentieth century. A collection of essays. Edited by N. Metropolis, J. Howlett and Gian-Carlo Rota. Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], New York-London, 1980. xix + 659 pp. ISBN 0-12-491650-3 (A. D. Booth) 81i:68002 68-03 (01A60)

History and methodology of the natural sciences ★История и методология естественных наук. Вып. XXII: Физика. (Russian) [History and methodology of the natural sciences. No. XXII: Physics] Edited by D. I. Gordeev, L. V. Levin and I. P. Bazarov. Moskov. Gos. Univ., Moscow, 1979. 176 pp. (Editors) 81i:01002 01-06 (83-06)

★История и методология естественных наук. Вып. XXI: Физика. (Russian) [History and methodology of the natural sciences. No. XXI: Physics] Edited by I. P. Bazarov and C. S. Sarangov. Moskov. Gos. Univ., Moscow, 1979. 192 pp. (Editors) 81j:01002 01-06 (82-06)

History of science One hundred fifth critical bibliography of the history of science and its

- cultural influences (to January 1980). Edited by John Neu. *Isis* 71 (1980), no. 260, 5-295. (From the text) 81j:01051 01A75 (00A20)
- Honolulu, Hawaii** ★Geometry of the Laplace operator. Proceedings of the Symposium in Pure Mathematics of the American Mathematical Society held at the University of Hawaii, Honolulu, Hawaii, March 27-30, 1979. Edited by Robert Osserman and Alan Weinstein. Proceedings of Symposia in Pure Mathematics, XXXVI. *American Mathematical Society, Providence, R.I.*, 1980. vii + 323 pp. ISBN 0-8218-1439-7 (Editors) 81c:58002 58-06 (58G25)
- Horní Bradlo** ★Nonlinear analysis, function spaces and applications. Proceedings of a Spring School held in Horní Bradlo, May 21-26, 1978. Edited by Svatopluk Fučík and Alois Kufner. Teubner-Texte zur Mathematik. [Teubner Texts in Mathematics] *RSB B. G. Teubner Verlagsgesellschaft, Leipzig*, 1979. 224 pp. (Editors) 81c:46001 46-06
- Hradec Králové** ★Proceedings of the Second Prague Symposium on Asymptotic Statistics. Held in Hradec Králové, August 21-25, 1978. Edited by Petr Mandl and Marie Hušková. North-Holland Publishing Co., Amsterdam-New York; Society of Czechoslovak Mathematicians and Physicists, Prague, 1979. 340 pp. ISBN 0-444-85375-8 (Editors) 81c:62005 62-06 (60-06, 94-06)
- Hybrid computer systems** ★Языки моделирования и программное обеспечение гибридных вычислительных систем. (Russian) [Modeling languages and software for hybrid computer systems] Edited by B. Ja. Kogan. Voprosy Kibernet. (Moscow) No. 46 (1978). "Socet. Radio", Moscow, 1978. pp. 1-183. (Editors) 81c:68005 68-06 (18B99, 93A10)
- Iasi** ★Lucrările Conferinței Naționale de Spații Neolomne. (Romanian) [Proceedings of the National Conference on Nonholonomic Spaces] Held at Iasi, May 28-30, 1976. Editura Academiei Republicii Socialiste România, Bucharest, 1979. 176 pp. (Editors) 81c:53002 53-06
- IEEE Conference:**
- Decision and Control** ★Proceedings of the 1978 IEEE Conference on Decision and Control including the 17th Symposium on Adaptive Processes. Held in San Diego, Calif., January 10-12, 1979. Institute of Electrical and Electronics Engineers, New York, 1979. xxi + 1461 pp. (Editors) 81c:93001 93-06
- ★Proceedings of the 18th IEEE Conference on Decision & Control. Vol. 1, 2. Including the 18th Symposium on Adaptive Processes. Held in Fort Lauderdale, Fla., December 12-14, 1979. Institute of Electrical and Electronics Engineers, Inc. (IEEE), New York, 1979. xx + 1077 pp. (Editors) 81c:93002 93-06
- IEEE Symposium:**
- Adaptive Processes** ★Proceedings of the 1978 IEEE Conference on Decision and Control including the 17th Symposium on Adaptive Processes. Held in San Diego, Calif., January 10-12, 1979. Institute of Electrical and Electronics Engineers, New York, 1979. xxi + 1461 pp. (Editors) 81c:93001 93-06
- ★Proceedings of the 18th IEEE Conference on Decision & Control. Vol. 1, 2. Including the 18th Symposium on Adaptive Processes. Held in Fort Lauderdale, Fla., December 12-14, 1979. Institute of Electrical and Electronics Engineers, Inc. (IEEE), New York, 1979. xx + 1077 pp. (Editors) 81c:93002 93-06
- Foundations of Computer Science** ★21st Annual Symposium on Foundations of Computer Science. Institute of Electrical and Electronics Engineers, Inc. (IEEE), New York, 1980. vi + 421 pp. (Editors) 81c:68006 68-06
- IFIP Conference:**
- Data Base Architecture** ★Data base architecture. Proceedings of the Fifth IFIP Working Conference held in Venice, June 26-29, 1979. Edited by G. Braochi and G. M. Nijssen. North-Holland Publishing Co., Amsterdam-New York, 1979. x + 341 pp. ISBN 0-444-85384-7 (Editors) 81b:68005 68B05 (68H05)
- Optimization Techniques** ★Optimization techniques. Part 1. Proceedings of the Ninth IFIP Conference held in Warsaw, September 4-8, 1979. Edited by K. Iracki, K. Malanowski and S. Walukiewicz. Lecture Notes in Control and Information Sciences, 22. Springer-Verlag, Berlin-New York, 1980. xvi + 569 pp. ISBN 3-540-10080-6 (Editors) 81j:49001a 49-06 (68-06, 90-06, 92-06, 93-06, 94-06)
- ★Optimization techniques. Part 2. Proceedings of the Ninth IFIP Conference held in Warsaw, September 4-8, 1979. Edited by K. Iracki, K. Malanowski and S. Walukiewicz. Lecture Notes in Control and Information Sciences, 23. Springer-Verlag, Berlin-New York, 1980. xv + 621 pp. ISBN 3-540-10081-4 (Editors) 81j:49001b 49-06 (68-06, 90-06, 92-06, 93-06, 94-06)
- IFIP Congress:**
- Information Processing** ★Information processing 80. Proceedings of the IFIP Congress held in Tokyo, October 6-9, 1980, and in Melbourne, October 14-17, 1980. Edited by Simon H. Lavington. IFIP Congress Series, 8. North-Holland Publishing Co., Amsterdam-New York, 1980. xiii + 1070 pp. ISBN 0-444-86034-7 (Editors) 81c:68009 68-06
- IFIP Workshop:**
- Methodology of Interaction** ★Methodology of interaction. Seillac II. Proceedings of the IFIP Workshop held at Seillac, May 1979. Edited by Richard A. Guedi, Paul J. W. ten Hagen, F. Robert A. Hopgood, Hugh A. Tucker and David A. Duce. North-Holland Publishing Co., Amsterdam-New York, 1980. xiii + 408 pp. ISBN 0-444-85479-7 (Editors) 81c:68011 68-06
- Immunology** ★Systems theory in immunology. Proceedings of the Working Conference held in Rome, May 1978. Edited by Carlo Bruni, Gino Doria, Giorgio Koch and Roberto Strom. Lecture Notes in Biomathematics, 32. Springer-Verlag, Berlin-New York, 1979. xi + 273 pp. ISBN 3-540-09728-7 (Editors) 81c:92001 92-06 (92A07)
- INDAM Conference:**
- Abelian Groups and their Relationship to the Theory of Modules** ★Symposia Mathematica. Vol. XXIII. Conference on Abelian Groups and their Relationship to the Theory of Modules held at the Istituto Nazionale di Alta Matematica Francesco Severi (INDAM), Rome, December 12-16, 1977. Academic Press, London-New York, 1979. 457 pp. (Editors) 81a:20005 20-06 (16-06)
- Index:**
- Bull. Austral. Math. Soc.** Author index to Bull. Austral. Math. Soc., Vol. 11 (1974) to Vol. 20 (1979). Bull. Austral. Math. Soc. 20 (1979), no. 3, 481-514. (Editors) 81a:00016 00A15
- J. Symbolic Logic** Index of contributed papers, Volumes 27-45, 1962-1980. J.
- Index: (continued)**
- Symbolic Logic** 45 (1980), no. 4, 643-668. (Editors) 81j:00012 00A15 (03-XX)
- Math. Ann.** Combined author and title index, Volume 101-250. *Math. Ann.* 250 (1980), no. 3, 175-273. (Editors) 81g:00005 00A20
- Phys. A** Index of authors and papers, Volumes 91-100, April 1978-March 1980. *Phys. A* 1980, Master Index, 48 pp. 81j:00013 00A15
- Riv. Mat. Univ. Parma** 1950-1979: Thirty years of work of the "Rivista di Matematica della Università di Parma". (Italian) *Riv. Mat. Univ. Parma* (4) 5 (1979), part 2, 897-939 (1980). (Editors) 81j:01035 01A65 (00A15)
- Séminaire Delange-Pisot-Poitou** Index cumulatif. Ire à 20e années: 1959/1960 à 1978/1979. *Séminaire Delange-Pisot-Poitou*, 20e année: 1978/1979. *Théorie des nombres*, Fasc. 2 (French), 56 pp., Secrétariat Math., Paris, 1980. (Editors) 81m:00013 00A20
- Inequalities** ★Variational inequalities and complementarity problems. Theory and applications. Proceedings of an International School of Mathematics on Variational Inequalities and Complementarity Problems in Mathematical Physics and Economics held in Erice, June 19-30, 1978. Edited by R. W. Cottle, F. Giannessi and J.-L. Lions. A Wiley-Interscience Publication. John Wiley & Sons, Ltd., Chichester, 1980. xvii + 408 pp. ISBN 0-471-27610-3 (Editors) 81c:49001 49-06 (49A29, 90-06, 90C33)
- Infinite-dimensional analysis** ★Операторы математической физики и бесконечномерный анализ. (Russian) [Operators of mathematical physics and infinite-dimensional analysis] Edited by Ju. M. Berezans'kii. *Akad. Nauk Ukrain. SSR, Inst. Mat.; Kiev*, 1979. 144 pp. (Editors) 81b:47002 47-06
- Information linkage between applied mathematics and industry** ★Information linkage between applied mathematics and industry. II. Proceedings of the Second Annual Workshop held in Monterey, Calif., February 22-24, 1979. Edited by Arthur L. Schoenstadt, Frank D. Faulkner, Richard Franke and I. Bert Russak. Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], New York-London, 1980. xii + 293 pp. ISBN 0-12-628750-3 (Editors) 81j:93004 93-06
- Information processing** ★Mathematical studies of information processing. Proceedings of the International Conference held in Kyoto, August 23-26, 1978. Edited by E. K. Blum, M. Paul and S. Takasu. Lecture Notes in Computer Science, 75. Springer-Verlag, Berlin-New York, 1979. viii + 629 pp. ISBN 3-540-09541-1 (Editors) 81c:68006 68-06
- ★Information processing 80. Proceedings of the IFIP Congress held in Tokyo, October 6-9, 1980, and in Melbourne, October 14-17, 1980. Edited by Simon H. Lavington. IFIP Congress Series, 8. North-Holland Publishing Co., Amsterdam-New York, 1980. xiii + 1070 pp. ISBN 0-444-86034-7 (Editors) 81c:68009 68-06
- Information reception and processing in structurally complex systems** ★Прием и обработка информации в сложных информационных системах. Вып. 8. (Russian) [Information reception and processing in structurally complex information systems. No. 8] Edited by T. K. Nezmetdinov. *Kazan. Univ., Kazan*, 1977. 183 pp. (Editors) 81c:94002 94-06 (60-06)
- Information science** ★Семiotика и информатика. Вып. 13. (Russian) [Semiotics and information science. No. 13] Edited by A. I. Mikhailov and V. K. Finn. *Akad. Nauk SSSR, Vsesojuz. Inst. Nauch. i Tehn. Informacii, Moscow*, 1979. 215 pp. (loose errata). (Editors) 81c:68003 68-06 (03-06)
- ★Семiotика и информатика. Вып. 14. (Russian) [Semiotics and information science. No. 14] Edited by A. I. Mikhailov. *Akad. Nauk SSSR, Vsesojuz. Inst. Nauch. i Tehn. Informacii, Moscow*, 1980. 183 pp. (loose errata). (Editors) 81j:68008 68-06
- Information systems** ★Formale Modelle für Informationssysteme. (German) [Formal model for information systems] GI (Gesellschaft für Informatik) Conference held in Tutzing, May 24-26, 1979. Edited by Heinrich C. Mayr and Bernd E. Meyer. Informatik-Fachberichte [Technical Reports on Information Science], 21. Springer-Verlag, Berlin-New York, 1979. vi + 265 pp. ISBN 3-540-09773-2 (Editors) 81m:68003 68-06
- ★Fuzzy sets. Theory and applications to policy analysis and information systems. Proceedings of the Symposium on Policy Analysis and Information Systems held at Duke University, Durham, N.C., June 28-30, 1980. Edited by Paul P. Wang and S. K. Chang. Plenum Press, New York-London, 1980. ix + 413 pp. ISBN 0-306-40557-1 (Editors) 81b:03105 03E72 (03-06, 90A05, 94D05)
- ★Pictorial information systems. Edited by S. K. Chang and K. S. Fu. Lecture Notes in Computer Science, 80. Springer-Verlag, Berlin-New York, 1980. ix + 445 pp. ISBN 3-540-09757-0 (Editors) 81c:68078 68H05 (68B15, 68G10)
- Information theory** ★Théorie de l'information. (French) [Information theory] Développements récents et applications. [Recent developments and applications] Proceedings of the International CNRS Colloquium on Recent Developments in Information Theory and their Applications held at Cachan, July 4-8, 1977. Colloques Internationaux du Centre National de la Recherche Scientifique [International Colloquia of the CNRS], 276. Editions du Centre National de la Recherche Scientifique (CNRS), Paris, 1978. 506 pp. ISBN 2-222-02258-4 (Editors) 81c:94001 94-06 (68H05)
- Information transmission systems** ★Построение и анализ систем передачи информации. (Russian) [Construction and analysis of information transmission systems] Edited by É. L. Bloh. "Nauka", Moscow, 1980. 144 pp. (Editors) 81c:94001 94-06 (62L20)
- Integral equations** ★Некоторые вопросы дифференциальных и интегральных уравнений и их приложения. Вып. 2. (Russian) [Some questions of differential and integral equations and their applications. No. 2] Edited by G. V. Tomskii. *Jakutsk. Gos. Univ., Yakutsk*, 1977. 192 pp. (Editors) 81b:34002 34-06
- ★Colloquium: Numerical Treatment of Integral Equations. Papers presented at the Mathematical Centre, Amsterdam, October, 1978-May, 1979. Edited by H. J. J. te Riele. MC Syllabus, 41. *Mathematisch Centrum, Amsterdam*, 1979. vii + 259 pp. (loose errata). ISBN 90-6196-189-0 (Editors) 81c:65004 65-06 (65R20)
- ★The application and numerical solution of integral equations. Proceedings of a Seminar held at the Australian National University, Canberra, November 29, 1978. Edited by Robert S. Anderssen, Frank R. de Hoog and Mark A. Lukas. Monographs and Textbooks on Mechanics of Solids and Fluids (Mechanics: Analysis), 6. *Sijthoff & Noordhoff, Alphen aan den Rijn-Germantown, Md.*, 1980. x + 259 pp. ISBN 90-286-0450-2 (Editors) 81f:45001 45-06 (65-06)
- ★Граничные свойства аналитических функций, сингулярные интегральные уравнения и некоторые вопросы гармонического анализа. (Russian) [Boundary

properties of analytic functions, singular integral equations and some questions of harmonic analysis] Edited by B. V. Hvedelidze. *Trudy Tbilisi. Mat. Inst. Razmadze Akad. Nauk Gruzin. SSR* 65 (1980). "Mecnerba", Tbilisi, 1980. pp. 1-142. (Editors) 81g:30002 30-06

★Differential and integral equations. Proceedings of the Seventh Midwest Conference held at the University of Missouri, Rolla, Mo., November 3-4, 1978. Edited by L. J. Grimm, O. R. Plummer and S. Y. Trimble. *University of Missouri-Rolla, Rolla, Mo.*, 1980. iv + 117 pp. (Editors) 81j:34003 34-06

★Numerical treatment of integral equations. Lectures delivered at the Workshop held at the Mathematical Research Institute, Oberwolfach, November 18-24, 1979. Edited by Julius Albrecht and Lothar Collatz. *International Series of Numerical Mathematics*, 53. Birkhäuser Verlag, Basel-Boston, Mass., 1980. iii + 275 pp. ISBN 3-7643-1105-3 (Editors) 81j:65009 65-06 (65R20)

Interaction in the mechanics of constructions ★Взаимодействие в механике конструкций. (Russian) [Interaction in the mechanics of constructions] Edited by Ju. A. Ševljakov. "Višča Škola", Kiev, 1980. 88 pp. (Editors) 81m:73007 73-02 (73C35, 73T05)

Interactive statistics ★Interactive statistics. Proceedings of the Applied Statistics Conference held at Macquarie University, Sydney, February 8-9, 1979. Edited by Don McNeil. *North-Holland Publishing Co., Amsterdam-New York*, 1979. x + 254 pp. ISBN 0-444-85412-6 (Editors) 81f:62003 62-06

Interfaces between computer science and operations research ★Interfaces between computer science and operations research. Proceedings of a Symposium held at the Mathematisch Centrum, Amsterdam, September 7-10, 1976. Edited by J. K. Lenstra, A. H. G. Rinnooy Kan and P. van Emde Boas. *Mathematical Centre Tracts*, 99. *Mathematisch Centrum, Amsterdam*, 1978. viii + 231 pp. ISBN 90-6196-170-X (L. E. Trotter, Jr.) 81f:68001 68-02 (68C25, 90B35, 90C10)

Interference waves in layered media ★Интерференционные волны в слоистых средах. I. (Russian) [Interference waves in layered media. I] Edited by L. A. Molotkov and P. V. Krauklis. *Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 99 (1980). "Nauka" Leningrad. Otdel., Leningrad, 1980. pp. 1-160. (Editors) 81k:76001 76-06

Intrinsic stochasticity in plasmas ★Intrinsic stochasticity in plasmas. International Workshop held at the Institut d'Études Scientifiques de Cargèse, Cargèse, June 17-23, 1979. Edited by Guy Laval and Dominique Gresillon. *Ecole Polytechnique, Palaiseau; distributed by Les Éditions de Physique, Orsay*, 1979. 443 pp. ISBN 2-7302-0016-9 (Editors) 81e:76086 76X05 (58F13, 78A35, 82A45)

Invariance ★Теория инвариантности и ее применение. Часть 1. (Russian) [Theory of invariance and its application. Part 1] Proceedings of the Fifth All-Union Conference held in Kiev, October 1976. Edited by A. I. Kuhtenko. "Naukova Dumka", Kiev, 1979. 460 pp. (Editors) 81h:93001a 93-06

★Теория инвариантности и ее применение. Часть 2. (Russian) [Theory of invariance and its application. Part 2] Proceedings of the Fifth All-Union Conference held in Kiev, October 1976. Edited by A. I. Kuhtenko. "Naukova Dumka", Kiev, 1979. 440 pp. (Editors) 81h:93001b 93-06

Inverse problems ★Applied inverse problems. Edited by P. C. Sabatier. *Lecture Notes in Physics*, 85. Springer-Verlag, Berlin-New York, 1978. v + 425 pp. ISBN 3-540-09094-0 (Editors) 81a:00024 00A69 (00A10, 35R25)

Inverse problems for differential equations of mathematical physics ★Обратные задачи для дифференциальных уравнений математической физики. (Russian) [Inverse problems for differential equations of mathematical physics] Edited by M. M. Lavrent'ev. *Akad. Nauk SSSR Sibirsk. Otdel., Vyčisl. Centr, Novosibirsk*, 1978. 162 pp. (Editors) 81j:35003 35-06

Investigations on linear operators and the theory of functions ★Исследования по линейным операторам и теории функций. IX. (Russian) [Investigations on linear operators and the theory of functions. IX] Edited by N. K. Nikolskii. *Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 92 (1979). "Nauka" Leningrad. Otdel., Leningrad, 1979. pp. 1-328. (Editors) 81a:30001 30-06

Iraklion ★Harmonic analysis, Iraklion 1978. Proceedings of a Conference held at the University of Crete, Iraklion, July, 1978. Edited by Nicholas Petridis, Stylianos K. Pichorides and Nicolas Varopoulos. *Lecture Notes in Mathematics*, 781. Springer-Verlag, Berlin-New York, 1980. iv + 213 pp. ISBN 3-540-09756-2 (Editors) 81c:42001 42-06 (43-06, 46-06)

IRIA Seminar: Analysis and Control of Systems ★Analyse et contrôle de systèmes. (French) [Analysis and control of systems] Papers from the Seminar organized by the Institut de Recherche d'Informatique et d'Automatique (IRIA) held in Rocquencourt, 1978. *Institut de Recherche d'Informatique et d'Automatique (IRIA), Rocquencourt*, 1978. 272 pp. ISBN 2-7261-0209-3 (Editors) 81m:93003 93-06

Irkutsk ★Динамика управляемых систем. (Russian) [Dynamics of control systems] Papers presented at the Third All-Union Četaev Conference, dedicated to the memory of N. G. Četaev on the occasion of the seventy-fifth anniversary of his birth, held in Irkutsk, June 20-25, 1977. Edited by V. M. Matrosov and S. V. Eliseev. "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. 344 pp. (Editors) 81c:93003 93-06

★Проблемы устойчивости движения, аналитической механики и управления движением. (Russian) [Problems of stability of motion, analytical mechanics and control of motion] Papers presented at the Third All-Union Četaev Conference, dedicated to the memory of N. G. Četaev on the occasion of the seventy-fifth anniversary of his birth, held in Irkutsk, June 20-25, 1977. Edited by V. M. Matrosov and A. N. Pančenko [A. M. Pančenko]. "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. 328 pp. (Editors) 81e:93002 93-06 (34-06, 58-06, 70E99, 70H99, 73H99, 90-06)

Italian studies in the philosophy of science ★Italian studies in the philosophy of science. Edited by Maria Luisa Dalla Chiara [Maria Luisa Dalla Chiara Scabia]. *Boston Studies in the Philosophy of Science*, 47. D. Reidel Publishing Co., Dordrecht-Boston, Mass., 1981. xi + 525 pp. ISBN 90-277-0735-9, 90-277-1073-2 (Editors) 81m:03004 03-06

Izop Nauki i Tehniki ★Математический анализ. Том 17. (Russian) [Mathematical analysis. Vol. 17] Edited by R. V. Gamkrelidze. *Izop Nauki i Tehniki*. [Progress in Science and Technology] *Akad. Nauk SSSR, Vsesojuz. Inst. Nauchn. i Tehn. Informacii, Moscow*, 1979. 272 pp. (loose errata). (Editors) 81d:00002 00A10

★Современные проблемы математики. Том 14. (Russian) [Current problems in mathematics. Vol. 14] Edited by R. V. Gamkrelidze. *Izop Nauki i Tehniki*. [Progress in Science and Technology] *Akad. Nauk SSSR, Vsesojuz. Inst. Nauchn. i Tehn.*

Informacii, Moscow, 1979. 256 pp. (loose errata). (Editors) 81d:00001 60-06

★Общая механика. Том 4. (Russian) [General mechanics. Vol. 4] Edited by L. I. Sedov and G. K. Mikhailov. *Izop Nauki i Tehniki*. [Progress in Science and Technology] *Akad. Nauk SSSR, Vsesojuz. Inst. Nauchn. i Tehn. Informacii, Moscow*, 1979. 143 pp. (Editors) 81d:70001 70-06

★Теория вероятностей. Математическая статистика. Теоретическая кибернетика. Том 17. (Russian) [Probability theory. Mathematical statistics. Theoretical cybernetics. Vol. 17] Edited by R. V. Gamkrelidze. *Izop Nauki i Tehniki*. [Progress in Science and Technology] *Akad. Nauk SSSR, Vsesojuz. Inst. Nauchn. i Tehn. Informacii, Moscow*, 1979. 195 pp. (loose errata). (Editors) 81e:62002 62-06 (68-06)

★Алгебра. Топология. Геометрия. Том 17. (Russian) [Algebra. Topology. Geometry. Vol. 17] Edited by R. V. Gamkrelidze. *Izop Nauki i Tehniki*. [Progress in Science and Technology] *Akad. Nauk SSSR, Vsesojuz. Inst. Nauchn. i Tehn. Informacii, Moscow*, 1979. 308 pp. (loose errata). (Editors) 81h:20001 20-06 (54F45)

★Техническая кибернетика. Том 11. (Russian) [Engineering cybernetics. Vol. 11] Edited by B. N. Petrov. *Izop Nauki i Tehniki*. [Progress in Science and Technology] *Akad. Nauk SSSR, Vsesojuz. Inst. Nauchn. i Tehn. Informacii, Moscow*, 1979. 192 pp. (Editors) 81j:93003 93-06

★Техническая кибернетика. Том 12. (Russian) [Engineering cybernetics. Vol. 12] Edited by Z. B. Golemba. *Izop Nauki i Tehniki*. [Progress in Science and Technology] *Akad. Nauk SSSR, Vsesojuz. Inst. Nauchn. i Tehn. Informacii, Moscow*, 1980. 239 pp. (Editors) 81d:93003 93-06 (68G05)

★Проблемы геометрии. Том 11. (Russian) [Problems in geometry. Vol. 11] Edited by A. I. Mikhailov. *Izop Nauki i Tehniki*. [Progress in Science and Technology] *Akad. Nauk SSSR, Vsesojuz. Inst. Nauchn. i Tehn. Informacii, Moscow*, 1980. 243 pp. (loose errata). (Editors) 81e:53003 53-06 (58-06)

★Современные проблемы математики. Том 15. (Russian) [Current problems in mathematics. Vol. 15] Edited by R. V. Gamkrelidze. *Izop Nauki i Tehniki*. [Progress in Science and Technology] *Akad. Nauk SSSR, Vsesojuz. Inst. Nauchn. i Tehn. Informacii, Moscow*, 1980. 228 pp. (loose errata). (Editors) 81e:81004 81-06

★Математический анализ. Том 18. (Russian) [Mathematical analysis. Vol. 18] Edited by R. V. Gamkrelidze. *Izop Nauki i Tehniki*. [Progress in Science and Technology] *Akad. Nauk SSSR, Vsesojuz. Inst. Nauchn. i Tehn. Informacii, Moscow*, 1980. 308 pp. (loose errata). (Editors) 81j:00006 00A10

★Механика деформируемого твердого тела. Том 13. (Russian) [Mechanics of a solid deformable body. Vol. 13] Edited by L. I. Sedov. *Izop Nauki i Tehniki*. [Progress in Science and Technology] *Akad. Nauk SSSR, Vsesojuz. Inst. Nauchn. i Tehn. Informacii, Moscow*, 1980. 300 pp. (Editors) 81j:73054 73J05 (73C99)

IUTAM Congress: Theoretical and Applied Mechanics ★Теоретическая и прикладная механика.

(Russian) [Theoretical and applied mechanics] Труды XIV Международного Конгресса ИУТАМ. [Proceedings of the 14th IUTAM Congress] Held at Delft, August 30-September 4, 1976. Papers translated from the English. Edited by G. K. Mikhailov. With a preface by M. A. Lavrent'ev. "Mir", Moscow, 1979. 767 pp. (Editors) 81k:76048 76N15 (70K99, 73M99, 86A10)

IUTAM Symposium: Shell Theory ★Theory of shells. Proceedings of the Third IUTAM Symposium on Shell Theory, dedicated to the memory of Academician I. N. Vekua, held in Tbilisi, August 22-28, 1978. Edited by Warner Tjardus Koiter and G. K. Mikhailov [G. K. Mikhailov]. *North-Holland Publishing Co., Amsterdam-New York*, 1980. xi + 704 pp. ISBN 0-444-85338-3 (Editors) 81c:73003 73-06 (73Lxx)

Jaca ★Quantum chromodynamics. Proceedings of the Tenth G.I.F.T. International Seminar on Theoretical Physics held at the University of Zaragoza, Jaca, June 1979. Edited by J. L. Alonso and R. Tarrach. *Lecture Notes in Physics*, 118. Springer-Verlag, Berlin-New York, 1980. ix + 424 pp. ISBN 3-540-09969-7 (Editors) 81i:81004 81-06 (81G05)

Jachranka ★Теория автоматов в применении к проектированию дискретных устройств и систем. (Russian) [Automata theory in application to the design of discrete devices and systems] Proceedings of Symposia held in Jachranka, April 18-23, 1977 and in Donovaly, May 8-13, 1978. Tanulmányok—MTA Számítástechn. Automat. Kutató Int. Budapest No. 99 (1979) (1980). *MTA Számítástechn. Automat. Kutató Intézet, Budapest*, 1980. pp. 1-246. (Editors) 81i:68005 68-06

Jahrestagung: Gesellschaft für Informatik ★GI—9. Jahrestagung. (German) Held in Bonn, October 1-5, 1979. Edited by K. H. Böhlting and P. P. Spies. *Informatik-Fachberichte* [Technical Reports on Information Science], 19. Springer-Verlag, Berlin-New York, 1979. xii + 690 pp. ISBN 3-540-09664-7 (Editors) 81m:68004 68-06

Jena ★Jenaer "Anti-Düring"-Konferenz. (German) [Jena "Anti-Düring" conference] Held at the Friedrich-Schiller-Universität, Jena, June 9-10, 1978. Edited by Franz Bolck. *Wissenschaftliche Beiträge der Friedrich-Schiller-Universität. Friedrich-Schiller-Universität, Jena*, 1979. 315 pp. (Editors) 81b:01003 01-06

★Begriffsschrift—Jenaer Frege-Konferenz. (German) [Begriffsschrift—Jena Frege conference] Held at Friedrich-Schiller-Universität, Jena, May 7-11, 1979. Edited by Franz Bolck. *Friedrich-Schiller-Universität, Jena*, 1979. iii + 548 pp. (Editors) 81m:03002 03-06 (01A70, 68-06)

Jodlowy Dwór ★Physics of the expanding universe. Proceedings of the Cracow School on Cosmology held at Jodlowy Dwór, September 1978. Edited by M. Demiański. *Lecture Notes in Physics*, 109. Springer-Verlag, Berlin-New York, 1979. iv + 210 pp. ISBN 3-540-09562-4 (Editors) 81h:83044 83F05

Journées: Éléments Finaux ★Journées "Éléments Finis". Held at Rennes, May 12-14, 1975. *Université de Rennes, Rennes*, 1975. 286 pp. (not consecutively pagged). (Editors) 81b:65004 65-06 (65N30)

Kaciveli ★Асимптотические методы в теории нелинейных колебаний. (Russian) [Asymptotic methods in the theory of nonlinear oscillations] Proceedings of the All-Union Conference on Asymptotic Methods in Nonlinear Mechanics held in Kaciveli, April 22-25, 1977. Edited by Ju. A. Mitropol'skii [Ju. O. Mitropol'skii]. "Naukova Dumka", Kiev, 1979. 279 pp. (Editors) 81a:34002 34-06 (34C15, 34Exx)

Karlavattion Abstracts of papers presented at the 42nd Conference of the Indian Mathematical Society. *Math. Student* 45 (1977), no. 2, 7-62 (1979). (Editors) 81j:00007 00A10

- Karpacz** ★Modern trends in the theory of condensed matter. Proceedings of the XVI Karpacz Winter School of Theoretical Physics held in Karpacz, February 19–March 3, 1979. Edited by Andrzej Pkalski and Jerzy A. Przystawa. Lecture Notes in Physics, 115. Springer-Verlag, Berlin-New York, 1980. ix + 597 pp. ISBN 3-540-09752-X (Editors) 81h:8202 82–06
- Keszthely** ★Numerical methods. Papers from the Third Colloquium held at Keszthely, September 5–10, 1977. Edited by Pál Rózsa. Colloquia Mathematica Societatis János Bolyai, 22. North-Holland Publishing Co., Amsterdam-New York, 1980. 631 pp. ISBN 0-444-85407-X (Editors) 81f:65006 65–06
- Kiel** ★Proceedings in Operations Research. 7. (German) Papers of the Sixth Annual Meeting of the Deutsche Gesellschaft für Operations Research (DGOR) held at Christian-Albrechts-Universität, Kiel, September 21–23, 1977. Edited by K. Brockhoff, W. Dinkelbach, P. Kall, D. B. Pressmar and K. Spicher. Physica Verlag, Würzburg, 1978. 536 pp. ISBN 3-7908-0194-1 (Editors) 81e:90003a 90–06 (62–06)
- Kiev** ★Современные проблемы теоретической и прикладной механики. (Russian) [Current problems in theoretical and applied mechanics] Proceedings of the Fourth All-Union Congress on Theoretical and Applied Mechanics held in Kiev, May 21–28, 1976. Edited by G. S. Pisarenko. "Naukova Dumka", Kiev, 1978. 412 pp. (Editors) 81h:70001 70–06 (73–06, 76–06)
- ★Теория инвариантности и ее применение. Часть 1. (Russian) [Theory of invariance and its application. Part 1] Proceedings of the Fifth All-Union Conference held in Kiev, October 1976. Edited by A. I. Kuhtenko. "Naukova Dumka", Kiev, 1979. 460 pp. (Editors) 81h:93001a 93–06
- ★Теория инвариантности и ее применение. Часть 2. (Russian) [Theory of invariance and its application. Part 2] Proceedings of the Fifth All-Union Conference held in Kiev, October 1976. Edited by A. I. Kuhtenko. "Naukova Dumka", Kiev, 1979. 440 pp. (Editors) 81h:93001b 93–06
- Kinetic logic: a Boolean approach to the analysis of complex regulatory systems** ★Kinetic logic: a Boolean approach to the analysis of complex regulatory systems. Proceedings of the EMBO Course "Formal Analysis of Genetic Regulation" held in Brussels, September 6–16, 1977. Edited by René Thomas. Lecture Notes in Biomathematics, 29. Springer-Verlag, Berlin-New York, 1979. xiii + 507 pp. ISBN 3-540-09556-X (Editors) 81h:92046a 92A09 (93A20, 94C10)
- Kingston, R.I.** ★Nonlinear partial differential equations in engineering and applied science. Proceedings of a Conference held at the University of Rhode Island, Kingston, R.I., June 4–8, 1979. Edited by Robert L. Sternberg, Anthony J. Kalinowski and John S. Papadakis. Lecture Notes in Pure and Applied Mathematics, 54. Marcel Dekker, Inc., New York-Basel, 1980. xvi + 480 pp. ISBN 0-8247-6996-1 (Editors) 81d:35002 35–06
- Kleebach** ★Journées sur les Marches Aléatoires. (French) [Conference on Random Walks] Held at Kleebach, March 5–10, 1979. Astérisque, 74. Société Mathématique de France, Paris, 1980. 201 pp. (Editors) 81g:60001 60–06
- Knoxville, Tenn.** ★Sparse Matrix Proceedings 1978. Edited by Iain S. Duff and G. W. Stewart. Symposium on Sparse Matrix Computations held in Knoxville, Tenn., November 2–3, 1978. SIAM, Philadelphia, Pa., 1979. xvi + 334 pp. ISBN 0-89871-160-6 (Editors) 81f:65003 65–06
- Kobe** ★Proceedings of the 3rd Symposium on Semigroups. Held at the Inter-University Seminar House of Kansai, Kobe, August 4–6, 1979. Edited by Tsuyoshi Fujiwara. Osaka University, Department of Mathematics, Osaka, 1980. iii + 124 pp. (Editors) 81b:20003 20–06 (20Mxx)
- Konferenz:**
- Jenaer "Anti-Dühring"** ★Jenaer "Anti-Dühring"-Konferenz. (German) [Jena "Anti-Dühring" conference] Held at the Friedrich-Schiller-Universität, Jena, June 9–10, 1978. Edited by Franz Bolck. Wissenschaftliche Beiträge der Friedrich-Schiller-Universität. Friedrich-Schiller-Universität, Jena, 1979. 315 pp. (Editors) 81b:01003 01–06
- Königswinter** ★Multiple criteria decision making, theory and application. Proceedings of the Third Conference held at Hagen/Königswinter, August 20–24, 1979. Edited by Günter Fandel and Tomás Gál. Lecture Notes in Economics and Mathematical Systems, 177. Springer-Verlag, Berlin-New York, 1980. xvi + 570 pp. ISBN 3-540-09963-8 (Editors) 81c:90002 90–06 (92A25)
- Kourovka notebook: unsolved problems in group theory** ★Куровская тетрадь. (нерешенные вопросы теории групп). (Russian) [Kourovka notebook: unsolved problems in the theory of groups] Edited by V. D. Mazurov, Ju. I. Merzjakov and V. A. Curkin. Sixth augmented edition. Akad. Nauk SSSR Sibirsk. Otdel., Inst. Mat., Novosibirsk, 1978. 99 pp. (Ju. I. Merzjakov) 81d:20001 20–XX
- Kozubnik** ★Trends in applications of pure mathematics to mechanics. Vol. II. Papers presented at the Second Symposium held in Kozubnik, September, 1977. Edited by Henryk Zorski. Monographs and Studies in Mathematics, 5. Pitman Publishing, Ltd., London-San Francisco, Calif., 1979. viii + 341 pp. ISBN 0-273-08421-6 (Editors) 81a:73003 73–06
- ★Analytic functions, Kozubnik 1979. Proceedings of the Seventh Conference held at Kozubnik, April 19–25, 1979. Edited by Julian Lawrynowicz. Lecture Notes in Mathematics, 798. Springer-Verlag, Berlin-New York, 1980. x + 476 pp. ISBN 3-540-09985-9 (Editors) 81d:32001 32–06 (30–06)
- Kyoto** ★Proceedings of the International Symposium on Algebraic Geometry. A Taniguchi Symposium. Held at Kyoto University, Kyoto, January 10–14, 1977. Edited by Masayoshi Nagata. Kinokuniya Book Store Co., Ltd., Tokyo, 1978. xiv + 737 pp. (Editors) 81e:14002 14–06
- ★Proceedings of the Fourth International Joint Conference on Pattern Recognition. Held in Kyoto, November 7–10, 1978. Institute of Electrical and Electronics Engineers, New York, 1979. xxii + 1166 pp. (Editors) 81a:68095 68G10 (68–06)
- ★Mathematical studies of information processing. Proceedings of the International Conference held in Kyoto, August 23–26, 1978. Edited by E. K. Blum, M. Paul and S. Takasu. Lecture Notes in Computer Science, 75. Springer-Verlag, Berlin-New York, 1979. viii + 629 pp. ISBN 3-540-09541-1 (Editors) 81f:68006 68–06
- ★FTCS-10. The 10th International Symposium on Fault-Tolerant Computing held in Kyoto, October 1–3, 1980. Digest of papers. IEEE Computer Society, New York, 1980. xix + 381 pp. (Editors) 81m:94002 94–06
- La Garde-Freinet** ★Colloque d'Analyse Harmonique et Complexe. (French) [Colloquium on complex and harmonic analysis] Held at La Garde-Freinet, June 20–25, 1977. Université d'Aix-Marseille I, UER de Mathématiques, Marseille, 1977. vii + 154 pp. (not consecutively pagged). (Editors) 81a:32001 32–06 (42–06)
- Lambda calculus** ★To H. B. Curry: essays on combinatory logic, lambda calculus and formalism. Edited by J. P. Seldin and J. R. Hindley. Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], London-New York, 1980. xxv + 606 pp. (1 plate). ISBN 0-12-349050-2 (Editors) 81f:03005 03–06 (03B40)
- Language design and programming methodology** ★Language design and programming methodology. Proceedings of a Symposium held in Sydney, September 10–11, 1979. Edited by Jeffrey M. Tobias. Lecture Notes in Computer Science, 79. Springer-Verlag, Berlin-New York, 1980. iv + 255 pp. ISBN 3-540-09745-7 (Editors) 81h:68002 68–06
- Languages** ★Automata, languages and programming. Proceedings of the Seventh International Colloquium held at Noordwijkerhout, July 14–18, 1980. Edited by J. W. de Bakker and J. van Leeuwen. Lecture Notes in Computer Science, 85. Springer-Verlag, Berlin-New York, 1980. viii + 671 pp. ISBN 3-540-10003-2 (From the preface) 81i:68004 68–06
- Laplace operator** ★Geometry of the Laplace operator. Proceedings of the Symposium in Pure Mathematics of the American Mathematical Society held at the University of Hawaii, Honolulu, Hawaii, March 27–30, 1979. Edited by Robert Osserman and Alan Weinstein. Proceedings of Symposia in Pure Mathematics, XXXVI. American Mathematical Society, Providence, R.I., 1980. vii + 323 pp. ISBN 0-8218-1439-7 (Editors) 81c:58002 58–06 (58G25)
- Large scale system models** ★Global and large scale system models. Proceedings of the Center for Advanced Studies (CAS) International Summer Seminar held in Dubrovnik, August 21–26, 1978. Edited by Branislav Lazarević. Lecture Notes in Control and Information Sciences, 19. Springer-Verlag, Berlin-New York, 1979. viii + 232 pp. ISBN 3-540-09637-X (Editors) 81a:93009 93A15 (93–06)
- Large-scale systems** ★Third Formator Symposium on Mathematical Methods for the Analysis of Large-Scale Systems. Proceedings of a Symposium held in Liblice, May 16–19, 1978. Edited by Jiří Benel and Lubomír Bakule. Academia [Publishing House of the Czechoslovak Academy of Sciences], Prague, 1979. 382 pp. (Editors) 81j:50007 93–06 (90–06, 92–06, 93A15)
- ★Simulation of distributed-parameter and large-scale systems. Proceedings of the IMACS European Simulation Meeting held at the University of Patras, Patras, October 2–4, 1979. Edited by S. G. Tzafestas. North-Holland Publishing Co., Amsterdam-New York, 1980. ix + 380 pp. ISBN 0-444-85447-9 (Editors) 81c:93004 93–06
- Large scale systems engineering** ★Handbook of large scale systems engineering applications. Edited by Madan G. Singh and André Titi. North-Holland Publishing Co., Amsterdam-New York, 1979. x + 564 pp. ISBN 0-444-85283-2 (Editors) 81d:93004 93–06 (90–06)
- Lausanne** ★Mathematical problems in theoretical physics. Proceedings of the International Conference on Mathematical Physics held in Lausanne, August 20–25, 1979. Edited by Konrad Osterwalder. Lecture Notes in Physics, 116. Springer-Verlag, Berlin-New York, 1980. viii + 412 pp. ISBN 3-540-09964-6 (Editors) 81f:81003 81–06
- Lawton, Okla.** ★Proceedings of the Conference on Convergence Structures. Held at Cameron University, Lawton, Okla., April 18–19, 1980. Edited by C. Riecke. Cameron University, Department of Mathematics, Lawton, Okla., 1980. ii + 173 pp. (Editors) 81m:54003 54–06
- Lecce** ★Nonlinear evolution equations and dynamical systems. Proceedings of the Meeting held at the University of Lecce, Lecce, June 20–23, 1979. Edited by M. Boiti, F. Pempinelli and G. Soliani. Lecture Notes in Physics, 120. Springer-Verlag, Berlin-New York, 1980. vi + 368 pp. ISBN 3-540-09971-9 (Editors) 81f:35004 35–06 (58–06, 70–06, 76–06)
- Lectures:**
- Problem Seminar on Mathematical Procedures** ★Vorträge aus dem Problemseminar Mathematische Verfahrenstechnik. (German) [Lectures from the Problem Seminar on Mathematical Procedures] Held in Weibg, November 6–10, 1978. Weiterbildungszentrum für Mathematische Kybernetik und Rechentechnik, Informationsverarbeitung, 36. Technische Universität Dresden, Dresden, 1979. 128 pp. (Editors) 81f:65002 65–06
- Leeds** ★Recursion theory: its generalisations and applications. Proceedings of Logic Colloquium '79 held at the University of Leeds, Leeds, August 5–14, 1979. Edited by F. R. Drake and S. S. Wainer. London Mathematical Society Lecture Note Series, 45. Cambridge University Press, Cambridge-New York, 1980. iv + 319 pp. ISBN 0-521-23543-X (Editors) 81j:03007 03–06 (03Dxx, 68–06)
- Leibniz in Paris** ★Leibniz à Paris (1672–1676). Tome I. (French) [Leibniz in Paris (1672–1676). Vol. I] Les sciences. [The sciences] Symposium of the G. W. Leibniz Society (Hannover) and of the Centre National de la Recherche Scientifique (CNRS) (Paris) held in Chantilly, November 14–18, 1976. Edited by Albert Heinekamp and Dieter Mettler. Studia Leibnitiana Supplementa, XVII. Franz Steiner Verlag GmbH, Wiesbaden, 1978. i + 242 pp. ISBN 3-515-02838-2 (Editors) 81m:01022a 01A45 (01A70)
- ★Leibniz à Paris (1672–1676). Tome II. (French) [Leibniz in Paris (1672–1676). Vol. II] La philosophie de Leibniz. [The philosophy of Leibniz] Symposium of the G. W. Leibniz Society (Hannover) and of the Centre National de la Recherche Scientifique (CNRS) (Paris) held in Chantilly, November 14–18, 1976. Edited by Albert Heinekamp, Dieter Mettler and Ingeborg von Wilucki. Studia Leibnitiana Supplementa, XVIII. Franz Steiner Verlag GmbH, Wiesbaden, 1978. i + 171 pp. ISBN 3-515-02839-0 (Editors) 81m:01022b 01A45 (01A70)
- Leicester** ★Mathematical methods in computer graphics and design. Proceedings of the Conference held at the University of Leicester, Leicester, September 28, 1978. Edited by K. W. Brodlee. The Institute of Mathematics and its Applications Conference Series. Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], London-New York, 1980. xi + 147 pp. ISBN 0-12-134880-6 (Editors) 81h:68010 68–06 (51–04)
- Leipzig** ★Lichtenstein-Festkolloquium. Held at the Karl-Marx-Universität, Leipzig, December 7–9, 1978, on the 100th anniversary of the birth of Leon Lichtenstein. W. Z. Karl-Marx-Universität Leipzig Math.-Natur. Reihe 29 (1980), no. 1, 1–70.
- Karl-Marx-Universität, Leipzig**, 1980. pp. i–iv and 1–76. (Editors) 81c:01001 01–06
- Lepton-hadron interactions** ★Hadron structure and lepton-hadron interactions.

- Proceedings of the Cargèse Summer Institute held in Cargèse, July, 1977. Edited by Maurice Lévy, Jean-Louis Basdevant, David Speiser, Jacques Weyers, Raymond Gastmans and Jean Zinn-Justin. NATO Advanced Study Institute Series, Ser. B: Physics, 39. Plenum Press, New York-London, 1979. viii + 736 pp. ISBN 0-306-40072-3 (Editors) **81a:81002** 81-06 (81G05, 81G15)
- Les Arcs** ★5th Conference on Automated Deduction. Held at Les Arcs, July 8-11, 1980. Edited by Wolfgang Bibel and Robert Kowalski. Lecture Notes in Computer Science, 87. Springer-Verlag, Berlin-New York, 1980. vii + 385 pp. ISBN 3-540-10009-1 (Editors) **81i:68006** 68-06 (03B35)
- Les Houches** ★Complex analysis, microlocal calculus and relativistic quantum theory. Proceedings of the International Colloquium held at the Centre de Physique, Les Houches, September 3-13, 1979. Edited by Daniel Jagolnitzer. Lecture Notes in Physics, 126. Springer-Verlag, Berlin-New York, 1980. viii + 502 pp. ISBN 3-540-09996-4 (Editors) **81e:81003** 81-06 (32-06, 35-06, 58-06, 82-06)
- Liblice** ★Third Formator Symposium on Mathematical Methods for the Analysis of Large-Scale Systems. Proceedings of a Symposium held in Liblice, May 16-19, 1978. Edited by Jiří Beneš and Lubomír Bakule. Academia [Publishing House of the Czechoslovak Academy of Sciences], Prague, 1979. 382 pp. (Editors) **81j:93007** 93-06 (90-06, 92-06, 93A15)
- Lichtenstein-Festkolloquium** ★Lichtenstein-Festkolloquium. Held at the Karl-Marx-Universität, Leipzig, December 7-9, 1978, on the 100th anniversary of the birth of Leon Lichtenstein. Wiss. Z. Karl-Marx-Universität Leipzig Math.-Natur. Reihe **29** (1980), no. 1, 1-70. Karl-Marx-Universität, Leipzig, 1980. pp. i-iv and 1-76. (Editors) **81i:01001** 01-06
- Lie-admissible formulations** ★Proceedings of the Second Workshop on Lie-Admissible Formulations. Part A. Review papers. Held at the Science Center, Harvard University, Cambridge, Mass., August 1-8, 1979. Hadronic J. **2** (1979), no. 6, 1252-2018. Hadronic Press, Inc., Nonantum, Mass., 1979. pp. 1252-2023. (Editors) **81a:81005a** 81-06 (17-06)
- ★Proceedings of the Second Workshop on Lie-Admissible Formulations. Part B. Research papers. Held at the Science Center, Harvard University, Cambridge, Mass., August 1-8, 1979. Hadronic J. **3** (1979/80), no. 1. Hadronic Press, Inc., Nonantum, Mass., 1980. pp. 1-725. (Editors) **81a:81005b** 81-06 (17-06)
- Lie groups** ★Analyse harmonique sur les groupes de Lie. II. (French) [Harmonic analysis on Lie groups. II] Séminaire Nancy-Strasbourg 1976-1978. Edited by Pierre Eymard, Jacques Faraut, Gérard Schiffmann and Reiji Takahashi. Lecture Notes in Mathematics, 739. Springer-Verlag, Berlin-New York, 1979. vi + 646 pp. ISBN 3-540-09536-5 (Editors) **81e:22002** 22-06 (43-06)
- ★Representation theory of Lie groups. Proceedings of the SRC/LMS Research Symposium held in Oxford, June 28-July 15, 1977. Edited by G. L. Luke. London Mathematical Society Lecture Note Series, 34. Cambridge University Press, Cambridge-New York, 1979. v + 341 pp. ISBN 0-521-22636-8 (A. U. Klimyk) **81j:22001** 22-06 (81C40)
- Limit theorems, random processes and their applications** ★Предельные теоремы, случайные процессы и их приложения. (Russian) [Limit theorems, random processes and their applications] Edited by S. H. Siraždinov. "Fan", Tashkent, 1979. 236 pp. (Editors) **81e:60001** 60-06 (62-06)
- Linear algebra** ★Вычислительные методы линейной алгебры. (Russian) [Numerical methods in linear algebra] Proceedings of the Third Seminar on Methods of Numerical and Applied Mathematics held in Novosibirsk, 1978. Edited by G. I. Martuk. Akad. Nauk SSSR Sibirsk. Otdel., Vysht. Centr, Novosibirsk, 1978. 120 pp. (Editors) **81b:65003b** 65-06
- Linear analysis on complex domains** ★Linear analysis on complex domains. (Japanese) Proceedings of a Symposium held at the Research Institute for Mathematical Sciences, Kyoto University, Kyoto, July 30-August 4, 1979. Shōkai-sekikenkyūshō Kōkyōroku No. 366 (1979). Kyoto University, Research Institute for Mathematical Sciences, Kyoto, 1979. pp. i-iii and 1-186. (Editors) **81a:30003** 30-06
- Linear differential n-person games** ★Задача группового преследования в линейных дифференциальных играх многих лиц. (Russian) [The group pursuit problem in linear differential n-person games] Edited by I. S. Rapoport. Akad. Nauk Ukrain. SSR Inst. Kibernet. Preprint No. 47 (1979). Akad. Nauk Ukrain. SSR, Inst. Kibernet., Kiev, 1979. pp. 1-47. (Editors) **81a:90003** 90D26 (90D25)
- Linear operators** ★Исследования по линейным операторам и теории функций. IX. (Russian) [Investigations on linear operators and the theory of functions. IX] Edited by N. K. Nikol'skii. Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI) **92** (1979). "Nauka" Leningrad. Otdel., Leningrad, 1979. pp. 1-328. (Editors) **81a:30001** 30-06
- ★Линейные операторы. (Russian) [Linear operators] Edited by I. V. Suveika. Mat. Issled. No. 54 (1980). "Shtiintsa", Kishinev, 1980. pp. 1-171. (Editors) **81i:47001** 47-XX
- Linguistics** ★Computational and mathematical linguistics. Proceedings of the International Conference on Computational Linguistics held in Pisa, August 27-September 1, 1973. Edited by A. Zampolli and N. Calzolari. Biblioteca dell' "Archivum Romanicum", Serie II: Linguistica [Library of the "Archivum Romanicum", Serie II: Linguistics], 36. Leo S. Olschki Editore, Florence, 1977. pp. 351-793. (Editors) **81b:68005** 68Fxx (68-06)
- Linz** ★Proceedings of the International Seminar on Fuzzy Set Theory. Held at the Institut für Mathematik, Johannes Kepler Universität, Linz, September 24-29, 1979. Edited by Erich Peter Klement. Johannes Kepler Universität, Linz, 1980. i + 146 pp. (Siegfried Gottwald) **81m:03067** 03E72 (03-06, 28A99, 54A40, 60E99, 94D05)
- Liverpool** ★Mathematical modelling of turbulent diffusion in the environment. Proceedings of the Conference held at the University of Liverpool, Liverpool, September 12-13, 1978. Edited by C. J. Harris. The Institute of Mathematics and its Applications Conference Series. Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], London-New York, 1979. xvi + 500 pp. ISBN 0-12-328350-7 (Editors) **81j:76051** 76F99 (76-06, 80A20)
- Ljubljana** ★Proceedings of the Fourth International Symposium on Network Theory. Held in Ljubljana, September 4-7, 1979. Georgi Publishing Co., St.-Saphorin; distributed by Renouf USA, Brookfield, Vt., 1979. 498 pp. ISBN 2-604-00033-4 (Editors) **81b:94003** 94-06 (94Cxx)
- Local time** ★Temps locaux. (French) [Local times] Exposé du Séminaire J. Arzima-M. Yor. Held at the Université Pierre et Marie Curie, Paris, 1976-1977. With an English summary. Astérisque, 52.53. Société Mathématique de France, Paris, 1978. ii + 223 pp. (Michael Sharpe) **81b:60042** 60G44 (60G48, 60J55)
- Locally compact groups** ★Representations of locally compact groups with applications. Part I, II. Colloquium held at the Mathematical Centre, Amsterdam, academic year 1977/78. Edited by T. H. Koornwinder. MC Syllabus, 38. Mathematisch Centrum, Amsterdam, 1979. iv + 496 pp. ISBN 90-6196-161-0, 90-6196-181-5 (A. U. Klimyk) **81k:22001** 22-02 (20Cxx, 22D10, 22E70, 43A05, 81C40)
- Logic** ★Proceedings from 5th Scandinavian Logic Symposium. Held in Aalborg, January 17-19, 1979. Edited by Finn V. Jensen, Brian H. Mayoh and Karen K. Møller. Aalborg University Press, Aalborg, 1979. vii + 361 pp. ISBN 87-7307-037-8 (Editors) **81m:03006** 03-06 (68-06)
- ★Mathematical logic in Latin America. Proceedings of the IV Latin American Symposium on Mathematical Logic held in Santiago, December 18-22, 1978. Edited by A. I. Arruda, R. Chuaqui and N. C. A. da Costa. Studies in Logic and the Foundations of Mathematics, 99. North-Holland Publishing Co., Amsterdam-New York, 1980. xii + 392 pp. ISBN 0-444-85402-9 (Editors) **81d:03002** 03-06
- ★Recursion theory: its generalisations and applications. Proceedings of Logic Colloquium '79 held at the University of Leeds, Leeds, August 5-14, 1979. Edited by F. R. Drake and S. S. Wainer. London Mathematical Society Lecture Note Series, 45. Cambridge University Press, Cambridge-New York, 1980. iv + 319 pp. ISBN 0-521-23543-X (Editors) **81j:03007** 03-06 (03Dxx, 68-06)
- ★Studies in inductive logic and probability. Vol. II. Edited by Richard C. Jeffrey. University of California Press, Berkeley, Calif., 1980. i + 305 pp. ISBN 0-520-03826-6 (Editors) **81j:03008** 03-06
- ★Proceedings of the Third Brazilian Conference on Mathematical Logic. Held at the Institute of Mathematics, Federal University of Pernambuco, Recife, December 17-22, 1979. Edited by Ayda I. Arruda, Newton C. A. da Costa and Antonio-Mario Sette. Sociedade Brasileira de Lógica, São Paulo, 1980. vi + 336 pp. (Editors) **81a:03005** 03-06
- Logico-algebraic approach to quantum mechanics** ★The logico-algebraic approach to quantum mechanics. Vol. I. Historical evolution. Edited by C. A. Hooker. University of Western Ontario Series in Philosophy of Science, 5. D. Reidel Publishing Co., Dordrecht-Boston, Mass., 1975. xv + 607 pp. ISBN 90-277-0567-4 (Editors) **81i:81003a** 81-03 (01A75, 03G12, 81B10)
- ★The logico-algebraic approach to quantum mechanics. Vol. II. Contemporary consolidation. Edited by C. A. Hooker. University of Western Ontario Series in Philosophy of Science, 5. D. Reidel Publishing Co., Dordrecht-Boston, Mass., 1979. xx + 466 pp. ISBN 90-277-0707-4, 90-277-0709-X (Editors) **81i:81003b** 81-06 (01A75, 03G12, 81B10)
- Logico-methodological problems of the natural sciences and the social sciences** ★Логико-методологические проблемы естественных и общественных наук. (Russian) [Logico-methodological problems of the natural sciences and the social sciences] Edited by V. V. Celiščev. "Nauka" Sibirsk. Otdel., Novosibirsk, 1977. 192 pp. (Editors) **81e:00010** 00A69 (00A25, 90A30, 92A20)
- London** ★EURO IFIP 79. Proceedings of the European Conference on Applied Information Technology of the International Federation for Information Processing held in London, September 25-28, 1979. Edited by P. A. Samet. North-Holland Publishing Co., Amsterdam-New York, 1979. xiv + 754 pp. ISBN 0-444-85370-7 (Editors) **81e:68003** 68-06 (94-06)
- London, Ont.** ★Foundations and applications of decision theory. Vol. I. Theoretical foundations. Papers from an International Workshop held at the University of Western Ontario, London, Ont., 1975. Edited by C. A. Hooker, J. J. Leach and E. F. McClennen. University of Western Ontario Series in Philosophy of Science, 13. D. Reidel Publishing Co., Dordrecht-Boston, Mass., 1978. xxiii + 446 pp. ISBN 90-277-0842-8 (Editors) **81a:90002a** 90A05
- ★Foundations and applications of decision theory. Vol. II. Epistemic and social applications. Papers from an International Workshop held at the University of Western Ontario, London, Ont., 1975. Edited by C. A. Hooker, J. J. Leach and E. F. McClennen. University of Western Ontario Series in Philosophy of Science, 13. D. Reidel Publishing Co., Dordrecht-Boston, Mass., 1978. xxiii + 208 pp. ISBN 90-277-0844-4 (Editors) **81a:90002b** 90A05
- ★Stellar turbulence. Proceedings of Colloquium 51 of the International Astronomical Union held at the University of Western Ontario, London, Ont., August 27-30, 1979. Edited by D. F. Gray and I. L. Linsky. Lecture Notes in Physics, 114. Springer-Verlag, Berlin-New York, 1980. viii + 308 pp. ISBN 3-540-09737-6 (Editors) **81j:85001** 85-06 (76F99)
- Los Angeles, Calif.** ★Conference Proceedings of the Twelfth Annual ACM Symposium on Theory of Computing. Papers presented at the Symposium held in Los Angeles, Calif., April 18-30, 1980. Association for Computing Machinery (ACM), New York, 1980. v + 447 pp. ISBN 0-89791-017-6 (Editors) **81j:68006** 68-06
- L'vov** ★Труды седьмой Всесоюзной школы-семинара по статистической гидроакустике. (Russian) [Proceedings of the Seventh All-Union School-Seminar on Statistical Hydroacoustics] Held at L'vov, September 4-9, 1975. Edited by V. V. Olshevskii and N. G. Zagorukko. Akad. Nauk SSSR Sibirsk. Otdel., Inst. Mat., Novosibirsk, 1977. 327 pp. (Editors) **81a:60010** 76-06 (93E11)
- Lynby** ★Dynamics and instability of fluid interfaces. Proceedings of a Meeting held at the Technical University of Denmark, Lynby, May 1978. Edited by T. S. Sørensen. Lecture Notes in Physics, 105. Springer-Verlag, Berlin-New York, 1979. v + 315 pp. ISBN 3-540-09524-1 (Editors) **81j:76045** 76E99
- Machine intelligence** ★Machine intelligence. Vol. 9. Edited by J. E. Hayes, Donald Michie and L. I. Mikulich [L. I. Mikulić]. Ellis Horwood Ltd., Chichester; Halsted Press [John Wiley & Sons], New York-Chichester-Brisbane, 1979. viii + 486 pp. ISBN 0-85312-112-5 (From the publishers description) **81f:68100** 68Gxx (03Dxx, 68-06)
- Madison, Wis.** ★Theoretical methods in medium-energy and heavy-ion physics. Proceedings of the NATO Advanced Studies Institute on Theoretical Nuclear Physics held at the University of Wisconsin, Madison, Wis., June 12-23, 1978. Edited by K. W. McVoy and William Albert Friedman. NATO Advanced Study Institute Series, Ser. B:

- Physics, 38. *Plenum Press, New York-London*, 1978. xii + 749 pp. ISBN 0-306-40062-6 (M. J. Męczyński) 81b:81030 81G35 (81-06, 81F20)
- ★FTCS-9. The Ninth Annual International Symposium on Fault-Tolerant Computing held at Madison, Wis., June 20-22, 1979. Digest of papers. *IEEE Computer Society, New York*, 1979. xi + 235 pp. (Editors) 81m:94001 94-06
- ★Dynamics and modelling of reactive systems. Proceedings of the Advanced Seminar held at the Mathematics Research Center, University of Wisconsin, Madison, Wis., October 22-24, 1979. Edited by Warren E. Stewart, W. Harmon Ray and Charles C. Conley. Publication of the Mathematics Research Center, University of Wisconsin, 44. *Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], New York-London*, 1980. xi + 413 pp. ISBN 0-12-669550-4 (Editors) 81b:80001 80-06 (80A30)
- ★The Kleene Symposium. Proceedings of the Symposium held at the University of Wisconsin, Madison, Wis., June 18-24, 1978. Edited by Jon Barwise [K. Jon Barwise], H. Jerome Keisler and Kenneth Kunen. Studies in Logic and the Foundations of Mathematics, 101. *North-Holland Publishing Co., Amsterdam-New York*, 1980. xx + 425 pp. (1 plate). ISBN 0-444-85345-6 (Editors) 81j:83009 03-06
- ★Analysis and computation of fixed points. Proceedings of a Symposium held at the Mathematics Research Center, University of Wisconsin, Madison, Wis., May 7-8, 1979. Edited by Stephen M. Robinson. Publication of the Mathematics Research Center, University of Wisconsin, 43. *Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], New York-London*, 1980. ix + 413 pp. ISBN 0-12-590240-9 (Editors) 81j:65003 65-06 (90-06)
- ★Singular perturbations and asymptotics. Proceedings of an Advanced Seminar held at the Mathematics Research Center, University of Wisconsin, Madison, Wis., May 28-30, 1980. Edited by Richard E. Meyer and Seymour V. Parter. Publication of the Mathematics Research Center, University of Wisconsin, 45. *Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], New York-London*, 1980. ix + 409 pp. ISBN 0-12-493260-6 (Editors) 81m:34001 34-06 (34Exx)
- Madrid** ★Actas de las Primeras Jornadas Matemáticas Hispano-Lusitanas. (Spanish) [Proceedings of the First Spanish-Portuguese Mathematical Conference] Held in Madrid, April 24-28, 1973. *Consejo Superior de Investigaciones Científicas, Madrid*, 1977. 687 pp. (1 plate). ISBN 94-00-03607-7 (Editors) 81j:00009 00A10
- Manhattan, Kan.** ★Proceedings of the 16th Midwestern Mechanics Conference. Held at Kansas State University, Manhattan, Kan., September 19-21, 1979. Edited by S. C. Sinha, P. G. Kirmser and C. L. D. Huang. Developments in Mechanics, 10. *Kansas State University, College of Engineering, Manhattan, Kan.*, 1979. ix + 321 pp. (loose errata) (Editors) 81m:73010 73-06
- Manifolds** ★Геометрия погруженных многообразий. (Russian) [Geometry of imbedded manifolds] Edited by V. T. Bazylev. *Moskov. Gos. Ped. Inst., Moscow*, 1978. 123 pp. (Editors) 81c:53002 53-06
- ★Group actions on manifolds and equivariant homotopy. (Japanese) Proceedings of a Symposium held at the Research Institute for Mathematical Sciences, Kyoto University, Kyoto, June 5-7, 1979. *Shinkaiseikikenshūsho Kōkyōroku* No. 365 (1979). *Kyoto University, Research Institute for Mathematical Sciences, Kyoto*, 1979. pp. i-ii and 1-104. (Editors) 81m:57001 57-06
- Mappings** ★Теория функций и отображений. (Russian) [Theory of functions and mappings] Edited by G. D. Suvorov. "Naukova Dumka", Kiev, 1979. 180 pp. (Editors) 81b:30002 30-06 (32-06, 42B99)
- Markov approach** ★Евклидова квантовая теория поля. (Russian) [Euclidean quantum field theory] Марковский подход. [The Markov approach] Translation from the English edited by R. A. Minlos. Edited by A. N. Kolmogorov and S. P. Novikov. Математика: Новое в Зарубежной Науке [Mathematics: Recent Publications in Foreign Science], 12. "Mir", Moscow, 1978. 288 pp. (Editors) 81f:81002 81-06 (81Exx)
- Marktoberdorf** ★Program construction. International Summer School held in Marktoberdorf, July 26-August 6, 1978. Edited by F. L. Bauer and M. Broy. Lecture Notes in Computer Science, 69. *Springer-Verlag, Berlin-New York*, 1979. vii + 651 pp. ISBN 3-540-09251-X (Editors) 81j:68007 68-06 (68Bxx)
- Marseille** ★Symbolic and algebraic computation. EUROSAM '79, an International Symposium held in Marseille, June 1979. Edited by Edward W. Ng. Lecture Notes in Computer Science, 72. *Springer-Verlag, Berlin-New York*, 1979. xv + 557 pp. ISBN 3-540-09519-5 (Editors) 81d:68005 68-06 (68C20)
- Mathematical analysis** ★Математический анализ. (Russian) [Mathematical analysis] Edited by A. N. Šerstnev. *Kazan. Gos. Univ., Kazan*, 1978. 124 pp. (Editors) 81b:00006 00A10
- ★Theory of numbers, mathematical analysis and their applications. A collection of papers dedicated to Academician Ivan Matveevič Vinogradov on his eighty-fifth birthday. A translation of Trudy Mat. Inst. Steklov 142 (1976). Edited by S. M. Nikol'skii. Proc. Steklov Inst. Math. 1979. no. 3. *American Mathematical Society, Providence, R.I.*, 1979. pp. i-vi and 1-289 (1 plate). (Editors) 81a:00014 00A10 (10-06)
- ★Математический анализ. Том 17. (Russian) [Mathematical analysis. Vol. 17] Edited by R. V. Gamkrelidze. Itogi Nauki i Tekhniki. [Progress in Science and Technology] Akad. Nauk SSSR, Vsesojuz. Inst. Nauch. i Tehn. Informacii, Moscow, 1979. 272 pp. (loose errata). (Editors) 81d:00002 00A10
- ★Математический анализ. Том 18. (Russian) [Mathematical analysis. Vol. 18] Edited by R. V. Gamkrelidze. Itogi Nauki i Tekhniki. [Progress in Science and Technology] Akad. Nauk SSSR, Vsesojuz. Inst. Nauch. i Tehn. Informacii, Moscow, 1980. 308 pp. (loose errata). (Editors) 81j:00006 00A10
- Mathematical analysis and the theory of functions** ★Математический анализ и теория функций. Вып. 8. (Russian) [Mathematical analysis and the theory of functions. No. 8] Edited by I. I. Bavrin. *Moskov. Oblast. Ped. Inst. im. Krupskoi, Moscow*, 1977. 169 pp. (Editors) 81c:32001 32-06 (30-06)
- Mathematical economics** ★Convex analysis and mathematical economics. Proceedings of a Symposium held at the University of Tilburg, Tilburg, February 20, 1978. Edited by Jacobus Kriens. Lecture Notes in Economics and Mathematical Systems, 168. *Springer-Verlag, Berlin-New York*, 1979. v + 136 pp. ISBN 3-540-09247-1 (Editors) 81j:90001 90-06 (49-06)
- Mathematical encyclopedia** ★Математическая энциклопедия. Том 1: А-Г. (Russian) [Mathematical encyclopedia. Vol. 1: A-G] Edited by I. M. Vinogradov, V. I. Bitjukov and Ju. V. Prohorov. "Sovet. Ėnciklopedija", Moscow, 1977. 1152 cols. (R. P. Boas, Jr.) 81c:00000 00A20
- ★Математическая энциклопедия. Том 2: Д-К. (Russian) [Mathematical encyclopedia. Vol. 2: D-K] Edited by I. M. Vinogradov, V. I. Bitjukov and Ju. V. Prohorov. "Sovet. Ėnciklopedija", Moscow, 1979. 1114 cols. (R. P. Boas, Jr.) 81c:00000 00A20
- Mathematical foundations of computer science** ★Mathematical foundations of computer science, 1979. Proceedings of the 8th Symposium held in Olomouc, September 3-7, 1979. Edited by Jiří Bečvář. Lecture Notes in Computer Science, 74. *Springer-Verlag, Berlin-New York*, 1979. ix + 580 pp. ISBN 3-540-09526-8 (Editors) 81c:68004 68-06
- ★Mathematical foundations of computer science, 1980. Proceedings of the Ninth Symposium held in Rydzyna, September 1-5, 1980. Edited by P. Dembiński. Lecture Notes in Computer Science, 88. *Springer-Verlag, Berlin-New York*, 1980. viii + 723 pp. ISBN 3-540-10027-X (Editors) 81c:68003 68-06
- Mathematical functions** ★Справочник по специальным функциям с формулами, графиками и математическими таблицами. (Russian) [Handbook of mathematical functions with formulas, graphs and mathematical tables] Translated from the English by V. A. Ditkin and L. N. Karmazinaja. Edited by M. Abramovic [Milton Abramowitz] and I. Stigan [Irene A. Stegun]. With an introduction by M. Abramovic [M. Abramowitz]. "Nauka", Moscow, 1979. 831 pp. (Editors) 81j:00014 00A22 (33-01, 65A05)
- Mathematical logic** ★Исследования по теории алгоритмов и математической логике. (Russian) [Studies in the theory of algorithms and mathematical logic] Edited by A. A. Markov and V. I. Horič. "Nauka", Moscow, 1979. 135 pp. (Editors) 81j:03003 03-06
- Mathematical logic in Latin America** ★Mathematical logic in Latin America. Proceedings of the IV Latin American Symposium on Mathematical Logic held in Santiago, December 18-22, 1978. Edited by A. I. Arruda, R. Chuquín and N. C. A. da Costa. Studies in Logic and the Foundations of Mathematics, 99. *North-Holland Publishing Co., Amsterdam-New York*, 1980. xii + 392 pp. ISBN 0-444-85402-9 (Editors) 81d:03002 03-06
- Mathematical methods in computer graphics and design** ★Mathematical methods in computer graphics and design. Proceedings of the Conference held at the University of Leicester, Leicester, September 28, 1978. Edited by K. W. Brodlić. The Institute of Mathematics and its Applications Conference Series. *Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], London-New York*, 1980. xi + 147 pp. ISBN 0-12-134880-6 (Editors) 81b:68010 68-06 (51-04)
- Mathematical methods in economic research** ★Математические методы в экономическом исследовании. (Russian) [Mathematical methods in economic research] Edited by G. M. Manija. "Mecniereba", Tbilisi, 1979. 240 pp. (Editors) 81c:90004 90-06
- Mathematical methods in operations research and reliability theory** ★Математические методы исследования операций и теории надежности. (Russian) [Mathematical methods in operations research and reliability theory] Edited by I. N. Kovalenko [I. M. Kovalenko], Ju. M. Ermol'ev and Ju. M. Kaniovskii. *Akad. Nauk Ukrain. SSR, Inst. Kibernet., Kiev*, 1980. 92 pp. (Editors) 81m:60002 60-06
- Mathematical methods of optimization and structuring of systems** ★Математические методы оптимизации и структурирования систем. (Russian) [Mathematical methods of optimization and structuring of systems] Edited by Ju. A. Abramov. *Kaliningrad. Gos. Univ., Kaliningrad*, 1979. 188 pp. (Editors) 81j:93002 93-06
- Mathematical modeling** ★Proceedings of the First International Conference on Mathematical Modeling. Vol. I, II, III, IV, V. Held in St. Louis, Mo., August 29-September 1, 1977. Edited by Xavier J. R. Avila. *University of Missouri-Rolla, Department of Engineering Mechanics, Rolla, Mo.*, 1977. x + 2646 pp. (Editors) 81j:90005 90-06 (92-06, 93-06)
- ★Proceedings of the Second International Conference on Mathematical Modeling. Vol. I, II. Held at St. Louis, Mo., July 11-13, 1979. Edited by Xavier J. R. Avila, Richard Bellman, Yudell L. Luke and A. K. Rigler. *University of Missouri-Rolla, Rolla, Mo.*, 1980. xi + 1310 pp. (Editors) 81j:00027 00A69 (00A10)
- ★Нейроботаника и математическое моделирование жизненных процессов. (Russian) [Neurobotanics and mathematical modeling of living processes] Edited by Ju. G. Antomov and K. A. Ivanov-Murmovskii. *Akad. Nauk Ukrain. SSR, Inst. Kibernet., Kiev*, 1979. 91 pp. (Editors) 81j:92002 92-06
- Mathematical modeling of planning and control processes** ★Математическое моделирование процессов планирования и управления. (Russian) [Mathematical modeling of planning and control processes] Edited by Ju. N. Pečerskii. *Mat. Issled.* No. 60 (1980). "Štiraica", Kishinev, 1980. pp. 1-76. (Editors) 81g:90003 90-06
- Mathematical modelling in biology and ecology** ★Mathematical modelling in biology and ecology. Proceedings of a Symposium held in Pretoria, July 5-6, 1979. Edited by Wayne M. Getz. Lecture Notes in Biomathematics, 33. *Springer-Verlag, Berlin-New York*, 1980. viii + 355 pp. ISBN 3-540-09735-X (Editors) 81j:92001 92-06
- Mathematical modelling of turbulent diffusion in the environment** ★Mathematical modelling of turbulent diffusion in the environment. Proceedings of the Conference held at the University of Liverpool, Liverpool, September 2-13, 1978. Edited by C. J. Harris. The Institute of Mathematics and its Applications Conference Series. *Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], London-New York*, 1979. xvi + 500 pp. ISBN 0-12-328350-7 (Editors) 81j:76051 76F99 (76-06, 80A20)
- Mathematical models of behavior** ★Математические модели поведения. (Russian) [Mathematical models of behavior] Edited by O. V. Šimel'fenig. *Saratov. Gos. Univ., Saratov*, 1978. 127 pp. (Editors) 81a:90005 90-06
- Mathematical models of mechanisms of pathological processes** ★Математические модели механизмов патологических процессов. (Russian) [Mathematical models of mechanisms of pathological processes] Edited by M. A. Hanin and I. B. Buharov. *Voprosy Kibernet. (Moscow)* No. 49 (1979). *Akad. Nauk SSSR, Nauch. Soet. po Kompleksnoi Probleme "Kibernetika", Moscow*, 1979. pp. 1-136. (Table of contents) 81f:92007 92A07
- Mathematical physics** ★Теория кубатурных формул и приложения функционального анализа к задачам математической физики. (Russian) [Theory of cubature formulas and the application of functional analysis to problems of mathematical physics] Edited by S. V. Uspenskii. Труды Семпара С. Л. Соболева, No. 1 [Proceedings of the S. L. Sobolev Seminar, No. 1], 1976. *Akad. Nauk SSSR Sibirsk. Otdel., Inst. Mat.*,

Nosovsk, 1976. 168 pp. (Editors) 81a:65009 65-06

★Крайние задачи математической физики. (Russian) [Boundary value problems of mathematical physics] Edited by Ju. A. Mitropol'skii [Ju. O. Mitropol'skii]. *Akad. Nauk Ukrain. SSR, Inst. Mat., Kiev*, 1978. 182 pp. (Editors) 81a:60006 65-06

★Теория кубатурных формул и приложения функционального анализа к задачам математической физики. (Russian) [Theory of cubature formulas and the application of functional analysis to problems of mathematical physics] Edited by S. V. Uspenskii. Труды Семинара С. Л. Соболева, No. 1 [Proceedings of the S. L. Sobolev Seminar, No. 1], 1978. *Akad. Nauk SSSR Sibirsk. Otdel., Inst. Mat., Novosibirsk*, 1978. 168 pp. (one plate). (Editors) 81a:65010 65-06

★Вариационно-разностные методы в математической физике. (Russian) [Variational-difference methods in mathematical physics] Proceedings of the All-Union Conference held in Novosibirsk, 1977. Edited by G. I. Marčuk. *Akad. Nauk SSSR Sibirsk. Otdel., Vychisl. Centr., Novosibirsk*, 1978. 230 pp. (Editors) 81b:65007 65-06

★Случайные процессы в задачах математической физики. (Russian) [Random processes in problems of mathematical physics] Edited by A. V. Skorohod. *Akad. Nauk Ukrain. SSR, Inst. Mat., Kiev*, 1979. 154 pp. (Editors) 81b:60002 60-06

★Крайние задачи математической физики. 10. (Russian) [Boundary value problems of mathematical physics. 10] Edited by O. A. Ladyženskaja, S. M. Nikol'skii and E. A. Volkov. Труды Мат. Инст. Стеклова. 147 (1980). "Наука" Leningrad. Otdel., Leningrad, 1980. pp. 1-204. (Editors) 81a:35001 35-06

★Крайние задачи математической физики и смежные вопросы теории функций. 12. (Russian) [Boundary value problems of mathematical physics and related questions in the theory of functions. 12] Edited by O. A. Ladyženskaja. Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI) 96 (1980). "Наука" Leningrad. Otdel., Leningrad, 1980. pp. 1-312. (Editors) 81b:35002 35-06

Mathematical problems of chemical thermodynamics ★Математические проблемы химической термодинамики. (Russian) [Mathematical problems of chemical thermodynamics] Edited by V. A. Mihalov. Итоги Науки и Техники. "Наука" Sibirsk. Otdel., Novosibirsk, 1980. 120 pp. (Editors) 81b:80001 80-06

Mathematical problems in theoretical physics ★Mathematical problems in theoretical physics. Proceedings of the International Conference on Mathematical Physics held in Lausanne, August 20-25, 1979. Edited by Konrad Osterwalder. Lecture Notes in Physics, 116. Springer-Verlag, Berlin-New York, 1980. viii + 412 pp. ISBN 3-540-09964-6 (Editors) 81b:81003 81-06

Mathematical programming ★Survey of mathematical programming. Vol. 1. Proceedings of the Ninth International Mathematical Programming Symposium held in Budapest, August 23-27, 1976. Edited by András Prékopa. North-Holland Publishing Co., Amsterdam-Oxford-New York, 1979. 550 pp. ISBN 0-444-85033-3 (Editors) 81g:90004a 90-06

★Survey of mathematical programming. Vol. 2. Proceedings of the Ninth International Mathematical Programming Symposium held in Budapest, August 23-27, 1976. Edited by András Prékopa. North-Holland Publishing Co., Amsterdam-Oxford-New York, 1979. 590 pp. ISBN 0-444-85033-3 (Editors) 81g:90004b 90-06

★Survey of mathematical programming. Vol. 3. Proceedings of the Ninth International Mathematical Programming Symposium held in Budapest, August 23-27, 1976. Edited by András Prékopa. North-Holland Publishing Co., Amsterdam-Oxford-New York, 1979. 414 pp. ISBN 0-444-85033-3 (Editors) 81g:90004c 90-06

★Studies on mathematical programming. Based on papers presented at the Third Conference on Mathematical Programming held at Mátrafüred, January 31-February 6, 1975. Edited by A. Prékopa. Mathematical Methods of Operations Research, 1. Akadémiai Kiadó (Publishing House of the Hungarian Academy of Sciences), Budapest, 1980. 200 pp. ISBN 963-05-1854-6 (Editors) 81b:90009 90-06

Mathematical programming at Oberwolfach ★Mathematical programming at Oberwolfach. Proceedings of a Conference held at the Mathematisches Forschungsinstitut, Oberwolfach, May 6-12, 1979. Edited by Heinz König, Bernhard Korte and Klaus Ritter. Math. Programming Stud. No. 14 (1981). North-Holland Publishing Co., Amsterdam-New York, 1981. pp. i-viii and 1-257. (Editors) 81k:49001 49-06

Mathematical statistics ★Вероятностные процессы и математическая статистика. (Russian) [Random processes and mathematical statistics] Edited by S. H. Siraždinov. "Fan", Tashkent, 1978. 192 pp. (Editors) 81a:60004 60-06 (28-06, 62-06)

★Теория вероятностей. Математическая статистика. Теоретическая кибернетика. Том 17. (Russian) [Probability theory. Mathematical statistics. Theoretical cybernetics. Vol. 17] Edited by R. V. Gamkrelidze. Итоги Науки и Техники. [Progress in Science and Technology] Akad. Nauk SSSR, Vsesojuz. Inst. Nauch. i Tehn. Informacii, Moscow, 1979. 195 pp. (loose errata). (Editors) 81e:62002 62-06 (68-06)

★Третья международная летняя школа по теории на вероятностные и математическая статистика. (Bulgarian) [Third International Summer School on Probability Theory and Mathematical Statistics] Held in Varna, May 10-20, 1978. Edited by B. Penkov and I. Stojanov. B'lgar. Akad. Nauk, Sofia, 1980. 194 pp. (Editors) 81j:60004 60-06

★Mathematical statistics. Edited by Robert Bartoszyński, Jacek Koronacki and Ryszard Zieliński. Banach Center Publications, 6. PWN—Polish Scientific Publishers, Warsaw, 1980. 376 pp. ISBN 83-01-01493-8 (Editors) 81m:62004 62-06

Mathematical statistics and probability theory ★Mathematical statistics and probability theory. Proceedings of the Sixth International Conference held in Włocławek, December 7-13, 1978. Edited by Witold Klonecki, Andrzej Kozek and Jan Rosiński. Lecture Notes in Statistics, 2. Springer-Verlag, New York-Heidelberg, 1980. xxii + 373 pp. ISBN 0-387-90493-X (Editors) 81g:62006 62-06 (60-06)

Mathematical studies of information processing ★Mathematical studies of information processing. Proceedings of the International Conference held in Kyoto, August 23-26, 1978. Edited by E. K. Blum, M. Paul and S. Takasu. Lecture Notes in Computer Science, 75. Springer-Verlag, Berlin-New York, 1979. viii + 629 pp. ISBN 3-540-09541-1 (Editors) 81f:68006 68-06

Mathematician-pedagogues of Kiev ★Киевские математики-педагоги. (Russian) [Mathematician-pedagogues of Kiev] Edited by A. N. Bogolubov. "Vil'na Škola", Kiev, 1979. 312 pp. (E. M. Bruina) 81d:01018 01A55 (01A60)

Mathematics today ★Mathematics today. Twelve informal essays. Edited by Lynn Arthur Steen. Reprint of the 1978 edition. Vintage Books [Random House], New York, 1980.

viii + 367 pp. ISBN 0-394-74503-5 (Editors) 81k:90002 00A05

Mátrafüred ★Studies on mathematical programming. Based on papers presented at the Third Conference on Mathematical Programming held at Mátrafüred, January 31-February 6, 1975. Edited by A. Prékopa. Mathematical Methods of Operations Research, 1. Akadémiai Kiadó (Publishing House of the Hungarian Academy of Sciences), Budapest, 1980. 200 pp. ISBN 963-05-1854-6 (Editors) 81b:90009 90-06

Measure theory ★Measure theory. Oberwolfach 1979. Proceedings of a Conference held at Oberwolfach, July 1-7, 1979. Edited by Dietrich Kötter. Lecture Notes in Mathematics, 794. Springer-Verlag, Berlin-New York, 1980. xv + 573 pp. ISBN 3-540-09979-4 (Editors) 81d:28001 28-06 (46-06, 60-06)

Mechanics ★Сборник по вопросам механики и прикладной математики. (Russian) [Collection of questions on mechanics and applied mathematics] Edited by V. A. Sapa. Kazakh. Gos. Univ., Alma-Ata, 1978. 226 pp. (Editors) 81a:00007 00A10

★Современные проблемы теоретической и прикладной механики. (Russian) [Current problems in theoretical and applied mechanics] Proceedings of the Fourth All-Union Congress on Theoretical and Applied Mechanics held in Kiev, May 21-28, 1976. Edited by G. S. Pisarenko. "Naukova Dumka", Kiev, 1978. 412 pp. (Editors) 81b:70001 70-06 (73-06, 76-06)

★Nonlinear analysis and mechanics: Heriot-Watt Symposium. Vol. II. Edited by R. J. Knops. Research Notes in Mathematics, 27. Pitman Publishing, Ltd., London-San Francisco, Calif., 1978. v + 285 pp. ISBN 0-273-08420-8 (Editors) 81f:73003 73-06

★Trends in applications of pure mathematics to mechanics. Vol. II. Papers presented at the Second Symposium held in Kozubnik, September, 1977. Edited by Henryk Zorski. Monographs and Studies in Mathematics, 5. Pitman Publishing, Ltd., London-San Francisco, Calif., 1979. viii + 341 pp. ISBN 0-273-08421-6 (Editors) 81a:73003 73-06

★Общая механика. Том 4. (Russian) [General mechanics. Vol. 4] Edited by L. I. Sedov and G. K. Mihalov. Итоги Науки и Техники. [Progress in Science and Technology] Akad. Nauk SSSR, Vsesojuz. Inst. Nauch. i Tehn. Informacii, Moscow, 1979. 143 pp. (Editors) 81d:70001 70-06

★Nonlinear analysis and mechanics: Heriot-Watt Symposium. Vol. IV. Edited by R. J. Knops. Research Notes in Mathematics, 39. Pitman (Advanced Publishing Program), San Francisco, Calif.-London, 1979. iii + 212 pp. ISBN 0-8224-8461-7 (Editors) 81f:73001 73-06 (58-06, 73C50)

★Теоретическая и прикладная механика. (Russian) [Theoretical and applied mechanics] Труды XIV Международного Конгресса ИЮТАМ. [Proceedings of the 14th IUTAM Congress] Held at Delft, August 30-September 4, 1976. Papers translated from the English. Edited by G. K. Mihalov. With a preface by M. A. Lavrent'ev. "Mir", Moscow, 1979. 767 pp. (Editors) 81k:76048 76N15 (70K99, 73M99, 86A10)

★Proceedings of the 16th Midwestern Mechanics Conference. Held at Kansas State University, Manhattan, Kan., September 19-21, 1979. Edited by S. C. Sinha, P. G. Kirmser and C. L. D. Huang. Developments in Mechanics, 10. Kansas State University, College of Engineering, Manhattan, Kan., 1979. ix + 321 pp. (loose errata). (Editors) 81m:73010 73-06

★Взаимодействие в механике конструкций. (Russian) [Interaction in the mechanics of constructions] Edited by Ju. A. Sevjakov. "Vil'na Škola", Kiev, 1980. 88 pp. (Editors) 81m:73007 73-02 (73C35, 73T05)

Mechanics and computers ★Механика и компьютер. Том 2. (Polish) [Mechanics and computers. Vol. 2] Metoda elementów skończonych w teorii konstrukcji. [The finite element method in construction theory]. Państwowe Wydawnictwo Naukowe (PWN), Warsaw, 1980. 298 pp. ISBN 83-01-01151-3 (Editors) 81m:73008 73-06

Mechanics of controllable motion ★Механика управляемого движения. (Russian) [Mechanics of controllable motion] Edited by V. V. Novozilov. Вопросы Механики и Процессы Управления [Questions of Mechanics and Control Processes], 3. Leningrad. Univ., Leningrad, 1979. 204 pp. (Editors) 81c:70002 70-06 (93B05)

Mechanics of a solid deformable body ★Механика деформируемого твердого тела. Том 13. (Russian) [Mechanics of a solid deformable body. Vol. 13] Edited by L. I. Sedov. Итоги Науки и Техники. [Progress in Science and Technology] Akad. Nauk SSSR, Vsesojuz. Inst. Nauch. i Tehn. Informacii, Moscow, 1980. 300 pp. (Editors) 81k:73054 73J05 (73C99)

Mechanics today ★Mechanics today. Vol. 5. Edited by S. Nemat-Nasser. Pergamon Mechanics Today Series. Pergamon Press, Oxford-New York, 1980. ix + 569 pp. ISBN 0-08-024249-9 (Editors) 81j:73003 73-06

Medium-energy physics ★Theoretical methods in medium-energy and heavy-ion physics. Proceedings of the NATO Advanced Studies Institute on Theoretical Nuclear Physics held at the University of Wisconsin, Madison, Wis., June 12-23, 1978. Edited by K. W. McVoy and William Albert Friedman. NATO Advanced Study Institute Series, Ser. B: Physics, 38. Plenum Press, New York-London, 1978. xii + 749 pp. ISBN 0-306-40662-6 (M. J. Męczyński) 81b:81030 81G35 (81-06, 81F20)

Meeting

AMASES ★Atti del Primo Convvegno A.M.A.S.E.S. (Italian) [Proceedings of the First AMASES Meeting] Held in Pisa, November 4-5, 1977. G. Giappichelli, Editore, Turin, 1979. viii + 393 pp. (Editors) 81c:90002 90-06

American Society of Mechanical Engineering ★Finite element methods for convection dominated flows. Papers presented at the Winter Annual Meeting of the American Society of Mechanical Engineers held in New York, December 2-7, 1979. Edited by Thomas J. R. Hughes. AMD, 34. American Society of Mechanical Engineers (ASME), New York, 1979. v + 224 pp. (Editors) 81c:76001 76-06 (65N30)

American Statistical Association ★Statistics and earth sciences—the challenge for the 80's and statistical problems in exploration and resource evaluation of energy fuels. Papers presented at sessions held as part of the American Statistical Association Annual Meeting, Washington, D.C., August 13-16, 1979. Edited by Richard B. MacCammon. J. Internat. Assoc. Math. Geol. 12 (1980), no. 5. Plenum Press, New York-London, 1980. pp. 415-522. (Editors) 81j:86001 86-06

Deutsche Gesellschaft für Operations Research ★Proceedings in Operations Research. 7. (German) Papers of the Sixth Annual Meeting of the Deutsche Gesellschaft für Operations Research (DGOR) held at Christian-Albrechts-Universität, Kiel, September 21-23, 1977. Edited by K. Brockhoff, W. Dinkelbach, P. Kall, D. B. Pressmar and K. Spicher. Physica Verlag, Würzburg, 1978. 536 pp. ISBN 3-7908-0194-1 (Editors) 81c:90003a 90-06 (62-06)

Meeting: (continued)

- ★Proceedings in Operations Research. 8. (German) Papers of the Seventh Annual Meeting of the Deutsche Gesellschaft für Operations Research (DGOR) held at the Freie Universität Berlin, Berlin, October 4-6, 1978. Edited by K.-W. Gaede, D. B. Pressmar, Ch. Schneeweiß, K.-P. Schuster and O. Seifert. Physica Verlag, Würzburg, 1979. 700 pp. ISBN 3-7908-0212-3 (Editors) 81e:90003b 90-06 (62-06)**
- ★Proceedings in Operations Research. 9. (German) Papers of the Eighth Annual Meeting of the Deutsche Gesellschaft für Operations Research (DGOR) held in Regensburg, September 19-21, 1979. Edited by J. Schwarze, L. von Dobschütz, B. Fleischmann, Ch. Schneeweiß and H. Steckhan. Physica Verlag, Würzburg, 1980. 668 pp. ISBN 3-7908-0223-9 (Editors) 81e:90003c 90-06 (62-06)**
- Dynamics and Instability of Fluid Interfaces** ★Dynamics and instability of fluid interfaces. Proceedings of a Meeting held at the Technical University of Denmark, Lyngby, May 1978. Edited by T. S. Sørensen. Lecture Notes in Physics, 105. Springer-Verlag, Berlin-New York, 1979. v + 315 pp. ISBN 3-540-09524-1 (Editors) 81j:76045 76E99
- IMACS European Simulation** ★Simulation of distributed-parameter and large-scale systems. Proceedings of the IMACS European Simulation Meeting held at the University of Patras, Patras, October 2-4, 1979. Edited by S. G. Tzafestas. North-Holland Publishing Co., Amsterdam-New York, 1980. ix + 380 pp. ISBN 0-444-85447-9 (Editors) 81c:93004 93-06
- Nonlinear Evolution Equations and Dynamical Systems** ★Nonlinear evolution equations and dynamical systems. Proceedings of the Meeting held at the University of Lecce, Lecce, June 20-23, 1979. Edited by M. Bioti, F. Pimpinelli and G. Soliani. Lecture Notes in Physics, 120. Springer-Verlag, Berlin-New York, 1980. vi + 368 pp. ISBN 3-540-09971-9 (Editors) 81f:35004 35-06 (58-06, 70-06, 76-06)
- Operator Theory and Functional Analysis** ★Operator theory and functional analysis. Papers presented at the 1978 Summer Meeting of the American Mathematical Society held in Providence, R.I. Edited by I. Erdélyi. Research Notes in Mathematics, 38. Pitman (Advanced Publishing Program), San Francisco, Calif.-London, 1979. iv + 164 pp. ISBN 0-8224-8450-1 (Editors) 81e:47003 47-06 (46-06)
- Stochastic Programming** ★Recent results in stochastic programming. Proceedings of a Meeting held in Oberwolfach, January 28-February 3, 1979. Edited by Peter Kall and András Prékopa. Lecture Notes in Economics and Mathematical Systems, 179. Springer-Verlag, Berlin-New York, 1980. ix + 237 pp. ISBN 3-540-10013-X (Editors) 81i:90008 90-06 (62-06, 90C15)
- Time Series** ★Analysing time series. Proceedings of the International Conference (ITSM) held in Guernsey, October 22-26, 1979. Edited by Oliver D. Anderson. North-Holland Publishing Co., Amsterdam-New York, 1980. vi + 419 pp. ISBN 0-444-85464-9 (Editors) 81f:62002 62-06
- ★Time series. Proceedings of the International Meeting held at Nottingham University, Nottingham, March 26-30, 1979. Edited by Oliver D. Anderson. North-Holland Publishing Co., Amsterdam-New York, 1980. viii + 446 pp. ISBN 0-444-85418-5 (Editors) 81i:62006 62-06 (62M10, 90A20)**
- Melbourne** ★Numerical simulation of fluid motion. Proceedings of an International Conference on the Numerical Simulation of Fluid Dynamic Systems held at Monash University, Melbourne, 1976. Edited by John Noye. North-Holland Publishing Co., Amsterdam-New York, 1978. ix + 580 pp. ISBN 0-444-85035-X (P. C. Jain) 81a:76005 76-06 (65P05)
- ★Information processing 80. Proceedings of the IFIP Congress held in Tokyo, October 6-9, 1980, and in Melbourne, October 14-17, 1980. Edited by Simon H. Lavington. IFIP Congress Series, 8. North-Holland Publishing Co., Amsterdam-New York, 1980. xiii + 1070 pp. ISBN 0-444-86034-7 (Editors) 81i:68009 68-06**
- Mengenlehre** ★Mengenlehre. (German) [Set theory] Edited by Ulrich Felgner. Wissenschaftliche Buchgesellschaft, Darmstadt, 1979. vii + 331 pp. ISBN 3-534-06711-8 (Editors) 81f:01050a 01A75 (03-03, 04-03)
- Methodological problems of mathematics** ★Методологические проблемы математики. (Russian) [Methodological problems of mathematics] Edited by Ju. F. Borisov. "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. 303 pp. (Editors) 81a:30002 03-06 (00A25)
- Methodology of interaction** ★Methodology of interaction. Seillac II. Proceedings of the IFIP Workshop held at Seillac, May 1979. Edited by Richard A. Guedj, Paul J. W. ten Hagen, F. Robert A. Hoppood, Hugh A. Tucker and David A. Duce. North-Holland Publishing Co., Amsterdam-New York, 1980. xiii + 408 pp. ISBN 0-444-85479-7 (Editors) 81i:68011 68-06
- Methodology in systems modelling and simulation** ★Methodology in systems modelling and simulation. Proceedings of the Symposium on Modelling and Simulation Methodology held at the Weizmann Institute of Science, Rehovot, August 13-18, 1978. Edited by Bernard P. Zeigler, Maurice S. Elzas, George J. Klir and Tuncer I. Ören. North-Holland Publishing Co., Amsterdam-New York, 1979. xv + 537 pp. ISBN 0-444-85340-5 (Editors) 81c:68079a 68J05
- Methods and applications in adaptive control** ★Methods and applications in adaptive control. Proceedings of an International Symposium held at the Ruhr-Universität Bochum, Bochum, March 20-21, 1980. Edited by H. Unbehauen. Lecture Notes in Control and Information Sciences, 24. Springer-Verlag, Berlin-New York, 1980. vi + 309 pp. ISBN 3-540-10226-4 (Editors) 81c:93038 93C40 (93-06)
- Methods in operations research and reliability theory in systems of analysis** ★Методы исследования операций и теория надежности в анализе систем. (Russian) [Methods in operations research and reliability theory in systems of analysis] Edited by I. N. Kovalenko [Kovalenko, I. M.], Ju. M. Ermol'ev and Ju. M. Kaniovskii. Akad. Nauk Ukrain. SSR, Inst. Kibernet., Kiev, 1979. 103 pp. (Editors) 81m:90001 90-06
- Metric questions of the theory of functions** ★Метрические вопросы теории функций. (Russian) [Metric questions of the theory of functions] Edited by G. D. Suvorov. "Naukova Dumka", Kiev, 1980. 164 pp. (Editors) 81j:30002 30-06
- Milton Keynes** ★Graph theory and combinatorics. Proceedings of the Conference held at the Open University, Milton Keynes, May 12, 1978. Edited by Robin J. Wilson. Research Notes in Mathematics, 34. Pitman (Advanced Publishing Program), San Francisco, Calif.-London, 1979. ii + 148 pp. ISBN 0-273-08435-6 (Editors) 81h:05004 05-06
- Minimal submanifolds and geodesics** ★Minimal submanifolds and geodesics. Proceedings of the Japan-United States Seminar held in Tokyo, September 19-22, 1977. Edited by Morio Obata. North-Holland Publishing Co., Amsterdam-New York, 1979. x + 292 pp. (I plate). ISBN 0-444-85327-8 (Editors) 81d:53002 53-06
- Modeling** ★Performance of computer systems. Proceedings of the Fourth International Symposium on Modelling and Performance Evaluation of Computer Systems held in Vienna, February 6-8, 1979. Edited by Mátyás Arató, Alexandre Butrimenko and E. Gelenbe. North-Holland Publishing Co., Amsterdam-New York, 1979. ix + 565 pp. ISBN 0-444-85332-4 (Editors) 81a:68006 68-06
- ★Methodology in systems modelling and simulation. Proceedings of the Symposium on Modelling and Simulation Methodology held at the Weizmann Institute of Science, Rehovot, August 13-18, 1978. Edited by Bernard P. Zeigler, Maurice S. Elzas, George J. Klir and Tuncer I. Ören. North-Holland Publishing Co., Amsterdam-New York, 1979. xv + 537 pp. ISBN 0-444-85340-5 (Editors) 81c:68079a 68J05**
- ★Mathematical modelling of turbulent diffusion in the environment. Proceedings of the Conference held at the University of Liverpool, Liverpool, September 12-13, 1978. Edited by C. J. Harris. The Institute of Mathematics and its Applications Conference Series. Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], London-New York, 1979. xvi + 500 pp. ISBN 0-12-328350-7 (Editors) 81j:76051 76F99 (76-06, 80A20)**
- ★Математическое моделирование процессов планирования и управления. (Russian) [Mathematical modeling of planning and control processes] Edited by Ju. N. Pečerskii. Mat. Issled. No. 60 (1980). "Štintsa", Kishinev, 1980. pp. 1-76. (Editor) 81c:90003 90-06**
- Modelling and differential equations in biology** ★Modelling and differential equations in biology. Papers presented at a Conference held at Southern Illinois University, Carbondale, Ill., June 5-9, 1978. Edited by T. A. Burton. Lecture Notes in Pure and Applied Mathematics, 58. Marcel Dekker, Inc., New York, 1980. viii + 277 pp. ISBN 0-8247-1075-4 (Editors) 81i:92002 92-06
- Modelling languages and software for hybrid computer systems** ★Языки моделирования и программное обеспечение гибридных вычислительных систем. (Russian) [Modelling languages and software for hybrid computer systems] Edited by B. Ja. Kogan. Voprosy Kibernet. (Moscow) No. 46 (1978). "Sovet. Radio", Moscow, 1978. pp. 1-183. (Editors) 81c:68005 68-06 (18B99, 93A10)
- Modelling of dynamical systems** ★Modelling of dynamical systems. Vol. 1. Edited by Harold Nicholson. IEE Control Engineering Series, 12. Peter Peregrinus, Ltd., Stevenage, 1980. xi + 227 pp. ISBN 0-906048-38-9 (Editors) 81m:93005 93-06
- Models. Algorithms. Decision making** ★Модели. Алгоритмы. Принятие решений. (Russian) [Models. Algorithms. Decision making] Edited by I. Š. Pinsker. "Nauka", Moscow, 1979. 252 pp. (Editors) 81a:62003 62-06
- Models of arithmetic** ★Modèles de l'arithmétique. (French) [Models of arithmetic] Paper presented at the Seminar held at the University of Paris VII, Paris, 1977. Edited by K. McAloon. Astérisque, 73. Société Mathématique de France, Paris, 1980. 155 pp. (Editor) 81j:03006 03-06 (03F30, 03H15)
- Models of biological growth** ★Conference on Models of Biological Growth and Spread. Mathematical theories and applications. Held in Heidelberg, July 16-21, 1979. Adv. in Appl. Probab. 12 (1980), no. 3, 543-573. Applied Probability Trust, Sheffield, 1980. pp. 543-823. (Editors) 81c:92001 92A05
- Models and methods of investigating economic systems** ★Модели и методы исследования экономических систем. (Russian) [Models and methods of investigating economic systems] Edited by E. L. Berljand and B. G. Mirkin. "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. 224 pp. (Editors) 81a:90006 90-06
- Modern algebra** ★Современная алгебра. (Russian) [Modern algebra] Группы и их гомоморфизмы. [Groups and their homomorphisms] Edited by E. S. Ljapin. Leningrad. Gos. Ped. Inst., Leningrad, 1980. 160 pp. (Editors) 81i:20001 20-06
- Modern trends in the theory of condensed matter** ★Modern trends in the theory of condensed matter. Proceedings of the XVI Karpacz Winter School of Theoretical Physics held in Karpacz, February 19-March 3, 1979. Edited by Andrzej Pekalski and Jerzy A. Przystawa. Lecture Notes in Physics, 115. Springer-Verlag, Berlin-New York, 1980. ix + 597 pp. ISBN 3-540-09752-X (Editors) 81h:82002 82-06
- Module theory** ★Symposia Mathematica. Vol. XXIII. Conference on Abelian Groups and their Relationship to the Theory of Modules held at the Istituto Nazionale di Alta Matematica Francesco Severi (INDAM), Rome, December 12-16, 1977. Academic Press, London-New York, 1979. 457 pp. (Editors) 81a:20005 20-06 (16-06)
- Modules** ★Кольца и модули. 2. (Russian) [Rings and modules. 2] Edited by Z. I. Borevii and A. I. Skopin. Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI) 94 (1979). "Nauka" Leningrad. Otdel., Leningrad, 1979. pp. 1-152. (Editors) 81c:00005 00A10
- Moffett Field, Calif.** ★Proceedings of the 1980 Army Numerical Analysis and Computers Conference. Held at the NASA Ames Research Center, Moffett Field, Calif., February 20-21, 1980. ARO Report 80, 3. U. S. Army Research Office, Research Triangle Park, N.C., 1980. xiv + 481 pp. (Editors) 81m:65007 65-06 (68-06)
- Mons** ★Logic Colloquium '78. Proceedings of the Colloquium held in Mons, August 24-September 1, 1978. Edited by Maurice Boffa, Dirk van Dalen and Kenneth McAloon. Studies in Logic and the Foundations of Mathematics, 97. North-Holland Publishing Co., Amsterdam-New York, 1979. x + 434 pp. ISBN 0-444-85378-2 (Editors) 81a:03001 03-06
- Monterey, Calif.** ★Information linkage between applied mathematics and industry. II. Proceedings of the Second Annual Workshop held in Monterey, Calif., February 22-24, 1979. Edited by Arthur L. Schoenstadt, Frank D. Faulkner, Richard Franke and I. Ben Russak. Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], New York-London, 1980. xii + 293 pp. ISBN 0-12-628750-3 (Editors) 81j:93004 93-06
- Montpellier** ★Problèmes théoriques liés aux nouvelles particules. (French) [Theoretical problems associated with the new particles] Held at Montpellier, May 23-28, 1977. Colloques Nationaux du Centre National de la Recherche Scientifique [National Colloquia of the CNRS], 937. Éditions du Centre National de la Recherche Scientifique (CNRS), Paris, 1978. 449 pp. ISBN 2-222-02209-6 (Editors) 81d:81001 81-06 (35-06)

Montreal, Que. ★Geometrical and topological methods in gauge theories. Proceedings of the Canadian Mathematical Society Summer Research Institute held at McGill University, Montreal, Que., September 3-8, 1979. Edited by John Harnad and Steven Shnider. Lecture Notes in Physics, 129. Springer-Verlag, Berlin-New York, 1980. viii + 155 pp. ISBN 3-540-10010-5 (Editors) 81c:81005 81-06 (53-06, 58-06, 81E10, 83C99)

★Combinatorics 79. Part I. Proceedings of the Colloquium held at the University of Montreal, Montreal, Que., June 11-16, 1979. Edited by M. Deza and I. G. Rosenberg. Ann. Discrete Math. 8 (1980). North-Holland Publishing Co., Amsterdam-New York, 1980. pp. i-xxii and 1-309. (Editors) 81c:05001a 05-06

★Combinatorics 79. Part II. Proceedings of the Colloquium held at the University of Montreal, Montreal, Que., June 11-16, 1979. Edited by M. Deza and I. G. Rosenberg. Ann. Discrete Math. 9 (1980). North-Holland Publishing Co., Amsterdam-New York, 1980. pp. i-vii and 1-309. (Editors) 81c:05001b 05-06

Motion of single- and multiphase media ★Движение одно- и многофазных сред. (Russian) [Motion of single- and multiphase media] Edited by D. F. Faizullov. "Fan", Tashkent, 1980. 116 pp. (Editors) 81m:76002 76-06 (76T05, 80A25)

Multiple criteria decision making, theory and application ★Multiple criteria decision making, theory and application. Proceedings of the Third Conference held at Hagen/Königswinter, August 20-24, 1979. Edited by Günter Fandel and Tomáš Gál. Lecture Notes in Economics and Mathematical Systems, 177. Springer-Verlag, Berlin-New York, 1980. xvi + 570 pp. ISBN 3-540-09963-8 (Editors) 81c:90002 90-06 (92A25)

Multiple-valued logic ★Proceedings of the Eighth International Symposium on Multiple-Valued Logic. Held in Rosemont, Ill., 1978. IEEE Computer Society Publications Office, Long Beach, Calif., 1978. v + 298 pp. (Editors) 81c:94001 94-06 (03B50, 68-06)

Multivariate analysis ★Multivariate analysis. V. Proceedings of the Fifth International Symposium held at the University of Pittsburgh, Pittsburgh, Pa., June 19-24, 1978. Edited by Paruchuri R. Krishnaiah. North-Holland Publishing Co., Amsterdam-New York, 1980. x + 677 pp. ISBN 0-444-85321-9 (Editors) 81c:62004 62-06 (60-06)

Multivariate statistical analysis ★Multivariate statistical analysis. Proceedings of the Second Conference on Multivariate Statistical Inference held at Dalhousie University, Halifax, N.S., October 5-7, 1979. Edited by R. P. Gupta. North-Holland Publishing Co., Amsterdam-New York, 1980. viii + 289 pp. ISBN 0-444-86019-3 (Editors) 81m:62005 62-06

Mysore ★Proceedings of the Conference on Mathematical Methods in Physics. Part A. Theoretical physics. Held at Mysore, August 28-31, 1978. Matscience Report, 96. Institute of Mathematical Sciences, Madras, 1979. iii + ii + 310 pp. (Editors) 81c:00014a 00A69

★Proceedings of the Conference on Mathematical Methods in Physics. Part B. Differential equations. Held at Mysore, August 28-31, 1978. Matscience Report, 96. Institute of Mathematical Sciences, Madras, 1979. ii + 155 pp. (Editors) 81c:00014b 00A69

★Proceedings of the Conference on Probability, Stochastic Processes and Statistical Mechanics. Held at Mysore, March 26-29, 1979. Edited by N. R. Ranganathan and R. Sridhar. Matscience Report, 97. Institute of Mathematical Sciences, Madras, 1979. iii + 202 pp. (Editors) 81j:60003 60-06 (81D05)

Nancy-Strasbourg ★Analyse harmonique sur les groupes de Lie. II. (French) [Harmonic analysis on Lie groups. II] Séminaire Nancy-Strasbourg 1976-1978. Edited by Pierre Eymard, Jacques Faraut, Gérard Schiffmann and Reiji Takahashi. Lecture Notes in Mathematics, 739. Springer-Verlag, Berlin-New York, 1979. vi + 646 pp. ISBN 3-540-09536-5 (Editors) 81c:22002 22-06 (43-06)

Natick, Mass. ★Proceedings of the Twenty-Fifth Conference on the Design of Experiments. Held in Natick, Mass., October 17-19, 1979. ARO Report 80, 2. U. S. Army Research Office, Research Triangle Park, N.C., 1980. xxix + 243 pp. (Editors) 81c:65009a 65C05

NATO Advanced Study Institute:
Bifurcation Phenomena in Mathematical Physics and Related Topics ★Bifurcation phenomena in mathematical physics and related topics. Proceedings of the NATO Advanced Study Institute held at Cargèse, June 24-July 7, 1979. Edited by Claude Bardos and Daniel Bessis. NATO Advanced Study Institute Series. Ser. C: Mathematical and Physical Sciences, 54. D. Reidel Publishing Co., Dordrecht-Boston, Mass.-London, 1980. ix + 596 pp. ISBN 90-271-1086-4 (Editors) 81f:00012 00A69 (35-06, 58-06, 81-06, 82-06)

Recent Advances in Group Theory and their Application to Spectroscopy ★Recent advances in group theory and their application to spectroscopy. Proceedings of the NATO Advanced Study Institute held at St. Francis Xavier University, Antigonish, N.S., August 6-20, 1978. Edited by John C. Donini. NATO Advanced Study Institute Series. Ser. B: Physics, 43. Plenum Press, New York-London, 1979. xii + 692 pp. ISBN 0-306-40172-X (Editors) 81a:81006 81-06 (81C40, 81G40, 81G50)

Synthesis and Analysis Methods for Safety and Reliability Studies ★Synthesis and analysis methods for safety and reliability studies. Proceedings of the NATO Advanced Study Institute held in Urbino, July 3-14, 1978. Edited by G. Apostolakis, S. Garbiba and G. Volta. Plenum Press, New York-London, 1980. ix + 463 pp. ISBN 0-306-40316-1 (Editors) 81j:93008 93-06 (90-06, 94-06)

Theoretical Nuclear Physics ★Theoretical methods in medium-energy and heavy-ion physics. Proceedings of the NATO Advanced Study Institute on Theoretical Nuclear Physics held at the University of Wisconsin, Madison, Wis., June 12-23, 1978. Edited by K. W. McVoy and William Albert Friedman. NATO Advanced Study Institute Series. Ser. B: Physics, 38. Plenum Press, New York-London, 1978. xii + 749 pp. ISBN 0-306-40062-6 (M. J. Męczyński) 81b:81030 81G35 (81-06, 81F20)

NATO Summer School:
Advanced Technology ★Advanced technology. Edited by Boris Rybak. Proceedings of the NATO Summer School held in Paris, June 30-July 13, 1978. NATO Advanced Study Institute Series. Ser. E: Applied Sciences, 31. Sijthoff & Noordhoff, Alphen aan den Rijn-Germantown, Md., 1979. x + 703 pp. ISBN 90-286-0299-2 (Editors) 81a:92001 92-06

Navier-Stokes problems ★Approximation methods for Navier-Stokes problems. Proceedings of the Symposium held at the University of Paderborn, Paderborn, September 9-15, 1979. Edited by R. Rautmann. Lecture Notes in Mathematics, 771. Springer-Verlag, Berlin-New York, 1980. xvi + 581 pp. ISBN 3-540-09734-1 (Editors) 81a:76004 76-06

Net theory and its applications ★Net theory and applications. Proceedings of the Advanced Course on General Net Theory of Processes and Systems held in Hamburg, October 8-9, 1979. Edited by Wilfried Brauer. Lecture Notes in Computer Science, 84. Springer-Verlag, Berlin-New York, 1980. xiii + 537 pp. ISBN 3-540-10001-6 (From the preface) 81f:68002 68-02 (68B20, 68D90)

Network theory ★Proceedings of the Fourth International Symposium on Network Theory. Held in Ljubljana, September 4-7, 1979. Georgi Publishing Co., St. Saphorin; Distributed by Renof USA, Brookfield, Vt., 1979. 498 pp. ISBN 2-604-00033-4 (Editors) 81b:40003 94-06 (94Cxx)

Neuenahr ★[Special issue on physical concepts in tissue growth]. Papers presented at an International Workshop held in Neuenahr, November 22-24, 1979. Collect. Phenom. 3, no. 3-4. (1981). Gordon & Breach Science Publishers, New York, 1981. pp. i and 139-320. (Editors) 81m:92029 92A09

Neurobiology and mathematical modeling of living processes ★Нейробиология и математическое моделирование живых процессов. (Russian) [Neurobiology and mathematical modeling of living processes] Edited by Ju. G. Antonov and K. A. Ivanov-Muromskii. Akad. Nauk Ukrain. SSR, Inst. Kibernet., Kiev, 1979. 91 pp. (Editors) 81j:92002 92-06

New approaches to nonlinear problems in dynamics ★New approaches to nonlinear problems in dynamics. Proceedings of a Conference held in Pacific Grove, Calif., December 9-14, 1979. Edited by Philip J. Holmes. Society for Industrial and Applied Mathematics (SIAM), Philadelphia, Pa., 1980. xii + 529 pp. ISBN 0-89871-167-3 (Editors) 81c:00006 00A69 (34Cxx, 58Fxx)

New Delhi ★Proceedings of the Symposium on the 1500th Birth Anniversary of Āryabhaṭa I. Held in New Delhi, November 2-4, 1976. Indian J. Hist. Sci. 12 (1977), no. 2, 83-244. Indian National Science Academy, New Delhi, 1977. pp. 83-245. (Editors) 81a:01008 01A32

New Orleans, La. ★Proceedings of the Conference on Semigroups in honor of Alfred H. Clifford. Held at Tulane University, New Orleans, La., September 1-3, 1978. Edited by William R. Neco. Reprints and Lecture Notes in Mathematics. Tulane University, New Orleans, La., 1979. viii + 240 pp. (Editors) 81a:20004 20-06 (06F05)

★Quantum theory and gravitation. Proceedings of a Symposium held at Loyola University, New Orleans, La., May 23-26, 1979. Edited by A. R. Marlow. Academic Press [Harcourt Brace Jovanovich, Publishers], New York-London-Toronto, Ont., 1980. x + 267 pp. ISBN 0-12-473260-7 (Editors) 81d:83003 83-06 (81-06, 83C45)

New perspectives on Galileo ★New perspectives on Galileo. Edited by Robert E. Butts and Joseph C. Pitt. University of Western Ontario Series in Philosophy of Science, 14. D. Reidel Publishing Co., Dordrecht-Boston, Mass., 1978. xvi + 262 pp. ISBN 90-277-0859-2, 90-277-0891-6 (N. Swerdlow) 81a:01013 01A45 (01A70)

New York ★Finite element methods for convection dominated flows. Papers presented at the Winter Annual Meeting of the American Society of Mechanical Engineers held in New York, December 2-7, 1979. Edited by Thomas J. R. Hughes. AMD, 34. American Society of Mechanical Engineers (ASME), New York, 1979. v + 224 pp. (Editors) 81c:76001 76-06 (65N30)

Nice ★Vector bundles and differential equations. Proceedings of a Conference held in Nice, June 12-17, 1979. Edited by André Hirschowitz. Progress in Mathematics, 7. Birkhäuser, Boston, Mass., 1980. v + 249 pp. ISBN 3-7643-3022-8 (Editors) 81b:14002 14-06 (81E10)

Nijmegen ★Analytical and numerical approaches to asymptotic problems in analysis. Proceedings of the Conference held at the University of Nijmegen, Nijmegen, June 9-13, 1980. Edited by O. Axelsson, L. S. Frank and A. van der Sluis. North-Holland Mathematics Studies, 47. North-Holland Publishing Co., Amsterdam-New York, 1981. xvi + 381 pp. ISBN 0-444-86131-9 (Editors) 81m:69005 65-06 (35-06, 92-06)

Nonclassical logics ★Исследования по неклассическим логикам и теории множеств. (Russian) [Studies in nonclassical logics and set theory] Edited by A. I. Mikhailov. "Nauka", Moscow, 1979. 374 pp. (Editors) 81f:03003 03-06

Nonholonomic spaces ★Lucrările Conferinței Naționale de Spații Neolonomice. (Romanian) [Proceedings of the National Conference on Nonholonomic Spaces] Held at Iași, May 28-30, 1976. Editura Academiei Republicii Socialiste România, Bucharest, 1979. 176 pp. (Editors) 81b:53002 53-06

Nonlinear acoustics ★8e Symposium International sur l'Acoustique Non Linéaire. (French) [8th International Symposium on Nonlinear Acoustics] Held at the École Nationale Supérieure de Chimie de Paris, Paris, July 3-6, 1978. J. Physique 40 (1979), no. 11 suppl. Colloque C-8. Société Française de Physique, Orsay, 1979. pp. i-iv and C8-1-C8-365. (Editors) 81c:76033 76Q05

Nonlinear analysis ★A survey on the theoretical and numerical trends in nonlinear analysis. I. Proceedings of the Third Seminar on Functional Analysis and its Applications (S.A.F.A. III) held in Bari, September 27-October 5, 1978. Confer. Sem. Mat. Univ. Bari No. 158-162 (1979). Editori Laterza, Bari, 1979. pp. i-iv and 1-180. (Editors) 81b:00007 00A10

★A survey on the theoretical and numerical trends in nonlinear analysis. II. Proceedings of the Third Seminar on Functional Analysis and its Applications (S.A.F.A. III) held in Bari, September 27-October 5, 1978. Confer. Sem. Mat. Univ. Bari No. 163-168 (1979) (1980). Editori Laterza, Bari, 1980. pp. 181-398. (Editors) 81b:47055 47Hxx (65-06)

Nonlinear analysis, function spaces and applications ★Nonlinear analysis, function spaces and applications. Proceedings of a Spring School held in Horni Bradlo, May 21-26, 1978. Edited by Svatopluk Fučík and Alois Kufner. Teubner-Texte zur Mathematik. [Teubner Texts in Mathematics] BSB B. G. Teubner Verlagsgesellschaft, Leipzig, 1979. 224 pp. (Editors) 81c:46001 46-06

Nonlinear analysis and mechanics: Heriot-Watt Symposium ★Nonlinear analysis and mechanics: Heriot-Watt Symposium. Vol. II. Edited by R. J. Knops. Research Notes in Mathematics, 27. Pitman Publishing, Ltd., London-San Francisco, Calif., 1978. v + 285 pp. ISBN 0-273-08420-8 (Editors) 81c:73003 73-06

★Nonlinear analysis and mechanics: Heriot-Watt Symposium. Vol. IV. Edited by

- R. J. Knops. *Research Notes in Mathematics*, 39. Pitman (Advanced Publishing Program), San Francisco, Calif.-London, 1979. iii + 212 pp. ISBN 0-8224-8461-7 (Editors) **81h:73001** 73-06 (58-06, 73C50)
- Nonlinear boundary value problems** ★Constructive methods for nonlinear boundary value problems and nonlinear oscillations. Proceedings of the Conference held at the Mathematical Research Institute, Oberwolfach, November 19-25, 1978. Edited by J. Albrecht, L. Collatz and K. Kirchgässner. International Series of Numerical Mathematics, 48. Birkhäuser Verlag, Basel-Boston, Mass., 1979. 190 pp. ISBN 3-7643-1098-7 (Editors) **81a:65006** 65-06
- Nonlinear eigenvalue problems** ★Bifurcation and nonlinear eigenvalue problems. Proceedings of a Session held at the Université de Paris XIII, Villetaneuse, October 2-4, 1978. Edited by C. Bardos, J. M. Lasry and M. Schatzman. Lecture Notes in Mathematics, 782. Springer-Verlag, Berlin-New York, 1980. viii + 296 pp. ISBN 3-540-09758-9 (Editors) **81c:35001** 35-06 (00A69, 35B32, 58E07)
- Nonlinear electromagnetics** ★Nonlinear electromagnetics. Edited by Piergiorgio L. E. Uslenghi. Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], New York-London, 1980. x + 426 pp. ISBN 0-12-709660-4 (Editors) **81j:78001** 78-06 (35Q20, 76X05)
- Nonlinear evolution equations** ★Studies on some nonlinear evolution equations. Seminarberichte [Seminar Reports], 17. Humboldt Universität, Sektion Mathematik, Berlin, 1979. 197 pp. (not consecutively paged). (Editors) **81i:35003** 35-06 (76A10, 76R99)
- Nonlinear evolution equations and dynamical systems** ★Nonlinear evolution equations and dynamical systems. Proceedings of the Meeting held at the University of Lecce, Lecce, June 20-23, 1979. Edited by M. Bötti, F. Pimpinelli and G. Soliani. Lecture Notes in Physics, 120. Springer-Verlag, Berlin-New York, 1980. vi + 368 pp. ISBN 3-540-09971-9 (Editors) **81i:35004** 35-06 (58-06, 70-06, 76-06)
- Nonlinear fluid mechanics** ★Special issue: computational methods in nonlinear fluid mechanics. Comput. & Fluids 8 (1980), no. 2. Pergamon Press, Oxford-New York-Toronto, Ont., 1980. pp. i-iii and 155-274. (Editors) **81d:76002** 76-04
- Nonlinear mechanics** ★Асимптотические методы в теории нелинейных колебаний. (Russian) [Asymptotic methods in the theory of nonlinear oscillations] Proceedings of the All-Union Conference on Asymptotic Methods in Nonlinear Mechanics held in Kaciveli, April 22-25, 1977. Edited by Ju. A. Mitropol'skii [Ju. O. Mitropol'skii]. "Naukova Dumka", Kiev, 1979. 279 pp. (Editors) **81a:34002** 34-06 (34C15, 34Exx)
- ★Асимптотические методы нелинейной механики. (Russian) [Asymptotic methods of nonlinear mechanics] Edited by Ju. A. Mitropol'skii [Ju. O. Mitropol'skii]. Akad. Nauk Ukrain. SSR, Inst. Mat., Kiev, 1979. 200 pp. (Editors) **81a:34003** 34-06
- ★Computational methods in nonlinear mechanics. Proceedings of the TICOM Second International Conference held at the University of Texas, Austin, Tex., March 26-29, 1979. Edited by J. Tinsley Oden. North-Holland Publishing Co., Amsterdam-New York, 1980. viii + 539 pp. ISBN 0-444-85382-0 (Editors) **81c:73002** 73-06 (65N30)
- Nonlinear optimization** ★Nonlinear optimization. Theory and algorithms. Proceedings of the International Summer School held at the University of Bergamo, Bergamo, September 1979, and repeated at the Hatfield Polytechnic, Hatfield, July 1980. Edited by L. C. W. Dixon, E. Spedicato and G. P. Szegö. Birkhäuser, Boston, Mass., 1980. vi + 486 pp. ISBN 3-7643-3020-1 (Editors) **81i:65006** 65-06
- Nonlinear oscillations** ★Constructive methods for nonlinear boundary value problems and nonlinear oscillations. Proceedings of the Conference held at the Mathematical Research Institute, Oberwolfach, November 19-25, 1978. Edited by J. Albrecht, L. Collatz and K. Kirchgässner. International Series of Numerical Mathematics, 48. Birkhäuser Verlag, Basel-Boston, Mass., 1979. 190 pp. ISBN 3-7643-1098-7 (Editors) **81a:65006** 65-06
- Nonlinear oscillations in biology** ★Nonlinear oscillations in biology. Proceedings of the Tenth Summer Seminar on Applied Mathematics held at the University of Utah, Salt Lake City, Utah, June 12-23, 1978. Edited by Frank C. Hoppensteadt. Lectures in Applied Mathematics, 17. American Mathematical Society, Providence, R.I., 1979. x + 253 pp. ISBN 0-8218-1117-7 (Editors) **81a:92002** 92-06 (34-06, 58-06)
- Nonlinear partial differential equations in engineering and applied science** ★Nonlinear partial differential equations in engineering and applied science. Proceedings of a Conference held at the University of Rhode Island, Kingston, R.I., June 4-8, 1979. Edited by Robert L. Sternberg, Anthony J. Kalinowski and John S. Papadakis. Lecture Notes in Pure and Applied Mathematics, 54. Marcel Dekker, Inc., New York-Basel, 1980. xvi + 480 pp. ISBN 0-8247-6996-1 (Editors) **81d:35002** 35-06
- Nonlinear systems** ★Classical and quantum aspects of completely integrable nonlinear systems. (Japanese) Proceedings of a Symposium held at the Research Institute for Mathematical Sciences, Kyoto University, Kyoto, November 19-22, 1979. Sūrikaiseikikenkyūsho Kōkyūroku No. 375 (1980). Kyoto University, Research Institute for Mathematical Sciences, Kyoto, 1980. pp. i-iii and 1-184. (Editors) **81m:35001** 35-06 (58-06, 81-06, 82-06)
- Nonmonotonic logic** ★Special issue on nonmonotonic logic. Edited by Daniel G. Bobrow. Artificial Intelligence 13 (1980), no. 1-2, 1-172. North-Holland Publishing Co., Amsterdam, 1980. pp. 1-174. (Editors) **81d:68119** 68Gxx (03B60, 68-06)
- Nonregular curves** ★Теория нерегулярных кривых в различных геометрических пространствах. (Russian) [The theory of nonregular curves in various geometric spaces] Edited by M. A. Tačlin. Kazah. Gos. Univ., Alma-Ata, 1979. 136 pp. (Editors) **81c:60007** 00A10 (03-06)
- Noordwijkerhout** ★Automata, languages and programming. Proceedings of the Seventh International Colloquium held at Noordwijkerhout, July 14-18, 1980. Edited by J. W. de Bakker and J. van Leeuwen. Lecture Notes in Computer Science, 85. Springer-Verlag, Berlin-New York, 1980. viii + 671 pp. ISBN 3-540-10003-2 (From the preface) **81i:68004** 68-06
- Norman, Okla.** ★Ring theory and algebra. III. Proceedings of the Third Oklahoma Conference held at the University of Oklahoma, Norman, Okla., March 15-17, 1979. Edited by Bernard R. McDonald. Lecture Notes in Pure and Applied Mathematics, 55. Marcel Dekker, Inc., New York, 1980. xvi + 422 pp. ISBN 0-8247-1158-0 (Editors) **81h:16001** 16-06
- Norwich** ★Combinatorial optimization. II. Proceedings of the Conference held at the University of East Anglia, Norwich, July 9-12, 1979. Edited by V. J. Rayward-Smith. Math. Programming Stud. No. 13 (1980). North-Holland Publishing Co., Amsterdam-New York, 1980. pp. i-viii and 1-142. (Editors) **81i:90003** 90-06 (05-06, 68-06)
- Notes in Banach spaces** ★Notes in Banach spaces. Edited by H. Elton Lacey. University of Texas Press, Austin, Tex., 1980. ii + 439 pp. ISBN 0-292-75520-1 (Editors) **81m:46002** 46-06
- Nottingham** ★Time series. Proceedings of the International Meeting held at Nottingham University, Nottingham, March 26-30, 1979. Edited by Oliver D. Anderson. North-Holland Publishing Co., Amsterdam-New York, 1980. viii + 446 pp. ISBN 0-444-85418-5 (Editors) **81i:62006** 62-06 (62M10, 90A20)
- Novosibirsk** ★Разностные и вариационно-разностные методы. (Russian) [Difference and variational-difference methods] Proceedings of the Second Seminar on Methods of Numerical and Applied Mathematics held in Novosibirsk, 1977. Edited by G. I. Marčuk. Akad. Nauk SSSR Sibirsk. Otdel., Vychisl. Centr., Novosibirsk, 1977. 161 pp. (Editors) **81b:65003a** 65-06 (65Q05)
- ★IV Всесоюзная конференция по проблемам теоретической кибернетики. (Russian) [Fourth All-Union Conference on Problems of Theoretical Cybernetics] Abstracts of papers presented at the Conference held at Novosibirsk, August 30-September 1, 1977. Akad. Nauk SSSR Sibirsk. Otdel., Inst. Mat., Novosibirsk, 1977. 210 pp. (Editors) **81i:93001** 93-06 (68-06, 90-06)
- ★Вычислительные методы линейной алгебры. (Russian) [Numerical methods in linear algebra] Proceedings of the Third Seminar on Methods of Numerical and Applied Mathematics held in Novosibirsk, 1978. Edited by G. I. Marčuk. Akad. Nauk SSSR Sibirsk. Otdel., Vychisl. Centr., Novosibirsk, 1978. 120 pp. (Editors) **81b:65003b** 65-06
- ★Вариационно-разностные методы в математической физике. (Russian) [Variational-difference methods in mathematical physics] Proceedings of the All-Union Conference held in Novosibirsk, 1977. Edited by G. I. Marčuk. Akad. Nauk SSSR Sibirsk. Otdel., Vychisl. Centr., Novosibirsk, 1978. 230 pp. (Editors) **81b:65007** 65-06
- ★Дифференциальные уравнения с частными производными. (Russian) [Partial differential equations] Proceedings of a Conference on Differential Equations and Numerical Mathematics held at Novosibirsk, September 26-28, 1978. Edited by S. K. Godunov. "Nauka" Sibirsk. Otdel., Novosibirsk, 1980. 256 pp. (errata insert). (Editor) **81m:35002** 35-06
- Nuclear spectroscopy** ★Nuclear spectroscopy. Lecture notes from the Workshop held at Gull Lake, Mich., August 27-September 7, 1979. Edited by G. F. Bertsch and D. Kurath. Lecture Notes in Physics, 119. Springer-Verlag, Berlin-New York, 1980. vii + 250 pp. ISBN 3-540-09970-0 (Editors) **81i:81070** 81G35
- Null series: two applications** ★Null series: two applications. Notas de Álgebra y Análisis [Notes on Algebra and Analysis], 8. Universidad Nacional del Sur, Instituto de Matemática, Bahía Blanca, 1979. ii + 47 pp. (Editors) **81a:42001** 42-06
- Number theory** ★Аналитическая теория чисел и теория функций. 2. (Russian) [Analytic number theory and the theory of functions. 2] Edited by A. B. Venkov and L. A. Tahtadžian. Zap. Naučn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI) 91 (1979). "Nauka" Leningrad. Otdel., Leningrad, 1979. pp. 1-184. (Editors) **81a:10003** 10-06
- ★Number theory, Carbondale 1979. Proceedings of the Southern Illinois Number Theory Conference, held at Southern Illinois University, Carbondale, Ill., March 30-31, 1979. Edited by Melvyn B. Nathanson. Lecture Notes in Mathematics, 751. Springer-Verlag, Berlin-New York, 1979. iv + 342 pp. ISBN 3-540-09559-4 (Editors) **81a:10004** 10-06
- ★Séminaire de Théorie des Nombres 1978-1979. (French) [Seminar on Number Theory 1978-1979] Held at the Université de Bordeaux I, Talence, during the academic year 1978-1979. Centre National de Recherche Scientifique (CNRS), Laboratoire de Théorie des Nombres, Talence, 1979. 277 pp. (not consecutively paged). (Editors) **81a:12001** 12-06 (10-06)
- ★Experimental number theory. (Japanese) Proceedings of a Symposium held at the Research Institute for Mathematical Sciences, Kyoto University, Kyoto, October 15-17, 1979. Sūrikaiseikikenkyūsho Kōkyūroku No. 371 (1979). Kyoto University, Research Institute for Mathematical Sciences, Kyoto, 1979. pp. i-iv and 1-116. (Editors) **81m:10004** 10-06
- ★Сборник работ по теории чисел. 4. (Russian) [Collection of articles on number theory. 4] Вопросы представления чисел квадратичными формами. [Questions on the representation of numbers by quadratic forms] Edited by N. P. Vekua and B. V. Hvedelidze. Trudy Tbiliss. Mat. Inst. Razmadze Akad. Nauk Gruzin. SSR 63 (1980). "Mecnereba", Tbilisi, 1980. pp. 1-72. (Editors) **81c:10002** 10-06
- ★Исследования по теории чисел. 6. (Russian) [Studies in number theory. 6] Edited by A. V. Malyshev. Zap. Naučn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI) 93 (1980). "Nauka" Leningrad. Otdel., Leningrad, 1980. pp. 1-230. (Editor) **81f:10004** 10-06
- ★Séminaire Delange-Pisot-Poitou, 20e année: 1978/1979. Théorie des nombres. Fascicule 1: Exposés 1 à 21. (French) [Seminar Delange-Pisot-Poitou, 20th Year: 1978/1979. Number Theory. Part 1: Exposés 1-21] Secrétariat Mathématique, Paris, 1980. ii + 98 pp. (not consecutively paged). ISBN 2-85926-271-7 (Editors) **81h:10002a** 10-06
- ★Séminaire Delange-Pisot-Poitou, 20e année: 1978/1979. Théorie des nombres. Fascicule 2: Exposés 22 à 33, Index cumulatif 1re à 20e années, 1959/1960 à 1978/1979. (French) [Seminar Delange-Pisot-Poitou, 20th Year: 1978/1979. Number Theory. Part 2: Exposés 22-33, Cumulative Index of the First Twenty Years, 1959/1960-1978/1979] Secrétariat Mathématique, Paris, 1980. i + 154 pp. (not consecutively paged). ISBN 2-85926-272-5 (Editors) **81h:10002b** 10-06
- ★Аналитическая теория чисел и теория функций. 3. (Russian) [Analytic number theory and the theory of functions. 3] Edited by G. V. Kuz'mina and O. M. Fomenko. Zap. Naučn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI) 100 (1980). "Nauka" Leningrad. Otdel., Leningrad, 1980. pp. 1-179. (Editors) **81m:10003** 10-06 (30-06)
- ★Séminaire de Théorie des Nombres, 1979-1980. (French) [Seminar on Number Theory, 1979-1980] Held at the Université de Bordeaux I, Talence, during the academic year 1979-1980. Université de Bordeaux I, U.E.R. de Mathématiques et d'Informatique, Talence, 1980. 258 pp. (not consecutively paged). (Editors) **81m:10005** 10-06
- Numerical analysis** ★Численный анализ. (Russian) [Numerical analysis] Edited by I. N. Molčanov and M. N. Moskal'kov. Akad. Nauk Ukrain. SSR, Inst. Kibernet., Kiev, 1978. 92 pp. (Editors) **81d:65001** 65-06

- ★Численный анализ. (Russian) [Numerical analysis] Edited by Ju. I. Šokin. *Akad. Nauk SSSR Sibirsk. Otdel., Inst. Teoret. i Prikl. Meh., Novosibirsk*, 1978. 140 pp. (Editors) 81j:65007 65-06
- ★Numerical analysis. Proceedings of the 8th Biennial Conference held at the University of Dundee, Dundee, June 26-29, 1979. Edited by G. A. Watson. *Lecture Notes in Mathematics*, 773. Springer-Verlag, Berlin-New York, 1980. x+184 pp. ISBN 0-340-09740-6 (Editors) 81j:65005 65-06
- ★Special topics of applied mathematics. Functional analysis, numerical analysis and optimization. Proceedings of the Seminar held at the Gesellschaft für Mathematik und Datenverarbeitung (GMD), Bonn, October 8-10, 1979. Edited by Jens Frehse, Diethard Pallaschke and Ulrich Trottenberg. *North-Holland Publishing Co., Amsterdam-New York*, 1980. viii+248 pp. ISBN 0-444-86035-5 (Editors) 81j:46003 46-06 (00A10, 49-06, 65-06)
- ★Проблемы вычислительной математики и системного программирования. (Russian) [Problems of numerical analysis and systems programming] Edited by S. V. Mironov, D. Olah, E. A. Zogolev and T. Markuš. Труды Научно-Исследовательского Вычислительного Центра Московского Государственного Университета и Будапештского Университетского Вычислительного Центра. [Works of the Scientific Research Computing Center of Moscow State University and the Budapest Computing Center for Universities] *Computing Center for Universities, Budapest*, 1980. 94 pp. ISBN 963-451-041-8 (Editors) 81j:65010 65-06
- ★Proceedings of the 1980 Army Numerical Analysis and Computers Conference. Held at the NASA Ames Research Center, Moffett Field, Calif., February 20-21, 1980. ARO Report 80, 3. U. S. Army Research Office, Research Triangle Park, N.C., 1980. xiv+481 pp. (Editors) 81m:65007 65-06 (68-06)
- Numerical analysis and its applications to continuum physics ★Seminar on Numerical Analysis and its Applications to Continuum Physics. Held in Rio de Janeiro, March 24-28, 1980. Coleção Atas, Sociedade Brasileira de Matemática, 12. Sociedade Brasileira de Matemática, Rio de Janeiro, 1980. ii+216 pp. (Editors) 81j:65003 65-06
- Numerical-analytic methods for the solution of problems of heat conduction and electrodynamics ★Численно-аналитические методы решения задач теплопроводности и электродинамики. (Russian) [Numerical-analytic methods for the solution of problems of heat conduction and electrodynamics] Edited and with a preface by Ju. A. Mitropol'skii [Ju. O. Mitropol'skii]. *Akad. Nauk Ukrain. SSR, Inst. Mat., Kiev*, 1979. 187 pp. 81c:80004 80A20 (78A25)
- Numerical computation ★Fundamentals of numerical computation (computer-oriented numerical analysis). Proceedings of a Conference held at the Technical University of Berlin, Berlin, June 5-8, 1979. Edited by Götz Alefeld and Rolf Dieter Grigoriéff. *Computing Supplementum*, 2. Springer-Verlag, Vienna, 1980. ii+229 pp. ISBN 3-211-81566-X (Editors) 81j:65005 65-06
- Numerical mathematics ★Разностные и вариационно-разностные методы. (Russian) [Difference and variational-difference methods] Proceedings of the Second Seminar on Methods of Numerical and Applied Mathematics held in Novosibirsk, 1977. Edited by G. I. Marčuk. *Akad. Nauk SSSR Sibirsk. Otdel., Vyčisl. Centr, Novosibirsk*, 1977. 161 pp. (Editors) 81b:65003a 65-06 (65Q05)
- ★Proceedings of the Fourth Symposium on Basic Problems of Numerical Mathematics. Held in Plzeň, September 4-8, 1978. Edited by Ivo Marek. *Charles University, Prague*, 1978. 201 pp. (Editors) 81a:65006 65-06
- ★Proceedings of the Ninth Manitoba Conference on Numerical Mathematics and Computing. Held at the University of Manitoba, Winnipeg, Man., September 27-29, 1979. Edited by G. H. J. Van Rees and H. C. Williams. *Congressus Numerantium*, XXVII. *Utilitas Mathematica Publishing, Inc., Winnipeg, Man.*, 1980. ix+434 pp. ISBN 0-919628-27-3 (Editors) 81j:65011 65-06 (05-06)
- ★Проблемы вычислительной математики. (Russian) [Problems of numerical mathematics] Edited by A. N. Tihonov and A. S. Pinskiĭ. *Moskov. Gos. Univ., Moscow*, 1980. 134 pp. (Editors) 81m:00019 00A69 (65-06)
- ★Дифференциальные уравнения с частными производными. (Russian) [Partial differential equations] Proceedings of a Conference on Differential Equations and Numerical Mathematics held at Novosibirsk, September 26-28, 1978. Edited by S. K. Godunov. *"Nauka" Sibirsk. Otdel., Novosibirsk*, 1980. 256 pp. (errata insert). (Editors) 81m:35002 35-06
- Numerical mathematics, programming and processing of an experiment ★Вычислительная математика, программирование и обработка эксперимента. (Russian) [Numerical mathematics, programming and processing of an experiment] Edited by K. V. Maslov. *"Naukora Dumka", Kiev*, 1979. 132 pp. (Editors) 81a:00009 00A10
- Numerical methods ★Программирование и численные методы. (Russian) [Programming and numerical methods] Edited by A. N. Čekalin and E. V. Ermolin. *Kazan. Gos. Univ., Kazan*, 1978. 104 pp. (Editors) 81j:65012 65-06 (90-06)
- ★Numerical methods. Papers from the Third Colloquium held at Keszthely, September 5-10, 1977. Edited by Pál Rózsa. *Colloquia Mathematica Societatis János Bolyai*, 22. *North-Holland Publishing Co., Amsterdam-New York*, 1980. 631 pp. ISBN 0-444-85407-X (Editors) 81j:65008 65-06
- ★Семинар: Численные Методы Решения Уравнений Баланса. (Russian) [Seminar on Numerical Methods for Solving Balance Equations] Papers presented at the Seminar held in Berlin, October 20-25, 1980. *Akademie der Wissenschaften der DDR, Zentralinstitut für Mathematik und Mechanik, Berlin*, 1980. iv+164 pp. (Editors) 81j:65013 65-06
- Numerical methods of approximation theory ★Numerical methods of approximation theory. Vol. 5. Excerpts of a Conference held at the Mathematical Research Institute, Oberwolfach, March 18-24, 1979. Edited by Lothar Collatz, Günter Meinardus and H. Werner. *International Series of Numerical Mathematics*, 52. *Birkhäuser Verlag, Basel-Boston, Mass.*, 1980. 337 pp. ISBN 3-7643-1103-7 (Editors) 81d:65002 65-06 (41-06)
- Numerical methods in the dynamics of rarefied gases ★Численные методы в динамике разреженных газов. Вып. 4. (Russian) [Numerical methods in the dynamics of rarefied gases. No. 4] Edited by O. S. Ryzov. *Akad. Nauk SSSR, Vyčisl. Centr, Moscow*, 1979. 135 pp. (Editors) 81j:7602a 76P05 (65L05)
- Numerical methods in geomechanics ★Numerical methods in geomechanics. Aachen 1979. Vol. IV. Additional contributions. Proceedings of the Third International Conference held in Aachen, April 2-6, 1979. Edited by W. Wittke. *A. A. Balkema, Rotterdam*, 1980. i-vi and 1255-1550 pp. ISBN 90-6191-044-7 (Editors) 81m:73009 73-06
- Numerical methods in linear algebra ★Вычислительные методы линейной алгебры. (Russian) [Numerical methods in linear algebra] Proceedings of the Third Seminar on Methods of Numerical and Applied Mathematics held in Novosibirsk, 1978. Edited by G. I. Marčuk. *Akad. Nauk SSSR Sibirsk. Otdel., Vyčisl. Centr, Novosibirsk*, 1978. 120 pp. (Editors) 81b:65003b 65-06
- Numerical methods of optimization (applied mathematics) ★Численные методы оптимизации (прикладная математика). (Russian) [Numerical methods of optimization (applied mathematics)] Edited by O. I. Artem'eva and B. A. Bel'tjukov. *Akad. Nauk SSSR Sibirsk. Otdel., Energet. Inst., Irkutsk*, 1978. 184 pp. (Editors) 81d:65003 65-06
- Numerical methods and questions in the organization of calculations ★Численные методы и вопросы организации вычислений. 4. (Russian) [Numerical methods and questions in the organization of calculations. 4] Edited by V. P. Il'in and V. N. Kublanovskaja. *Zap. Nauch. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 102 (1980). *"Nauka" Leningrad. Otdel., Leningrad*, 1980. pp. 1-196. (Editors) 81m:65006 65-06 (68-06)
- Numerical simulation ★Прямое численное моделирование течений газа. (Russian) [Direct numerical simulation of gas flows] Edited by O. M. Belocerovskii. Численный эксперимент в газовой динамике. [Numerical experiment in gas dynamics] *Akad. Nauk SSSR, Vyčisl. Centr, Moscow*, 1978. 176 pp. (Jaroslav Jeleň) 81g:76004 76N15 (65P05, 76P05, 76Z05)
- Numerical simulation of fluid motion ★Numerical simulation of fluid motion. Proceedings of an International Conference on the Numerical Simulation of Fluid Dynamic Systems held at Monash University, Melbourne, 1976. Edited by John Noye. *North-Holland Publishing Co., Amsterdam-New York*, 1978. ix+580 pp. ISBN 0-444-85035-X (P. C. Jain) 81a:76005 76-06 (65P05)
- Numerical techniques for stochastic systems ★Numerical techniques for stochastic systems. Papers based on lectures presented at the Conference held at Gargnano, September 1979. Edited by Francesco Archetti and Marco Cugiani. *North-Holland Publishing Co., Amsterdam-New York*, 1980. viii+406 pp. ISBN 0-444-86000-2 (Editors) 81j:93067 93E03 (93-06)
- Numerical treatment of integral equations ★Numerical treatment of integral equations. Lectures delivered at the Workshop held at the Mathematical Research Institute, Oberwolfach, November 18-24, 1979. Edited by Julius Albrecht and Lothar Collatz. *International Series of Numerical Mathematics*, 53. *Birkhäuser Verlag, Basel-Boston, Mass.*, 1980. iii+275 pp. ISBN 3-7643-1105-3 (Editors) 81j:65009 65-06 (65R20)
- Numerische Integration ★Numerische Integration. (German) [Numerical integration] Tagung at the Mathematisches Forschungsinstitut, Oberwolfach, October 1-7, 1978. Edited by G. Hämmerlin. *International Series of Numerical Mathematics*, 45. *Birkhäuser Verlag, Basel-Boston, Mass.*, 1979. 320 pp. ISBN 3-7643-1014-6 (Editors) 81b:65006 65-06
- Oberhof ★Beiträge zur Graphentheorie und deren Anwendungen. (German) [Contributions to graph theory and its applications] International Colloquium held in Oberhof, April 10-16, 1977. *Technische Hochschule Ilmenau, Ilmenau*, 1977. 320 pp. (Editors) 81a:05040 05Cxx (05-06)
- Oberwolfach ★Constructive methods for nonlinear boundary value problems and nonlinear oscillations. Proceedings of the Conference held at the Mathematical Research Institute, Oberwolfach, November 19-25, 1978. Edited by J. Albrecht, L. Collatz and K. Kirchgässner. *International Series of Numerical Mathematics*, 48. *Birkhäuser Verlag, Basel-Boston, Mass.*, 1979. 190 pp. ISBN 3-7643-1098-7 (Editors) 81a:65006 65-06
- ★Numerische Integration. (German) [Numerical integration] Tagung at the Mathematisches Forschungsinstitut, Oberwolfach, October 1-7, 1978. Edited by G. Hämmerlin. *International Series of Numerical Mathematics*, 45. *Birkhäuser Verlag, Basel-Boston, Mass.*, 1979. 320 pp. ISBN 3-7643-1014-6 (Editors) 81b:65006 65-06
- ★Proceedings of the Sixth Conference on Mathematical Methods in Celestial Mechanics. Part I. Held at the Mathematisches Forschungsinstitut, Oberwolfach, August 14-19, 1978. *Celestial Mech.* 21 (1980), no. 1. *D. Reidel Publishing Co., Dordrecht-Boston, Mass.*, 1980. pp. 1-125 (one plate). (Editors) 81a:7001a 70-06 (70F15)
- ★Proceedings of the Sixth Conference on Mathematical Methods in Celestial Mechanics. Part II. Held at the Mathematisches Forschungsinstitut, Oberwolfach, August 14-19, 1978. *Celestial Mech.* 21 (1980), no. 2. *D. Reidel Publishing Co., Dordrecht-Boston, Mass.*, 1980. pp. 129-250. (Editors) 81a:7001b 70-06 (70F15)
- ★Measure theory, Oberwolfach 1979. Proceedings of a Conference held at Oberwolfach, July 1-7, 1979. Edited by Dietrich Kölzow. *Lecture Notes in Mathematics*, 794. *Springer-Verlag, Berlin-New York*, 1980. xv+573 pp. ISBN 3-540-09979-4 (Editors) 81d:28001 28-06 (46-06, 60-06)
- ★Numerical methods of approximation theory. Vol. 5. Excerpts of a Conference held at the Mathematical Research Institute, Oberwolfach, March 18-24, 1979. Edited by Lothar Collatz, Günter Meinardus and H. Werner. *International Series of Numerical Mathematics*, 52. *Birkhäuser Verlag, Basel-Boston, Mass.*, 1980. 337 pp. ISBN 3-7643-1103-7 (Editors) 81d:65002 65-06 (41-06)
- ★Recent results in stochastic programming. Proceedings of a Meeting held in Oberwolfach, January 28-February 3, 1979. Edited by Peter Kall and András Prékopa. *Lecture Notes in Economics and Mathematical Systems*, 179. *Springer-Verlag, Berlin-New York*, 1980. ix+237 pp. ISBN 3-540-10013-X (Editors) 81i:90008 90-06 (62-06, 90C15)
- ★Numerical treatment of integral equations. Lectures delivered at the Workshop held at the Mathematical Research Institute, Oberwolfach, November 18-24, 1979. Edited by Julius Albrecht and Lothar Collatz. *International Series of Numerical Mathematics*, 53. *Birkhäuser Verlag, Basel-Boston, Mass.*, 1980. iii+275 pp. ISBN 3-7643-1105-3 (Editors) 81j:65009 65-06 (65R20)
- ★Mathematical programming at Oberwolfach. Proceedings of a Conference held at the Mathematisches Forschungsinstitut, Oberwolfach, May 6-12, 1979. Edited by Heinz König, Bernhard Korte and Klaus Ritter. *Math. Programming Stud.* No. 14 (1981). *North-Holland Publishing Co., Amsterdam-New York*, 1981. pp. i-viii and 1-257. (Editors) 81k:49001 49-06 (90-06)
- Obituary: Aržanyh, I. S. In memory of Ivan Semenovitch Aržanyh. (Russian) *Izv. Akad. Nauk*

Obituary: (continued)

- UzSSR Ser. Fiz.-Mat. Nauk 1980, no. 4, 100-101. (Editors) 81k:01054 01A70
- Baer, Reinhold See Slemos, Helmut, 81k:01041
- Biles, Chester Iltner See Cochran, William G.; et al., 81m:01043
- Bowen, Rufus In memoriam: Rufus Bowen. *Global theory of dynamical systems (Proc. Internat. Conf., Northwestern Univ., Evanston, Ill., 1979)*, p. iii. *Lecture Notes in Math.*, 819, Springer, Berlin, 1980. (Editors) 81m:01097 01A70
- See also Sullivan, Dennis, 81k:01049
- Boyer, Carl See Kline, Morris, 81a:01037
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- Fábry, Jiří On the death of Professor Jiří Fábry, corresponding member of the Czechoslovak Academy of Sciences. (Czech) *Časopis Pěst. Mat.* 104 (1979), no. 1, 101-106. (Editors) 81a:01030b 01A70
- In memoriam Professor Jiří Fábry, corresponding member of the Czechoslovak Academy of Sciences. *Czechoslovak Math. J.* 29(104) (1979), no. 1, 163-168 (1 plate). (Editors) 81a:01030a 01A70
- See also Schmidtmayer, Josef, 81a:01030c
- Fleckenstein, Joachim Otto See Hoskin, M. A., 81j:01039
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- Gheorghij, Ștefan I. See Ene, Horia I., 81e:01025a and Iacob, Calin, 81e:01025b
- Gödel, Kurt Kurt Gödel (1906-1978). (Bulgarian) *Fiz.-Mat. Spis. B'lgar. Akad. Nauk.* 21(54) (1978), no. 4, 325-327 (1979). (Editors) 81m:01098 01A70
- Kurt Gödel, 1906-1978. (Spanish) *Gaceta Mat. (I) (Madrid)* 30 (1978), no. 3-4, 59-64. (Editors) 81k:01055 01A70
- See also Wette, Edward W., 81a:01044; Taketli, Gais, 81f:01037 and Wang, Han, 81k:01015
- Gregory, Bernard See Weiskopf, Victor F., 81e:01002
- Haradze, A. K. Haradze, A. K. (Russian) *Trudy Tbiliss. Univ.* 189 (1977), 143-147 (1 plate). (Editors) 81f:01042 01A70
- Hame, Helmut Helmut Hassé, 25. August 1898-26. Dezember 1979. *J. Reine Angew. Math.* 314 (1980), 1. (Editors) 81f:01043 01A70
- Heyting, Arend Heyting, (Dutch) *Nederl. Akad. Wetensch. Verslag Afd. Naturk.* 89 (1980), no. 7, 78-79. (Editors) 81m:01099 01A70
- Jahn, Hermann Arthur See Landsberg, Peter T., 81m:01063
- Koltunov, M. A. In memory of Mikhail Andreievich Koltunov. (Russian) *Izv. Vysš. Učebn. Zaved. Matematika* 1980, no. 9, 3-4. (Editors) 81m:01100 01A70
- Kurczysz, Stanisław Stanisław Kurczysz (1947-1978). (Polish) *Arch. Automat. Telemek.* 23 (1978), no. 4, 511-512. (Editors) 81f:01044 01A70
- Kveselava, D. A. D. A. Kveselava (1911-1978). (Russian) *Trudy Vyčisl. Centra Akad. Nauk Gruzin. SSR* 19 (1979), no. 1 *Vychisl. Mat. i Programirovanie*, 5-6. (Editors) 81j:01045 01A70
- Laurent'ev, M. A. Mikhail Alekseevič Laurent'ev. (Russian) *Differentsial'nye Uravnenija* 16 (1980), no. 11, 1923-1924. (Editors) 81m:01101 01A70
- Markuševič, A. I. Aleksei Ivanovič Markuševič. (Russian) *Uspehi Mat. Nauk* 35 (1980), no. 4(214), 131-133. (Editors) 81k:01056 01A70
- See also Kolmogorov, A. N.; et al., 81m:01059
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- Mikładze, S. E. S. E. Mikładze. (Russian) *Trudy Tbiliss. Univ.* 189 (1977), 139-142 (1 plate). (Editors) 81f:01045 01A70
- Morse, Marston See Püschel, Viktor, 81f:01034
- Muskhelishvili, N. I. See Magnaradze, L. G., 81k:01040
- Nehari, Zeev In memoriam Zeev Nehari 1915-1978. *J. Analyse Math.* 36 (1979), vi-vii (1 plate) (1980). (Editors) 81f:01046 01A70
- Nevanlinna, Rolf See Lehto, Olli, 81m:01065
- Patodi, Vijay Kumar Vijay Kumar Patodi. *Geometry and analysis*, pp. i-iii, Indian Acad. Sci., Bangalore, 1980. (Editors) 81m:01102 01A70
- Péter, Rózsa See Császár, Akos, 81k:01031 and Ruzsa, Imre; et al., 81k:01045
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- Samelson, Klaus See Bauer, Friedrich L.; et al., 81k:01025
- Sansone, Giovanni Giovanni Sansone. (Russian) *Differentsial'nye Uravnenija* 16 (1980), no. 10, 1906-1913. (Editors) 81k:01057 01A70
- Schröder, Kurt Kurt Schröder. (German) Ordentliches Mitglied der Akademie der Wissenschaften der DDR, geb. 31. 7. 1909, gest. 7. 7. 1978. *Elektron. Informationsverarb. Kybernet.* 15 (1979), no. 5-6, 235-236 (1 plate). (Editors) 81j:01046 01A70
- Scott, Joseph Frederick See Hall, A. R., 81k:01038
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- Supina, Giulio See Graffi, Dario, 81k:01035
- Vekua, I. N. Il'ja Nestorovič Vekua. (Russian) *Differentsial'nye Uravnenija* 14 (1978), no. 6, 1144-1146. (Editors) 81k:01016 01A70

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- Vranceanu, Gheorghe See Teodorescu, Nicolae, 81k:01050 and Iancu, S.; et al., 81m:01054
- Wolff, Georg See Burau, W., 81a:01032
- Youngman, Wolfgang See Margenau, Henry, 81k:01042
- Okayama ★Proceedings of the 13th Symposium on Ring Theory. Held at Okayama University, Okayama, September 28-30, 1980. Edited by Hisao Tominaga. Okayama Mathematical Lectures. Okayama University, Department of Mathematics, Okayama, 1981. ii + 125 pp. (Editors) 81m:16004 16-06
- Olomouc ★Mathematical foundations of computer science, 1979. Proceedings of the 8th Symposium held in Olomouc, September 3-7, 1979. Edited by Jiří Bečvář. *Lecture Notes in Computer Science*, 74. Springer-Verlag, Berlin-New York, 1979. ix + 580 pp. ISBN 3-540-09526-8 (Editors) 81c:68004 68-06
- Olympiads. Algebra. Combinatorial analysis ★Олимпиады. Алгебра. Комбинаторика. (Russian) [Olympiads. Algebra. Combinatorial analysis] Edited by L. J. Safarevič. "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. 177 pp. (Editors) 81j:00004 00A05 (03-01, 05-01, 10-01)
- On the path of Albert Einstein ★On the path of Albert Einstein. Edited by Behram Kurşunoğlu, Arnold Perlmutter and Linda F. Scott. *Studies in the Natural Sciences*, 15. Plenum Press, New York-London, 1979. vii + 171 pp. ISBN 0-306-40296-3 (Marcos Rosenbaum) 81k:83003 83-06 (01A65)
- On the theory of finite groups ★К теории конечных групп. (Russian) [On the theory of finite groups] Translated from the English by S. P. Demulkin. Edited by A. I. Kostrikin. Математика: Новое в Зарубежной Науке [Mathematics: Recent Publications in Foreign Science], 16. "Mir", Moscow, 1979. 200 pp. (Editors) 81e:20020 20Dxx
- Open questions in mathematics ★Open questions in mathematics. A collection of unsolved problems. Edited by Dagmar R. Henney. *George Washington University, Department of Mathematics, Washington, D.C.*, 1981. 158 pp. (not consecutively paged). (J. L. Selfridge) 81j:00006 00A07
- Operating systems ★Operációs rendszerek elmélete. (Hungarian) [Theory of operating systems] Fifth Visegrád Winter School held in Visegrád, 1979. Tanulmányok—MTA Számítástech. Automat. Kutató Int. Budapest No. 100 (1979). MTA Számítástech. Automat. Kutató Intézet, Budapest, 1979. pp. 1-387. (Editors) 81f:68043 68B20 (68-06)
- Operations research ★Final Proceedings of the Sixteenth Annual U.S. Army Operations Research Symposium. Vol. I, II. Held in Fort Lee, Va., October 12-14, 1977. U.S. Government Printing Office, Washington, D.C., 1977. xviii + 1162 pp. (Editors) 81m:90002 90-06
- ★Proceedings in Operations Research. 7. (German) Papers of the Sixth Annual Meeting of the Deutsche Gesellschaft für Operations Research (DGOR) held at Christian-Albrechts-Universität, Kiel, September 21-23, 1977. Edited by K. Brockhoff, W. Dinkelbach, P. Kall, D. B. Pressmar and K. Spicher. *Physica Verlag, Würzburg*, 1978. 536 pp. ISBN 3-7908-0194-1 (Editors) 81e:90003a 90-06 (62-06)
- ★Interfaces between computer science and operations research. Proceedings of a Symposium held at the Mathematisch Centrum, Amsterdam, September 7-10, 1976. Edited by J. K. Lenstra, A. H. G. Rinnooy Kan and P. van Emde Boas. *Mathematical Centre Tracts*, 99. *Mathematisch Centrum, Amsterdam*, 1978. viii + 231 pp. ISBN 90-6196-170-X (L. E. Trotter, Jr.) 81f:68001 68-02 (68C25, 90B35, 90C10)
- ★Proceedings in Operations Research. 8. (German) Papers of the Seventh Annual Meeting of the Deutsche Gesellschaft für Operations Research (DGOR) held at the Freie Universität Berlin, Berlin, October 4-6, 1978. Edited by K.-W. Gaede, D. B. Pressmar, Ch. Schneeweß, K.-P. Schuster and O. Seifert. *Physica Verlag, Würzburg*, 1979. 700 pp. ISBN 3-7908-0212-3 (Editors) 81e:90003b 90-06 (62-06)
- ★Методы исследования операций и теории надежности в анализе систем. (Russian) [Methods in operations research and reliability theory in systems analysis] Edited by I. N. Kovalenko [Kovalenko, I. M.], Ju. M. Ermol'ev and Ju. M. Kaniovskii. *Akad. Nauk Ukrain. SSR, Inst. Kibernet., Kiev*, 1979. 103 pp. (Editors) 81m:90001 90-06
- ★Proceedings in Operations Research. 9. (German) Papers of the Eighth Annual Meeting of the Deutsche Gesellschaft für Operations Research (DGOR) held in Regensburg, September 19-21, 1979. Edited by J. Schwarze, L. von Dobschütz, B. Fleischmann, Ch. Schneeweß and H. Steckhan. *Physica Verlag, Würzburg*, 1980. 668 pp. ISBN 3-7908-0223-9 (Editors) 81e:90003c 90-06 (62-06)
- ★Математические методы исследования операций и теории надежности. (Russian) [Mathematical methods in operations research and reliability theory] Edited by I. N. Kovalenko [I. M. Kovalenko], Ju. M. Ermol'ev and Ju. M. Kaniovskii. *Akad. Nauk Ukrain. SSR, Inst. Kibernet., Kiev*, 1980. 92 pp. (Editors) 81m:60002 60-06
- Operations research (models, systems, solutions) ★Исследование операций (модели, системы, решения). Вып. 7. (Russian) [Operations research (models, systems, solutions), No. 7] Edited by Ju. G. Evtushenko. *Akad. Nauk SSSR, Vyčisl. Centr, Moscow*, 1979. 121 + 3 pp. (Editors) 81f:90002 90-06
- Operations research and statistical simulation ★Исследование операций и статистическое моделирование. Вып. 5. (Russian) [Operations research and statistical simulation, No. 5] Edited by I. V. Romanovskii. *Leningrad. Univ., Leningrad*, 1979. 204 pp. (Editors) 81e:65002 65-06 (90-06)
- Operator equations ★Качественные и приближенные методы исследования операторных уравнений. Вып. 4. (Russian) [Qualitative and approximate methods for the investigation of operator equations, No. 4] Edited by P. P. Zabreiko. *Jaroslavl. Gos. Univ., Yaroslavl*, 1979. 203 pp. (Editors) 81d:65004 65-06
- Operator theory ★Исследования по теории операторов и их приложениям. (Russian) [Studies in the theory of operators and their applications] Edited by V. A. Marchenko and V. Ja. Golodets. "Naukova Dumka", Kiev, 1979. 180 pp. (Editors) 81a:90012 00A10
- ★Функциональный анализ. Вып. 13. (Russian) [Functional analysis, No. 13] Edited by A. V. Štraus. Теория операторов. [Operator theory] *U'janovsk. Gos. Ped. Inst., U'janovsk*, 1979. 176 pp. (Editors) 81e:47002 47-06 (46-06)
- Operator theory and functional analysis ★Operator theory and functional analysis. Papers presented at the 1978 Summer Meeting of the American Mathematical Society held in Providence, R.I. Edited by I. Erdélyi. *Research Notes in Mathematics*, 38. Plenum

- (Advanced Publishing Program), San Francisco, Calif.-London, 1979. iv + 164 pp. ISBN 0-8224-8450-1 (Editors) 81e:47003 47-06 (46-06)
- Operators** ★Spectral theory of functions and operators. A translation of Trudy Mat. Inst. Steklov. 130 (1978). Edited by S. M. Nikol'skii. Proc. Steklov Inst. Math. 1979, no. 4. American Mathematical Society, Providence, R.I., 1980. pp. i-v and 1-233. (Editors) 81j:00010 00A10 (46-06, 47-06)
- Operators of mathematical physics and infinite-dimensional analysis** ★Операторы математической физики и бесконечномерный анализ. (Russian) [Operators of mathematical physics and infinite-dimensional analysis] Edited by Ju. M. Berezans'kii. Akad. Nauk Ukrain. SSR, Inst. Mat., Kiev, 1979. 144 pp. (Editors) 81b:47002 47-06
- Optimal decisions** ★Теория оптимальных решений. (Russian) [Theory of optimal decisions] Edited by È. I. Nenahov. Akad. Nauk Ukrain. SSR, Inst. Kibernet., Kiev, 1979. 112 pp. (Editors) 81d:90003 90-06
- Optimal design** ★Combinatorial mathematics, optimal designs and their applications. Proceedings of the Symposium on Combinatorial Mathematics and Optimal Design held at Colorado State University, Fort Collins, Colo., June 5-9, 1978. Edited by J. Srivastava. Ann. Discrete Math. 6 (1980). North-Holland Publishing Co., Amsterdam-New York, 1980. pp. i-viii and 1-391. (Editors) 81i:05005 05-06
- Optimal design of experiments** ★Beiträge zur optimalen Versuchsplanung. Teil V. (German) [Papers on the optimal design of experiments. Part V] Freiberger Forschungshefte D [Freiberger Research Notes D]. 117. VEB Deutscher Verlag für Grundstoffindustrie, Leipzig, 1979. 152 pp. (Ivar Petersen) 81k:62103 62K05 (93E10)
- Optimization** ★Эвристические алгоритмы оптимизации. (Russian) [Heuristic algorithms of optimization] Edited by Ju. A. Mamatov. Yaroslavl Gos. Univ., Yaroslavl, 1978. 162 pp. (Editors) 81e:90004 90-06
- ★Численные методы оптимизации (прикладная математика). (Russian) [Numerical methods of optimization (applied mathematics)] Edited by O. I. Artem'eva and B. A. Bel'tjukov. Akad. Nauk SSSR Sibirsk. Otdel., Energet. Inst., Irkutsk, 1978. 184 pp. (Editors) 81d:65003 65-06
- ★Математические методы оптимизации и структурирования систем. (Russian) [Mathematical methods of optimization and structuring of systems] Edited by Ju. A. Abramov. Kaliningrad Gos. Univ., Kaliningrad, 1979. 188 pp. (Editors) 81i:93002 93-06
- ★Dynamic optimization and mathematical economics. Edited by Pan Tai Liu. Mathematical Concepts and Methods in Science and Engineering. 19. Plenum Press, New York-London, 1980. x + 269 pp. ISBN 0-306-40245-9 (Editors) 81a:90001 90-06
- ★Combinatorial optimization. Edited by Manfred W. Padberg. With a 205 item bibliography. Math. Programming Stud. No. 12 (1980). North-Holland Publishing Co., Amsterdam, 1980. pp. i-vii and 1-221. (Editors) 81c:90051 90Cxx
- ★Combinatorial optimization. II. Proceedings of the Conference held at the University of East Anglia, Norwich, July 9-12, 1979. Edited by V. J. Rayward-Smith. Math. Programming Stud. No. 13 (1980). North-Holland Publishing Co., Amsterdam-New York, 1980. pp. i-viii and 1-142. (Editors) 81i:90003 90-06 (05-06, 68-06)
- ★Special topics of applied mathematics. Functional analysis, numerical analysis and optimization. Proceedings of the Seminar held at the Gesellschaft für Mathematik und Datenverarbeitung (GMD), Bonn, October 8-10, 1979. Edited by Jens Frehse, Diethard Pallaschke and Ulrich Trottenberg. North-Holland Publishing Co., Amsterdam-New York, 1980. viii + 248 pp. ISBN 0-444-86035-5 (Editors) 81j:46003 46-06 (00A10, 49-06, 65-06)
- Optimization and adaptive control in large-scale systems** ★Оптимизация и адаптивное управление в больших системах. (Russian) [Optimization and adaptive control in large-scale systems] Edited by V. P. Zivogladov. "Ilim", Frunze, 1980. 111 pp. (Editors) 81j:93005 93-06 (49-06, 94D05)
- Optimization problems** ★Variational inequalities and optimization problems. Proceedings of a Summer School held at Constanța, August 20-30, 1979. Edited by Dan Pascali. Ministerul Educației și Învățământului, Institutul de Învățământ Superior, Constanța, 1979. vi + 344 pp. (Editors) 81i:49001 49-06 (65-06)
- Optimization techniques** ★Optimization techniques. Part 1. Proceedings of the Ninth IFIP Conference held in Warsaw, September 4-8, 1979. Edited by K. Iracki, K. Malanowski and S. Walukiewicz. Lecture Notes in Control and Information Sciences, 22. Springer-Verlag, Berlin-New York, 1980. xvi + 569 pp. ISBN 3-540-10080-6 (Editors) 81j:49001a 49-06 (68-06, 90-06, 92-06, 93-06, 94-06)
- ★Optimization techniques. Part 2. Proceedings of the Ninth IFIP Conference held in Warsaw, September 4-8, 1979. Edited by K. Iracki, K. Malanowski and S. Walukiewicz. Lecture Notes in Control and Information Sciences, 23. Springer-Verlag, Berlin-New York, 1980. xv + 621 pp. ISBN 3-540-10081-4 (Editors) 81j:49001b 49-06 (68-06, 90-06, 92-06, 93-06, 94-06)
- Orbit Science** ★High-energy physics in the Einstein centennial year. A part of the proceedings of Orbis Scientiae 1979 held at the University of Miami, Coral Gables, Fla., January 15-18, 1979. Edited by Behram Kursunoglu, Arnold Perlmutter, Frank Krausz and Linda F. Scott. Studies in the Natural Sciences, 16. Plenum Press, New York-London, 1979. viii + 525 pp. ISBN 0-306-40297-1 (Editors) 81a:81003 81-06 (81G25)
- Ordered groups** ★Ordered groups. Proceedings of the Conference held at Boise State University, Boise, Idaho, October 16-20, 1978. Edited by Jo E. Smith, G. Otis Kenny and Richard N. Ball. Lecture Notes in Pure and Applied Mathematics, 62. Marcel Dekker, Inc., New York, 1980. x + 174 pp. ISBN 0-8247-6943-0 (Editors) 81m:06001 06-06
- Oscillation theory** ★Исследования по устойчивости и теории колебаний. (Russian) [Studies in stability and the theory of oscillations] Edited by Ju. S. Kolesov and P. P. Zabreiko. Yaroslavl Gos. Univ., Yaroslavl, 1978. 132 pp. (Editors) 81a:34004 34-06
- ★Теория рассеяния. Теория колебаний. (Russian) [Scattering theory. Theory of oscillations] Edited by M. S. Birman. Проблемы Математической Физики [Problems in Mathematical Physics], 9. Leningrad Univ., Leningrad, 1979. 188 pp. (Editors) 81a:35003 35-06
- Oscillations** ★Исследования по устойчивости в теории колебаний. (Russian) [Studies in stability and the theory of oscillations] Edited by Ju. S. Kolesov. Yaroslavl Gos. Univ., Yaroslavl, 1979. 123 pp. (Editors) 81e:34006 34-06 (70-06)
- Oxford** ★Representation theory of Lie groups. Proceedings of the SRC/LMS Research Symposium held in Oxford, June 28-July 15, 1977. Edited by G. L. Luke. London Mathematical Society Lecture Note Series, 34. Cambridge University Press, Cambridge-New York, 1979. v + 341 pp. ISBN 0-521-22636-8 (A. U. Klimyk) 81j:22001 22-06 (81C40)
- ★Word problems. II. The Oxford book. Outgrowth of a Conference on Decision Problems in Algebra held in Oxford, Summer 1976. Edited by S. I. Adjan [S. I. Adjan], William W. Boone and Graham Higman. Studies in Logic and the Foundations of Mathematics, 95. North-Holland Publishing Co., Amsterdam-New York, 1980. x + 578 pp. (1 plate). ISBN 0-444-85343-X (Editors) 81i:03056 03D40 (03-06, 20-06, 20F10)
- ★Stochastic programming. Proceedings of an International Conference held at the University of Oxford, Oxford, July 15-17, 1974. Edited by M. A. H. Dempster. The Institute of Mathematics and its Applications Conference Series. Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], London-New York, 1980. xiii + 573 pp. ISBN 0-12-208250-8 (Editors) 81j:90094 90C15 (90-06)
- ★Analysis and optimisation of stochastic systems. Proceedings of the International Conference held at the University of Oxford, Oxford, September 6-8, 1978. Edited by O. L. R. Jacobs, M. H. A. Davis, M. A. H. Dempster, C. J. Harris and P. C. Parks. The Institute of Mathematics and its Applications Conference Series. Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], London-New York, 1980. xiv + 573 pp. ISBN 0-12-378680-0 (Editors) 81j:93069 93E20 (93E11)
- Pacific Grove, Calif.** ★New approaches to nonlinear problems in dynamics. Proceedings of a Conference held in Pacific Grove, Calif., December 9-14, 1979. Edited by Philip J. Holmes. Society for Industrial and Applied Mathematics (SIAM), Philadelphia, Pa., 1980. xii + 529 pp. ISBN 0-89871-167-3 (Editors) 81k:00006 00A69 (34Cxx, 58Fxx)
- ★Thirteenth Asilomar Conference on Circuits, Systems & Computers. Held in Pacific Grove, Calif., November 5-7, 1979. Edited by Shu Park Chan. IEEE Computer Society, New York, 1980. xiv + 615 pp. (Editors) 81a:93004 93-06 (68-06, 94-06)
- Packing and covering in combinatorics** ★Packing and covering in combinatorics. Edited by A. Schrijver. Mathematical Centre Tracts, 106. Mathematisch Centrum, Amsterdam, 1979. v + 313 pp. ISBN 90-6196-180-7 (R. A. Brualdi) 81i:05001 05-02 (05B40)
- Paderborn** ★Functional analysis: surveys and recent results. II. Proceedings of the Second Conference on Functional Analysis held at the University of Paderborn, Paderborn, January 31-February 4, 1979. Edited by Klaus-Dieter Bierstedt and Benno Fuchssteiner. North-Holland Mathematics Studies, 38. Notas de Matemática [Mathematical Notes], 68. North-Holland Publishing Co., Amsterdam-New York, 1980. xii + 342 pp. ISBN 0-444-85403-7 (Editors) 81a:46004 46-06
- ★Approximation methods for Navier-Stokes problems. Proceedings of the Symposium held at the University of Paderborn, Paderborn, September 9-15, 1979. Edited by R. Rautmann. Lecture Notes in Mathematics, 771. Springer-Verlag, Berlin-New York, 1980. xvi + 581 pp. ISBN 3-540-09734-1 (Editors) 81i:76004 76-06
- Papers: Triples** ★Trabajos sobre triples. (Spanish) [Papers on triples] Papers presented at the Seventh Spanish-Portuguese Mathematical Conference held in San Felip de Guixols, May 26-30, 1980. Álgebra, 26. Universidad de Santiago de Compostela, Departamento de Álgebra y Fundamentos, Santiago de Compostela, 1980. 90 pp. ISBN 84-7191-177-9 (Editors) 81e:18002 18-06
- Papers on the optimal design of experiments** ★Beiträge zur optimalen Versuchsplanung. Teil V. (German) [Papers on the optimal design of experiments. Part V] Freiberger Forschungshefte D [Freiberger Research Notes D]. 117. VEB Deutscher Verlag für Grundstoffindustrie, Leipzig, 1979. 152 pp. (Ivar Petersen) 81k:62103 62K05 (93E10)
- Paris** ★Temps locaux. (French) [Local times] Exposé du Séminaire J. Azéma-M. Yor. Held at the Université Pierre et Marie Curie, Paris, 1976-1977. With an English summary. Astérisque, 52,53. Société Mathématique de France, Paris, 1978. ii + 223 pp. (Michael Sharpe) 81b:60042 60C44 (60G48, 60J55)
- ★Advanced technobiology. Edited by Boris Rybak. Proceedings of the NATO Summer School held in Paris, June 30-July 13, 1978. NATO Advanced Study Institute Series, Ser. E: Applied Sciences, 31. Sijthoff & Noordhoff, Alphen aan den Rijn-Germantown, Md., 1979. x + 703 pp. ISBN 90-286-0299-2 (Editors) 81a:92001 92-06
- ★8e Symposium International sur l'Acoustique Non Linéaire. (French) [8th International Symposium on Nonlinear Acoustics] Held at the École Nationale Supérieure de Chimie de Paris, Paris, July 3-6, 1978. J. Physique 40 (1979), no. 11 suppl. Colloque C-8. Société Française de Physique, Orsay, 1979. pp. i-iv and C8-1-C8-365. (Editors) 81e:76033 76Q05
- ★Séminaire d'Algèbre Paul Dubreil et Marie-Paule Malliavin. (French) [Algebra Seminar Paul Dubreil and Marie-Paule Malliavin] Held in Paris, 1979. Edited by Marie-Paule Malliavin [Marie-Paule Malliavin-Brammeret]. Lecture Notes in Mathematics, 795. Springer-Verlag, Berlin-New York, 1980. v + 433 pp. ISBN 3-540-09980-8 (Editors) 81i:16001 16-06 (13-06, 17-06)
- ★Séminaire de Probabilités. XIV. (French) [Seminar on Probability. XIV] Held in Paris, 1978/1979. Edited by Jacques Azéma and Marc Yor. Lecture Notes in Mathematics, 784. Springer-Verlag, Berlin-New York, 1980. vii + 546 pp. ISBN 3-540-09760-0 (Editors) 81f:60004 60-06
- ★Modèles de l'arithmétique. (French) [Models of arithmetic] Papers presented at the Seminar held at the University of Paris VII, Paris, 1977. Edited by K. McAloon. Astérisque, 73. Société Mathématique de France, Paris, 1980. 155 pp. (Editors) 81j:03006 03-06 (03F30, 03H15)
- ★International Symposium on Programming. Proceedings of the Fourth International Symposium on Programming held in Paris, April 22-24, 1980. Edited by Bernard Robinet. Lecture Notes in Computer Science, 83. Springer-Verlag, Berlin-New York, 1980. viii + 341 pp. ISBN 3-540-09981-6 (Editors) 81j:68010 68-06
- Partial differential equations** ★Дифференциальные уравнения с частными производными. (Russian) [Partial differential equations] Edited by S. V. Uspenkii. Труды Семинара С. Л. Соболева, No. 2 [Proceedings of the S. L. Sobolev Seminar, No. 2], 1978. Akad. Nauk SSSR Sibirsk. Otdel., Inst. Mat., Novosibirsk, 1978. 144 pp. (Editors) 81i:35002 35-06 (34-06)
- ★Дифференциальные уравнения с частными производными. (Russian) [Partial differential equations] Edited by S. V. Uspenkii. Труды Семинара С. Л. Соболева, No. 2 [Proceedings of the S. L. Sobolev Seminar, No. 2], 1979. Akad. Nauk SSSR Sibirsk. Otdel., Inst. Mat., Novosibirsk, 1979. 150 pp. (Editors) 81i:35005 35-06
- ★A survey of numerical methods for partial differential equations. Edited by I. Gladwell and R. Wait. With contributions by L. Fox, J. A. Hendry, A. Prothero, J. D.

- Reid, I. M. Smith, S. Scheffler, J. R. Whiteman, L. M. Delves, C. Phillips, Wait, J. M. Watt, C. T. H. Baker, T. L. Freeman, Gladwell, G. Hall, J. E. Walsh and J. Williams. *The Clarendon Press, Oxford University Press, New York, 1979. xii + 425 pp. ISBN 0-19-853351-9 (M. Zlamal) 81i:65002 65-02 (65Nxx)*
- ★The study of the structure of solutions of partial differential equations. (Japanese) Proceedings of a Symposium held at the Research Institute for Mathematical Sciences, Kyoto University, Kyoto, February 13-15, 1979. *Sūrikaiseikenyōsho Kōkyūroku No. 357 (1979). Kyoto University, Research Institute for Mathematical Sciences, Kyoto, 1979. pp. i-ii and 1-218. (Editors) 81m:35004 35-06*
- ★Journées "Équations aux Dérivées Partielles". (French) [Conference on Partial Differential Equations] Held at Saint Jean de Monts, June 2-6, 1980. *Société Mathématique de France, Paris, 1980. 72 pp. (not consecutively paged). (Editors) 81j:35002 35-06 (32-06)*
- ★Дифференциальные уравнения с частными производными. (Russian) [Partial differential equations] Proceedings of a Conference on Differential Equations and Numerical Mathematics held at Novosibirsk, September 26-28, 1978. Edited by S. K. Godunov. "Nauka" Sibirsk. Otdel., Novosibirsk, 1980. 256 pp. (errata insert). (Editors) 81m:35002 35-06
- ★Séminaire Goulaouic-Schwartz, 1979-1980. (French) Équations aux dérivées partielles. [Partial differential equations] École Polytechnique, Centre de Mathématiques, Palaiseau, 1980. 303 pp. (not consecutively paged). (Editors) 81m:35003 35-06 (58-06)
- ★Studies in the structure of solutions of partial differential equations. (Japanese) Proceedings of a Symposium held at the Research Institute for Mathematical Sciences, Kyoto University, Kyoto, November 5-7, 1979. *Sūrikaiseikenyōsho Kōkyūroku No. 376 (1980). Kyoto University, Research Institute for Mathematical Sciences, Kyoto, 1980. pp. i-ii and 1-162. (Editors) 81m:35005 35-06*
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- Particle theory** ★Recent developments in particle and field theory. Lectures and seminars delivered at the Symposium on Particles and Fields held at Tübingen University, Tübingen, June 20-July 1, 1977. Edited by Walter Dittrich. *Friedr. Vieweg & Sohn, Braunschweig, 1979. v + 422 pp. ISBN 3-528-08426-X (Editors) 81a:81007 81-06 (81G05, 81M05)*
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- Patras** ★Simulation of distributed-parameter and large-scale systems. Proceedings of the IMACS European Simulation Meeting held at the University of Patras, Patras, October 2-4, 1979. Edited by S. G. Tzafestas. *North-Holland Publishing Co., Amsterdam-New York, 1980. ix + 380 pp. ISBN 0-444-85447-9 (Editors) 81c:93004 93-06*
- Pattern recognition** ★Pattern recognition. Ideas in practice. Edited by Bruce G. Batchelor. *Plenum Press, New York-London, 1978. xv + 485 pp. (From the preface) 81h:68090 68G10*
- ★Proceedings of the Fourth International Joint Conference on Pattern Recognition. Held in Kyoto, November 7-10, 1978. *Institute of Electrical and Electronics Engineers, New York, 1979. xxii + 1166 pp. (Editors) 81a:68095 68G10 (68-06)*
- ★Автоматизация анализа и распознавания изображений. I. (Russian) [Automation, analysis and pattern recognition. I] Методы и средства. [Methods and means] Edited by G. G. Gromov. "Zinatne", Riga, 1979. 267 pp. (Editors) 81c:68110 68G10 (68-06)
- Performance of computer systems** ★Performance of computer systems. Proceedings of the Fourth International Symposium on Modelling and Performance Evaluation of Computer Systems held in Vienna, February 6-8, 1979. Edited by Mátys Arató, Alexandre Butrimenko and E. Gelenbe. *North-Holland Publishing Co., Amsterdam-New York, 1979. ix + 565 pp. ISBN 0-444-85332-4 (Editors) 81a:68006 68-06*
- Permutation group in physics and chemistry** ★The permutation group in physics and chemistry. Edited by Jürgen Hinze. Symposium held at the University of Bielefeld, Bielefeld, July, 1978. *Lecture Notes in Chemistry, 12. Springer-Verlag, Berlin-New York, 1979. vi + 230 pp. ISBN 3-540-09707-4 (Editors) 81a:81004 81-06 (81C40)*
- Perth** ★Gravitational radiation, collapsed objects and exact solutions. Proceedings of the Einstein Centenary Summer School held in Perth, January 1979. Edited by Cyril Edwards. *Lecture Notes in Physics, 124. Springer-Verlag, Berlin-New York, 1980. vi + 487 pp. ISBN 3-540-09992-1 (Editors) 81i:83003 83-06 (83C35)*
- Philosophy of science** ★Italian studies in the philosophy of science. Edited by Maria Luisa Dalla Chiara [Maria Luisa Dalla Chiara Scabia]. Boston Studies in the Philosophy of Science, 47. *D. Reidel Publishing Co., Dordrecht-Boston, Mass., 1981. xi + 525 pp. ISBN 90-277-0735-9, 90-277-1073-2 (Editors) 81a:03004 03-06*
- Physics** ★High-energy physics in the Einstein centennial year. A part of the proceedings of Orbis Scientiae 1979 held at the University of Miami, Coral Gables, Fla., January 15-18, 1979. Edited by Behram Kursunoglu, Arnold Perlmutter, Frank Krausz and Linda F. Scott. *Studies in the Natural Sciences, 16. Plenum Press, New York-London, 1979. viii + 525 pp. ISBN 0-306-40297-1 (Editors) 81a:81003 81-06 (81G25)*
- ★The permutation group in physics and chemistry. Edited by Jürgen Hinze. Symposium held at the University of Bielefeld, Bielefeld, July, 1978. *Lecture Notes in Chemistry, 12. Springer-Verlag, Berlin-New York, 1979. vi + 230 pp. ISBN 3-540-09707-4 (Editors) 81a:81004 81-06 (81C40)*
- ★Proceedings of the Conference on Mathematical Methods in Physics. Part A. Theoretical physics. Held at Mysore, August 28-31, 1978. *Matscience Report, 96. Institute of Mathematical Sciences, Madras, 1979. iii + ii + 310 pp. (Editors) 81c:00014a 00A69*
- ★Proceedings of the Conference on Mathematical Methods in Physics. Part B. Differential equations. Held at Mysore, August 28-31, 1978. *Matscience Report, 96.*
- Institute of Mathematical Sciences, Madras, 1979. ii + 155 pp. (Editors) 81c:00014a 00A69*
- ★История и методология естественных наук. Вып. XXII: Физика. (Russian) [History and methodology of the natural sciences. No. XXII: Physics] Edited by D. I. Gordeev, L. V. Levin and I. P. Bazarov. *Moskov. Gos. Univ., Moscow, 1979. 176 pp. (Editors) 81i:01002 01-06 (83-06)*
- ★История и методология естественных наук. Вып. XXI: Физика. [Physics] Edited by I. P. Bazarov and C. S. Sarangov. *Moskov. Gos. Univ., Moscow, 1979. 192 pp. (Editors) 81j:01002 01-06 (82-06)*
- ★Bifurcation phenomena in mathematical physics and related topics. Proceedings of the NATO Advanced Study Institute held at Cargèse, June 24-July 7, 1979. Edited by Claude Bardos and Daniel Bessis. NATO Advanced Study Institute Series. Ser. C: Mathematical and Physical Sciences, 54. *D. Reidel Publishing Co., Dordrecht-Boston, Mass.-London, 1980. ix + 596 pp. ISBN 90-277-1086-4 (Editors) 81f:00012 00A69 (35-06, 58-06, 81-06, 82-06)*
- ★Mathematical problems in theoretical physics. Proceedings of the International Conference on Mathematical Physics held in Lausanne, August 20-25, 1979. Edited by Konrad Osterwalder. *Lecture Notes in Physics, 116. Springer-Verlag, Berlin-New York, 1980. viii + 412 pp. ISBN 3-540-09964-6 (Editors) 81f:81003 81-06*
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- Physics of the expanding universe** ★Physics of the expanding universe. Proceedings of the Cracow School on Cosmology held at Jodłowy Dwór, September 1978. Edited by M. Demiański. *Lecture Notes in Physics, 109. Springer-Verlag, Berlin-New York, 1979. iv + 210 pp. ISBN 3-540-09562-4 (Editors) 81h:83044 83F05*
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- ★Atti del Primo Convegno A.M.A.S.E.S. (Italian) [Proceedings of the First AMASES Meeting] Held in Pisa, November 4-5, 1977. *G. Giapichelli, Editore, Turin, 1979. viii + 393 pp. (Editors) 81c:90002 90-06*
- Pittsburgh, Pa.** ★Multivariate analysis. V. Proceedings of the Fifth International Symposium held at the University of Pittsburgh, Pittsburgh, Pa., June 19-24, 1978. Edited by Paruchuri R. Krishnaiah. *North-Holland Publishing Co., Amsterdam-New York, 1980. x + 677 pp. ISBN 0-444-85321-9 (Editors) 81a:62004 62-06 (60-06)*
- Planning and control** ★Quantitative planning and control. Essays in honor of William Wager Cooper on the occasion of his 65th birthday. Edited by Yuji Ijiri and Andrew B. Whinston. *Academic Press [Harcourt Brace Jovanovich, Publishers], New York-London, 1979. xxx + 344 pp. (1 plate). ISBN 0-12-370450-2 (Editors) 81b:90002 90Axx*
- Plasticity** ★Исследования по упругости и пластичности. Вып. 13. (Russian) [Studies in elasticity and plasticity. No. 13] Актуальные проблемы механики сплошных сред. [Current problems of continuum mechanics] Edited by N. F. Morozov and K. F. Černyh. *Leningrad. Univ., Leningrad, 1980. 320 pp. (Editors) 81k:73002 73-06 (76F99, 78A25)*
- Pisa** ★Proceedings of the Fourth Symposium on Basic Problems of Numerical Mathematics. Held in Pisa, September 4-8, 1978. Edited by Ivo Marek. *Charles University, Prague, 1978. 201 pp. (Editors) 81a:65008 65-06*
- Policy analysis** ★Fuzzy sets. Theory and applications to policy analysis and information systems. Proceedings of the Symposium on Policy Analysis and Information Systems held at Duke University, Durham, N.C., June 28-30, 1980. Edited by Paul F. Wang and S. K. Chang. *Plenum Press, New York-London, 1980. ix + 413 pp. ISBN 0-306-40557-1 (Editors) 81h:03105 03E72 (03-06, 90A05, 94D05)*
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- Potential theory** ★Potential theory, Copenhagen 1979. Proceedings of a Colloquium held in Copenhagen, May 14-18, 1979. Edited by Christian Berg, Gunnar Forst and Bent Fuglede. *Lecture Notes in Mathematics, 787. Springer-Verlag, Berlin-New York, 1980. viii + 319 pp. ISBN 3-540-09967-0 (Editors) 81i:31001 31-06*
- ★Séminaire de Théorie du Potentiel, Paris. No. 5. (French) [Seminar on Potential Theory, Paris. No. 5] Edited by Francis Hirsch and Gabriel Mokobodzki. *Lecture Notes in Mathematics, 814. Springer-Verlag, Berlin-New York, 1980. iv + 239 pp. ISBN 3-540-10025-3 (Editors) 81i:31002 31-06*
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- ★Вероятностные методы и кибернетика. Вып. XV. (Russian) [Probabilistic methods and cybernetics. No. XV] Edited by Ju. V. Golunkov. *Kazan. Univ., Kazan, 1979. 95 pp. (Editors) 81d:03003 03-06 (68Cxx)*
- Probability** ★Séminaire de Probabilités, Rennes 1978. (French) [Seminar on Probability, Rennes 1978] *Université de Rennes, Rennes, 1978. 232 pp. (not consecutively paged) (Editors) 81m:60003 60-06*

★Applications of statistics & probability in soil & structural engineering. Vol. I, II. Proceedings of the Third International Conference (ICASP3) held in Sydney, January 29–February 2, 1979. Edited by Owen G. Ingles. *Unisearch, Ltd., Kensington*, 1979. Vol. I: 427 pp.; Vol. II: pp. 429–849. ISBN 0-909796-08-4, 0-909796-09-2 (Editors) 81b:62002a 62–06

★Applications of statistics & probability in soil & structural engineering. Vol. III. Proceedings of the Third International Conference (ICASP3) held in Sydney, January 29–February 2, 1979. Edited by Owen G. Ingles. *Unisearch, Ltd., Kensington*, 1979. 468 pp. ISBN 0-909796-10-6 (Editors) 81b:62002b 62–06

★Contribuciones en probabilidad y estadística matemática, enseñanza de la matemática y análisis. (Spanish) [Contributions in probability and mathematical statistics, teaching of mathematics and analysis] Dedicated to Professor Alfonso Guiraud Martin on the occasion of his academic retirement. *Grindley Ediciones, Granada*, 1979. viii + 307 pp. (1 plate). ISBN 84-338-0110-4 (Editors) 81d:90001 00A10 (60–06, 90–06)

★Proceedings of the Conference on Probability, Stochastic Processes and Statistical Mechanics. Held at Mysore, March 26–29, 1979. Edited by N. R. Rangnathan and R. Sridhar. *Matscience Report, 97. Institute of Mathematical Sciences, Madras*, 1979. iii + 202 pp. (Editors) 81j:60003 60–06 (81D05)

★Séminaire de Probabilités. XIV. (French) [Seminar on Probability. XIV] Held in Paris, 1978/1979. Edited by Jacques Azéma and Marc Yor. *Lecture Notes in Mathematics, 784. Springer-Verlag, Berlin-New York*, 1980. vii + 546 pp. ISBN 3-540-09760-0 (Editors) 81f:60004 60–06

★Studies in subjective probability. Second edition. Edited by Henry E. Kyburg, Jr. and Howard E. Smoller. *Robert E. Krieger Publishing Co., Inc., Huntington, N.Y.*, 1980. ii + 262 pp. ISBN 0-88275-296-0 (Editors) 81i:60003 60A05 (62A15)

★Studies in inductive logic and probability. Vol. II. Edited by Richard C. Jeffrey. *University of California Press, Berkeley, Calif.*, 1980. i + 305 pp. ISBN 0-520-03826-6 (Editors) 81j:03008 03–06

★École d'Été de Probabilités de Saint-Flour VIII—1978. (French) [Eighth Saint Flour Probability Summer School—1978] Held at Saint Flour, July 5–22, 1978. Edited by P. L. Hennequin. *Lecture Notes in Mathematics, 774. Springer-Verlag, Berlin-New York*, 1980. xiii + 334 pp. ISBN 3-540-09741-4 (Editors) 81j:60005 60–06

★Computational probability. Proceedings of the Actuarial Research Conference held at Brown University, Providence, R.I., August 28–30, 1975. Edited by P. M. Kahn. *Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], New York-London*, 1980. xi + 340 pp. ISBN 0-12-394680-8 (Editors) 81k:60005 60–04 (62P05, 65U05, 92–06)

★Analytical methods of probability theory. Edited by V. S. Koroljuk. "Naukova Dumka", Kiev, 1979. 156 pp. (Editors) 81a:60003 60–06

★Mathematical statistics and probability theory. Proceedings of the Sixth International Conference held in Wista, December 7–13, 1978. Edited by Witold Klonecki, Andrzej Kozek and Jan Rosiński. *Lecture Notes in Statistics, 2. Springer-Verlag, New York-Heidelberg*, 1980. xxi + 373 pp. ISBN 0-387-90493-X (Editors) 81g:62006 62–06 (60–06)

★Трета международна летна школа по теория на вероятностите и математическа статистика. (Bulgarian) [Third International Summer School on Probability Theory and Mathematical Statistics] Held in Varna, May 10–20, 1978. Edited by B. Penkov and J. Stojanov. *B'lgar. Akad. Nauk, Sofia*, 1980. 194 pp. (Editors) 81j:60004 60–06

★Probability theory. Mathematical statistics. Theoretical cybernetics. Теория вероятностей. Математическая статистика. Теоретическая кибернетика. Том 17. (Russian) [Probability theory. Mathematical statistics. Theoretical cybernetics. Vol. 17] Edited by R. V. Gamkrelidze. *Итоги Науки и Техники. [Progress in Science and Technology] Akad. Nauk SSSR, Vsesojuz. Inst. Nauch. i Tehn. Informacii, Moscow*, 1979. 195 pp. (loose errata). (Editors) 81e:62002 62–06 (68–06)

★Problèmes théoriques liés aux nouvelles particules. ★Problèmes théoriques liés aux nouvelles particules. (French) [Theoretical problems associated with the new particles] Held at Montpellier, May 23–28, 1977. *Colloques Nationaux du Centre National de la Recherche Scientifique [National Colloquia of the CNRS], 937. Éditions du Centre National de la Recherche Scientifique (CNRS), Paris*, 1978. 449 pp. ISBN 2-222-02209-6 (Editors) 81d:81001 81–06 (35–06)

Problems:

★Foliation. Foliation problem session (R. Bott). Compiled by Mark Mostow and Paul Schweitzer [Paul A. Schweitzer]. *Algebraic and geometric topology (Proc. Sympos. Pure Math., Stanford Univ., Stanford, Calif., 1976), Part 2, pp. 269–271, Proc. Sympos. Pure Math., XXXII, Amer. Math. Soc., Providence, R.I.*, 1978. (Connor Lazarov) 81k:57028 57R30

★Group theory. ★Коуровская тетрадь (нерешенные вопросы теории групп). (Russian) [Kourouva notebook: unsolved problems in the theory of groups] Edited by V. D. Mazurov, Ju. I. Merzjakov and V. A. Kurkin. Sixth augmented edition. *Akad. Nauk SSSR Sibirsk. Otdel., Inst. Mat., Novosibirsk*, 1978. 99 pp. (Ju. I. Merzjakov) 81d:20001 20–XX

★Hilbert. ★Die Hilbertschen Probleme. (German) [The Hilbert problems] Second edition. Translated from the Russian. Edited by P. S. Alexandrov. *Ostwalds Klassiker der Exakten Wissenschaften [Ostwald's Classics of the Exact Sciences], 252. Akademische Verlagsgesellschaft Geest & Portig K.-G., Leipzig*, 1979. 302 pp. (Editors) 81b:01002 01–06 (00A05)

★Homological group theory. List of problems. Edited by C. T. C. Wall. *Homological group theory (Proc. Sympos., Durham, 1977), pp. 369–394, London Math. Soc. Lecture Note Ser., 36, Cambridge Univ. Press, Cambridge*, 1979. (Editors) 81f:00002 00A05 (20–02, 57–02)

★Topology. Problem session. The Proceedings of the 1979 Topology Conference (Ohio Univ., Athens, Ohio, 1979). *Topology Proc.* 4 (1979), no. 2, 637–642 (1980). (Editors) 81m:54001 54–XX

★Problems in the development of probability theory. Notes on some problems concerning the development of probability theory. (Chinese) *Acta Math. Sinica* 19 (1976), no. 2, 73–82. 81i:01005 01A05 (60–03)

★Problems in the diffraction and propagation of waves. ★Проблемы дифракции и распространения волн. Вып. 17. (Russian) [Problems in the diffraction and propagation of waves. No. 17] Edited by E. M. Gjunninen. *Leningrad. Univ.*, Leningrad, 1979. 216 pp. (Editors) 81c:78006 78A45 (78A40)

★Problems in experimental and theoretical physics. ★Некоторые вопросы экспериментальной и теоретической физики. (Russian) [Problems in experimental and theoretical physics] Edited by G. B. Abdullaev and T. G. Kerimova. "Élm", Baku, 1977. 268 pp. (Vladimir Šipa) 81d:8200a 82A70 (81Hxx, 82A65)

★Problems in the general theory of relativity and theory of group representations. ★Problems in the general theory of relativity and theory of group representations. A translation of Trudy Fiz. Inst. Lebedev. 96 (1977). Edited by N. G. Basov. Translated from the Russian by Alan Mason. *Proc. (Trudy) P. N. Lebedev Phys. Inst.* 96 (1979). *Consultants Bureau [Plenum], New York-London*, 1979. pp. i–vii and 1–185. (Editors) 81i:83004 83–06 (22–06)

★Problems in geometry. ★Проблемы геометрии. Том 11. (Russian) [Problems in geometry. Vol. 11] Edited by A. I. Mikhailov. *Итоги Науки и Техники. [Progress in Science and Technology] Akad. Nauk SSSR, Vsesojuz. Inst. Nauch. i Tehn. Informacii, Moscow*, 1980. 243 pp. (loose errata). (Editors) 81e:53003 53–06 (58–06)

★Problems in mathematical physics. ★Теория рассеяния. Теория колебаний. (Russian) [Scattering theory. Theory of oscillations] Edited by M. Š. Birman. *Проблемы Математической Физики [Problems in Mathematical Physics], 9. Leningrad. Univ., Leningrad*, 1979. 188 pp. (Editors) 81a:35003 35–06

★Problems of numerical analysis and systems programming. ★Проблемы вычислительной математики и системного программирования. (Russian) [Problems of numerical analysis and systems programming] Edited by M. Š. Mironov, D. Olah, E. A. Žogolev and T. Markuš. *Труды Научно-Исследовательского Вычислительного Центра Московского Государственного Университета и Будапештского Университетского Вычислительного Центра. [Works of the Scientific Research Computing Center of Moscow State University and the Budapest Computing Center for Universities] Computing Center for Universities, Budapest*, 1980. 94 pp. ISBN 963-451-041-8 (Editors) 81j:65010 65–06

★Problems of numerical mathematics. ★Проблемы вычислительной математики. (Russian) [Problems of numerical mathematics] Edited by A. N. Tikhonov and A. S. Il'inskiĭ. *Moskov. Gos. Univ., Moscow*, 1980. 134 pp. (Editors) 81m:00019 00A69 (65–06)

★Problems of stability of motion, analytical mechanics and control of motion. ★Проблемы устойчивости движения, аналитической механики и управления движением. (Russian) [Problems of stability of motion, analytical mechanics and control of motion] Papers presented at the Third All-Union Četaev Conference, dedicated to the memory of N. G. Četaev on the occasion of the seventy-fifth anniversary of his birth, held in Irkutsk, June 20–25, 1977. Edited by V. M. Matrosov and A. N. Pančenkov [A. M. Pančenkov]. "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. 328 pp. (Editors) 81e:93002 93–06 (34–06, 58–06, 70E99, 70H99, 73H99, 90–06)

★Problems in the theory of elasticity and viscoelasticity. ★Вопросы теории упругости и вязкоупругости. (Russian) [Problems in the theory of elasticity and viscoelasticity] Edited by G. B. Kuznetsov. *Akad. Nauk SSSR, Ural. Nauch. Centr, Sverdlovsk*, 1978. 126 pp. (Editors) 81c:73002 73–06

★Problems of the thermomechanics of elastic bodies. ★Zagadnienia termomechaniki ciał sprężystych. (Polish) [Problems of the thermomechanics of elastic bodies] Edited and with English papers translated by Józef Ignaczak. *Zakład Narodowy im. Ossolińskich—Wydawnictwo Polskiej Akademii Nauk (Ossolinum), Wrocław*, 1978. 274 pp. (Vadim Komkov) 81f:73001 73–06 (73U05)

Proceedings:

★All-Union School-Seminar on Statistical Hydroacoustics. ★Труды седьмой Всесоюзной школы-семинара по статистической гидроакустике. (Russian) [Proceedings of the Seventh All-Union School-Seminar on Statistical Hydroacoustics] Held at L'vov, September 4–9, 1975. Edited by V. V. Ol'sevskii and N. G. Zagorukov. *Akad. Nauk SSSR Sibirsk. Otdel., Inst. Mat., Novosibirsk*, 1977. 327 pp. (Editors) 81a:00010 76–06 (93E11)

★AMASES Meeting. ★Atti del Primo Convegno A.M.A.S.E.S. (Italian) [Proceedings of the First AMASES Meeting] Held in Pisa, November 4–5, 1977. *G. Giappichelli, Editore, Turin*, 1979. viii + 393 pp. (Editors) 81e:90002 90–06

★Annual ACM Symposium on Theory of Computing. ★Conference Proceedings of the Twelfth Annual ACM Symposium on Theory of Computing. Papers presented at the Symposium held in Los Angeles, Calif., April 18–30, 1980. *Association for Computing Machinery (ACM), New York*, 1980. v + 447 pp. ISBN 0-89791-017-6 (Editors) 81j:68006 68–06

★Annual U.S. Army Operations Research Symposium. ★Final Proceedings of the Sixteenth Annual U.S. Army Operations Research Symposium. Vol. I, II. Held in Fort Lee, Va., October 12–14, 1977. *U. S. Government Printing Office, Washington, D.C.*, 1977. xviii + 1162 pp. (Editors) 81m:90002 90–06

★Army Numerical Analysis and Computers Conference. ★Proceedings of the 1980 Army Numerical Analysis and Computers Conference. Held at the NASA Ames Research Center, Moffett Field, Calif., February 20–21, 1980. ARO Report 80. 3. *U. S. Army Research Office, Research Triangle Park, N.C.*, 1980. xiv + 481 pp. (Editors) 81m:65007 65–06 (68–06)

★Brazilian Conference on Mathematical Logic. ★Proceedings of the Third Brazilian Conference on Mathematical Logic. Held at the Institute of Mathematics, Federal University of Pernambuco, Recife, December 17–22, 1979. Edited by Ayda I. Arruda, Newton C. A. da Costa and Antonio-Mario Sette. *Sociedade Brasileira Lógica, São Paulo*, 1980. vi + 336 pp. (Editors) 81m:03005 03–06

★Brescia Mathematical Seminar. ★Rendiconti del Seminario Matematico di Brescia. Vol. 4. (Italian) [Proceedings of the Brescia Mathematical Seminar. Vol. 4] Scienze Matematiche, 4. *Vita e Pensiero, Milan*, 1980. 97 pp. (Editors) 81h:51001 51–06

★Conference on Approximation Theory. ★Proceedings of the Conference on Approximation Theory. (Chinese) Held at Hangzhou, April 23–30, 1978. *Hangzhou University Press, Hangzhou*, 1978. iii + 152 pp. (Editors) 81m:41002 41–06

Proceedings: (continued)

- Conference on Convergence Structures** ★Proceedings of the Conference on Convergence Structures. Held at Cameron University, Lawton, Okla., April 18-19, 1980. Edited by C. Riecke. *Cameron University, Department of Mathematics, Lawton, Okla.*, 1980. ii + 173 pp. (Editors) **81m:54003** 54-06
- Conference on Crystallographic Groups** ★Proceedings of the Conference on Kristallografische Gruppen. Part I. Held at the Universität Bielefeld, Bielefeld, September 2-16, 1979. Edited by A. W. M. Dress and J. Neubüser. *Match No. 9* (1980). *Max-Planck-Institut für Kohlenforschung, Institut für Strahlenchemie, Mülheim*, 1980. pp. i-iv and 1-261. (Editors) **81k:20002** 20-06 (20H15)
- Conference on the Design of Experiments** ★Proceedings of the Twenty-Fifth Conference on the Design of Experiments. Held in Natick, Mass., October 17-19, 1979. ARO Report 80, 2. U. S. Army Research Office, Research Triangle Park, N.C., 1980. xxix + 243 pp. (Editors) **81k:65009a** 65C05
- Conference on Mathematical Methods in Celestial Mechanics** ★Proceedings of the Sixth Conference on Mathematical Methods in Celestial Mechanics. Part I. Held at the Mathematisches Forschungsinstitut, Oberwolfach, August 14-19, 1978. *Celestial Mech.* 21 (1980), no. 1. D. Reidel Publishing Co., Dordrecht-Boston, Mass., 1980. pp. 1-125 (one plate). (Editors) **81a:70001a** 70-06 (70F15)
- ★Proceedings of the Sixth Conference on Mathematical Methods in Celestial Mechanics. Part II. Held at the Mathematisches Forschungsinstitut, Oberwolfach, August 14-19, 1978. *Celestial Mech.* 21 (1980), no. 2. D. Reidel Publishing Co., Dordrecht-Boston, Mass., 1980. pp. 129-250. (Editors) **81a:70001b** 70-06 (70F15)
- Conference on Mathematical Methods in Physics** ★Proceedings of the Conference on Mathematical Methods in Physics. Part A. Theoretical physics. Held at Mysore, August 28-31, 1978. *Matscience Report*, 96. *Institute of Mathematical Sciences, Madras*, 1979. iii + ii + 310 pp. (Editors) **81e:00014a** 00A69
- ★Proceedings of the Conference on Mathematical Methods in Physics. Part B. Differential equations. Held at Mysore, August 28-31, 1978. *Matscience Report*, 96. *Institute of Mathematical Sciences, Madras*, 1979. ii + 155 pp. (Editors) **81e:00014b** 00A69
- Conference on the Methods of Algebra and Functional Analysis in the Study of Families of Operators** ★Материалы Конференции "Методы Алгебры и Функционального Анализа при Исследовании Семейств Операторов". (Russian) [Proceedings of a Conference on the Methods of Algebra and Functional Analysis in the Study of Families of Operators] Held in Tartu, November 24-26, 1978. Dedicated to G. Kangro on the occasion of the sixty-fifth anniversary of his birth. *Tartu. Gos. Univ., Tartu*, 1978. 116 pp. (Editors) **81m:47001** 47-06 (00A10, 01A70, 40-06)
- Conference on Probability, Stochastic Processes and Statistical Mechanics** ★Proceedings of the Conference on Probability, Stochastic Processes and Statistical Mechanics. Held at Mysore, March 26-29, 1979. Edited by N. R. Ranganathan and R. Sridhar. *Matscience Report*, 97. *Institute of Mathematical Sciences, Madras*, 1979. iii + 202 pp. (Editors) **81j:60003** 60-06 (81D05)
- Conference on Semigroups in Honor of Alfred H. Clifford** ★Proceedings of the Conference on Semigroups in honor of Alfred H. Clifford. Held at Tulane University, New Orleans, La., September 1-3, 1978. Edited by William R. Nico. Reprints and Lecture Notes in Mathematics. *Tulane University, New Orleans, La.*, 1979. viii + 240 pp. (Editors) **81a:20004** 20-06 (06F05)
- Franco-Southeast Asian Mathematical Conference** ★Proceedings of the First Franco-Southeast Asian Mathematical Conference, Singapore, May 1979. Vol. II. Held in Singapore, May 1979. *Southeast Asian Bull. Math.* 1979, Special Issue b. *Southeast Asian Mathematical Society, Singapore*, 1979. pp. 173-302. (Editors) **81g:00004** 00A10
- IEEE Conference on Decision and Control** ★Proceedings of the 1978 IEEE Conference on Decision and Control including the 17th Symposium on Adaptive Processes. Held in San Diego, Calif., January 10-12, 1979. *Institute of Electrical and Electronics Engineers, New York*, 1979. xxi + 1461 pp. (Editors) **81a:93001** 93-06
- ★Proceedings of the 18th IEEE Conference on Decision and Control. Vol. 1, 2. Including the 18th Symposium on Adaptive Processes. Held in Fort Lauderdale, Fla., December 12-14, 1979. *Institute of Electrical and Electronics Engineers, Inc. (IEEE), New York*, 1979. xx + 1077 pp. (Editors) **81k:93002** 93-06
- International Colloquium on Differential Geometry** ★Proceedings of the IV International Colloquium on Differential Geometry. Held at the University of Santiago de Compostela, Santiago de Compostela, September 18-21, 1978. *Cursos y Congresos de la Universidad de Santiago de Compostela* [Courses and Conferences of the University of Santiago de Compostela], 15. *Universidad de Santiago de Compostela, Departamento de Geometria y Topologia, Santiago de Compostela*, 1979. ix + 294 pp. *ISBN* 84-7191-148-5 (Editors) **81b:53001** 53-06 (58-06)
- International Conference on Mathematical Modelling** ★Proceedings of the First International Conference on Mathematical Modelling. Vol. I, II, III, IV, V. Held in St. Louis, Mo., August 29-September 1, 1977. Edited by Xavier J. R. Avula. *University of Missouri-Rolla, Department of Engineering Mechanics, Rolla, Mo.*, 1977. x + 2646 pp. (Editors) **81i:90005** 90-06 (92-06, 93-06)
- ★Proceedings of the Second International Conference on Mathematical Modelling. Vol. I, II. Held at St. Louis, Mo., July 11-13, 1979. Edited by Xavier J. R. Avula, Richard Bellman, Yudell L. Luke and A. K. Rigler. *University of Missouri-Rolla, Rolla, Mo.*, 1980. xi + 1310 pp. (Editors) **81j:00027** 00A69 (00A10)
- International Joint Conference on Pattern Recognition** ★Proceedings of the Fourth International Joint Conference on Pattern Recognition. Held in Kyoto, November 7-10, 1978. *Institute of Electrical and Electronics Engineers, New York*, 1979. xxii + 1166 pp. (Editors) **81a:68005** 68G10 (68-06)
- International Seminar on Fuzzy Set Theory** ★Proceedings of the International Seminar on Fuzzy Set Theory. Held at the Institut für Mathematik, Johannes Kepler Universität, Linz, September 24-29, 1979. Edited by Erich Peter Klement. *Johannes Kepler Universität, Linz*, 1980. i + 146 pp. (Siegfried Gottwald) **81m:03067** 03E72 (03-06, 28A99, 54A40, 60E99, 94D05)
- International Symposium on Algebraic Geometry** ★Proceedings of the International

Proceedings: (continued)

- Symposium on Algebraic Geometry**. A Taniguchi Symposium. Held at Kyoto University, Kyoto, January 10-14, 1977. Edited by Masayoshi Nagata. *Kinokuniya Book Store Co., Ltd., Tokyo*, 1978. xiv + 737 pp. (Editors) **81e:14002** 14-06
- International Symposium on Applications of Mathematics in System Theory** ★Proceedings of the International Symposium on Applications of Mathematics in System Theory. I. Held at the University of Braşov, Braşov, December 27-30, 1978. Edited by C. L. Simionescu and I. Benkö. *Universitatea din Braşov, Braşov*, 1979. ii + 339 pp. (Editors) **81j:93006a** 93-06 (49-06, 65-06, 90-06, 92-06)
- ★Proceedings of the International Symposium on Applications of Mathematics in System Theory. II. Held at the University of Braşov, Braşov, December 27-30, 1978. Edited by C. L. Simionescu and I. Benkö. *Universitatea din Braşov, Braşov*, 1979. 376 pp. (Editors) **81j:93006b** 93-06 (49-06, 65-06, 90-06, 92-06)
- International Symposium on Multiple-Valued Logic** ★Proceedings of the Eighth International Symposium on Multiple-Valued Logic. Held in Rosemont, Ill., 1978. *IEEE Computer Society Publications Office, Long Beach, Calif.*, 1978. v + 298 pp. (Editors) **81a:94001** 94-06 (03B50, 68-06)
- International Symposium on Network Theory** ★Proceedings of the Fourth International Symposium on Network Theory. Held in Ljubljana, September 4-7, 1979. *Georgi Publishing Co., St.-Saphorin; Distributed by Renof USA, Brookfield, Vt.*, 1979. 498 pp. *ISBN* 2-604-00033-4 (Editors) **81b:94003** 94-06 (94Cxx)
- Internationale Universitätswochen für Kernphysik** ★Facts and prospects of gauge theories. Proceedings of the XVII. Internationale Universitätswochen für Kernphysik held at Schlading, February 21-March 3, 1978. Edited by Paul Urban. *Acta Physica Austriaca Supplement*, XIX. *Springer-Verlag, Vienna*, 1978. v + 889 pp. *ISBN* 3-211-81514-7 (Editors) **81b:81001** 81-06 (81E10)
- Manitoba Conference on Numerical Mathematics and Computing** ★Proceedings of the Ninth Manitoba Conference on Numerical Mathematics and Computing. Held at the University of Manitoba, Winnipeg, Man., September 27-29, 1979. Edited by G. H. J. Van Rees and H. C. Williams. *Congressus Numerantium, XXVII. Utilitas Mathematica Publishing, Inc., Winnipeg, Man.*, 1980. ix + 434 pp. *ISBN* 0-919628-27-3 (Editors) **81j:65011** 65-06 (05-06)
- Midwestern Mechanics Conference** ★Proceedings of the 16th Midwestern Mechanics Conference. Held at Kansas State University, Manhattan, Kan., September 19-21, 1979. Edited by S. C. Sinha, P. G. Kirmser and C. L. D. Huang. *Developments in Mechanics*, 10. *Kansas State University, College of Engineering, Manhattan, Kan.*, 1979. ix + 321 pp. (loose errata). (Editors) **81m:73010** 73-06
- National Conference on Nonholonomic Spaces** ★Lucrările Conferinței Naționale de Spații Neolomne. (Romanian) [Proceedings of the National Conference on Nonholonomic Spaces] Held at Iași, May 28-30, 1976. *Editura Academiei Republicii Socialiste România, Bucharest*, 1979. 176 pp. (Editors) **81b:53002** 53-06
- Operations Research** ★Proceedings in Operations Research. 7. (German) Papers of the Sixth Annual Meeting of the Deutsche Gesellschaft für Operations Research (DGOR) held at Christian-Albrechts-Universität, Kiel, September 21-23, 1977. Edited by K. Brockhoff, W. Dinkelbach, P. Kall, D. B. Pressmar and K. Spicher. *Physica Verlag, Würzburg*, 1978. 536 pp. *ISBN* 3-7908-0194-1 (Editors) **81e:90003a** 90-06 (62-06)
- ★Proceedings in Operations Research. 8. (German) Papers of the Seventh Annual Meeting of the Deutsche Gesellschaft für Operations Research (DGOR) held at the Freie Universität Berlin, Berlin, October 4-6, 1978. Edited by K.-W. Gaede, D. B. Pressmar, Ch. Schneeweiß, K.-P. Schuster and O. Seifert. *Physica Verlag, Würzburg*, 1979. 700 pp. *ISBN* 3-7908-0212-3 (Editors) **81e:90003b** 90-06 (62-06)
- ★Proceedings in Operations Research. 9. (German) Papers of the Eighth Annual Meeting of the Deutsche Gesellschaft für Operations Research (DGOR) held in Regensburg, September 19-21, 1979. Edited by J. Schwarz, L. von Dobschütz, B. Fleischmann, Ch. Schneeweiß and H. Steckhaar. *Physica Verlag, Würzburg*, 1980. 668 pp. *ISBN* 3-7908-0223-9 (Editors) **81e:90003c** 90-06 (62-06)
- Prague Symposium on Asymptotic Statistics** ★Proceedings of the Second Prague Symposium on Asymptotic Statistics. Held in Hradec Králové, August 21-25, 1978. Edited by Petr Mandl and Marie Hušková. *North-Holland Publishing Co., Amsterdam-New York; Society of Czechoslovak Mathematicians and Physicists, Prague*, 1979. 340 pp. *ISBN* 0-444-85375-8 (Editors) **81c:62005** 62-06 (60-06, 94-06)
- Scandinavian Logic Symposium** ★Proceedings from 5th Scandinavian Logic Symposium. Held in Aalborg, January 17-19, 1979. Edited by Finn V. Jensen. Brian H. Mayoh and Karen K. Möller. *Aalborg University Press, Aalborg*, 1979. vii + 361 pp. *ISBN* 87-7307-037-8 (Editors) **81m:03006** 03-06 (68-06)
- School of Algebra** ★Atas da 5ª Escola de Álgebra. [Proceedings of the 5th School of Algebra] Held in Rio de Janeiro, July 17-28, 1978. *Sociedade Brasileira de Matemática, Rio de Janeiro*, 1978. v + 199 pp. (Editors) **81c:00004** 00A10
- Southeastern Conference on Combinatorics, Graph Theory and Computing** ★Proceedings of the Tenth Southeastern Conference on Combinatorics, Graph Theory and Computing. Vols. I, II. Held at the Florida Atlantic University, Boca Raton, Fla., April 2-6, 1979. Edited by Frederick Hoffman, David McCarthy, Ronald C. Mullin and Ralph G. Stanton. *Congressus Numerantium, XXIII-XXIV. Utilitas Mathematica Publishing, Inc., Winnipeg, Man.*, 1979. Vol. I: xii + 467 pp.; Vol. II: pp. xiii-xx and 469-939. *ISBN* 0-919628-23-0, 0-919628-24-9 (Editors) **81b:05004** 05-06
- Spanish-Portuguese Mathematical Conference** ★Actas de las Primeras Jornadas Matemáticas Hispano-Lusitanas. (Spanish) [Proceedings of the First Spanish-Portuguese Mathematical Conference] Held in Madrid, April 24-28, 1973. *Consejo Superior de Investigaciones Científicas, Madrid*, 1977. 687 pp. (1 plate). *ISBN* 94-00-03607-7 (Editors) **81j:00009** 00A10
- Symposium on Basic Problems of Numerical Mathematics** ★Proceedings of the Fourth Symposium on Basic Problems of Numerical Mathematics. Held in Plzeň, September 4-8, 1978. Edited by Ivo Marek. *Charles University, Prague*, 1978. 201 pp. (Editors) **81a:65008** 65-06
- Symposium on the Fifteen Hundredth Birth Anniversary of Āryabhaṭa I** ★Proceeding

Proceedings: (continued)

- of the Symposium on the 1500th Birth Anniversary of Āryabhaṭa I. Held in New Delhi, November 2-4, 1976. Indian J. Hist. Sci. 12 (1977), no. 2, 283-244. *Indian National Science Academy, New Delhi*, 1977. pp. 83-245. (Editors) **81a:01008** 01A32
- Symposium on Ring Theory** ★Proceedings of the 12th Symposium on Ring Theory. Held at Hokkaido University, Sapporo, August 31-September 1, 1979. Edited by Manabu Harada. Okayama Mathematical Lectures. *Okayama University, Department of Mathematics, Okayama*, 1980. iii + 60 pp. (Editors) **81a:16002** 16-06
- ★Proceedings of the 13th Symposium on Ring Theory. Held at Okayama University, Okayama, September 28-30, 1980. Edited by Hisao Tominaga. Okayama Mathematical Lectures. *Okayama University, Department of Mathematics, Okayama*, 1981. ii + 125 pp. (Editors) **81m:16004** 16-06
- Symposium on Semigroups** ★Proceedings of the 3rd Symposium on Semigroups. Held at the Inter-University Seminar House of Kansai, Kobe, August 4-6, 1979. Edited by Tsuyoshi Fujiwara. Osaka University, Department of Mathematics, Osaka, 1980. iii + 124 pp. (Editors) **81b:20003** 20-06 (20Mxx)
- Symposium on Sparse Matrix Computations** ★Sparse Matrix Proceedings 1978. Edited by Iain S. Duff and G. W. Stewart. Symposium on Sparse Matrix Computations held in Knoxville, Tenn., November 2-3, 1978. *SIAM, Philadelphia, Pa.*, 1979. xvi + 334 pp. ISBN 0-89871-160-6 (Editors) **81f:65003** 65-06
- Topology Conference** ★The Proceedings of the 1979 Topology Conference. Held at Ohio University, Athens, Ohio, 1979. Edited by Włodzimierz Kuperberg, G. M. Reed and Philip Zenor. Topology Proc. 4 (1979), no. 1. (1980). *Auburn University, Mathematics Department, Auburn, Ala.*, 1980. pp. 1-338. (Editors) **81h:54001** 54-06
- ★The Proceedings of the 1979 Topology Conference. Held at Ohio University, Athens, Ohio, 1979. Edited by Włodzimierz Kuperberg, G. M. Reed and Philip Zenor. Topology Proc. 4 (1979), no. 2 (1980). *Auburn University, Mathematics Department, Auburn, Ala.*, 1980. pp. 339-645. (Editors) **81h:54001** 54-06 (55-06)
- West Coast Conference on Combinatorics, Graph Theory and Computing** ★Proceedings of the West Coast Conference on Combinatorics, Graph Theory and Computing. Held at Humboldt State University, Arcata, Calif., September 5-7, 1979. Edited by Phyllis Z. Chinn and D. McCarthy. Congressus Numerantium, XXVI. *Utilitas Mathematica Publishing, Inc., Winnipeg, Man.*, 1980. vi + 322 pp. ISBN 0-919628-26-5 (Editors) **81i:05006** 05-06 (68-06)
- Workshop on Lie-Admissible Formulations** ★Proceedings of the Second Workshop on Lie-Admissible Formulations. Part A. Review papers. Held at the Science Center, Harvard University, Cambridge, Mass., August 1-8, 1979. *Hadronic J.* 2 (1979), no. 6, 1252-2018. *Hadronic Press, Inc., Nonantum, Mass.*, 1979. pp. 1252-2023. (Editors) **81a:81005a** 81-06 (17-06)
- ★Proceedings of the Second Workshop on Lie-Admissible Formulations. Part B. Research papers. Held at the Science Center, Harvard University, Cambridge, Mass., August 1-8, 1979. *Hadronic J.* 3 (1979/80), no. 1. *Hadronic Press, Inc., Nonantum, Mass.*, 1980. pp. 1-725. (Editors) **81a:81005b** 81-06 (17-06)
- World Conference on Mathematics at the Service of Man** ★Proceedings of the First World Conference on Mathematics at the Service of Man. Vol. 1. Held in Barcelona in 1977. Edited by A. Ballester, N. Batle and E. Trillas. *Universitat Politècnica, Escola Tècnica Superior d'Arquitectura, Departament de Matemàtiques, Barcelona*, 1980. v + 650 pp. (Editors) **81m:50003a** 90-06 (93-06)
- ★Proceedings of the First World Conference on Mathematics at the Service of Man. Vol. II. Held in Barcelona in 1977. Edited by A. Ballester, N. Batle and E. Trillas. *Universitat Politècnica, Escola Tècnica Superior d'Arquitectura, Departament de Matemàtiques, Barcelona*, 1980. ii + 681 pp. (Editors) **81m:50003b** 90-06 (93-06)
- Proceedings of the International School of Physics "Enrico Fermi"** ★Physics and astrophysics of neutron stars and black holes. Proceedings of the International School of Physics "Enrico Fermi", Course LXV, held at Varenna, Italy 14-26, 1975. Edited by Riccardo Giacconi and Remo Ruffini. *North-Holland Publishing Co., Amsterdam-New York*, 1978. xxv + 871 pp. ISBN 0-7204-0720-3 (Editors) **81k:83004** 83-06 (85-06)
- Proceedings of the P. N. Lebedev Physics Institute** ★Problems in the general theory of relativity and theory of group representations. A translation of Trudy Fiz. Inst. Lebedev. 96 (1977). Edited by N. G. Basov. Translated from the Russian by Alan Mason. Proc. (Trudy) P. N. Lebedev Phys. Inst. 96 (1979). Consultants Bureau [Plenum], New York-London, 1979. pp. i-vii and 1-185. (Editors) **81i:83004** 83-06 (22-06)
- Proceedings of the S. L. Sobolev Seminar, No. 1** ★Теория кубатурных формул и приложения функционального анализа к задачам математической физики. (Russian) [Theory of cubature formulas and the application of functional analysis to problems of mathematical physics] Edited by S. V. Uspenskii. Труды Семинара С. Л. Соболева, No. 1 [Proceedings of the S. L. Sobolev Seminar, No. 1]. 1976. *Akad. Nauk SSSR Sibirsk. Otdel., Inst. Mat., Novosibirsk*, 1976. 168 pp. (Editors) **81a:65009** 65-06
- ★Теория кубатурных формул и приложения функционального анализа к задачам математической физики. (Russian) [Theory of cubature formulas and the application of functional analysis to problems of mathematical physics] Edited by S. V. Uspenskii. Труды Семинара С. Л. Соболева, No. 1 [Proceedings of the S. L. Sobolev Seminar, No. 1]. 1978. *Akad. Nauk SSSR Sibirsk. Otdel., Inst. Mat., Novosibirsk*, 1978. 168 pp. (one plate). (Editors) **81a:65010** 65-06
- ★Теория кубатурных формул и приложения функционального анализа к задачам математической физики. (Russian) [Theory of cubature formulas and the application of functional analysis to problems of mathematical physics] Edited by S. V. Uspenskii. Труды Семинара С. Л. Соболева, No. 1 [Proceedings of the S. L. Sobolev Seminar, No. 1]. 1979. *Akad. Nauk SSSR Sibirsk. Otdel., Inst. Mat., Novosibirsk*, 1979. 156 pp. (Editors) **81f:35006** 35-06 (65-06)
- Proceedings of the S. L. Sobolev Seminar, No. 2** ★Дифференциальные уравнения с частными производными. (Russian) [Partial differential equations] Edited by S. V. Uspenskii. Труды Семинара С. Л. Соболева, No. 2 [Proceedings of the S. L. Sobolev Seminar, No. 2]. 1978. *Akad. Nauk SSSR Sibirsk. Otdel., Inst. Mat., Novosibirsk*, 1978. 144 pp. (Editors) **81a:35002** 35-06 (34-06)
- ★Дифференциальные уравнения с частными производными. (Russian) [Partial differential equations] Edited by S. V. Uspenskii. Труды Семинара С. Л. Соболева, No. 2 [Proceedings of the S. L. Sobolev Seminar, No. 2]. 1979. *Akad. Nauk SSSR Sibirsk. Otdel., Inst. Mat., Novosibirsk*, 1979. 150 pp. (Editors) **81a:35005** 35-06
- Proceedings of Symposia in Pure Mathematics** ★Geometry of the Laplace operator. Proceedings of the Symposium in Pure Mathematics of the American Mathematical Society held at the University of Hawaii, Honolulu, Hawaii, March 27-30, 1979. Edited by Robert Osserman and Alan Weinstein. Proceedings of Symposia in Pure Mathematics, XXXVI. *American Mathematical Society, Providence, R.I.*, 1980. vii + 323 pp. ISBN 0-8218-1439-7 (Editors) **81c:58002** 58-06 (58G25)
- Processing of software and hardware for automatic control systems** ★Робототехника МАТЕМАТИЧЕСКИХ И ТЕХНИЧЕСКИХ СРЕДСТВ АВТОМАТИЗИРОВАННЫХ СИСТЕМ УПРАВЛЕНИЯ. (Russian) [Processing of software and hardware for automatic control systems] Edited by V. I. Skurikhin, N. I. Tukalevskaja and V. E. Kravchenko. *Akad. Nauk Ukrain. SSR, Inst. Kibernet., Kiev*, 1978. 110 pp. (Editors) **81a:90007** 90-06
- Program construction** ★Program construction. International Summer School held in Marktoberdorf, July 26-August 6, 1978. Edited by F. L. Bauer and M. Broy. Lecture Notes in Computer Science, 69. *Springer-Verlag, Berlin-New York*, 1979. vii + 651 pp. ISBN 3-540-09251-X (Editors) **81f:68007** 68-06 (68Bxx)
- Programming** ★Современные вопросы прикладной математики и программирования. (Russian) [Contemporary questions of applied mathematics and programming] Edited by B. A. Šerbakov. "Siniica", Kishinev, 1979. 176 pp. (Editors) **81a:00008** 00A10 (90-06)
- ★Automata, languages and programming. Sixth Colloquium (ICALP 79) held in Graz, July 16-20, 1979. Edited by Hermann A. Maurer. Lecture Notes in Computer Science, 71. *Springer-Verlag, Berlin-New York*, 1979. ix + 684 pp. ISBN 3-540-09510-1 (Editors) **81c:68002** 68-06
- ★Automata, languages and programming. Proceedings of the Seventh International Colloquium held at Noordwijkerhout, July 14-18, 1980. Edited by J. W. de Bakker and J. van Leeuwen. Lecture Notes in Computer Science, 85. *Springer-Verlag, Berlin-New York*, 1980. viii + 671 pp. ISBN 3-540-10003-2 (From the preface) **81c:68004** 68-06
- ★International Symposium on Programming. Proceedings of the Fourth International Symposium on Programming held in Paris, April 22-24, 1980. Edited by Bernard Robinet. Lecture Notes in Computer Science, 83. *Springer-Verlag, Berlin-New York*, 1980. viii + 341 pp. ISBN 3-540-09961-6 (Editors) **81f:68010** 68-06
- ★Mathematical programming at Oberwolfach. Proceedings of a Conference held at the Mathematisches Forschungsinstitut, Oberwolfach, May 6-12, 1979. Edited by Heinz König, Bernhard Korte and Klaus Ritter. Math. Programming Stud. No. 14 (1981). *North-Holland Publishing Co., Amsterdam-New York*, 1981. pp. i-viii and 1-257. (Editors) **81k:49001** 49-06 (90-06)
- Programming languages** ★Conference Record of the Sixth Annual ACM Symposium on Principles of Programming Languages. Held in San Antonio, Tex., January 29-31, 1979. *Association for Computing Machinery (ACM), New York*, 1979. iv + 290 pp. (Editors) **81f:68005** 68-06 (68B10)
- Programming methodology** ★Language design and programming methodology. Proceedings of a Symposium held in Sydney, September 10-11, 1979. Edited by Jeffrey M. Tobias. Lecture Notes in Computer Science, 79. *Springer-Verlag, Berlin-New York*, 1980. iv + 255 pp. ISBN 3-540-09745-7 (Editors) **81h:68002** 68-06
- Programming and numerical methods** ★Программирование и численные методы. (Russian) [Programming and numerical methods] Edited by A. N. Cekanin and E. V. Ermolin. *Kazan. Gos. Univ., Kazan*, 1978. 104 pp. (Editors) **81c:65012** 65-06 (90-06)
- Progress in cybernetics and systems research** ★Progress in cybernetics and systems research. Vol. VII. General systems methodology, organization and management, cognition and learning. Edited by Franz R. Pichler and F. de P. Hanika. *Hemisphere Publishing Corp., Washington, D.C.-London*, 1980. x + 393 pp. ISBN 0-89116-195-3 (Editors) **81i:90006** 90-06 (92-06, 93-06)
- Providence, R.I.** ★Operator theory and functional analysis. Papers presented at the 1978 Summer Meeting of the American Mathematical Society held in Providence, R.I. Edited by I. Erdélyi. Research Notes in Mathematics, 38. *Pitman (Advanced Publishing Program), San Francisco, Calif.-London*, 1979. iv + 164 pp. ISBN 0-8224-8450-1 (Editors) **81c:47003** 47-06 (46-06)
- ★Computational probability. Proceedings of the Actuarial Research Conference held at Brown University, Providence, R.I., August 28-30, 1975. Edited by P. M. Kahn. *Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], New York-London*, 1980. xi + 340 pp. ISBN 0-12-394680-8 (Editors) **81h:60005** 60-04 (62P05, 65U05, 92-06)
- Quadratic forms** ★Представления и квадратичные формы. (Russian) [Representations and quadratic forms] Edited by Ju. A. Mitropol'skii [Ju. O. Mitropol'skii]. *Akad. Nauk Ukrain. SSR, Inst. Mat., Kiev*, 1979. 156 pp. (Editors) **81m:16036** 16A64 (16-06)
- Qualitative and approximate methods for the investigation of operator equations** ★Качественные и приближенные методы исследования операторных уравнений. Вып. 4. (Russian) [Qualitative and approximate methods for the investigation of operator equations. No. 4] Edited by P. P. Zabreiko. *Jaroslavl. Gos. Univ., Yaroslavl*, 1979. 203 pp. (Editors) **81d:65004** 65-06
- Quantitative approximation** ★Quantitative approximation. Proceedings of an International Symposium held in Bonn, August 20-24, 1979. Edited by Ronald A. DeVore and Karl Scherer. *Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], New York-London*, 1980. xi + 324 pp. ISBN 0-12-213650-0 (Editors) **81c:41001** 41-06 (65-06)
- Quantitative planning and control** ★Quantitative planning and control. Essays in honor of William Wager Cooper on the occasion of his 65th birthday. Edited by Yuji Ijiri and Andrew B. Whinston. *Academic Press [Harcourt Brace Jovanovich, Publishers], New York-London*, 1979. xxx + 344 pp. (1 plate). ISBN 0-12-370450-2 (Editors) **81f:90002** 90Axx
- Quantum chromodynamics** ★Quantum chromodynamics. Proceedings of the Tenth G.I.F.T. International Seminar on Theoretical Physics held at the University of Zaragoza, Jaca, June 1979. Edited by J. L. Alonso and R. Tarrach. Lecture Notes in Physics, 118. *Springer-Verlag, Berlin-New York*, 1980. ix + 424 pp. ISBN 3-540-09969-7 (Editors) **81i:81004** 81-06 (81G05)
- Quantum electrodynamics** ★Foundations of radiation theory and quantum electrodynamics. Edited by Asim Orhan Barut. *Plenum Press, New York-London*, 1980.

- x + 220 pp. ISBN 0-306-40277-7 (K. Wódkiewicz) 81i:81002 81-02 (81L05)
- Quantum field theory** ★Евклидова квантовая теория поля. (Russian) [Euclidean quantum field theory] Марковский подход. [The Markov approach] Translation from the English edited by R. A. Minlos. Edited by A. N. Kolmogorov and S. P. Novikov. Математика: Новое в Зарубежной Науке [Mathematics: Recent Publications in Foreign Science], 12. "Mir", Moscow, 1978. 288 pp. (Editors) 81i:81002 81-06 (81Exx)
- Quantum mechanics** ★The logico-algebraic approach to quantum mechanics. Vol. I. Historical evolution. Edited by C. A. Hooker. University of Western Ontario Series in Philosophy of Science, 5. D. Reidel Publishing Co., Dordrecht-Boston, Mass., 1975. xv + 607 pp. ISBN 90-277-0567-4 (Editors) 81i:81003a 81-03 (01A75, 03G12, 81B10)
- ★The logico-algebraic approach to quantum mechanics. Vol. II. Contemporary consolidation. Edited by C. A. Hooker. University of Western Ontario Series in Philosophy of Science, 5. D. Reidel Publishing Co., Dordrecht-Boston, Mass., 1979. xx + 466 pp. ISBN 90-277-0707-4, 90-277-0709-X (Editors) 81i:81003b 81-06 (01A75, 03G12, 81B10)
- Quantum theory** ★Complex analysis, microlocal calculus and relativistic quantum theory. Proceedings of the International Colloquium held at the Centre de Physique, Les Houches, September 3-13, 1979. Edited by Daniel Iagolnitzer. Lecture Notes in Physics, 126. Springer-Verlag, Berlin-New York, 1980. viii + 502 pp. ISBN 3-540-09996-4 (Editors) 81i:81003 81-06 (32-06, 35-06, 58-06, 82-06)
- Quantum theory and gravitation** ★Quantum theory and gravitation. Proceedings of a Symposium held at Loyola University, New Orleans, La., May 23-26, 1979. Edited by A. R. Marlow. Academic Press [Harcourt Brace Jovanovich, Publishers], New York-London-Toronto, Ont., 1980. x + 267 pp. ISBN 0-12-473260-7 (Editors) 81i:83003 83-06 (81-06, 83C45)
- Quantum theory and the structures of time and space** ★Quantum theory and the structures of time and space. Vol. 2. In memoriam Werner Heisenberg. Papers presented at the Second Conference held in Tutzing, July 12-15, 1976. Edited by L. Castell, M. Drieschner and C. F. von Weizsäcker. Carl Hanser Verlag, Munich, 1977. 252 pp. ISBN 3-446-12459-4 (Editors) 81i:81002a 81-06
- ★Quantum theory and the structures of time and space. Vol. 3. Papers presented at the Third Conference held in Tutzing, July 1978. Edited by L. Castell and C. F. von Weizsäcker. Carl Hanser Verlag, Munich, 1979. 200 pp. ISBN 3-446-12911-1 (Editors) 81i:81002b 81-06
- Quantum vortices** ★Вихревые движения жидкости. Устойчивость и отрыв пограничного слоя; свободные и квантовые вихри. (Russian) [Vortex motions in a fluid. Stability and separation of a boundary layer; free and quantum vortices] Translation from the English edited by V. N. Nikolaevskii and G. Ju. Stepanov. Механика: Новое в Зарубежной Науке [Mechanics: Recent Publications in Foreign Science], 21. "Mir", Moscow, 1979. 327 pp. (Editors) 81i:76018 76C05 (76-06, 81-06)
- Quebec** ★Complex approximation. Proceedings of the Conference held in Quebec, July 3-8, 1978. Edited by Bernard Aupetit. Progress in Mathematics, 4. Birkhäuser, Boston, Mass., 1980. ix + 118 pp. ISBN 3-7643-3004-X (Editors) 81d:30065 30E10 (32-06)
- Questions in applied mathematics** ★Вопросы прикладной математики. (Russian) [Questions in applied mathematics] Edited by B. A. Bel'jukov. Sibirsk. Énerget. Inst. Sibirsk. Otdel. Akad. Nauk SSSR, Irkutsk, 1977. 180 pp. (Editors) 81i:90008 90-06
- Questions of differential and integral equations and their applications** ★Некоторые вопросы дифференциальных и интегральных уравнений и их приложения. Вып. 2. (Russian) [Some questions of differential and integral equations and their applications. No. 2] Edited by G. V. Tomskii. Yakutsk. Gos. Univ., Yakutsk, 1977. 192 pp. (Editors) 81i:34002 34-06
- Questions in the dynamical theory of seismic wave propagation** ★Вопросы динамической теории распространения сейсмических волн. Вып. XIX. (Russian) [Questions in the dynamical theory of seismic wave propagation. No. 19] Edited by G. I. Petralen' and A. P. Volin. "Nauka" Leningrad. Otdel., Leningrad, 1979. 200 pp. (Editors) 81i:86003 86A15 (73D99)
- Questions of engineering cybernetics** ★Вопросы технической кибернетики. (Russian) [Questions of engineering cybernetics] Edited by Ju. A. Mahmudov. "Élm", Baku, 1979. 155 pp. (Editors) 81i:90007 90-06 (93E03, 94-06)
- Questions of global geometry** ★Вопросы глобальной геометрии. (Russian) [Questions of global geometry] Edited by A. L. Verner. Leningrad. Gos. Ped. Inst., Leningrad, 1979. 80 pp. (Editors) 81i:53003 53-06
- Radiation theory** ★Foundations of radiation theory and quantum electrodynamics. Edited by Asim Orhan Barut. Plenum Press, New York-London, 1980. x + 220 pp. ISBN 0-306-40277-7 (K. Wódkiewicz) 81i:81002 81-02 (81L05)
- Random equations** ★Approximate solution of random equations. Edited by A. T. Bharucha-Reid. North Holland Series in Probability and Applied Mathematics. North-Holland Publishing Co., New York-Amsterdam, 1979. ix + 242 pp. ISBN 0-444-00344-4 (Editors) 81i:60002 60-06 (47Hxx)
- Random processes** ★Предельные теоремы, случайные процессы и их приложения. (Russian) [Limit theorems, random processes and their applications] Edited by S. H. Sirazdinov. "Fan", Tashkent, 1979. 236 pp. (Editors) 81i:60001 60-06 (62-06)
- ★Теория случайных процессов. Вып. 8. (Russian) [Theory of random processes. No. 8] Edited by I. I. Gihman. "Naukova Dumka", Kiev, 1980. 126 pp. (Editors) 81i:60003 60-06
- Random processes and mathematical statistics** ★Вероятностные процессы и математическая статистика. (Russian) [Random processes and mathematical statistics] Edited by S. H. Sirazdinov. "Fan", Tashkent, 1978. 192 pp. (Editors) 81i:60004 60-06 (28-06, 62-06)
- Random processes in problems of mathematical physics** ★Случайные процессы в задачах математической физики. (Russian) [Random processes in problems of mathematical physics] Edited by A. V. Skorohod. Akad. Nauk Ukrain. SSR, Inst. Mat., Kiev, 1979. 154 pp. (Editors) 81i:60002 60-06
- Random processes. Sample functions and intersections** ★Случайные процессы. Выборочные функции и пересечения. (Russian) [Random processes. Sample functions and intersections] Translations by V. I. Piterberg. Edited by Ju. K. Beljaev. Математика: Новое в Зарубежной Науке [Mathematics: Recent Publications in Foreign Science], 10. "Mir", Moscow, 1978. 280 pp. (Editors) 81i:60049 60G15 (60G17)
- Random walks** ★Journées sur les Marches Aléatoires. (French) [Conference on Random Walks] Held at Kleebach, March 5-10, 1979. Astérisque, 74. Société Mathématique de France, Paris, 1980. 201 pp. (Editors) 81g:60001 60-06
- Raumtheorie** ★Raumtheorie. (German) [Theory of space] Edited by Hans Freudenthal. Wege der Forschung [Paths of Research], CCLXX. Wissenschaftliche Buchgesellschaft, Darmstadt, 1978. vi + 408 pp. ISBN 3-534-05604-3 (Editors) 81i:51002 51-03 (01A75, 53-03)
- Reactive systems** ★Dynamics and modelling of reactive systems. Proceedings of the Advanced Seminar held at the Mathematics Research Center, University of Wisconsin, Madison, Wis., October 22-24, 1979. Edited by Warren E. Stewart, W. Harmon Ray and Charles C. Conley. Publication of the Mathematics Research Center, University of Wisconsin, 44. Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], New York-London, 1980. xi + 413 pp. ISBN 0-12-669550-4 (Editors) 81i:80001 80-06 (80A30)
- Reading** Symposium on mathematical genetics. *Adv. in Appl. Probab.* 13 (1981), no. 1, 1-13. (Editors) 81m:92036 92A10
- Recent advances in group theory and their application to spectroscopy** ★Recent advances in group theory and their application to spectroscopy. Proceedings of the NATO Advanced Study Institute held at St. Francis Xavier University, Antigonish, N.S., August 6-20, 1978. Edited by John C. Donini. NATO Advanced Study Institute Series, Ser. B: Physics, 43. Plenum Press, New York-London, 1979. xii + 692 pp. ISBN 0-306-40172-X (Editors) 81a:81006 81-06 (81C40, 81G40, 81G50)
- Recent advances in numerical methods in fluids** ★Recent advances in numerical methods in fluids. Vol. 1. Edited by C. Taylor and K. Morgan. Pitman Press Ltd., Swansea, 1980. v + 406 pp. ISBN 0-906674-07-7 (From the preface) 81j:76002 76-06 (65-06)
- Recent development of algebraic analysis** ★Recent development of algebraic analysis. (Japanese) Proceedings of a Symposium held at the Research Institute for Mathematical Sciences, Kyoto University, Kyoto, July 2-5, 1979. Sūrikaiseikikenkyūhō Kōkyūroku No. 361 (1979). Kyoto University, Research Institute for Mathematical Sciences, Kyoto, 1979. pp. i-iii and 1-183. (Editors) 81m:58001 58-06 (35-06, 81-06)
- Recent developments in particle and field theory** ★Recent developments in particle and field theory. Lectures and seminars delivered at the Symposium on Particles and Fields held at Tübingen University, Tübingen, June 20-July 1, 1977. Edited by Walter Dietrich. Friedr. Vieweg & Sohn, Braunschweig, 1979. v + 422 pp. ISBN 3-528-08426-X (Editors) 81a:81007 81-06 (81G05, 81M05)
- Recent developments in statistical inference and data analysis** ★Recent developments in statistical inference and data analysis. Proceedings of the International Conference in Statistics held at the Institute of Statistical Mathematics, Tokyo, November 28-30, 1979. Edited by Kameo Matsui. North-Holland Publishing Co., Amsterdam-New York, 1980. ix + 364 pp. ISBN 0-444-86104-1 (Editors) 81j:62009 62-06
- Recent developments in variable structure systems, economics and biology** ★Recent developments in variable structure systems, economics and biology. Proceedings of a US-Italy Seminar held in Taormina, August 29-September 2, 1977. Edited by R. R. Mohler and A. Ruberti. Lecture Notes in Economics and Mathematical Systems, 162. Springer-Verlag, Berlin-New York, 1978. vi + 326 pp. ISBN 3-540-09089-4 (Editors) 81i:90002 90-06 (92-06, 93-06)
- Recent results in stochastic programming** ★Recent results in stochastic programming. Proceedings of a Meeting held in Oberwolfach, January 28-February 3, 1979. Edited by Peter Kall and András Prékopa. Lecture Notes in Economics and Mathematical Systems, 179. Springer-Verlag, Berlin-New York, 1980. ix + 237 pp. ISBN 3-540-10013-X (Editors) 81i:90008 90-06 (62-06, 90C15)
- Recife** ★Proceedings of the Third Brazilian Conference on Mathematical Logic. Held at the Institute of Mathematics, Federal University of Pernambuco, Recife, December 17-22, 1979. Edited by Ayda I. Arruda, Newton C. A. da Costa and Antonio-Marino Sette. Sociedade Brasileira de Lógica, São Paulo, 1980. vi + 336 pp. (Editors) 81i:03085 03-06
- Recognition of shapes and artificial intelligence** ★Reconnaissance des formes et intelligence artificielle. Tome I, II, III. (French) [Recognition of shapes and artificial intelligence. Vol. I, II, III] Second AFCET-IRIA Congress held in Toulouse, September 12-14, 1979. Institut de Recherche d'Informatique et d'Automatique (IRIA), Rocquencourt, 1979. Vol. I: 423 pp.; Vol. II: 426 pp.; Vol. III: 368 pp. ISBN 2-7621-0212-3 (Editors) 81j:68007 68-06 (62-06, 92-06)
- Recursion theory** ★The Kleene Symposium. Proceedings of the Symposium held at the University of Wisconsin, Madison, Wis., June 18-24, 1978. Edited by Jon Barwise [K. Jon Barwise], H. Jerome Keisler and Kenneth Kunen. Studies in Logic and the Foundations of Mathematics, 101. North-Holland Publishing Co., Amsterdam-New York, 1980. xx + 425 pp. (1 plate). ISBN 0-444-85345-6 (Editors) 81j:03009 03-06
- Recursion theory: its generalisations and applications** ★Recursion theory: its generalisations and applications. Proceedings of Logic Colloquium '79 held at the University of Leeds, Leeds, August 5-14, 1979. Edited by F. R. Drake and S. S. Wainer. London Mathematical Society Lecture Note Series, 45. Cambridge University Press, Cambridge-New York, 1980. iv + 319 pp. ISBN 0-521-23543-X (Editors) 81j:03007 03-06 (03Dxx, 68-06)
- Recursive functions** ★Рекурсивные функции. (Russian) [Recursive functions] Edited by E. A. Poljakov. Icanov. Gos. Univ., Icanovo, 1978. 100 pp. (Editors) 81m:03007 03-06 (03Dxx)
- Regensburg** ★Proceedings in Operations Research. 9. (German) Papers of the Eighth Annual Meeting of the Deutsche Gesellschaft für Operations Research (DGOR) held in Regensburg, September 19-21, 1979. Edited by J. Schwarze, L. von Dobschütz, B. Fleischmann, Ch. Schneeweß and H. Steckhan. Physica Verlag, Würzburg, 1980. 668 pp. ISBN 3-7908-0223-9 (Editors) 81i:90003c 90-06 (62-06)
- Rehovot** ★Methodology in systems modelling and simulation. Proceedings of the Symposium on Modelling and Simulation Methodology held at the Weizmann Institute of Science, Rehovot, August 13-18, 1978. Edited by Bernard P. Zeigler, Maurice S. Elzas, George J. Klir and Tuncer I. Ören. North-Holland Publishing Co., Amsterdam-New York, 1979. xv + 537 pp. ISBN 0-444-85340-5 (Editors) 81i:68079 68J05
- Relevance of history of science for philosophy of science** ★Special issue: the relevance of history of science for philosophy of science. Stud. Hist. Philos. Sci. 11 (1980), no. 1

- Pergamon Press, Oxford-New York*, 1980. pp. i-v and 89-174. (Editors) **81i:01004** 01-06 (00A69)
- Reliability studies** ★Synthesis and analysis methods for safety and reliability studies. Proceedings of the NATO Advanced Study Institute held in Urbino, July 3-14, 1978. Edited by G. Apostolakis, S. Garbiba and G. Volta. *Plenum Press, New York-London*, 1980. ix + 463 pp. ISBN 0-306-40316-1 (Editors) **81j:93008** 93-06 (90-06, 94-06)
- Rennes** ★Journées "Éléments Finis". Held at Rennes, May 12-14, 1975. *Université de Rennes, Rennes*, 1975. 286 pp. (not consecutively pagged). (Editors) **81b:65004** 65-06 (65N30)
- ★Séminaire de Probabilités, Rennes 1978. (French) [Seminar on Probability, Rennes 1978] *Université de Rennes, Rennes*, 1978. 232 pp. (not consecutively pagged). (Editors) **81m:60003** 60-06
- Representation of numbers by quadratic forms** ★Сборник работ по теории чисел. 4. (Russian) [Collection of articles on number theory. 4] Вопросы представления чисел квадратичными формами. [Questions on the representation of numbers by quadratic forms] Edited by N. P. Vekua and B. V. Hvedelidze. *Trudy Tbilisi. Mat. Inst. Razmadze Akad. Nauk Gruzii. SSR* 63 (1980). "Mecniereba", Tbilisi, 1980. pp. 1-72. (Editors) **81c:10002** 10-06
- Representation theory** ★Combinatorics, representation theory and statistical methods in groups. Young Day Proceedings. Edited by T. V. Narayana, R. M. Mathsen and J. G. Williams. *Lecture Notes in Pure and Applied Mathematics*, 57. *Marcel Dekker, Inc., New York*, 1980. xii + 170 pp. ISBN 0-8247-6937-6 (Editors) **81h:05003** 05-06 (01A70, 20-06)
- Representation theory of Lie groups** ★Representation theory of Lie groups. Proceedings of the SRC/LMS Research Symposium held in Oxford, June 28-July 15, 1977. Edited by G. L. Luke. *London Mathematical Society Lecture Note Series*, 34. *Cambridge University Press, Cambridge-New York*, 1979. v + 341 pp. ISBN 0-521-22636-8 (A. U. Klimyk) **81j:22001** 22-06 (81C40)
- Representations of locally compact groups with applications** ★Representations of locally compact groups with applications. Part I, II. Colloquium held at the Mathematical Centre, Amsterdam, academic year 1977/78. Edited by T. H. Koornwinder. *MC Syllabus*, 38. *Mathematisch Centrum, Amsterdam*, 1979. iv + 496 pp. ISBN 90-6196-161-0, 90-6196-181-5 (A. U. Klimyk) **81k:22001** 22-02 (20Cxx, 22D10, 22E70, 43A05, 81C40)
- Representations and quadratic forms** ★Представления и квадратичные формы. (Russian) [Representations and quadratic forms] Edited by Ju. A. Mitropol'skii [Ju. O. Mitropol'skii]. *Akad. Nauk Ukrain. SSR, Inst. Mat., Kiev*, 1979. 156 pp. (Editors) **81m:16036** 16A64 (16-06)
- Research in mathematics and physics** ★Научные исследования в области математики и физики. (Russian) [Research in mathematics and physics] Edited by A. B. Vardijavili and A. N. Salahitdinov. *Taškent. Gos. Ped. Inst., Tashkent*, 1979. 152 pp. (Editors) **81i:00004** 00A10
- Research Triangle Park, N.C.** ★Robustness in statistics. Proceedings of a Workshop held at the Army Research Office, Research Triangle Park, N.C., April 11-12, 1978. Edited by Robert L. Launer and Graham N. Wilkinson. *Academic Press [Harcourt Brace Jovanovich, Publishers], New York-London*, 1979. xvi + 296 pp. ISBN 0-12-438150-2 (Colin L. Mallows) **81c:62032** 62F35
- Ring theory** ★Proceedings of the 12th Symposium on Ring Theory. Held at Hokkaido University, Sapporo, August 31-September 1, 1979. Edited by Manabu Harada. *Okayama Mathematical Lectures. Okayama University, Department of Mathematics, Okayama*, 1980. iii + 60 pp. (Editors) **81a:16002** 16-06
- ★Ring theory, Antwerp 1980. Proceedings of the Conference held at the University of Antwerp, Antwerp, May 6-9, 1980. Edited by F. van Oystaeyen. *Lecture Notes in Mathematics*, 825. *Springer-Verlag, Berlin-New York*, 1980. vii + 209 pp. ISBN 3-540-10246-9 (Editors) **81i:16002** 16-06
- ★Studies in commutative ring theory. (Japanese) Proceedings of a Symposium held at the Research Institute for Mathematical Sciences, Kyoto University, Kyoto, October 31-November 2, 1979. *Sūrikaiseikenkyūsho Kōkyōroku* No. 374 (1980). *Kyoto University, Research Institute for Mathematical Sciences, Kyoto*, 1980. pp. i-ii and 1-194. (Editors) **81m:13001** 13-06 (14-06)
- ★Proceedings of the 13th Symposium on Ring Theory. Held at Okayama University, Okayama, September 28-30, 1980. Edited by Hisao Tominaga. *Okayama Mathematical Lectures. Okayama University, Department of Mathematics, Okayama*, 1981. ii + 125 pp. (Editors) **81m:16004** 16-06
- Ring theory and algebra** ★Ring theory and algebra. III. Proceedings of the Third Oklahoma Conference held at the University of Oklahoma, Norman, Okla., March 15-17, 1979. Edited by Bernard R. McDonald. *Lecture Notes in Pure and Applied Mathematics*, 55. *Marcel Dekker, Inc., New York*, 1980. xvi + 422 pp. ISBN 0-8247-1158-0 (Editors) **81h:16001** 16-06
- Rings and modules** ★Кольца и модули. 2. (Russian) [Rings and modules. 2] Edited by Z. I. Borevič and A. I. Skopin. *Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* 94 (1979). "Nauka" Leningrad. Otdel., Leningrad, 1979. pp. 1-152. (Editors) **81c:00005** 00A10
- Rio de Janeiro** ★Atas da 5ª Escola de Álgebra. [Proceedings of the 5th School of Algebra] Held in Rio de Janeiro, July 17-28, 1978. *Sociedade Brasileira de Matemática, Rio de Janeiro*, 1978. v + 199 pp. (Editors) **81c:00004** 00A10
- ★Seminar on Numerical Analysis and its Applications to Continuum Physics. Held in Rio de Janeiro, March 24-28, 1980. *Coleção Atas, Sociedade Brasileira de Matemática*, 12. *Sociedade Brasileira de Matemática, Rio de Janeiro*, 1980. ii + 216 pp. (Editors) **81i:65003** 65-06
- Robustness in statistics** ★Robustness in statistics. Proceedings of a Workshop held at the Army Research Office, Research Triangle Park, N.C., April 11-12, 1978. Edited by Robert L. Launer and Graham N. Wilkinson. *Academic Press [Harcourt Brace Jovanovich, Publishers], New York-London*, 1979. xvi + 296 pp. ISBN 0-12-438150-2 (Colin L. Mallows) **81c:62032** 62F35
- Roquencourt** ★Analyse et contrôle de systèmes. (French) [Analysis and control of systems] Papers from the Seminar organized by the Institut de Recherche d'Informatique et d'Automatique (IRIA) held in Roquencourt, 1978. *Institut de Recherche d'Informatique et d'Automatique (IRIA), Roquencourt*, 1978. 272 pp. ISBN 2-7261-0209-3 (Editors) **81m:93003** 93-06
- Rolla, Mo.** ★Differential and integral equations. Proceedings of the Seventh Midwest Conference held at the University of Missouri, Rolla, Mo., November 3-4, 1978. Edited by L. J. Grimm, O. R. Plummer and S. Y. Trimble. *University of Missouri-Rolla, Rolla, Mo.*, 1980. iv + 117 pp. (Editors) **81j:34003** 34-06
- Rome** ★Symposia Mathematica. Vol. XXIII. Conference on Abelian Groups and their Relationship to the Theory of Modules held at the Istituto Nazionale di Alta Matematica Francesco Severi (INDAM), Rome, December 12-16, 1977. *Academic Press, London-New York*, 1979. 457 pp. (Editors) **81a:20005** 20-06 (16-06)
- ★Systems theory in immunology. Proceedings of the Working Conference held in Rome, May 1978. Edited by Carlo Bruni, Gino Doria, Giorgio Koch and Roberto Strom. *Lecture Notes in Biomathematics*, 32. *Springer-Verlag, Berlin-New York*, 1979. xi + 273 pp. ISBN 3-540-09728-7 (Editors) **81c:92001** 92-06 (92A07)
- Rosemont, Ill.** ★Proceedings of the Eighth International Symposium on Multiple-Valued Logic. Held in Rosemont, Ill., 1978. *IEEE Computer Society Publications Office, Long Beach, Calif.*, 1978. v + 298 pp. (Editors) **81a:94001** 94-06 (03B50, 68-06)
- Rydzyń** ★Mathematical foundations of computer science, 1980. Proceedings of the Ninth Symposium held in Rydzyń, September 1-5, 1980. Edited by P. Dembiński. *Lecture Notes in Computer Science*, 68. *Springer-Verlag, Berlin-New York*, 1980. viii + 723 pp. ISBN 3-540-10027-X (Editors) **81k:68003** 68-06
- Saint Flour** ★École d'Été de Probabilités de Saint-Flour VIII—1978. (French) [Eighth Saint Flour Probability Summer School—1978] Held at Saint Flour, July 5-22, 1978. Edited by P. L. Hennequin. *Lecture Notes in Mathematics*, 774. *Springer-Verlag, Berlin-New York*, 1980. xiii + 334 pp. ISBN 3-540-09741-4 (Editors) **81j:60005** 60-06
- Saint Jean de Monts** ★Journées "Équations aux Dérivées Partielles". (French) [Conference on Partial Differential Equations] Held at Saint Jean de Monts, June 2-6, 1980. *Société Mathématique de France, Paris*, 1980. 72 pp. (not consecutively pagged). (Editors) **81j:35002** 35-06 (32-06)
- St. Louis, Mo.** ★Proceedings of the First International Conference on Mathematical Modeling. Vol. I, II, III, IV. V. Held in St. Louis, Mo., August 29-September 1, 1977. Edited by Xavier J. R. Avula. *University of Missouri-Rolla, Department of Engineering Mechanics, Rolla, Mo.*, 1977. x + 2646 pp. (Editors) **81i:90005** 90-06 (92-06, 93-06)
- ★Proceedings of the Second International Conference on Mathematical Modelling. Vol. I, II. Held at St. Louis, Mo., July 11-13, 1979. Edited by Xavier J. R. Avula, Richard Bellman, Yudell L. Luke and A. K. Rigler. *University of Missouri-Rolla, Rolla, Mo.*, 1980. xi + 1310 pp. (Editors) **81j:00027** 00A69 (00A10)
- Salt Lake City, Utah** ★Nonlinear oscillations in biology. Proceedings of the Tenth Summer Seminar on Applied Mathematics held at the University of Utah, Salt Lake City, Utah, June 12-23, 1978. Edited by Frank C. Hoppensteadt. *Lectures in Applied Mathematics*, 17. *American Mathematical Society, Providence, R.I.*, 1979. x + 253 pp. ISBN 0-8218-1117-7 (Editors) **81a:92002** 92-06 (34-06, 58-06)
- San Antonio, Tex.** ★Conference Record of the Sixth Annual ACM Symposium on Principles of Programming Languages. Held in San Antonio, Tex., January 29-31, 1979. *Association for Computing Machinery (ACM), New York*, 1979. iv + 290 pp. (Editors) **81f:68005** 68-06 (68B10)
- San Diego, Calif.** ★Proceedings of the 1978 IEEE Conference on Decision and Control including the 17th Symposium on Adaptive Processes. Held in San Diego, Calif., January 10-12, 1979. *Institute of Electrical and Electronics Engineers, New York*, 1979. xxi + 1461 pp. (Editors) **81a:93001** 93-06
- ★ACM-SIGACT Symposium on the Theory of Computing. Held in San Diego, Calif., May 1-3, 1978. Edited by Richard Lipton, E. K. Blum and A. V. Aho. *J. Comput. System Sci.* 20 (1980), no. 2. *Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], New York-London*, 1980. pp. 117-276. (Editors) **81d:68004** 68-06
- San Feliu de Guixols** ★Trabajos sobre triples. (Spanish) [Papers on triples] Papers presented at the Seventh Spanish-Portuguese Mathematical Conference held in San Feliu de Guixols, May 26-30, 1980. *Álgebra*, 26. *Universidad de Santiago de Compostela, Departamento de Álgebra y Fundamentos, Santiago de Compostela*, 1980. 90 pp. ISBN 84-7191-177-9 (Editors) **81i:18002** 18-06
- Santa Cruz, Calif.** ★The Santa Cruz Conference on Finite Groups. Held at the University of California, Santa Cruz, Calif., June 25-July 20, 1979. Edited by Bruce Cooperstein and Geoffrey Mason. *Proceedings of Symposia in Pure Mathematics*, 37. *American Mathematical Society, Providence, R.I.*, 1980. xviii + 634 pp. ISBN 0-8218-1440-0 (Editors) **81m:20004** 20-06 (20Dxx)
- Santiago** ★Mathematical logic in Latin America. Proceedings of the IV Latin American Symposium on Mathematical Logic held in Santiago, December 18-22, 1978. Edited by A. I. Arruda, R. Chuaqui and N. C. A. da Costa. *Studies in Logic and the Foundations of Mathematics*, 99. *North-Holland Publishing Co., Amsterdam-New York*, 1980. xii + 392 pp. ISBN 0-444-85402-9 (Editors) **81a:03002** 03-06
- Santiago de Compostela** ★Proceedings of the IV International Colloquium on Differential Geometry. Held at the University of Santiago de Compostela, Santiago de Compostela, September 18-21, 1978. *Cursos y Congresos de la Universidad de Santiago de Compostela [Courses and Conferences of the University of Santiago de Compostela]*, 15. *Universidad de Santiago de Compostela, Departamento de Geometría y Topología, Santiago de Compostela*, 1979. ix + 294 pp. ISBN 84-7191-148-5 (Editors) **81h:53001** 53-06 (58-06)
- São Carlos** ★Functional differential equations and bifurcation. Proceedings of a Conference held at the Instituto de Ciências Matemáticas de São Carlos, Universidade de São Paulo, São Carlos, July 2-7, 1979. Edited by Antonio Fernandes Izé. *Lecture Notes in Mathematics*, 799. *Springer-Verlag, Berlin-New York*, 1980. xxii + 409 pp. ISBN 3-540-09966-7 (Editors) **81j:34004** 34-06 (45-06)
- Sapporo** ★Proceedings of the 12th Symposium on Ring Theory. Held at Hokkaido University, Sapporo, August 31-September 1, 1979. Edited by Manabu Harada. *Okayama Mathematical Lectures. Okayama University, Department of Mathematics, Okayama*, 1980. iii + 60 pp. (Editors) **81a:16002** 16-06
- Scattering theory. Theory of oscillations** ★Теория рассеяния. Теория колебаний. (Russian) [Scattering theory. Theory of oscillations] Edited by M. S. Birman. *Проблемы Математической Физики [Problems in Mathematical Physics]*, 9. *Leningrad. Univ., Leningrad*, 1979. 188 pp. (Editors) **81a:35003** 35-06
- Scheveningen** ★Geometrical approaches to differential equations. Proceedings of the Fourth Scheveningen Conference on Differential Equations held at Scheveningen, August 26-31, 1979. Edited by Rodolfo Martini. *Lecture Notes in Mathematics*, 810.

- Springer-Verlag, Berlin-New York, 1980. vii + 339 pp. ISBN 3-540-10018-0 (Editors) 81b:35002 35-06 (58-06)
- Schladming** ★ Facts and prospects of gauge theories. Proceedings of the XVII. Internationale Universitätswochen für Kernphysik held at Schladming, February 21–March 3, 1978. Edited by Paul Urban. Acta Physica Austriaca Supplement, XIX. Springer-Verlag, Vienna, 1978. v + 889 pp. ISBN 3-211-81514-7 (Editors) 81b:81001 81-06 (81E10)
- School:**
- Cracow, Cosmology** ★ Physics of the expanding universe. Proceedings of the Cracow School on Cosmology held at Jodłowy Dwór, September 1978. Edited by M. Demiański. Lecture Notes in Physics, 109. Springer-Verlag, Berlin-New York, 1979. iv + 210 pp. ISBN 3-540-09562-4 (Editors) 81b:83044 83F05
- Variational Inequalities and Complementarity Problems in Mathematical Physics and Economics** ★ Variational inequalities and complementarity problems. Theory and applications. Proceedings of an International School of Mathematics on Variational Inequalities and Complementarity Problems in Mathematical Physics and Economics held in Erice, June 19–30, 1978. Edited by R. W. Cottle, F. Giannessi and J.-L. Lions. A Wiley-Interscience Publication. John Wiley & Sons, Ltd., Chichester, 1980. xvii + 408 pp. ISBN 0-471-27610-3 (Editors) 81d:49001 49-06 (49A29, 90-06, 90C33)
- Science in Czechoslovakia** ★ Věda v Československu, 1918–1952. (Czech) [Science in Czechoslovakia, 1918–1952] Edited by Luboš Nový. Práce z Dějin Přírodních Věd [Works in the History of Natural Sciences], 11. Československá Akademie Věd (ČSAV) Prague, 1979. 496 pp. (Editors) 81j:01032 01A60 (01A72)
- Seattle, Wash.** ★ Sources of gravitational radiation. Proceedings of the Workshop held at the Battelle Seattle Research Center, Seattle, Wash., July 24–August 4, 1978. Edited by Larry L. Smarr. Cambridge University Press, Cambridge-New York, 1979. xiii + 505 pp. ISBN 0-521-22778-X (Editors) 81j:83017 83C35 (83B05, 85A40)
- Seillac** ★ Methodology of interaction. Seillac II. Proceedings of the IFIP Workshop held at Seillac, May 1979. Edited by Richard A. Guedj, Paul J. W. ten Hagen, F. Robert A. Hopgood, Hugh A. Tucker and David A. Duce. North-Holland Publishing Co., Amsterdam-New York, 1980. xiii + 408 pp. ISBN 0-444-85479-7 (Editors) 81i:68011 68-06
- Selecta Mathematica** ★ Selecta Mathematica. V. (German) Edited by Konrad Jacobs. Heidelberg Taschenbücher [Heidelberg Paperbacks], 201. Springer-Verlag, Berlin-New York, 1979. xii + 260 pp. (loose erratum). ISBN 3-540-09407-5 (Editors) 81j:58042 58Fxx (00A10)
- Selected papers:**
- Mathematics** ★ Selected papers on mathematics. DM 80, 1. Karl Marx University of Economics, Department of Mathematics, Budapest, 1980. i + 87 pp. (Editors) 81i:68012 68-06 (92-06)
- Selected topics in graph theory** ★ Selected topics in graph theory. Edited by Lowell W. Beineke and Robin J. Wilson. Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], London-New York, 1978. xii + 451 pp. ISBN 0-12-086250-6 (Jerald A. Kabell) 81e:05059 05Cxx (05-02)
- Semantics of concurrent computation** ★ Semantics of concurrent computation. Proceedings of the International Symposium held at Evian, July 2–4, 1979. Edited by Gilles Kahn. Lecture Notes in Computer Science, 70. Springer-Verlag, Berlin-New York, 1979. vi + 368 pp. ISBN 3-540-09511-X (Editors) 81e:68002 68-06 (68B10)
- Semiconducting devices** ★ Прогнозирование надежности полупроводниковых приборов. (Russian) [Prediction of the reliability of semiconducting devices] Edited by M. S. Demidova, Z. S. Icković and E. Ja. Finkelstein. "Zinatne", Riga, 1979. 139 pp. (Editors) 81j:62006 62-06
- Semigroup varieties and semigroups of endomorphisms** ★ Полугрупповые многообразия и полугруппы эндоморфизмов. (Russian) [Semigroup varieties and semigroups of endomorphisms] Edited by E. S. Ljapin. Leningrad. Gos. Ped. Inst., Leningrad, 1979. 160 pp. (Editors) 81b:20004 20-06 (20Mxx)
- Semigroups** ★ Proceedings of the Conference on Semigroups in honor of Alfred H. Clifford. Held at Tulane University, New Orleans, La., September 1–3, 1978. Edited by William R. Nico. Reprints and Lecture Notes in Mathematics. Tulane University, New Orleans, La., 1979. viii + 240 pp. (Editors) 81a:20004 20-06 (06F05)
- ★ Proceedings of the 3rd Symposium on Semigroups. Held at the Inter-University Seminar House of Kansai, Kobe, August 4–6, 1979. Edited by Tsuyoshi Fujiwara. Osaka University, Department of Mathematics, Osaka, 1980. iii + 124 pp. (Editors) 81b:20003 20-06 (20Mxx)
- ★ Semigroups. Proceedings of the Conference held at Monash University, Clayton, October 27–30, 1979. Edited by T. E. Hall, P. R. Jones and G. B. Preston. Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], New York-London, 1980. x + 255 pp. ISBN 0-12-319450-4 (Editors) 81i:20074 20Mxx (20-06)
- Séminaire:**
- J. Azéma-M. Yor** ★ Temps locaux. (French) [Local times] Exposé du Séminaire J. Azéma-M. Yor. Held at the Université Pierre et Marie Curie, Paris, 1976–1977. With an English summary. Astérisque, 52, 53. Société Mathématique de France, Paris, 1978. ii + 223 pp. (Michael Sharpe) 81b:60042 60G44 (60G48, 60J55)
- Bourbaki** ★ Séminaire Bourbaki. (French) [Bourbaki seminar] Vol. 1978/79: Exposé 525–542. Lecture Notes in Mathematics, 770. Springer-Verlag, Berlin-New York, 1980. iv + 341 pp. ISBN 3-540-09733-3 (Editors) 81c:00006 00A10
- Delange-Pisot-Poitou** ★ Séminaire Delange-Pisot-Poitou, 20e année: 1978/1979. Théorie des nombres. Fascicule 1: Exposé 1 à 21. (French) [Seminar Delange-Pisot-Poitou, 20th Year: 1978/1979. Number Theory. Part 1: Exposé 1–21] Secrétariat Mathématique, Paris, 1980. ii + 98 pp. (not consecutively paged). ISBN 2-85926-271-7 (Editors) 81b:10024 10-06
- ★ Séminaire Delange-Pisot-Poitou, 20e année: 1978/1979. Théorie des nombres. Fascicule 2: Exposé 22 à 33, Index cumulatifs 1re à 20e années, 1959/1960 à 1978/1979. (French) [Seminar Delange-Pisot-Poitou, 20th Year: 1978/1979. Number Theory. Part 2: Exposé 22–33, Cumulative Index of the First Twenty Years, 1959/1960–1978/1979] Secrétariat Mathématique, Paris, 1980. i + 154 pp. (not consecutively paged). ISBN 2-85926-272-5 (Editors) 81b:1002b 10-06
- Séminaire: (continued)**
- Goulaouic-Schwartz** ★ Séminaire Goulaouic-Schwartz, 1979–1980. (French) Équations aux dérivées partielles. [Partial differential equations] École Polytechnique, Centre de Mathématiques, Palaiseau, 1980. 303 pp. (not consecutively paged). (Editors) 81m:35003 35-06 (58-06)
- Pierre Lelong-Henri Skoda (Analyse)** ★ Séminaire Pierre Lelong-Henri Skoda (Analyse). Années 1978/79. (French) Edited by Pierre Lelong and Henri Skoda. Lecture Notes in Mathematics, 822. Springer-Verlag, Berlin-New York, 1980. viii + 356 pp. ISBN 3-540-10241-8 (Editors) 81j:32003 32-06
- Algèbre Paul Dubreil et Marie-Paule Malliavin** ★ Séminaire d'Algèbre Paul Dubreil et Marie-Paule Malliavin. (French) [Algebra Seminar Paul Dubreil and Marie-Paule Malliavin] Held in Paris, 1979. Edited by Marie-Paule Malliavin [Marie-Paule Malliavin-Brammer]. Lecture Notes in Mathematics, 795. Springer-Verlag, Berlin-New York, 1980. v + 433 pp. ISBN 3-540-09980-8 (Editors) 81f:16001 16-06 (13-06, 17-06)
- Analyse Harmonique sur les Groupes de Lie** ★ Analyse harmonique sur les groupes de Lie. II. (French) [Harmonic analysis on Lie groups. II] Séminaire Nancy-Strasbourg 1976–1978. Edited by Pierre Eymard, Jacques Faraut, Gérard Schiffmann and Raji Takahashi. Lecture Notes in Mathematics, 739. Springer-Verlag, Berlin-New York, 1979. vi + 646 pp. ISBN 3-540-09536-5 (Editors) 81e:22002 22-06 (43-06)
- Théorie des Nombres** ★ Séminaire de Théorie des Nombres 1978–1979. (French) [Seminar on number theory 1978–1979] Held at the Université de Bordeaux I, Talence, during the academic year 1978–1979. Centre National de Recherche Scientifique (CNRS), Laboratoire de Théorie des Nombres, Talence, 1979. 271 pp. (not consecutively paged). (Editors) 81a:12001 12-06 (10-06)
- Seminar:**
- François Norguet** ★ Fonctions de plusieurs variables complexes. IV. (French) [Functions of several complex variables. IV] Séminaire François Norguet, October 1976–June 1979. Edited by François Norguet. Lecture Notes in Mathematics, 807. Springer-Verlag, Berlin-New York, 1980. ix + 198 pp. ISBN 3-540-10015-6 (Editors) 81j:32002 32-06
- Application and Numerical Solution of Integral Equations** ★ The application and numerical solution of integral equations. Proceedings of a Seminar held at the Australian National University, Canberra, November 29, 1978. Edited by Robert S. Anderssen, Frank R. de Hoog and Mark A. Lukas. Monographs and Textbooks on Mechanics of Solids and Fluids (Mechanics: Analysis), 6. Sijthoff & Noordhoff, Alphen aan den Rijn-Germantown, Md., 1980. x + 259 pp. ISBN 90-286-0450-2 (Editors) 81f:45001 45-06 (65-06)
- Canadian Mathematical Congress** ★ Global analysis. Proceedings of the Biennial Seminar of the Canadian Mathematical Congress held at the University of Calgary, Calgary, Alta., June 12–27, 1978. Edited by M. Grmela and J. E. Marsden. Lecture Notes in Mathematics, 755. Springer-Verlag, Berlin-New York, 1979. vii + 377 pp. ISBN 3-540-09703-1 (Editors) 81a:58001 58-06
- Dynamics and Modelling of Reactive Systems** ★ Dynamics and modelling of reactive systems. Proceedings of the Advanced Seminar held at the Mathematics Research Center, University of Wisconsin, Madison, Wis., October 22–24, 1979. Edited by Warren E. Stewart, W. Harmon Ray and Charles C. Conley. Publication of the Mathematics Research Center, University of Wisconsin, 44. Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], New York-London, 1980. xi + 413 pp. ISBN 0-12-669550-4 (Editors) 81i:80001 80-06 (80A30)
- Equations with Partial Hyperbolic and Holomorphic Derivatives** ★ Séminaire sur les Équations aux Dérivées Partielles Hyperboliques et Holomorphes, Année 1979–1980. (French) [Seminar on Hyperbolic and Holomorphic Partial Differential Equations] Université de Paris VI, Paris, 1980. 110 pp. (not consecutively paged). (Editors) 81k:35003 35-06 (58-06)
- Fourier Analysis** ★ Fourier analysis. Proceedings of a Seminar held at El Escorial, June 17–23, 1979. Edited by Miguel de Guzmán and Ireneo Peral. Asociación Matemática Española [Spanish Mathematical Association], 1. Asociación Matemática Española, Madrid, 1980. iii + 200 pp. ISBN 84-300-2172-8 (Editors) 81f:42001 42-06
- Functional Analysis** ★ Séminaire d'Analyse Fonctionnelle, 1979–1980. (French) [Seminar on Functional Analysis, 1979–1980] École Polytechnique, Centre de Mathématiques, Palaiseau, 1980. 309 pp. (not consecutively paged). (Editors) 81m:46003 46-06
- Functional Analysis and its Applications** ★ A survey on the theoretical and numerical trends in nonlinear analysis. I. Proceedings of the Third Seminar on Functional Analysis and its Applications (S.A.F.A. III) held in Bari, September 27–October 5, 1978. Confer. Sem. Mat. Univ. Bari No. 158-162 (1979). Editori Laterza, Bari, 1979. pp. i–iv and 1–180. (Editors) 81b:00007 00A10
- ★ A survey on the theoretical and numerical trends in nonlinear analysis. II. Proceedings of the Third Seminar on Functional Analysis and its Applications (S.A.F.A. III) held in Bari, September 27–October 5, 1978. Confer. Sem. Mat. Univ. Bari No. 163-168 (1979) (1980). Editori Laterza, Bari, 1980. pp. 181–398. (Editors) 81f:47055 47Hxx (65-06)
- Fuzzy Set Theory** ★ Proceedings of the International Seminar on Fuzzy Set Theory. Held at the Institut für Mathematik, Johannes Kepler Universität, Linz, September 24–29, 1979. Edited by Erich Peter Klement. Johannes Kepler Universität, Linz, 1980. i + 146 pp. (Siegfried Gottwald) 81m:03067 03E72 (03-06, 28A99, 54A40, 60E99, 94D05)
- G.I.F.T., Theoretical Physics** ★ Quantum chromodynamics. Proceedings of the Tenth G.I.F.T. International Seminar on Theoretical Physics held at the University of Zaragoza, Jaca, June 1979. Edited by J. L. Alonso and R. Tarrach. Lecture Notes in Physics, 118. Springer-Verlag, Berlin-New York, 1980. ix + 424 pp. ISBN 3-540-09969-7 (Editors) 81f:81004 81-06 (81G05)
- Harmonic Analysis** ★ Séminaire d'Analyse Harmonique, 1978–1979. (French) [Seminar on Harmonic Analysis, 1978–1979] Publications Mathématiques d'Orsay 79, 7. Université de Paris-Sud, Département de Mathématique, Orsay, 1979. iii + 63 pp. (Editors) 81j:43001 43-06 (42-06)
- Japan-United States, Minimal Submanifolds and Geodesics** ★ Minimal submanifolds and geodesics. Proceedings of the Japan-United States Seminar held in Tokyo,

Seminar: (continued)

September 19–22, 1977. Edited by Morio Obata. *North-Holland Publishing Co., Amsterdam-New York*, 1979. x+292 pp. (1 plate). ISBN 0-444-85327-8 (Editors) 81d:53002 53–06

Mathematical Procedures ★Vorträge aus dem Problemseminar Mathematische Verfahrenstechnik. (German) [Lectures from the Problem Seminar on Mathematical Procedures] Held in Weifig, November 6–10, 1978. Weiterbildungszentrum für Mathematische Kybernetik und Rechentchnik, Informationsverarbeitung, 36. Technische Universität Dresden, Dresden, 1979. 128 pp. (Editors) 81f:65002 65–06

Methods of Numerical and Applied Mathematics ★Разностные и вариационно-разностные методы. (Russian) [Difference and variational-difference methods] Proceedings of the Second Seminar on Methods of Numerical and Applied Mathematics held in Novosibirsk, 1977. Edited by G. I. Marčuk. *Akad. Nauk SSSR Sibirsk. Otdel., Vychisl. Centr., Novosibirsk*, 1977. 161 pp. (Editors) 81b:65003a 65–06 (65Q05)

★Вычислительные методы линейной алгебры. (Russian) [Numerical methods in linear algebra] Proceedings of the Third Seminar on Methods of Numerical and Applied Mathematics held in Novosibirsk, 1978. Edited by G. I. Marčuk. *Akad. Nauk SSSR Sibirsk. Otdel., Vychisl. Centr., Novosibirsk*, 1978. 120 pp. (Editors) 81b:65003b 65–06

Models of Arithmetic ★Modèles de l'arithmétique. (French) [Models of arithmetic] Papers presented at the Seminar held at the University of Paris VII, Paris, 1977. Edited by K. McAloon. *Astérisque*, 73. *Société Mathématique de France, Paris*, 1980. 155 pp. (Editors) 81j:03006 03–06 (03F30, 03H15)

Number Theory ★Séminaire de Théorie des Nombres, 1979–1980. (French) [Seminar on Number Theory, 1979–1980] Held at the Université de Bordeaux I, Talence, during the academic year 1979–1980. *Université de Bordeaux I, U.E.R. de Mathématiques et d'Informatique, Talence*, 1980. 258 pp. (not consecutively paged). (Editors) 81m:10005 10–06

Numerical Analysis and Its Applications to Continuum Physics ★Seminar on Numerical Analysis and Its Applications to Continuum Physics. Held in Rio de Janeiro, March 24–28, 1980. *Coleção Atas, Sociedade Brasileira de Matemática*, 12. *Sociedade Brasileira de Matemática, Rio de Janeiro*, 1980. ii+216 pp. (Editors) 81i:65003 65–06

Numerical Methods for Solving Balance Equations ★Семинар: Численные Методы Решения Уравнений Баланса. (Russian) [Seminar on Numerical Methods for Solving Balance Equations] Papers presented at the Seminar held in Berlin, October 20–25, 1980. Report 1980. 5. *Akademie der Wissenschaften der DDR, Zentralinstitut für Mathematik und Mechanik, Berlin*, 1980. iv+164 pp. (Editors) 81j:65013 65–06

Potential theory ★Séminaire de Théorie du Potentiel, Paris. No. 5. (French) [Seminar on Potential Theory, Paris. No. 5] Edited by Francis Hirsch and Gabriel Mokobodzki. *Lecture Notes in Mathematics*, 814. *Springer-Verlag, Berlin-New York*, 1980. iv+239 pp. ISBN 3-540-10025-3 (Editors) 81i:31002 31–06

Probability ★Séminaire de Probabilités, Rennes 1978. (French) [Seminar on Probability, Rennes 1978] *Université de Rennes, Rennes*, 1978. 232 pp. (not consecutively paged). (Editors) 81m:60003 60–06

★Séminaire de Probabilités. XIV. (French) [Seminar on Probability. XIV] Held in Paris, 1978/1979. Edited by Jacques Azéma and Marc Yor. *Lecture Notes in Mathematics*, 784. *Springer-Verlag, Berlin-New York*, 1980. vii+546 pp. ISBN 3-540-09760-0 (Editors) 81j:60004 60–06

Singular Perturbations and Asymptotics ★Singular perturbations and asymptotics. Proceedings of an Advanced Seminar held at the Mathematics Research Center, University of Wisconsin, Madison, Wis., May 28–30, 1980. Edited by Richard E. Meyer and Seymour V. Parter. Publication of the Mathematics Research Center, University of Wisconsin, 45. *Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers]*, New York-London, 1980. ix+409 pp. ISBN 0-12-493260-6 (Editors) 81m:34001 34–06 (34Exx)

Special Topics of Applied Mathematics ★Special topics of applied mathematics. Functional analysis, numerical analysis and optimization. Proceedings of the Seminar held at the Gesellschaft für Mathematik und Datenverarbeitung (GMD), Bonn, October 8–10, 1979. Edited by Jens Frehse, Diethard Pallaschke and Ulrich Trottenberg. *North-Holland Publishing Co., Amsterdam-New York*, 1980. viii+248 pp. ISBN 0-444-86035-5 (Editors) 81j:46003 46–06 (00A10, 49–06, 65–06)

Universal Algebra ★Материалы Семинара "Универсальная Алгебра". (Russian) [Abstracts of the Seminar on Universal Algebra] Held at Baku, September 1976. "Elm", Baku, 1979. 23 pp. (Editors) 81j:08001 08–06 (06–06, 20–06)

US-Italy, Recent Developments in Variable Structure Systems, Economics and Biology ★Recent developments in variable structure systems, economics and biology. Proceedings of a US-Italy Seminar held in Taormina, August 29–September 2, 1977. Edited by R. R. Mohler and A. Ruberti. *Lecture Notes in Economics and Mathematical Systems*, 162. *Springer-Verlag, Berlin-New York*, 1978. vi+326 pp. ISBN 3-540-09089-4 (Editors) 81f:90002 90–06 (92–06, 93–06)

Seminars:

Euclidean Harmonic Analysis ★Euclidean harmonic analysis. Proceedings of Seminars held at the University of Maryland, College Park, Md., 1979. Edited by John J. Benedetto. *Lecture Notes in Mathematics*, 779. *Springer-Verlag, Berlin-New York*, 1980. i+177 pp. ISBN 3-540-09748-1 (Editors) 81d:42002 42–06

Semiotics and Information Science ★Семiotика и информатика. Вып. 13. (Russian) [Semiotics and information science. No. 13] Edited by A. I. Mikhailov and V. K. Finn. *Akad. Nauk SSSR, Vsesojuz. Inst. Nauch. i Tehn. Informacii, Moscow*, 1979. 215 pp. (loose errata). (Editors) 81b:68003 68–06 (02–06)

★Семiotика и информатика. Вып. 14. (Russian) [Semiotics and information science. No. 14] Edited by A. I. Mikhailov. *Akad. Nauk SSSR, Vsesojuz. Inst. Nauch. i Tehn. Informacii, Moscow*, 1980. 183 pp. (loose errata). (Editors) 81j:68008 68–06

Seminar:

Bifurcation and Nonlinear Eigenvalue Problems ★Bifurcation and nonlinear eigenvalue problems. Proceedings of a Session held at the Université de Paris XIII,

Villetaneuse, October 2–4, 1978. Edited by C. Bardos, J. M. Lasry and M. Schatzman. *Lecture Notes in Mathematics*, 782. *Springer-Verlag, Berlin-New York*, 1980. viii+296 pp. ISBN 3-540-09758-9 (Editors) 81c:35001 35–06 (00A69, 35B32, 58E07)

Set theory ★Mengenlehre. (German) [Set theory] Edited by Ulrich Fölger.

Wissenschaftliche Buchgesellschaft, Darmstadt, 1979. vii+331 pp. ISBN 3-534-06711-8 (Editors) 81f:01050a 01A75 (03–03, 04–03)

★Исследования по неклассическим логикам и теории множеств. (Russian) [Studies in nonclassical logics and set theory] Edited by A. I. Mikhailov. "Nauka", Moscow, 1979. 374 pp. (Editors) 81f:03003 03–06

Shell theory ★Theory of shells. Proceedings of the Third IUTAM Symposium on Shell Theory, dedicated to the memory of Academician I. N. Vekua, held in Tbilisi, August 22–28, 1978. Edited by Warner Tjardus Koiter and G. K. Mikhailov [G. K. Mikhailov]. *North-Holland Publishing Co., Amsterdam-New York*, 1980. xi+704 pp. ISBN 0-444-85338-3 (Editors) 81c:73003 73–06 (73Lxx)

Siegen ★Approximation in Theorie und Praxis. (German) [Approximation in theory and practice] Proceedings of a Symposium held in Siegen, January 31–February 2, 1979. Edited by Günter Meinardus. *Bibliographisches Institut, Mannheim*, 1979. 304 pp. ISBN 3-411-01567-5 (Editors) 81a:41002 41–06

★Contributions to geometry. Proceedings of the Geometry Symposium held in Siegen, June 28–July 1, 1978. Edited by Jürgen Tölke and Jörg M. Wills. *Birkhäuser Verlag, Basel-Boston, Mass.*, 1979. 406 pp. ISBN 3-7643-1048-0 (Editors) 81b:52002 52–06 (53–06)

★Topology Symposium, Siegen 1979. Proceedings of a Symposium held at the University of Siegen, Siegen, June 14–19, 1979. Edited by Ulrich Koschorke and Walter D. Neumann. *Lecture Notes in Mathematics*, 788. *Springer-Verlag, Berlin-New York*, 1980. viii+495 pp. ISBN 3-540-09968-9 (Editors) 81i:57001 57–06 (55–06)

Simulation ★Methodology in systems modelling and simulation. Proceedings of the Symposium on Modelling and Simulation Methodology held at the Weizmann Institute of Science, Rehovot, August 13–18, 1978. Edited by Bernard P. Zeigler, Maurice S. Elzas, George J. Klir and Tuncer I. Ören. *North-Holland Publishing Co., Amsterdam-New York*, 1979. xv+537 pp. ISBN 0-444-85340-5 (Editors) 81c:68079a 68J05

Simulation of distributed-parameter and large-scale systems ★Simulation of distributed-parameter and large-scale systems. Proceedings of the IMACS European Simulation Meeting held at the University of Patras, Patras, October 2–4, 1979. Edited by S. G. Tzafestas. *North-Holland Publishing Co., Amsterdam-New York*, 1980. ix+380 pp. ISBN 0-444-85447-9 (Editors) 81c:93004 93–06

Simulation of systems '79 ★Simulation of systems '79. Proceeding of the 9th IMACS Congress held in Sorrento, September 24–28, 1979. Edited by L. Dekker, G. Savastano and G. C. Vansteenkiste. *North-Holland Publishing Co., Amsterdam-New York*, 1980. xvi+1169 pp. ISBN 0-444-86123-8 (Editors) 81j:68009 68–06 (90–06, 93–06)

Singapore ★Proceedings of the First Franco-Southeast Asian Mathematical Conference, Singapore, May 1979. Vol. II. Held in Singapore, May 1979. *Southeast Asian Bull. Math.* 1979. Special Issue b. *Southeast Asian Mathematical Society, Singapore*, 1979. pp. 173–302. (Editors) 81g:00004 00A10

Singular perturbations and asymptotics ★Singular perturbations and asymptotics. Proceedings of an Advanced Seminar held at the Mathematics Research Center, University of Wisconsin, Madison, Wis., May 28–30, 1980. Edited by Richard E. Meyer and Seymour V. Parter. Publication of the Mathematics Research Center, University of Wisconsin, 45. *Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers]*, New York-London, 1980. ix+409 pp. ISBN 0-12-493260-6 (Editors) 81m:34001 34–06 (34Exx)

Some problems of the theory of elasticity ★Некоторые задачи теории упругости. (Russian) [Some problems of the theory of elasticity] Edited by M. O. Baleshtilivili. *Tbilis. Gos. Univ., Inst. Prikl. Mat., Tbilisi*, 1980. 151 pp. (Editors) 81m:73011 73–06

Sorrento ★Simulation of systems '79. Proceeding of the 9th IMACS Congress held in Sorrento, September 24–28, 1979. Edited by L. Dekker, G. Savastano and G. C. Vansteenkiste. *North-Holland Publishing Co., Amsterdam-New York*, 1980. xvi+1169 pp. ISBN 0-444-86123-8 (Editors) 81j:68009 68–06 (90–06, 93–06)

Sources of gravitational radiation ★Sources of gravitational radiation. Proceedings of the Workshop held at the Battelle Seattle Research Center, Seattle, Wash., July 24–August 4, 1978. Edited by Larry L. Smarr. *Cambridge University Press, Cambridge-New York*, 1979. xiii+505 pp. ISBN 0-521-22778-X (Editors) 81j:83017 83C35 (83B05, 85A40)

Space theory ★Raumtheorie. (German) [Theory of space] Edited by Hans Freudenthal. *Wege der Forschung [Paths of Research]*, CCLXX. *Wissenschaftliche Buchgesellschaft, Darmstadt*, 1978. vi+408 pp. ISBN 3-534-05604-3 (Editors) 81c:51002 51–03 (01A75, 53–03)

Sparse matrix computations ★Sparse Matrix Proceedings 1978. Edited by Iain S. Duff and G. W. Stewart. Symposium on Sparse Matrix Computations held in Knoxville, Tenn., November 2–3, 1978. *SIAM, Philadelphia, Pa.*, 1979. xvi+334 pp. ISBN 0-89871-160-6 (Editors) 81f:65003 65–06

Special issue:

Pedersen, Olaf ★Special issue dedicated to Olaf Pedersen on his sixtieth birthday. *Centaurus* 24 (1980). *Munksgaard, Copenhagen*, 1980. pp. 1–368 (1 plate). (Editors) 81i:01003 01–06 (01A70)

Wundt, Wilhelm ★(Special issue dedicated to Wilhelm Wundt and his work). (German) *Wiss. Z. Karl-Marx-Universität Leipzig Ges. Sprachwiss. Reihe 28* (1979), no. 2. *Karl-Marx-Universität, Leipzig*, 1979. pp. 169–267. (Editors) 81c:01002 01–06 (01A70, 92A25)

Computational methods in nonlinear fluid mechanics ★Special issue: computational methods in nonlinear fluid mechanics. *Comput. & Fluids* 8 (1980), no. 2. *Pergamon Press, Oxford-New York-Toronto, Ont.*, 1980. pp. i–iii and 155–274. (Editors) 81d:76002 76–04

Computers in aerodynamics ★Special issue: computers in aerodynamics. *Comput. & Fluids* 8 (1980), no. 1. *Pergamon Press, Oxford-New York-Toronto, Ont.*, 1980. pp. i–iii and 1–154. (Editors) 81d:76003 76–04

Covariance ★Special issue on covariance. Edited by Walter T. Federer. *Comm. Statist. A—Theory Methods* 8 (1979), no. 8. *Marcel Dekker, Inc., New York-Basel*, 1979. pp. 719–854. (George W. Williams) 81c:62001 62J10

Special issue: (continued)

- International Congress of Mathematicians** ★Special issue: International Congress of Mathematicians, 1978. (Japanese) Sōgaku 31 (1979), no. 1, 1-94. *Mathematical Society of Japan, Tokyo*, 1979. pp. 1-96. (Editors) **81a:00011** 00A10 (01A65)
- Large elastic deformation of discrete systems** ★Special issue on large elastic deformation of discrete systems. Lectures presented at the Euromech 69 International Colloquium held in Balatonszékes, April 13-15, 1977. *Acta Tech. Acad. Sci. Hungar.* **87** (1978), no. 1-2 (1979). *Akadémi Kiadó (Publishing House of the Hungarian Academy of Sciences), Budapest*, 1978. pp. 1-210. (Editors) **81a:73002** 73-06
- Nonmonotonic logic** ★Special issue on nonmonotonic logic. Edited by Daniel G. Bobrow. *Artificial Intelligence* **13** (1980), no. 1-2, 1-172. *North-Holland Publishing Co., Amsterdam*, 1980. pp. 1-174. (Editors) **81d:68119** 68Gxx (03B60, 68-06)
- Physical concepts in tissue growth** ★(Special issue on physical concepts in tissue growth). Papers presented at an International Workshop held in Neuenahr, November 22-24, 1979. *Collect. Phenom.* **3**, no. 3-4. (1981). *Gordon & Breach Science Publishers, New York*, 1981. pp. i and 139-320. (Editors) **81m:92029** 92A09
- Relevance of history of science for philosophy of science** ★Special issue: the relevance of history of science for philosophy of science. *Stud. Hist. Philos. Sci.* **11** (1980), no. 2. *Pergamon Press, Oxford-New York*, 1980. pp. i-v and 89-174. (Editors) **81i:01004** 01-06 (00A69)
- Special questions of algebra and topology** ★Специальные вопросы алгебры и топологии. (Russian) [Special questions of algebra and topology] Edited by L. G. Mustafaev and R. A. Bairamov. "Eim", Baku, 1980. 122 pp. (Editors) **81m:20005** 20-06 (08-06, 54H15)
- Special topics of applied mathematics** ★Special topics of applied mathematics. Functional analysis, numerical analysis and optimization. Proceedings of the Seminar held at the Gesellschaft für Mathematik und Datenverarbeitung (GMD), Bonn, October 8-10, 1979. Edited by Jens Frehe, Diethard Pallasche and Ulrich Trottenberg. *North-Holland Publishing Co., Amsterdam-New York*, 1980. viii + 248 pp. *ISBN 0-444-86035-5* (Editors) **81j:46003** 46-06 (00A10, 49-06, 65-06)
- Specification and estimation of frontier production, profit and cost functions** ★Specification and estimation of frontier production, profit and cost functions. Edited by Dennis J. Aigner and Peter Schmidt. *J. Econometrics* **13** (1980), no. 1. *North-Holland Publishing Co., Amsterdam-New York*, 1980. pp. 1-138. (G. Tinctor) **81k:62157** 62P20 (90A11)
- Spectral theory** ★Функциональный анализ. Вып. 14. (Russian) [Functional analysis. No. 14] Спектральная теория. [Spectral theory] Edited by A. V. Strauss. *Ulyanovsk. Gos. Ped. Inst., Ulyanovsk*, 1980. 200 pp. (Editors) **81j:47002** 47-06 (46-06)
- Spectral theory of functions and operators** ★Spectral theory of functions and operators. A translation of Trudy Mat. Inst. Steklov. **130** (1978). Edited by S. M. Nikol'skii. *Proc. Steklov Inst. Math.* **1979**, no. 4. *American Mathematical Society, Providence, R.I.*, 1980. pp. i-v and 1-233. (Editors) **81i:00010** 00A10 (46-06, 47-06)
- Spectroscopy** ★Recent advances in group theory and their application to spectroscopy. Proceedings of the NATO Advanced Study Institute held at St. Francis Xavier University, Antigonish, N.S., August 6-20, 1978. Edited by John C. Donini. *NATO Advanced Study Institute Series, Ser. B: Physics*, **43**. *Plenum Press, New York-London*, 1979. xii + 692 pp. *ISBN 0-306-40172-X* (Editors) **81a:81006** 81-06 (81C40, 81G40, 81G50)
- Splinefunktionen in der Statistik** ★Splinefunktionen in der Statistik. (German) [Spline functions in statistics] Edited by Karl-August Schäfer. Sonderhefte zum Allgemeinen Statistischen Archiv [Special Issue of the General Statistical Archive], **14**. *Vandenhoeck & Ruprecht, Göttingen*, 1978. 103 pp. *ISBN 3-525-11185-1* (Theo Gasser) **81e:62105** 62M15 (41A15, 62P10, 65U05)
- Splines** ★Приближение функций полиномами и сплайнами. (Russian) [Approximation of functions by polynomials and splines] Edited by S. B. Stečkin. *Trudy Mat. Inst. Steklov.* **145** (1980). "Nauka", Moscow, 1980. pp. 1-252. (Editors) **81b:41001** 41-06 (41A10, 41A15)
- Spring School:**
- Nonlinear Analysis, Function Spaces and Applications** ★Nonlinear analysis, function spaces and applications. Proceedings of a Spring School held in Horni Bradlo, May 21-26, 1978. Edited by Svatopluk Fučík and Alois Kufner. *Teubner-Texte zur Mathematik*. [Teubner Texts in Mathematics] *BSB B. G. Teubner Verlagsgesellschaft, Leipzig*, 1979. 224 pp. (Editors) **81e:46001** 46-06
- Stability** ★Исследования по устойчивости и теории колебаний. (Russian) [Studies in stability and the theory of oscillations] Edited by Ju. S. Kolesov and P. P. Zabreiko. *Jaroslav. Gos. Univ., Yaroslavl*, 1978. 132 pp. (Editors) **81a:34004** 34-06
- ★Теория устойчивости и ее приложения. (Russian) [Theory of stability and its applications] Edited by V. D. It'egov and V. M. Matrosov. "Nauka" *Sibirsk. Otdel., Novosibirsk*, 1979. 295 pp. (Editors) **81b:34003** 34-06 (34Dxx)
- ★Исследования по устойчивости и теории колебаний. (Russian) [Studies in stability and the theory of oscillations] Edited by Ju. S. Kolesov. *Jaroslav. Gos. Univ., Yaroslavl*, 1979. 123 pp. (Editors) **81c:34006** 34-06 (70-06)
- Stability of motion** ★Динамика управляемых систем. (Russian) [Dynamics of control systems] Papers presented at the Third All-Union Četaev Conference, dedicated to the memory of N. G. Četaev on the occasion of the seventy-fifth anniversary of his birth, held in Irkutsk, June 20-25, 1977. Edited by V. M. Matrosov and S. V. Eliseev. "Nauka" *Sibirsk. Otdel., Novosibirsk*, 1979. 344 pp. (Editors) **81c:93003** 93-06
- ★Проблема устойчивости движения, аналитической механики и управления движением. (Russian) [Problems of stability of motion, analytical mechanics and control of motion] Papers presented at the Third All-Union Četaev Conference, dedicated to the memory of N. G. Četaev on the occasion of the seventy-fifth anniversary of his birth, held in Irkutsk, June 20-25, 1977. Edited by V. M. Matrosov and A. N. Pančenko [A. M. Pančenko]. "Nauka" *Sibirsk. Otdel., Novosibirsk*, 1979. 328 pp. (Editors) **81c:93002** 93-06 (34-06, 58-06, 70E99, 70H99, 73H99, 90-06)
- Stability and separation of a boundary layer** ★Выделение движения жидкостей. Устойчивость и отрыв пограничного слоя; свободные и квантовые вихри. (Russian) [Vortex motions in a fluid. Stability and separation of a boundary layer; free and quantum vortices] Translation from the English edited by V. N. Nikolaevskii and G. Ju. Stepanov. *Механика: Новое в Заграничной Науче* [Mechanics: Recent Publications in Foreign Science], **21**. "Mir", Moscow, 1979. 327 pp. (Editors) **81e:76018** 76C05 (76-06, 81-06)
- Statistical analysis** ★Multivariate statistical analysis. Proceedings of the Second Conference on Multivariate Statistical Inference held at Dalhousie University, Halifax, N.S., October 5-7, 1979. Edited by R. P. Gupta. *North-Holland Publishing Co., Amsterdam-New York*, 1980. viii + 289 pp. *ISBN 0-444-86019-3* (Editors) **81m:62005** 62-06
- Statistical analysis of weather modification experiments** ★Statistical analysis of weather modification experiments. Papers presented at a Workshop on the Design and Analysis of Weather Modification Experiments held at Florida State University, Tallahassee, Fla., October 26-27, 1978. Edited by Edward J. Wegman and Douglas J. DePriest. *Lecture Notes in Statistics*, **3**. *Marcel Dekker, Inc., New York*, 1980. x + 145 pp. *ISBN 0-8247-1177-7* (Editors) **81k:60001** 86-06 (62P99, 86A10)
- Statistical hydroacoustics** ★Труды седьмой Всесоюзной школы-семинара по статистической гидроакустике. (Russian) [Proceedings of the Seventh All-Union School-Seminar on Statistical Hydroacoustics] Held at L'vov, September 4-9, 1978. Edited by V. V. Ol'sevskii and N. G. Zagoruiko. *Akad. Nauk SSSR Sibirsk. Otdel., Int. Mat., Novosibirsk*, 1979. 327 pp. (Editors) **81a:00010** 76-06 (93E11)
- Statistical mechanics** ★Proceedings of the Conference on Probability, Stochastic Processes and Statistical Mechanics. Held at Mysore, March 26-29, 1979. Edited by N. R. Ranganathan and R. Sridhar. *Mathematics Report*, **97**. *Institute of Mathematical Science, Madras*, 1979. iii + 202 pp. (Editors) **81j:60003** 60-06 (81D05)
- Statistical physics** ★Гиббсовские состояния в статистической физике. (Russian) [Gibbs states in statistical physics] Translation from the English edited by R. A. Minke. *Математика: Новое в Заграничной Науче* [Mathematics: Recent Publications in Foreign Science], **11**. "Mir", Moscow, 1978. 256 pp. (Editors) **81i:82003** 82-06
- Statistical procedures** ★Time-sequential statistical procedures. Edited by Pranab Kumar Sen. *Comm. Statist. A—Theory Methods* **7** (1978), no. 4. *Marcel Dekker, Inc., New York*, 1978. pp. 311-408. (Lionel Weiss) **81c:62141** 62L10 (62G10, 62N05, 62P10)
- Statistical simulation** ★Исследования операций и статистическое моделирование. Вып. 5. (Russian) [Operations research and statistical simulation. No. 5] Edited by I. V. Romanovskii. *Leningrad. Univ., Leningrad*, 1979. 204 pp. (Editors) **81i:65002** 65-06 (90-06)
- Statistical tests** ★Asymptotic theory of statistical tests and estimation. In honor of Wassily Hoeffding. Proceedings of an Advanced International Symposium held at the University of North Carolina, Chapel Hill, N.C., April 16-18, 1979. Edited by Indu Mohan Chakravarti. With an appendix by Peter Clifford. *Academic Press [Harcourt Brace Jovanovich, Publishers], New York-London-Toronto, Ont.*, 1980. xiv + 350 pp. *ISBN 0-12-166650-6* (Editors) **81c:62004** 62-06 (60-06)
- Statistics** ★Splinefunktionen in der Statistik. (German) [Spline functions in statistics] Edited by Karl-August Schäfer. Sonderhefte zum Allgemeinen Statistischen Archiv [Special Issue of the General Statistical Archive], **14**. *Vandenhoeck & Ruprecht, Göttingen*, 1978. 103 pp. *ISBN 3-525-11185-1* (Theo Gasser) **81e:62105** 62M15 (41A15, 62P10, 65U05)
- ★Applications of statistics & probability in soil & structural engineering. Vol. I, II. Proceedings of the Third International Conference (ICASP3) held in Sydney, January 29-February 2, 1979. Edited by Owen G. Ingles. *Unisearch, Ltd., Kensington*, 1979. Vol. I: 427 pp.; Vol. II: pp. 429-849. *ISBN 0-909796-08-4, 0-909796-09-2* (Editors) **81b:62002a** 62-06
- ★Applications of statistics & probability in soil & structural engineering. Vol. III. Proceedings of the Third International Conference (ICASP3) held in Sydney, January 29-February 2, 1979. Edited by Owen G. Ingles. *Unisearch, Ltd., Kensington*, 1979. 468 pp. *ISBN 0-909796-10-6* (Editors) **81b:62002b** 62-06
- ★Contributions to statistics. Jaroslav Hájek Memorial Volume. Edited by Jana Jurečková. *D. Reidel Publishing Co., Dordrecht-Boston, Mass.-London*, 1979. 317 pp. (1 plate). *ISBN 0-9277-0883-5* (Editors) **81b:62004** 62-06
- ★Contribuciones en probabilidad y estadística matemática, enseñanza de la matemática y análisis. (Spanish) [Contributions in probability and mathematical statistics, teaching of mathematics and analysis] Dedicated to Professor Alfonso Guiraur Martín on the occasion of his academic retirement. *Grindley Ediciones, Granada*, 1979. viii + 307 pp. (1 plate). *ISBN 84-338-0110-4* (Editors) **81d:00001** 00A10 (60-06, 90-06)
- ★Robustness in statistics. Proceedings of a Workshop held at the Army Research Office, Research Triangle Park, N.C., April 11-12, 1978. Edited by Robert L. Launer and Graham N. Wilkinson. *Academic Press [Harcourt Brace Jovanovich, Publishers], New York-London*, 1979. xvi + 296 pp. *ISBN 0-12-438150-2* (Colin L. Mallows) **81e:62032** 62F35
- ★Interactive statistics. Proceedings of the Applied Statistics Conference held at Macquarie University, Sydney, February 8-9, 1979. Edited by Don McNeil. *North-Holland Publishing Co., Amsterdam-New York*, 1979. x + 254 pp. *ISBN 0-444-85412-6* (Editors) **81f:62003** 62-06
- ★Recent developments in statistical inference and data analysis. Proceedings of the International Conference in Statistics held at the Institute of Statistical Mathematics, Tokyo, November 28-30, 1979. Edited by Kameo Matsui. *North-Holland Publishing Co., Amsterdam-New York*, 1980. ix + 364 pp. *ISBN 0-444-86104-1* (Editors) **81j:62009** 62-06
- ★Исследования по математической статистике. IV. (Russian) [Studies in mathematical statistics. IV] Edited by I. A. Ibragimov and M. S. Nikulin. *Zap. Nauch. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)* **98** (1980). "Nauka" *Leningrad. Otdel., Leningrad*, 1980. pp. 1-168. (Editors) **81j:62011** 62-06
- ★Developments in statistics. Vol. 3. Edited by Paruchuri R. Krishnaiah. *Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], New York-London*, 1980. xiv + 254 pp. *ISBN 0-12-426603-7* (Editors) **81k:62005** 62-06
- ★Mathematical statistics. Edited by Robert Bartoszyński, Jacek Koronacki and Ryszard Zieliński. *Banach Center Publications*, **6**. *PWN—Polish Scientific Publishers, Warsaw*, 1980. 376 pp. *ISBN 83-01-01493-8* (Editors) **81m:62004** 62-06
- Statistics and earth sciences—the challenge for the 80's and statistical problems in exploration and resource evaluation of energy fuels** ★Statistics and earth sciences—the challenge for the 80's and statistical problems in exploration and resource evaluation of energy fuels. Papers presented at sessions held as part of the American Statistical Association

- Annual Meeting, Washington, D.C., August 13-16, 1979.** Edited by Richard B. McCammon. J. Internat. Assoc. Math. Geol. 12 (1980), no. 5. Plenum Press, New York-London, 1980. pp. 415-522. (Editors) **81j:36001** 86-06
- Stellar turbulence.** Proceedings of Colloquium 51 of the International Astronomical Union held at the University of Western Ontario, London, Ont., August 27-30, 1979. Edited by D. F. Gray and J. L. Linsky. Lecture Notes in Physics, 114. Springer-Verlag, Berlin-New York, 1980. viii + 348 pp. ISBN 3-540-09737-6 (Editors) **81j:25001** 85-06 (76F99)
- Stillwater, Okla.** ★Differential equations. Proceedings of the Eighth Fall Conference held at Oklahoma State University, Stillwater, Okla., October, 1979. Edited by Shair Ahmad, Marvin Keener and A. C. Lazer. Academic Press [Harcourt Brace Jovanovich, Publishers], New York-London-Toronto, Ont., 1980. ix + 278 pp. ISBN 0-12-045550-1 (Editors) **81s:34005** 34-06
- Stochastic control systems.** ★Стохастические системы управления. (Russian) [Stochastic control systems] Edited by A. V. Medvedev. "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. 103 pp. (Editors) **81j:62010** 62-06 (68G10)
- Stochastic optimization models.** ★Стохастические модели оптимизации. (Russian) [Stochastic optimization models] Edited by V. A. Kolesaja. Akad. Nauk Ukrain. SSR Inst. Kibernet. Preprint 1979, no. 13. Akad. Nauk Ukrain. SSR, Inst. Kibernet., Kiev, 1979. pp. 1-55. (Editors) **81e:90004** 90-06 (90C15)
- Stochastic processes.** ★Proceedings of the Conference on Probability, Stochastic Processes and Statistical Mechanics. Held at Mysore, March 26-29, 1979. Edited by N. R. Ranganathan and R. Sridhar. Matscience Report, 97. Institute of Mathematical Sciences, Madras, 1979. iii + 202 pp. (Editors) **81j:60003** 60-06 (81D05)
- ★Ninth Conference on Stochastic Processes and their Applications. Held at Northwestern University, Evanston, Ill., August 6-10, 1979. Adv. in Appl. Probab. 12 (1980), no. 2, 263-318. Applied Probability Trust, Sheffield, 1980. pp. 263-541. (Editors) **81b:60001** 60-06
- ★Applied stochastic processes. Proceedings of the Conference held at the University of Georgia, Athens, Ga., May 15-19, 1978. Edited by G. Adomian. Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], New York-London, 1980. ix + 301 pp. ISBN 0-12-044380-5 (Editors) **81j:60001** 60-06
- Stochastic programming.** ★Recent results in stochastic programming. Proceedings of a Meeting held in Oberwolfach, January 28-February 3, 1979. Edited by Peter Kall and András Prékopa. Lecture Notes in Economics and Mathematical Systems, 179. Springer-Verlag, Berlin-New York, 1980. ix + 237 pp. ISBN 3-540-10013-X (Editors) **81j:90008** 90-06 (62-06, 90C15)
- ★Stochastic programming. Proceedings of an International Conference held at the University of Oxford, Oxford, July 15-17, 1974. Edited by M. A. H. Dempster. The Institute of Mathematics and its Applications Conference Series. Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], London-New York, 1980. xiii + 573 pp. ISBN 0-12-028250-8 (Editors) **81j:90004** 90C15 (90-06)
- Stochastic systems.** ★Numerical techniques for stochastic systems. Papers based on lectures presented at the Conference held at Gargnano, September 1979. Edited by Francesco Archetti and Marco Cugiani. North-Holland Publishing Co., Amsterdam-New York, 1980. viii + 406 pp. ISBN 0-444-86000-2 (Editors) **81f:93067** 93E03 (93-06)
- ★Analysis and optimisation of stochastic systems. Proceedings of the International Conference held at the University of Oxford, Oxford, September 6-8, 1978. Edited by O. L. R. Jacobs, M. H. A. Davis, M. A. H. Dempster, C. J. Harris and P. C. Parks. The Institute of Mathematics and its Applications Conference Series. Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], London-New York, 1980. xiv + 573 pp. ISBN 0-12-378680-0 (Editors) **81j:93069** 93E20 (93E11)
- Stochasticity.** ★Intrinsic stochasticity in plasmas. International Workshop held at the Institut d'Études Scientifiques de Cargèse, Cargèse, June 17-23, 1979. Edited by Guy Laval and Dominique Gresillon. École Polytechnique, Palaiseau; distributed by Les Éditions de Physique, Orsay, 1979. 443 pp. ISBN 2-7302-0016-9 (Editors) **81e:76006** 76X05 (58F13, 78A35, 82A45)
- Stony Brook, N.Y.** ★Supergravity. Proceedings of the Workshop held at Stony Brook, N.Y., September 27-29, 1979. Edited by P. van Nieuwenhuizen and D. Z. Freedman. North-Holland Publishing Co., Amsterdam-New York, 1979. xii + 341 pp. ISBN 0-444-85438-X (Editors) **81j:83001** 83-06
- Stratified spaces.** ★Analytic varieties and various problems on stratified spaces. (Japanese) Proceedings of a Symposium held at the Research Institute for Mathematical Sciences, Kyoto University, Kyoto, May 22-25, 1978. Sūrikaiseikikenkyūsho Kōkyūroku No. 372 (1979). Kyoto University, Research Institute for Mathematical Sciences, Kyoto, 1979. pp. i-ii and 1-307. (Editors) **81m:32001** 32-06 (81-06)
- Structure of topological categories.** ★Structure of topological categories. Proceedings of a Conference held at the University of Bremen, September 2-5, 1978. Edited by Horst Herrlich, Rudolf-Eberhard Hoffmann, Hans-Eberhard Porst and Manfred Bernd Wischnewsky. Mathematik—Arbeitspapiere [Mathematics—Publications], 18. Universität Bremen, Bremen, 1979. iv + 252 pp. (Editors) **81a:18001** 18-06 (18B30, 54B30)
- Studies in algebraic geometry.** ★Studies in algebraic geometry. Edited by A. Seidenberg. MAA Studies in Mathematics, 20. Mathematical Association of America, Washington, D.C., 1980. xi + 143 pp. ISBN 0-88385-120-2 (Editors) **81i:14001** 14-06
- Studies in commutative ring theory.** ★Studies in commutative ring theory. (Japanese) Proceedings of a Symposium held at the Research Institute for Mathematical Sciences, Kyoto University, Kyoto, October 31-November 2, 1979. Sūrikaiseikikenkyūsho Kōkyūroku No. 374 (1980). Kyoto University, Research Institute for Mathematical Sciences, Kyoto, 1980. pp. i-ii and 1-194. (Editors) **81m:13001** 13-06 (14-06)
- Studies in elasticity and plasticity.** ★Исследования по упругости и пластичности. Вып. 13. (Russian) [Studies in elasticity and plasticity. No. 13] Актуальные проблемы механики сплошных сред. [Current problems of continuum mechanics] Edited by N. F. Morozov and K. F. Černyh. Leningrad. Univ., Leningrad, 1980. 320 pp. (Editors) **81k:73002** 73-06 (76F99, 78A25)
- Studies in functional analysis.** ★Studies in functional analysis. Edited by R. G. Bartle. MAA Studies in Mathematics, 21. Mathematical Association of America, Washington, D.C., 1980. xi + 227 pp. ISBN 0-88385-121-0 (Editors) **81j:46004** 46-06 (47-06)
- Studies in inductive logic and probability.** ★Studies in inductive logic and probability. Vol. II. Edited by Richard C. Jeffrey. University of California Press, Berkeley, Calif., 1980. i + 305 pp. ISBN 0-520-03826-6 (Editors) **81j:03006** 03-06
- Studies on mathematical programming.** ★Studies on mathematical programming. Based on papers presented at the Third Conference on Mathematical Programming held at Mátrafüred, January 31-February 6, 1975. Edited by A. Prékopa. Mathematical Methods of Operations Research, 1. Akadémiai Kiadó [Publishing House of the Hungarian Academy of Sciences], Budapest, 1980. 200 pp. ISBN 963-05-1854-6 (Editors) **81i:90009** 90-06
- Studies in mathematical statistics.** ★Исследования по математической статистике. IV. (Russian) [Studies in mathematical statistics. IV] Edited by I. A. Ibragimov and M. S. Nikulin. Zap. Nauch. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI) 98 (1980). "Nauka" Leningrad. Otdel., Leningrad, 1980. pp. 1-168. (Editors) **81j:62011** 62-06
- Studies in nonclassical logics and set theory.** ★Исследования по неклассическим логикам и теории множеств. (Russian) [Studies in nonclassical logics and set theory] Edited by A. I. Mikhailov. "Nauka", Moscow, 1979. 374 pp. (Editors) **81f:03003** 03-06
- Studies on some nonlinear evolution equations.** ★Studies on some nonlinear evolution equations. Seminarberichte [Seminar Reports], 17. Humboldt Universität, Sektion Mathematik, Berlin, 1979. 197 pp. (not consecutively paged). (Editors) **81i:35003** 35-06 (76A10, 76R99)
- Studies in number theory.** ★Исследования по теории чисел. 6. (Russian) [Studies in number theory. 6] Edited by A. V. Mal'nev. Zap. Nauch. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI) 93 (1980). "Nauka" Leningrad. Otdel., Leningrad, 1980. pp. 1-230. (Editors) **81f:10004** 10-06
- Studies in stability and the theory of oscillations.** ★Исследования по устойчивости и теории колебаний. (Russian) [Studies in stability and the theory of oscillations] Edited by Ju. S. Kolesov and P. P. Zabreiko. Yaroslavl. Gos. Univ., Yaroslavl, 1978. 132 pp. (Editors) **81a:34004** 34-06
- ★Исследования по устойчивости и теории колебаний. (Russian) [Studies in stability and the theory of oscillations] Edited by Ju. S. Kolesov. Yaroslavl. Gos. Univ., Yaroslavl, 1979. 123 pp. (Editors) **81e:34006** 34-06 (70-06)
- Studies in the structure of solutions of partial differential equations.** ★Studies in the structure of solutions of partial differential equations. (Japanese) Proceedings of a Symposium held at the Research Institute for Mathematical Sciences, Kyoto University, Kyoto, November 5-7, 1979. Sūrikaiseikikenkyūsho Kōkyūroku No. 376 (1980). Kyoto University, Research Institute for Mathematical Sciences, Kyoto, 1980. pp. i-ii and 1-162. (Editors) **81m:35005** 35-06
- Studies in subjective probability.** ★Studies in subjective probability. Second edition. Edited by Henry E. Kyburg, Jr. and Howard E. Smokler. Robert E. Krieger Publishing Co., Inc., Huntington, N.Y., 1980. ii + 262 pp. ISBN 0-83275-296-0 (Editors) **81i:60003** 60A05 (62A15)
- Studies in the theory of algorithms and mathematical logic.** ★Исследования по теории алгоритмов и математической логике. (Russian) [Studies in the theory of algorithms and mathematical logic] Edited by A. A. Markov and V. I. Homic. "Nauka", Moscow, 1979. 135 pp. (Editors) **81b:03003** 03-06
- Studies in the theory of operators and their applications.** ★Исследования по теории операторов и их приложениям. (Russian) [Studies in the theory of operators and their applications] Edited by V. A. Marčenko and V. Ja. Golodec. "Naukova Dumka", Kiev, 1979. 180 pp. (Editors) **81a:00012** 00A10
- Study of algorithms of numerical calculation.** ★Study of algorithms of numerical calculation. (Japanese) Proceedings of a Symposium held at the Research Institute for Mathematical Sciences, Kyoto University, Kyoto, November 20-22, 1978. Sūrikaiseikikenkyūsho Kōkyūroku No. 373 (1979). Kyoto University, Research Institute for Mathematical Sciences, Kyoto, 1979. pp. i-ii and 1-132. (Editors) **81m:65008** 65-06
- Study of the structure of solutions of partial differential equations.** ★The study of the structure of solutions of partial differential equations. (Japanese) Proceedings of a Symposium held at the Research Institute for Mathematical Sciences, Kyoto University, Kyoto, February 13-15, 1979. Sūrikaiseikikenkyūsho Kōkyūroku No. 357 (1979). Kyoto University, Research Institute for Mathematical Sciences, Kyoto, 1979. pp. i-ii and 1-218. (Editors) **81m:35004** 35-06
- Summary of Kleene's work in recursion theory.** A summary of Kleene's work in recursion theory. The Kleene Symposium (Proc. Sympos., Univ. Wisconsin, Madison, Wis., 1978), pp. x-xi, Studies in Logic and Foundations of Math., 101, North-Holland, Amsterdam, 1980. (Editors) **81m:03001** 03-03 (01A70)
- Summer Institute:**
- Cargèse, Lepton Structure and Lepton-Hadron Interactions.** ★Hadron structure and lepton-hadron interactions. Proceedings of the Cargèse Summer Institute held in Cargèse, July, 1977. Edited by Maurice Lévy, Jean-Louis Basdevant, David Speiser, Jacques Weyers, Raymond Gastmans and Jean Zinn-Justin. NATO Advanced Study Institute Series, Ser. B: Physics, 39. Plenum Press, New York-London, 1979. viii + 736 pp. ISBN 0-306-40072-3 (Editors) **81a:81002** 81-06 (81G05, 81G15)
- Summer Research Institute:**
- Canadian Mathematical Society.** ★Geometrical and topological methods in gauge theories. Proceedings of the Canadian Mathematical Society Summer Research Institute held at McGill University, Montreal, Que., September 3-8, 1979. Edited by John Harnad and Steven Shnider. Lecture Notes in Physics, 129. Springer-Verlag, Berlin-New York, 1980. viii + 155 pp. ISBN 3-540-10010-5 (Editors) **81e:81005** 81-06 (53-06, 58-06, 81E10, 83C99)
- Geometrical and Topological Methods in Gauge Theories.** ★Geometrical and topological methods in gauge theories. Proceedings of the Canadian Mathematical Society Summer Research Institute held at McGill University, Montreal, Que., September 3-8, 1979. Edited by John Harnad and Steven Shnider. Lecture Notes in Physics, 129. Springer-Verlag, Berlin-New York, 1980. viii + 155 pp. ISBN 3-540-10010-5 (Editors) **81e:81005** 81-06 (53-06, 58-06, 81E10, 83C99)
- Summer School:**
- Einstein Centenary.** ★Gravitational radiation, collapsed objects and exact solutions. Proceedings of the Einstein Centenary Summer School held in Perth, January 1979. Edited by Cyril Edwards. Lecture Notes in Physics, 124. Springer-Verlag, Berlin-New York, 1980. vi + 487 pp. ISBN 3-540-09992-1 (Editors) **81i:83003** 83-06 (83C35)
- Algebraic Coding Theory and Applications.** ★Algebraic coding theory and applications.

Summer School: (continued)

Lectures from the Summer School held at the International Centre for Mechanical Sciences (CISM), Udine, July 1978. Edited by Giuseppe Longo. CISM Courses and Lectures, 258. Springer-Verlag, Vienna, 1979. x + 528 pp. ISBN 3-211-81544-9 (E. M. Gaidulin) 81b:54026 94Bxx (94-02)

C.I.M.E., Dynamical Systems ★Dynamical systems. Lectures presented at the C.I.M.E. Summer School held in Bressanone, June 19–27, 1978. Progress in Mathematics, 8. Birkhäuser, Boston, Mass., 1980. viii + 289 pp. ISBN 3-7643-3024-4 (Editors) 81b:58004 58-06

Nonlinear Optimization ★Nonlinear optimization. Theory and algorithms. Proceedings of the International Summer School held at the University of Bergamo, Bergamo, September 1979, and repeated at the Hatfield Polytechnic, Hatfield, July 1980. Edited by L. C. W. Dixon, E. Spedicato and G. P. Szegö. Birkhäuser, Boston, Mass., 1980. vi + 486 pp. ISBN 3-7643-3020-1 (Editors) 81j:65006 65-06

Probability Theory and Mathematical Statistics ★Трета международна летна школа по теория на вероятностите и математическа статистика. (Bulgarian) [Third International Summer School on Probability Theory and Mathematical Statistics] Held in Varna, May 10–20, 1978. Edited by B. Penkov and J. Stojanov. B'lgar. Akad. Nauk, Sofia, 1980. 194 pp. (Editors) 81j:60004 60-06

Program Construction ★Program construction. International Summer School held in Marktoberdorf, July 26–August 6, 1978. Edited by F. L. Bauer and M. Broy. Lecture Notes in Computer Science, 69. Springer-Verlag, Berlin-New York, 1979. vii + 651 pp. ISBN 3-540-09251-X (Editors) 81f:68007 68-06 (68Bxx)

Saint Flour, Probability ★École d'Été de Probabilités de Saint-Flour VIII—1978. (French) [Eighth Saint Flour Probability Summer School—1978] Held at Saint Flour, July 5–22, 1978. Edited by P. L. Hennequin. Lecture Notes in Mathematics, 774. Springer-Verlag, Berlin-New York, 1980. xiii + 334 pp. ISBN 3-540-09741-4 (Editors) 81j:60005 60-06

Variational Inequalities and Optimization Problems ★Variational inequalities and optimization problems. Proceedings of a Summer School held at Constanța, August 20–30, 1979. Edited by Dan Pascali. Ministerul Educației și Încălzirii, Institutul de Încălzire Superior, Constanța, 1979. vi + 344 pp. (Editors) 81b:49001 49-06 (65-06)

Summer Seminar:

Applied Mathematics ★Nonlinear oscillations in biology. Proceedings of the Tenth Summer Seminar on Applied Mathematics held at the University of Utah, Salt Lake City, Utah, June 12–23, 1978. Edited by Frank C. Hoppensteadt. Lectures in Applied Mathematics, 17. American Mathematical Society, Providence, R.I., 1979. x + 253 pp. ISBN 0-8218-1117-7 (Editors) 81a:92002 92-06 (34-06, 58-06)

Global and Large Scale System Models ★Global and large scale system models. Proceedings of the Center for Advanced Studies (CAS) International Summer Seminar held in Dubrovnik, August 21–26, 1978. Edited by Branislav Lazarević. Lecture Notes in Control and Information Sciences, 19. Springer-Verlag, Berlin-New York, 1979. viii + 232 pp. ISBN 3-540-09637-X (Editors) 81a:93009 93A15 (93-06)

Supergravity ★Supergravity. Proceedings of the Workshop held at Stony Brook, N.Y., September 27–29, 1979. Edited by P. van Nieuwenhuizen and D. Z. Freedman. North-Holland Publishing Co., Amsterdam-New York, 1979. xii + 341 pp. ISBN 0-444-85438-X (Editors) 81j:83001 83-06

Survey of mathematical programming ★Survey of mathematical programming. Vol. 1. Proceedings of the Ninth International Mathematical Programming Symposium held in Budapest, August 23–27, 1976. Edited by András Prékopa. North-Holland Publishing Co., Amsterdam-Oxford-New York, 1979. 550 pp. ISBN 0-444-85033-3 (Editors) 81j:90004a 90-06

★Survey of mathematical programming. Vol. 2. Proceedings of the Ninth International Mathematical Programming Symposium held in Budapest, August 23–27, 1976. Edited by András Prékopa. North-Holland Publishing Co., Amsterdam-Oxford-New York, 1979. 590 pp. ISBN 0-444-85033-3 (Editors) 81j:90004b 90-06

★Survey of mathematical programming. Vol. 3. Proceedings of the Ninth International Mathematical Programming Symposium held in Budapest, August 23–27, 1976. Edited by András Prékopa. North-Holland Publishing Co., Amsterdam-Oxford-New York, 1979. 414 pp. ISBN 0-444-85033-3 (Editors) 81j:90004c 90-06

Survey of numerical methods for partial differential equations ★A survey of numerical methods for partial differential equations. Edited by I. Gladwell and R. Wait. With contributions by L. Fox, J. A. Hendry, A. Prothero, J. D. Reid, I. M. Smith, S. Scheffler, J. R. Whiteman, L. M. Delves, C. Phillips, Wait, J. M. Watt, C. T. H. Baker, T. L. Freeman, Gladwell, G. Hall, J. E. Walsh and J. Williams. The Clarendon Press, Oxford University Press, New York, 1979. xii + 425 pp. ISBN 0-19-853351-9 (M. Zlamal) 81j:65002 65-02 (65Nxx)

Survey on the theoretical and numerical trends in nonlinear analysis ★A survey on the theoretical and numerical trends in nonlinear analysis. I. Proceedings of the Third Seminar on Functional Analysis and its Applications (S.A.F.A. III) held in Bari, September 27–October 5, 1978. Confer. Sem. Mat. Univ. Bari No. 158-162 (1979). Editori Laterza, Bari, 1979. pp. i–iv and 1–180. (Editors) 81b:00007 00A10

★A survey on the theoretical and numerical trends in nonlinear analysis. II. Proceedings of the Third Seminar on Functional Analysis and its Applications (S.A.F.A. III) held in Bari, September 27–October 5, 1978. Confer. Sem. Mat. Univ. Bari No. 163-168 (1979) (1980). Editori Laterza, Bari, 1980. pp. 181–398. (Editors) 81b:47055 47Hxx (65-06)

Surveys in combinatorics ★Surveys in combinatorics. Proceedings of the Seventh British Combinatorial Conference held in Cambridge, August 13–17, 1979. Edited by Béla Bollobás. London Mathematical Society Lecture Note Series, 38. Cambridge University Press, Cambridge-New York, 1979. vii + 261 pp. ISBN 0-521-22846-8 (Editors) 81b:05005 05-06

Sydney ★Finite element methods in engineering. Proceedings of the Third International Conference held at the University of New South Wales, Sydney, July 2–6, 1979. Edited by A. P. Kabaila and V. A. Pulman. Unisearch, Ltd., Kensington, 1979. xiv + 802 pp. ISBN 0-85841-150-4 (Editors) 81a:65007 65-06

★Applications of statistics & probability in soil & structural engineering. Vol. I, II. Proceedings of the Third International Conference (ICASP3) held in Sydney, January

29–February 2, 1979. Edited by Owen G. Ingles. Unisearch, Ltd., Kensington, 1979. Vol. I: 427 pp.; Vol. II: pp. 429–849. ISBN 0-909796-08-4, 0-909796-09-2 (Editors) 81b:62002a 62-06

★Applications of statistics & probability in soil & structural engineering. Vol. III. Proceedings of the Third International Conference (ICASP3) held in Sydney, January 29–February 2, 1979. Edited by Owen G. Ingles. Unisearch, Ltd., Kensington, 1979. 468 pp. ISBN 0-909796-10-6 (Editors) 81b:62002b 62-06

★Interactive statistics. Proceedings of the Applied Statistics Conference held at Macquarie University, Sydney, February 8–9, 1979. Edited by Don McNeil. North-Holland Publishing Co., Amsterdam-New York, 1979. x + 254 pp. ISBN 0-444-85412-6 (Editors) 81b:62003 62-06

★Language design and programming methodology. Proceedings of a Symposium held in Sydney, September 10–11, 1979. Edited by Jeffrey M. Tobias. Lecture Notes in Computer Science, 79. Springer-Verlag, Berlin-New York, 1980. iv + 255 pp. ISBN 3-540-09745-7 (Editors) 81b:68002 68-06

Symbolic and algebraic computation ★Symbolic and algebraic computation. EUROSAM '79, an International Symposium held in Marseille, June 1979. Edited by Edward W. Ng. Lecture Notes in Computer Science, 72. Springer-Verlag, Berlin-New York, 1979. xv + 557 pp. ISBN 3-540-09519-5 (Editors) 81d:68005 68-06 (68C20)

Symposia Mathematica ★Symposia Mathematica. Vol. XXIII. Conference on Abelian Groups and their Relationship to the Theory of Modules held at the Istituto Nazionale di Alta Matematica Francesco Severi (INDAM), Rome, December 12–16, 1977. Academic Press, London-New York, 1979. 457 pp. (Editors) 81a:20005 20-06 (16-06)

Hyman Blumberg, Research in Early Childhood Education ★Women and the

mathematical mystique. Proceedings of the Eighth Annual Hyman Blumberg Symposium on Research in Early Childhood Education held in Boston, Mass., February 1976. Edited by Lynn H. Fox, Linda Brody and Dianne Tobin. Studies of Intellectual Precocity, 5. Johns Hopkins University Press, Baltimore, Md., 1980. xi + 211 pp. ISBN 0-8018-2341-2 (Editors) 81j:00005 00A05 (01A80)

Einstein ★Einstein Symposium, Berlin. (German) On the occasion of the 100th anniversary of his birthday, held March 25–30, 1979. Edited by H. Nelkowski, A. Hermann, H. Poser, R. Schrader and R. Seiler. Lecture Notes in Physics, 100. Springer-Verlag, Berlin-New York, 1979. viii + 550 pp. ISBN 3-540-09718-X (Editors) 81e:83001 83-06 (01A70)

Kleene ★The Kleene Symposium. Proceedings of the Symposium held at the University of Wisconsin, Madison, Wis., June 18–24, 1978. Edited by Jon Barwise [K. Jon Barwise], H. Jerome Keisler and Kenneth Kunen. Studies in Logic and the Foundations of Mathematics, 101. North-Holland Publishing Co., Amsterdam-New York, 1980. xx + 425 pp. (1 plate). ISBN 0-444-85345-6 (Editors) 81j:03009 03-06

Monna, A. F. ★Symposium dédié à A. F. Monna. (French) [Symposium dedicated to A. F. Monna] Held in Utrecht, December 18, 1979. Communications of the Mathematical Institute, Rijksuniversiteit Utrecht, 12. Rijksuniversiteit Utrecht, Mathematisch Instituut, Utrecht, 1980. 82 pp. (Editors) 81m:00007 00A10 (01A70)

Acoustique Non Linéaire ★8e Symposium International sur l'Acoustique Non Linéaire. (French) [8th International Symposium on Nonlinear Acoustics] Held at the École Nationale Supérieure de Chimie de Paris, Paris, July 3–6, 1978. I. Physique 40 (1979), no. 11 suppl. Colloque C-8. Société Française de Physique, Orsay, 1979. pp. i–iv and C8-1–C8-365. (Editors) 81e:76033 76Q05

Algebraic Geometry ★Proceedings of the International Symposium on Algebraic Geometry. A Taniguchi Symposium. Held at Kyoto University, Kyoto, January 10–14, 1977. Edited by Masayoshi Nagata. Kinokuniya Book Store Co., Ltd., Tokyo, 1978. xiv + 737 pp. (Editors) 81e:14002 14-06

Algebraic Topology ★Algebraic topology, Aarhus 1978. Proceedings of a Symposium held at the University of Aarhus, Aarhus, August 7–12, 1978. Edited by Johan Louis Dupont and Ib Henning Madsen. Lecture Notes in Mathematics, 763. Springer-Verlag, Berlin-New York, 1979. vi + 695 pp. ISBN 3-540-09721-X (Editors) 81b:55001 55-06 (18F25, 57-06)

Analysis and Computation of Fixed Points ★Analysis and computation of fixed points. Proceedings of a Symposium held at the Mathematics Research Center, University of Wisconsin, Madison, Wis., May 7–8, 1979. Edited by Stephen M. Robinson. Publication of the Mathematics Research Center, University of Wisconsin, 6. Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], New York-London, 1980. ix + 413 pp. ISBN 0-12-590240-9 (Editors) 81j:65003 65-06 (90-06)

Analytic Varieties and Various Problems on Stratified Spaces ★Analytic varieties and various problems on stratified spaces. (Japanese) Proceedings of a Symposium held at the Research Institute for Mathematical Sciences, Kyoto University, Kyoto, May 22–25, 1978. Sūrikaiseikikenkyūsho Kōkyūroku No. 372 (1979). Kyoto University, Research Institute for Mathematical Sciences, Kyoto, 1979. pp. i–ii and 1–307. (Editors) 81m:32001 32-06 (81-06)

Applications of Mathematics in System Theory ★Proceedings of the International Symposium on Applications of Mathematics in System Theory. I. Held at the University of Braşov, Braşov, December 27–30, 1978. Edited by C. L. Simionescu and I. Benkő. Universitatea din Braşov, Braşov, 1979. ii + 339 pp. (Editors) 81j:93006a 93-06 (49-06, 65-06, 90-06, 92-06)

★Proceedings of the International Symposium on Applications of Mathematics in System Theory. II. Held at the University of Braşov, Braşov, December 27–30, 1978. Edited by C. L. Simionescu and I. Benkő. Universitatea din Braşov, Braşov, 1979. 376 pp. (Editors) 81j:93006b 93-06 (49-06, 65-06, 90-06, 92-06)

Approximation Methods for Navier-Stokes Problems ★Approximation methods for Navier-Stokes problems. Proceedings of the Symposium held at the University of Paderborn, Paderborn, September 9–15, 1979. Edited by R. Rautmann. Lecture Notes in Mathematics, 771. Springer-Verlag, Berlin-New York, 1980. xvi + 581 pp. ISBN 3-540-09734-1 (Editors) 81a:76004 76-06

Approximation in Theorie und Praxis ★Approximation in Theorie und Praxis. (German) [Approximation in theory and practice] Proceedings of a Symposium held in Siegen, January 31–February 2, 1979. Edited by Günter Meinardus. Bibliographisches Institut, Mannheim, 1979. 304 pp. ISBN 3-411-01567-5 (Editor) 81a:41002 41-06

Symposium: (continued)

Asymptotic Theory of Statistical Tests and Estimation ★ Asymptotic theory of statistical tests and estimation. In honor of Wassily Hoeffding. Proceedings of an Advanced International Symposium held at the University of North Carolina, Chapel Hill, N.C., April 16-18, 1979. Edited by Indra Mohan Chakravarti. With an appendix by Peter Clifford. *Academic Press [Harcourt Brace Jovanovich, Publishers], New York-London-Toronto, Ont.*, 1980. xiv + 350 pp. ISBN 0-12-166650-6 (Editors) 81c:62004 62-06 (60-06)

Automata Theory in Application to the Design of Discrete Devices and Systems

★ Теория автоматов в применении к проектированию дискретных устройств и систем. (Russian) [Automata theory in application to the design of discrete devices and systems] Proceedings of Symposia held in Jachranka, April 18-23, 1977 and in Donovaly, May 8-13, 1978. Tanulmányok—MTA Számítástech. Automat. Kutató Intézet. Budapest No. 99 (1979) (1980). MTA Számítástech. Automat. Kutató Intézet, Budapest, 1980. pp. 1-246. (Editors) 81b:68005 68-06

Basic Problems of Numerical Mathematics ★ Proceedings of the Fourth Symposium on Basic Problems of Numerical Mathematics. Held in Plzeň, September 4-8, 1978. Edited by Ivo Marek. *Charles University, Prague*, 1978. 201 pp. (Editors) 81a:65008 65-06

Classical and Quantum Aspects of Completely Integrable Nonlinear Systems

★ Classical and quantum aspects of completely integrable nonlinear systems. (Japanese) Proceedings of a Symposium held at the Research Institute for Mathematical Sciences, Kyoto University, Kyoto, November 19-22, 1979. Sūrikaiseikikenkyūsho Kōkyūroku No. 375 (1980). *Kyoto University, Research Institute for Mathematical Sciences, Kyoto*, 1980. pp. i-iii and 1-184. (Editors) 81m:35001 35-06 (58-06, 81-06, 82-06)

Combinatorial Mathematics and Optimal Design

★ Combinatorial mathematics, optimal designs and their applications. Proceedings of the Symposium on Combinatorial Mathematics and Optimal Design held at Colorado State University, Fort Collins, Colo., June 5-9, 1978. Edited by J. Srivastava. *Ann. Discrete Math.* 6 (1980). *North-Holland Publishing Co., Amsterdam-New York*, 1980. pp. i-viii and 1-391. (Editors) 81i:05005 05-06

Computational Statistics ★ Computat 1980. Proceedings of the Fourth Symposium in Computational Statistics held in Edinburgh, 1980. Edited by Marjorie M. Barritt and David Wishart. *Physica Verlag, Vienna*, 1980. 632 pp. ISBN 3-7098-0229-8 (Editors) 81j:62007 62-06 (90-06)

Computing Methods in Applied Sciences and Engineering ★ Computing methods in applied sciences and engineering. Proceedings of the Fourth International Symposium held at Versailles, December 10-14, 1979. Edited by R. Glowinski and J.-L. Lions. *North-Holland Publishing Co., Amsterdam-New York*, 1980. ix + 724 pp. ISBN 0-444-86008-8 (Editors) 81h:65001 65-06 (00A69, 76-06)

Convex Analysis and Mathematical Economics ★ Convex analysis and mathematical economics. Proceedings of a Symposium held at the University of Tilburg, Tilburg, February 20, 1978. Edited by Jacobus Kriens. *Lecture Notes in Economics and Mathematical Systems*, 168. *Springer-Verlag, Berlin-New York*, 1979. v + 136 pp. ISBN 3-540-09247-1 (Editors) 81j:90001 90-06 (49-06)

EUROSAM ★ Symbolic and algebraic computation. EUROSAM '79, an International Symposium held in Marseille, June 1979. Edited by Edward W. Ng. *Lecture Notes in Computer Science*, 72. *Springer-Verlag, Berlin-New York*, 1979. xv + 557 pp. ISBN 3-540-09519-5 (Editors) 81d:68005 68-06 (68C20)

Experimental Number Theory ★ Experimental number theory. (Japanese) Proceedings of a Symposium held at the Research Institute for Mathematical Sciences, Kyoto University, Kyoto, October 15-17, 1979. Sūrikaiseikikenkyūsho Kōkyūroku No. 371 (1979). *Kyoto University, Research Institute for Mathematical Sciences, Kyoto*, 1979. pp. i-iv and 1-116. (Editors) 81m:10004 10-06

Fault-Tolerant Computing ★ FTCS-10. The 10th International Symposium on Fault-Tolerant Computing held in Kyoto, October 1-3, 1980. Digest of papers. *IEEE Computer Society, New York*, 1980. xix + 381 pp. (Editors) 81m:94002 94-06

1500th Birth Anniversary of Āryabhaṭa I ★ Proceedings of the Symposium on the 1500th Birth Anniversary of Āryabhaṭa I. Held in New Delhi, November 2-4, 1976. *Indian J. Hist. Sci.* 12 (1977), no. 2, 83-245. *Indian National Science Academy, New Delhi*, 1977. pp. 83-245. (Editors) 81a:01008 01A32

Formator, Mathematical Methods for the Analysis of Large-Scale Systems ★ Third Formator Symposium on Mathematical Methods for the Analysis of Large-Scale Systems. Proceedings of a Symposium held in Liblice, May 16-19, 1978. Edited by Jiří Beneš and Lubomír Bakule. *Academia [Publishing House of the Czechoslovak Academy of Sciences], Prague*, 1979. 382 pp. (Editors) 81j:93007 93-06 (90-06, 92-06, 93A15)

Foundations of Mathematics ★ Foundations of mathematics. (Japanese) Proceedings of a Symposium held at the Research Institute for Mathematical Sciences, Kyoto University, Kyoto, May 30-June 2, 1979. Sūrikaiseikikenkyūsho Kōkyūroku No. 362 (1979). *Kyoto University, Research Institute for Mathematical Sciences, Kyoto*, 1979. pp. i-ii and 1-185. (Editors) 81m:03003 03-06

Geometry ★ Contributions to geometry. Proceedings of the Geometry Symposium held in Siegen, June 28-July 1, 1978. Edited by Jürgen Tölke and Jörg M. Wills. *Birkhäuser Verlag, Basel-Boston, Mass.*, 1979. 406 pp. ISBN 3-7643-1048-0 (Editors) 81b:52002 52-06 (53-06)

Geometry of the Laplace Operator ★ Geometry of the Laplace operator. Proceedings of the Symposium in Pure Mathematics of the American Mathematical Society held at the University of Hawaii, Honolulu, Hawaii, March 27-30, 1979. Edited by Robert Osserman and Alan Weinstein. *Proceedings of Symposia in Pure Mathematics*, XXXVI. *American Mathematical Society, Providence, R.I.*, 1980. vii + 323 pp. ISBN 0-8218-1439-7 (Editors) 81c:58002 58-06 (58G25)

Group Actions on Manifolds and Equivalent Homotopy ★ Group actions on manifolds and equivalent homotopy. (Japanese) Proceedings of a Symposium held at the Research Institute for Mathematical Sciences, Kyoto University, Kyoto, June 5-7, 1979. Sūrikaiseikikenkyūsho Kōkyūroku No. 365 (1979). *Kyoto University, Research Institute for Mathematical Sciences, Kyoto*, 1979. pp. i-ii and 1-104. (Editors) 81m:57001 57-06

Symposium: (continued)

Group Representations and Harmonic Analysis ★ Group representations and harmonic analysis. (Japanese) Proceedings of a Symposium held at the Research Institute for Mathematical Sciences, Kyoto University, Kyoto, August 27-30, 1979. Sūrikaiseikikenkyūsho Kōkyūroku No. 368 (1979). *Kyoto University, Research Institute for Mathematical Sciences, Kyoto*, 1979. pp. i-iii and 1-240. (Editors) 81m:22002 22-06 (43-06)

Heriot-Watt, Nonlinear Analysis and Mechanics ★ Nonlinear analysis and mechanics: Heriot-Watt Symposium. Vol. II. Edited by R. J. Knops. *Research Notes in Mathematics*, 27. *Pitman Publishing, Ltd., London-San Francisco, Calif.*, 1978. v + 285 pp. ISBN 0-273-08420-8 (Editors) 81c:73003 73-06

★ Nonlinear analysis and mechanics: Heriot-Watt Symposium. Vol. IV. Edited by R. J. Knops. *Research Notes in Mathematics*, 39. *Pitman (Advanced Publishing Program), San Francisco, Calif.-London*, 1979. iii + 212 pp. ISBN 0-8224-8461-7 (Editors) 81i:73001 73-06 (58-06, 73C50)

Interfaces between Computer Science and Operations Research ★ Interfaces between computer science and operations research. Proceedings of a Symposium held at the Mathematisch Centrum, Amsterdam, September 7-10, 1976. Edited by J. K. Lenstra, A. H. G. Rinnooy Kan and P. van Emde Boas. *Mathematical Centre Tracts*, 99. *Mathematisch Centrum, Amsterdam*, 1978. viii + 231 pp. ISBN 90-6196-170-X (L. E. Trotter, Jr.) 81i:68001 68-02 (68C25, 90B35, 90C10)

Language Design and Programming Methodology ★ Language design and programming methodology. Proceedings of a Symposium held in Sydney, September 10-11, 1979. Edited by Jeffrey M. Tobias. *Lecture Notes in Computer Science*, 79. *Springer-Verlag, Berlin-New York*, 1980. iv + 255 pp. ISBN 3-540-09745-7 (Editors) 81h:68002 68-06

Latin-American, Mathematical Logic

★ Mathematical logic in Latin America. Proceedings of the IV Latin American Symposium on Mathematical Logic held in Santiago, December 18-22, 1978. Edited by A. I. Arruda, R. Chuaqui and N. C. A. da Costa. *Studies in Logic and the Foundations of Mathematics*, 99. *North-Holland Publishing Co., Amsterdam-New York*, 1980. xii + 392 pp. ISBN 0-444-85402-9 (Editors) 81d:03002 03-06

G. W. Leibniz Society/Centre National de la Recherche Scientifique (CNRS)

★ Leibniz à Paris (1672-1676). Tome I. (French) [Leibniz in Paris (1672-1676). Vol. I] Les sciences. [The sciences] Symposium of the G. W. Leibniz Society (Hannover) and of the Centre National de la Recherche Scientifique (CNRS) (Paris) held in Chantilly, November 14-18, 1976. Edited by Albert Heinekamp and Dieter Mettler. *Studia Leibnitiana Supplementa*, XVII. *Franz Steiner Verlag GmbH, Wiesbaden*, 1978. i + 242 pp. ISBN 3-515-02838-2 (Editors) 81m:01022a 01A45 (01A70)

★ Leibniz à Paris (1672-1676). Tome II. (French) [Leibniz in Paris (1672-1676). Vol. II] La philosophie de Leibniz. [The philosophy of Leibniz] Symposium of the G. W. Leibniz Society (Hannover) and of the Centre National de la Recherche Scientifique (CNRS) (Paris) held in Chantilly, November 14-18, 1976. Edited by Albert Heinekamp, Dieter Mettler and Ingeborg von Wilck. *Studia Leibnitiana Supplementa*, XVIII. *Franz Steiner Verlag GmbH, Wiesbaden*, 1978. i + 171 pp. ISBN 3-515-02839-0 (Editors) 81m:01022b 01A45 (01A70)

Linear Analysis on Complex Domains

★ Linear analysis on complex domains. (Japanese) Proceedings of a Symposium held at the Research Institute for Mathematical Sciences, Kyoto University, Kyoto, July 30-August 4, 1979. Sūrikaiseikikenkyūsho Kōkyūroku No. 366 (1979). *Kyoto University, Research Institute for Mathematical Sciences, Kyoto*, 1979. pp. i-iii and 1-186. (Editors) 81m:30003 30-06

Mathematical Foundations of Computer Science ★ Mathematical foundations of computer science, 1979. Proceedings of the 8th Symposium held in Olomouc, September 3-7, 1979. Edited by Jiří Bečvář. *Lecture Notes in Computer Science*, 74. *Springer-Verlag, Berlin-New York*, 1979. ix + 580 pp. ISBN 3-540-09526-8 (Editors) 81c:68004 68-06

★ Mathematical foundations of computer science, 1980. Proceedings of the Ninth Symposium held in Rydzyna, September 1-5, 1980. Edited by P. Dembski. *Lecture Notes in Computer Science*, 88. *Springer-Verlag, Berlin-New York*, 1980. viii + 723 pp. ISBN 3-540-10027-X (Editors) 81k:68003 68-06

Mathematical Genetics Symposium on mathematical genetics. *Adv. in Appl. Probab.* 13 (1981), no. 1, 1-13. (Editors) 81m:92036 92A10

Mathematical Modelling in Biology and Ecology ★ Mathematical modelling in biology and ecology. Proceedings of a Symposium held in Pretoria, July 5-6, 1979. Edited by Wayne M. Getz. *Lecture Notes in Biomathematics*, 33. *Springer-Verlag, Berlin-New York*, 1980. viii + 355 pp. ISBN 3-540-09735-X (Editors) 81i:92001 92-06

Mathematical Programming ★ Survey of mathematical programming. Vol. 1. Proceedings of the Ninth International Mathematical Programming Symposium held in Budapest, August 23-27, 1976. Edited by András Prékopa. *North-Holland Publishing Co., Amsterdam-Oxford-New York*, 1979. 550 pp. ISBN 0-444-85033-3 (Editors) 81g:90004a 90-06

★ Survey of mathematical programming. Vol. 2. Proceedings of the Ninth International Mathematical Programming Symposium held in Budapest, August 23-27, 1976. Edited by András Prékopa. *North-Holland Publishing Co., Amsterdam-Oxford-New York*, 1979. 590 pp. ISBN 0-444-85033-3 (Editors) 81g:90004b 90-06

★ Survey of mathematical programming. Vol. 3. Proceedings of the Ninth International Mathematical Programming Symposium held in Budapest, August 23-27, 1976. Edited by András Prékopa. *North-Holland Publishing Co., Amsterdam-Oxford-New York*, 1979. 414 pp. ISBN 0-444-85033-3 (Editors) 81g:90004c 90-06

Methods and Applications in Adaptive Control ★ Methods and applications in adaptive control. Proceedings of an International Symposium held at the Ruhr-Universität Bochum, Bochum, March 20-21, 1980. Edited by H. Unbehauen. *Lecture Notes in Control and Information Sciences*, 24. *Springer-Verlag, Berlin-New York*, 1980. vi + 309 pp. ISBN 3-540-10226-4 (Editors) 81k:93035 93C40 (93-06)

Modelling and Performance Evaluation of Computer Systems ★ Performance of

Symposium: (continued)

- computer systems. Proceedings of the Fourth International Symposium on Modelling and Performance Evaluation of Computer Systems held in Vienna, February 6-8, 1979. Edited by Mátyás Arató, Alexandre Butrizenko and E. Gelenbe. North-Holland Publishing Co., Amsterdam-New York, 1979. ix + 565 pp. ISBN 0-444-85332-4 (Editors) **81c:68006** 68-06
- Modelling and Simulation Methodology** ★Methodology in systems modelling and simulation. Proceedings of the Symposium on Modelling and Simulation Methodology held at the Weizmann Institute of Science, Rehovot, August 13-18, 1978. Edited by Bernard P. Zeigler, Maurice S. Elzas, George J. Klir and Tuncer I. Ören. North-Holland Publishing Co., Amsterdam-New York, 1979. xv + 537 pp. ISBN 0-444-85340-5 (Editors) **81c:68079a** 68J05
- Multiple-Valued Logic** ★Proceedings of the Eighth International Symposium on Multiple-Valued Logic. Held in Rosemont, Ill., 1978. IEEE Computer Society Publications Office, Long Beach, Calif., 1978. v + 298 pp. (Editors) **81a:94001** 94-06 (03B50, 68-06)
- Multivariate Analysis** ★Multivariate analysis. V. Proceedings of the Fifth International Symposium held at the University of Pittsburgh, Pittsburgh, Pa., June 19-24, 1978. Edited by Paruchuri R. Krishnaiah. North-Holland Publishing Co., Amsterdam-New York, 1980. x + 677 pp. ISBN 0-444-85321-9 (Editors) **81a:62004** 62-06 (60-06)
- Network Theory** ★Proceedings of the Fourth International Symposium on Network Theory. Held in Ljubljana, September 4-7, 1979. Georgi Publishing Co., St.-Saphorin; Distributed by Rensouf USA, Brookfield, Vt., 1979. 498 pp. ISBN 2-604-00033-4 (Editors) **81b:94003** 94-06 (94Cxx)
- Particles and Fields** ★Recent developments in particle and field theory. Lectures and seminars delivered at the Symposium on Particles and Fields held at Tübingen University, Tübingen, June 20-July 1, 1977. Edited by Walter Dittrich. Friedr. Vieweg & Sohn, Braunschweig, 1979. v + 422 pp. ISBN 3-528-08426-X (Editors) **81a:81007** 81-06 (81G05, 81M05)
- Permutation Group in Physics and Chemistry** ★The permutation group in physics and chemistry. Edited by Jürgen Hinze. Symposium held at the University of Bielefeld, Bielefeld, July, 1978. Lecture Notes in Chemistry, 12. Springer-Verlag, Berlin-New York, 1979. vi + 230 pp. ISBN 3-540-09707-4 (Editors) **81a:81004** 81-06 (81C40)
- Policy Analysis and Information Systems** ★Fuzzy sets. Theory and applications to policy analysis and information systems. Proceedings of the Symposium on Policy Analysis and Information Systems held at Duke University, Durham, N.C., June 28-30, 1980. Edited by Paul P. Wang and S. K. Chang. Plenum Press, New York-London, 1980. ix + 413 pp. ISBN 0-306-40557-1 (Editors) **81b:03105** 03E72 (03-06, 90A05, 94D05)
- Prague, Asymptotic Statistics** ★Proceedings of the Second Prague Symposium on Asymptotic Statistics. Held in Hradec Králové, August 21-25, 1978. Edited by Petr Mandl and Marie Hušková. North-Holland Publishing Co., Amsterdam-New York; Society of Czechoslovak Mathematicians and Physicists, Prague, 1979. 340 pp. ISBN 0-444-85375-8 (Editors) **81c:62005** 62-06 (60-06, 94-06)
- Programming** ★International Symposium on Programming. Proceedings of the Fourth International Symposium on Programming held in Paris, April 22-24, 1980. Edited by Bernard Robinet. Lecture Notes in Computer Science, 83. Springer-Verlag, Berlin-New York, 1980. viii + 341 pp. ISBN 3-540-09981-6 (Editors) **81j:68010** 68-06
- Quantitative Approximation** ★Quantitative approximation. Proceedings of an International Symposium held in Bonn, August 20-24, 1979. Edited by Ronald A. DeVore and Karl Scherer. Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], New York-London, 1980. xi + 324 pp. ISBN 0-12-213650-0 (Editors) **81a:41001** 41-06 (65-06)
- Quantum Theory and Gravitation** ★Quantum theory and gravitation. Proceedings of a Symposium held at Loyola University, New Orleans, La., May 23-26, 1979. Edited by A. R. Marlow. Academic Press [Harcourt Brace Jovanovich, Publishers], New York-London-Toronto, Ont., 1980. x + 267 pp. ISBN 0-12-473260-7 (Editors) **81d:83003** 83-06 (81-06, 83C45)
- Recent Development in Algebraic Analysis** ★Recent development of algebraic analysis. (Japanese) Proceedings of a Symposium held at the Research Institute for Mathematical Sciences, Kyoto University, Kyoto, July 2-5, 1979. Sūrikaiseikikenkyūsho Kōkyūroku No. 361 (1979). Kyoto University, Research Institute for Mathematical Sciences, Kyoto, 1979. pp. i-iii and 1-183. (Editors) **81m:58001** 58-06 (35-06, 81-06)
- Ring Theory** ★Proceedings of the 12th Symposium on Ring Theory. Held at Hokkaido University, Sapporo, August 31-September 1, 1979. Edited by Manabu Harada. Okayama Mathematical Lectures. Okayama University, Department of Mathematics, Okayama, 1980. iii + 60 pp. (Editors) **81a:16002** 16-06
- ★Proceedings of the 13th Symposium on Ring Theory. Held at Okayama University, Okayama, September 28-30, 1980. Edited by Hisao Tominaga. Okayama Mathematical Lectures. Okayama University, Department of Mathematics, Okayama, 1981. ii + 125 pp. (Editors) **81m:16004** 16-06
- Scandinavian Logic** ★Proceedings from 5th Scandinavian Logic Symposium. Held in Aalborg, January 17-19, 1979. Edited by Finn V. Jensen, Brian H. Mayoh and Karen K. Möller. Aalborg University Press, Aalborg, 1979. vii + 361 pp. ISBN 87-7307-037-8 (Editors) **81m:03006** 03-06 (68-06)
- Semantics of Concurrent Computation** ★Semantics of concurrent computation. Proceedings of the International Symposium held at Evian, July 2-4, 1979. Edited by Gilles Kahn. Lecture Notes in Computer Science, 70. Springer-Verlag, Berlin-New York, 1979. vi + 368 pp. ISBN 3-540-09511-X (Editors) **81c:68002** 68-06 (68B10)
- Semigroups** ★Proceedings of the 3rd Symposium on Semigroups. Held at the Inter-University Seminar House of Kansai, Kobe, August 4-6, 1979. Edited by Tsuchiyoshi Fujiwara. Osaka University, Department of Mathematics, Osaka, 1980. iii + 124 pp. (Editors) **81b:20003** 20-06 (20Mxx)
- Sparse Matrix Computations** ★Sparse Matrix Proceedings 1978. Edited by Iain S. Duff and G. W. Stewart. Symposium on Sparse Matrix Computations held in Knoxville, Tenn., November 2-3, 1978. SIAM, Philadelphia, Pa., 1979. xvi + 334 pp.

Symposium: (continued)

- ISBN 0-89711-160-6 (Editors) **81f:65003** 65-06
- SRC/LMS, Representation theory of Lie groups** ★Representation theory of Lie groups. Proceedings of the SRC/LMS Research Symposium held in Oxford, June 28-July 15, 1977. Edited by G. L. Luke. London Mathematical Society Lecture Note Series, 34. Cambridge University Press, Cambridge-New York, 1979. v + 341 pp. ISBN 0-521-22636-8 (A. U. Klimyk) **81j:22001** 22-06 (81C40)
- Studies in Commutative Ring Theory** ★Studies in commutative ring theory. (Japanese) Proceedings of a Symposium held at the Research Institute for Mathematical Sciences, Kyoto University, Kyoto, October 31-November 2, 1979. Sūrikaiseikikenkyūsho Kōkyūroku No. 374 (1980). Kyoto University, Research Institute for Mathematical Sciences, Kyoto, 1980. pp. i-ii and 1-194. (Editors) **81m:13001** 13-06 (14-06)
- Studies in the Structure of Solutions of Partial Differential Equations** ★Studies in the structure of solutions of partial differential equations. (Japanese) Proceedings of a Symposium held at the Research Institute for Mathematical Sciences, Kyoto University, Kyoto, November 5-7, 1979. Sūrikaiseikikenkyūsho Kōkyūroku No. 376 (1980). Kyoto University, Research Institute for Mathematical Sciences, Kyoto, 1980. pp. i-ii and 1-162. (Editors) **81m:35005** 35-06
- Study of Algorithms of Numerical Calculation** ★Study of algorithms of numerical calculation. (Japanese) Proceedings of a Symposium held at the Research Institute for Mathematical Sciences, Kyoto University, Kyoto, November 20-22, 1978. Sūrikaiseikikenkyūsho Kōkyūroku No. 373 (1979). Kyoto University, Research Institute for Mathematical Sciences, Kyoto, 1979. pp. i-ii and 1-132. (Editors) **81m:65006** 65-06
- Study of the Structure of Solutions of Partial Differential Equations** ★The study of the structure of solutions of partial differential equations. (Japanese) Proceedings of a Symposium held at the Research Institute for Mathematical Sciences, Kyoto University, Kyoto, February 13-15, 1979. Sūrikaiseikikenkyūsho Kōkyūroku No. 357 (1979). Kyoto University, Research Institute for Mathematical Sciences, Kyoto, 1979. pp. i-ii and 1-218. (Editors) **81m:35004** 35-06
- Styrian Mathematical** ★11. Steiermärkisches Mathematisches Symposium. (German) [Eleventh Styrian Mathematical Symposium] Held in Graz, October 1-4, 1979. Ber. Math.-Stat. Sekt. Forsch. Graz No. 124-132 (1979). Forschungszentrum Graz, Mathematisch-Statistische Sektion, Graz, 1979. 218 pp. (not consecutively paged). (Editors) **81j:00011** 00A10
- Symbolic and Algebraic Computation** ★Symbolic and algebraic computation. EUROSAM '79, an International Symposium held in Marseille, June 1979. Edited by Edward W. Ng. Lecture Notes in Computer Science, 72. Springer-Verlag, Berlin-New York, 1979. xv + 557 pp. ISBN 3-540-09519-5 (Editors) **81d:68005** 68-06 (68C20)
- Systems Analysis and Simulation** ★Systems analysis and simulation, 1980. Proceedings of the International Symposium held in Berlin, September 1-5, 1980. Edited by Achim Sydow. Mathematical Research, 5. Akademie-Verlag, Berlin, 1980. 496 pp. (Editors) **81j:93009** 93-06 (68-06, 90-06, 92-06)
- Topology** ★Topology Symposium, Siegen 1979. Proceedings of a Symposium held at the University of Siegen, Siegen, June 14-19, 1979. Edited by Ulrich Koschorke and Walter D. Neumann. Lecture Notes in Mathematics, 788. Springer-Verlag, Berlin-New York, 1980. viii + 495 pp. ISBN 3-540-09968-9 (Editors) **81i:57001** 57-06 (55-06)
- Topology and Geometry** ★Topological structures. II. Part 1. Proceedings of a Symposium on Topology and Geometry held in Amsterdam, October 31-November 2, 1978. Edited by P. C. Baayen and J. van Mill. Mathematical Centre Tracts, 115. Mathematisch Centrum, Amsterdam, 1979. x + 189 pp. ISBN 90-6196-185-8 (Editors) **81a:54001a** 54-06 (55-06, 57-06)
- ★Topological structures. II. Part 2. Proceedings of a Symposium on Topology and Geometry held in Amsterdam, October 31-November 2, 1978. Edited by P. C. Baayen and J. van Mill. Mathematical Centre Tracts, 116. Mathematisch Centrum, Amsterdam, 1979. pp. i-vii and 191-393. ISBN 90-6196-186-6 (Editors) **81a:54001b** 54-06 (55-06, 57-06)
- Trends in Applications of Pure Mathematics to Mechanics** ★Trends in applications of pure mathematics to mechanics. Vol. II. Papers presented at the Second Symposium held in Kozubnik, September, 1977. Edited by Henryk Zorski. Monographs and Studies in Mathematics, 5. Pitman Publishing, Ltd., London-San Francisco, Calif., 1979. viii + 341 pp. ISBN 0-273-08421-6 (Editors) **81a:73003** 73-06
- U.S. Army, Operations Research** ★Final Proceedings of the Sixteenth Annual U.S. Army Operations Research Symposium. Vol. I, II. Held in Fort Lee, Va., October 12-14, 1977. U. S. Government Printing Office, Washington, D.C., 1977. xviii + 1162 pp. (Editors) **81m:90002** 90-06
- Various Problems Related to Invariant Subspaces** ★Various problems related to invariant subspaces. (Japanese) Proceedings of a Symposium held at the Research Institute for Mathematical Sciences, Kyoto University, Kyoto, December 20-22, 1979. Sūrikaiseikikenkyūsho Kōkyūroku No. 377 (1980). Kyoto University, Research Institute for Mathematical Sciences, Kyoto, 1980. pp. i-ii and 1-181. (Editors) **81m:47002** 47-06 (47Axx)
- Synergetics: Far from equilibrium** ★Synergetics. Far from equilibrium. Proceedings of the Conference Far from Equilibrium: Instabilities and Structures held in Bordeaux, September 27-29, 1978. Edited by Adolphe Pacault and Christian Vidal. Springer Series in Synergetics, 3. Springer-Verlag, Berlin-New York, 1979. x + 175 pp. ISBN 3-540-09304-4 (Editors) **81a:82002** 82-06 (58F13, 80A30, 82A25, 92A09)
- Synthesis and analysis methods for safety and reliability studies** ★Synthesis and analysis methods for safety and reliability studies. Proceedings of the NATO Advanced Study Institute held in Urbino, July 3-14, 1978. Edited by G. Apostolakis, S. Garribba and G. Volta. Plenum Press, New York-London, 1980. ix + 463 pp. ISBN 0-306-40316-1 (Editors) **81j:93008** 93-06 (90-06, 94-06)
- Syracuse, N.Y.** ★21st Annual Symposium on Foundations of Computer Science. Institute of Electrical and Electronics Engineers, Inc. (IEEE), New York, 1980. vi + 421 pp. (Editors) **81c:68008** 68-06
- System models** ★Global and large scale system models. Proceedings of the Center for

Advanced Studies (CAS) International Summer Seminar held in Dubrovnik, August 21-26, 1978. Edited by Branislav Lazarević. Lecture Notes in Control and Information Sciences, 19. Springer-Verlag, Berlin-New York, 1979. viii + 232 pp. ISBN 3-540-09637-X (Editors) 81c:93009 93A15 (93-06)

System theory ★Proceedings of the International Symposium on Applications of Mathematics in System Theory. I. Held at the University of Braşov, Braşov, December 27-30, 1978. Edited by C. L. Simionescu and I. Benko. *Universitatea din Braşov, Braşov*, 1979. ii + 339 pp. (Editors) 81c:93066 93-06 (49-06, 65-06, 90-06, 92-06)

★Proceedings of the International Symposium on Applications of Mathematics in System Theory. II. Held at the University of Braşov, Braşov, December 27-30, 1978. Edited by C. L. Simionescu and I. Benko. *Universitatea din Braşov, Braşov*, 1979. 376 pp. (Editors) 81c:93066b 93-06 (49-06, 65-06, 90-06, 92-06)

Systems ★Recent developments in variable structure systems, economics and biology. Proceedings of a US-Italy Seminar held in Taormina, August 29-September 2, 1977. Edited by R. R. Mohler and A. Ruberti. Lecture Notes in Economics and Mathematical Systems, 162. Springer-Verlag, Berlin-New York, 1978. vi + 326 pp. ISBN 3-540-09089-4 (Editors) 81c:90002 90-06 (92-06, 93-06)

★Analyse et contrôle de systèmes. (French) [Analysis and control of systems] Papers from the Seminar organized by the Institut de Recherche d'Informatique et d'Automatique (IRIA) held in Rocquencourt, 1978. *Institut de Recherche d'Informatique et d'Automatique (IRIA), Rocquencourt*, 1978. 272 pp. ISBN 2-7261-0209-3 (Editors) 81c:93003 93-06

★Управление техническими и организационными системами с применением вычислительной техники. (Russian) [Control of technical and organizational systems by application of computer technology] Edited by Ja. Z. Cypkin. "Nauka", Moscow, 1979. 232 pp. (Editors) 81c:90001 90-06 (68-06)

★Thirteenth Asilomar Conference on Circuits, Systems & Computers. Held in Pacific Grove, Calif., November 5-7, 1979. Edited by Shu Park Chan. *IEEE Computer Society, New York*, 1980. xiv + 615 pp. (Editors) 81c:93004 93-06 (68-06, 94-06)

Systems analysis ★Analyse des systèmes. (French) [Systems analysis] Conference held in Bordeaux, September 11-16, 1978. *Astérisque*, 75, 76. Société Mathématique de France, Paris, 1980. 248 pp. (Editors) 81c:93002 93-06

Systems analysis and simulation ★Systems analysis and simulation, 1980. Proceedings of the International Symposium held in Berlin, September 1-5, 1980. Edited by Achim Sydow. Mathematical Research, 5. Akademie-Verlag, Berlin, 1980. 496 pp. (Editors) 81c:93009 93-06 (68-06, 90-06, 92-06)

Systems engineering ★Handbook of large scale systems engineering applications. Edited by Madan G. Singh and André Titi. North-Holland Publishing Co., Amsterdam-New York, 1979. x + 564 pp. ISBN 0-444-85283-2 (Editors) 81c:93004 93-06 (90-06)

Systems programming ★Проблемы вычислительной математики и системного программирования. (Russian) [Problems of numerical analysis and systems programming] Edited by S. V. Mironov, D. Olah, E. A. Žogolev and T. Markuš. Труды Научно-Исследовательского Вычислительного Центра Московского Государственного Университета и Будапештского Университетского Вычислительного Центра. [Works of the Scientific Research Computing Center of Moscow State University and the Budapest Computing Center for Universities] Computing Center for Universities, Budapest, 1980. 94 pp. ISBN 963-451-041-8 (Editors) 81c:65010 65-06

Systems research ★Энергетический подход к исследованию систем. (Russian) [Energetics approach to systems research] Edited by B. V. Biriukov and V. A. Venikov. Voprosy Kibernet. (Moscow) No. 32 (1977). "Soviet Radio", Moscow, 1977. pp. 1-160. (Editors) 81c:93005 93A10 (93-06)

★Progress in cybernetics and systems research. Vol. VII. General systems methodology, organization and management, cognition and learning. Edited by Franz R. Pichler and F. de P. Hanika. Hemisphere Publishing Corp., Washington, D.C.-London, 1980. x + 393 pp. ISBN 0-89116-195-3 (Editors) 81c:90006 90-06 (92-06, 93-06)

★Системные исследования. (Russian) [Systems research] Методологические проблемы. [Methodological problems] Ежегодник 1979. [Yearbook 1979] Edited by D. M. Gvišiani and V. N. Sadovskii. "Nauka", Moscow, 1980. 384 pp. (Editors) 81c:00028 00A69 (00A25, 03A05, 92A05)

Systems theory ★Асимптотические методы в теории систем. Вып. 9. (Russian) [Asymptotic methods in systems theory. No. 9] Edited by A. N. Pančenko. *Irkutsk. Gos. Univ., Irkutsk*, 1976. 248 pp. (Editors) 81c:93001 93-06 (49-06, 76-06)

Systems theory in immunology ★Systems theory in immunology. Proceedings of the Working Conference held in Rome, May 1978. Edited by Carlo Bruni, Gino Doria, Giorgio Koch and Roberto Strom. Lecture Notes in Biomathematics, 32. Springer-Verlag, Berlin-New York, 1979. xi + 273 pp. ISBN 3-540-09728-7 (Editors) 81c:92001 92-06 (92A07)

Tables: Bessel functions See Rapoport, Ju. M., 81c:65014

Tagung: Numerische Integration ★Numerische Integration. (German) [Numerical integration] Tagung at the Mathematisches Forschungsinstitut, Oberwolfach, October 1-7, 1978. Edited by G. Hämmerlin. International Series of Numerical Mathematics, 45. Birkhäuser Verlag, Basel-Boston, Mass., 1979. 320 pp. ISBN 3-7643-1014-6 (Editors) 81b:65006 65-06

Talence ★Séminaire de Théorie des Nombres, 1979-1980. (French) [Seminar on Number Theory, 1979-1980] Held at the Université de Bordeaux I, Talence, during the academic year 1979-1980. Université de Bordeaux I, U.E.R. de Mathématiques et d'Informatique, Talence, 1980. 258 pp. (not consecutively paged). (Editors) 81c:10005 10-06

Tallahassee, Fla. ★Statistical analysis of weather modification experiments. Papers presented at a Workshop on the Design and Analysis of Weather Modification Experiments held at Florida State University, Tallahassee, Fla., October 26-27, 1978. Edited by Edward J. Wegman and Douglas J. DePriest. Lecture Notes in Statistics, 3. Marcel Dekker, Inc., New York, 1980. x + 145 pp. ISBN 0-8247-1177-7 (Editors) 81c:96001 86-06 (62P99, 86A10)

Taormina ★Recent developments in variable structure systems, economics and biology. Proceedings of a US-Italy Seminar held in Taormina, August 29-September 2, 1977. Edited by R. R. Mohler and A. Ruberti. Lecture Notes in Economics and Mathematical

Systems, 162. Springer-Verlag, Berlin-New York, 1978. vi + 326 pp. ISBN 3-540-09089-4 (Editors) 81c:90002 90-06 (92-06, 93-06)

Tartu ★Материалы Конференции "Методы Алгебры и Функционального Анализа при Исследовании Семейств Операторов". (Russian) [Proceedings of a Conference on the Methods of Algebra and Functional Analysis in the Study of Families of Operators] Held in Tartu, November 24-26, 1978. Dedicated to G. Kangro on the occasion of the sixty-fifth anniversary of his birth. Tartu. Gos. Univ., Tartu, 1978. 116 pp. (Editors) 81c:47001 47-06 (00A10, 01A70, 40-06)

Tbilisi ★Theory of shells. Proceedings of the Third IUTAM Symposium on Shell Theory, dedicated to the memory of Academician I. N. Vekua, held in Tbilisi, August 22-28, 1978. Edited by Warner Tjardus Koiter and G. K. Mikhailov [G. K. Mikhailov]. North-Holland Publishing Co., Amsterdam-New York, 1980. xi + 704 pp. ISBN 0-444-85338-3 (Editors) 81c:73003 73-06 (73Lxx)

Technology ★Advanced technobiology. Edited by Boris Rybak. Proceedings of the NATO Summer School held in Paris, June 30-July 13, 1978. NATO Advanced Study Institute Series, Ser. E: Applied Sciences, 31. Sijthoff & Noordhoff, Alphen aan den Rijn-Germantown, Md., 1979. x + 703 pp. ISBN 90-286-0299-2 (Editors) 81c:92001 92-06

Telephone traffic theory and networks with controllable elements ★Теория телеграфной и сетей с управляемыми элементами. (Russian) [Telephone traffic theory and networks with controllable elements] Edited by A. D. Harkaveič and V. A. Garmal. "Nauka", Moscow, 1980. 216 pp. (Editors) 81c:49003 94-06

Temps locaux ★Temps locaux. (French) [Local times] Exposé du Séminaire J. Azéma-M. Yor. Held at the Université Pierre et Marie Curie, Paris, 1976-1977. With an English summary. *Astérisque*, 52, 53. Société Mathématique de France, Paris, 1978. ii + 223 pp. (Michael Sharpe) 81b:60042 60G44 (60G48, 60J55)

Theoretical and applied mechanics ★Теоретическая и прикладная механика. (Russian) [Theoretical and applied mechanics] Труды XIV Международного Конгресса ИУТАМ. [Proceedings of the 14th IUTAM Congress] Held at Delft, August 30-September 4, 1976. Papers translated from the English. Edited by G. K. Mikhailov. With a preface by M. A. Lavrent'ev. "Mir", Moscow, 1979. 767 pp. (Editors) 81c:76048 76N15 (70K99, 73M99, 86A10)

Theoretical and applied questions of differential equations and algebra ★Теоретические и прикладные вопросы дифференциальных уравнений и алгебры. (Russian) [Theoretical and applied questions of differential equations and algebra] Edited by A. N. Šarkovskii. "Naukova Dumka", Kiev, 1978. 272 pp. (Editors) 81c:00013 00A10

Theoretical computer science ★Theoretical computer science. Held at Aachen, 1979. 4th GI (Gesellschaft für Informatik) Conference. Edited by Klaus Weihrauch. Lecture Notes in Computer Science, 67. Springer-Verlag, Berlin-New York, 1979. vii + 324 pp. ISBN 3-540-09118-1 (Editors) 81c:68013 68-06

Theoretical cybernetics ★Теория вероятностей. Математическая статистика. Теоретическая кибернетика. Том 17. (Russian) [Probability theory. Mathematical statistics. Theoretical cybernetics. Vol. 17] Edited by R. V. Gamkrelidze. Итоги Науки и Техники. [Progress in Science and Technology] Akad. Nauk SSSR, Vsesojuz. Inst. Nauch. i Tehn. Informacii, Moscow, 1979. 195 pp. (loose errata). (Editors) 81c:62002 62-06 (68-06)

Theoretical methods in medium-energy and heavy-ion physics ★Theoretical methods in medium-energy and heavy-ion physics. Proceedings of the NATO Advanced Studies Institute on Theoretical Nuclear Physics held at the University of Wisconsin, Madison, Wis., June 12-23, 1978. Edited by K. W. McVoy and William Albert Friedman. NATO Advanced Study Institute Series, Ser. B: Physics, 38. Plenum Press, New York-London, 1978. xii + 749 pp. ISBN 0-306-40062-6 (M. J. Maczyński) 81b:81030 81G35 (81-06, 81F20)

Theoretical physics ★Некоторые вопросы экспериментальной и теоретической физики. (Russian) [Problems in experimental and theoretical physics] Edited by G. B. Abdullaev and T. G. Kerimova. "Elm", Baku, 1977. 268 pp. (Vladimir Šips) 81d:82069a 82A70 (81Hxx, 82A65)

★Proceedings of the Conference on Mathematical Methods in Physics. Part A. Theoretical physics. Held at Mysore, August 28-31, 1978. *Matscience Report*, 96. Institute of Mathematical Sciences, Madras, 1979. iii + ii + 310 pp. (Editors) 81c:00014a 00A69

★Quantum chromodynamics. Proceedings of the Tenth G.I.F.T. International Seminar on Theoretical Physics held at the University of Zaragoza, Jaca, June 1979. Edited by J. L. Alonso and R. Tarrach. Lecture Notes in Physics, 118. Springer-Verlag, Berlin-New York, 1980. ix + 424 pp. ISBN 3-540-09969-7 (Editors) 81c:81004 81-06 (81G05)

Theoretical questions of design of computer systems ★Теоретические вопросы проектирования вычислительных систем. (Russian) [Theoretical questions of design of computer systems] Edited by A. A. Letičevskii and A. B. Godlevskii. *Akad. Nauk Ukrain. SSR, Inst. Kibernet.*, Kiev, 1980. 102 pp. (Editors) 81c:68011 68-06

Theory of coding and complexity of calculations ★Теория кодирования и сложность вычислений. (Russian) [Theory of coding and complexity of calculations] Edited by I. Ja. Akušik and V. M. Amerbaev. "Nauka" Kazakh. SSR, Alma-Ata, 1980. 228 pp. (Editors) 81c:68014 68-06

Theory of computing ★Conference Record of the Eleventh Annual ACM Symposium on Theory of Computing. Held in Atlanta, Ga., April 30-May 2, 1979. *Association for Computing Machinery (ACM)*, New York, 1979. vii + 368 pp. ISBN 0-89791-003-6 (Editors) 81c:68004 68-06

★ACM-SIGACT Symposium on the Theory of Computing. Held in San Diego, Calif., May 1-3, 1978. Edited by Richard Lipton, E. K. Blum and A. V. Aho. J. Comput. System Sci. 20 (1980), no. 2. Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], New York-London, 1980. pp. 117-276. (Editors) 81d:68004 68-06

Theory of cubature formulas and the application of functional analysis to problems of mathematical physics ★Теория кубатурных формул и приложения функционального анализа к задачам математической физики. (Russian) [Theory of cubature formulas and the application of functional analysis to problems of mathematical physics] Edited by S. V. Uspenskii. Труды Семинара С. Л. Соболева, No. 1 [Proceedings of the S. L. Sobolev Seminar, No. 1]. 1976. *Akad. Nauk SSSR Sibirsk. Otdel. Inst. Mat., Novosibirsk*, 1976. 168 pp. (Editors) 81c:65009 65-06

★Теория кубатурных формул и приложения функционального анализа к

- задачам математической физики. (Russian) [Theory of cubature formulas and the application of functional analysis to problems of mathematical physics] Edited by S. V. Uspenskii. Труды Семинара С. Л. Соболева, No. 1 [Proceedings of the S. L. Sobolev Seminar, No. 1], 1978. Akad. Nauk SSSR Sibirsk. Otdel., Inst. Mat., Novosibirsk, 1978. 168 pp. (one plate). (Editors) **81a:65010** 65-06
- ★Теория кубатурных формул и приложения функционального анализа к задачам математической физики. (Russian) [Theory of cubature formulas and the application of functional analysis to problems of mathematical physics] Edited by S. V. Uspenskii. Труды Семинара С. Л. Соболева, No. 1 [Proceedings of the S. L. Sobolev Seminar, No. 1], 1979. Akad. Nauk SSSR Sibirsk. Otdel., Inst. Mat., Novosibirsk, 1979. 156 pp. (Editors) **81f:35006** 35-06 (65-06)
- Theory of elementary particles extended in space-time** ★Theory of elementary particles extended in space-time. Edited by Hideki Yukawa. Progr. Theoret. Phys. Suppl. No. 67 (1979) (1980). Kyoto University, Kyoto, 1980. pp. i-ii and 1-334. (Editors) **81e:81007** 81-06 (81G25)
- Theory of functions** ★Математический анализ и теория функций. Вып. 8. (Russian) [Mathematical analysis and the theory of functions. No. 8] Edited by I. I. Bavrin. Moskov. Oblast. Ped. Inst. im. Krupskoi, Moscow, 1977. 169 pp. (Editors) **81c:32001** 32-06 (30-06)
- Theory of functions and mappings** ★Теория функций и отображений. (Russian) [Theory of functions and mappings] Edited by G. D. Suvorov. "Naukova Dumka", Kiev, 1979. 180 pp. (Editors) **81b:30002** 30-06 (32-06, 42B99)
- Theory of invariance and its application** ★Теория инвариантности и ее применение. Часть 1. (Russian) [Theory of invariance and its application. Part 1] Proceedings of the Fifth All-Union Conference held in Kiev, October 1976. Edited by A. I. Kuhtenko. "Naukova Dumka", Kiev, 1979. 460 pp. (Editors) **81h:93001a** 93-06
- ★Теория инвариантности и ее применение. Часть 2. (Russian) [Theory of invariance and its application. Part 2] Proceedings of the Fifth All-Union Conference held in Kiev, October 1976. Edited by A. I. Kuhtenko. "Naukova Dumka", Kiev, 1979. 440 pp. (Editors) **81h:93001b** 93-06
- Theory of models and its applications** ★Теория моделей и ее применения. (Russian) [Theory of models and its applications] Edited by B. S. Balzanov. Kazah. Gos. Univ., Alma-Ata, 1980. 83 pp. (Editors) **81k:03002** 03-06 (03Cxx)
- Theory of nonregular curves in various geometric spaces** ★Теория нерегулярных кривых в различных геометрических пространствах. (Russian) [The theory of nonregular curves in various geometric spaces] Edited by M. A. Taiclin. Kazah. Gos. Univ., Alma-Ata, 1979. 136 pp. (Editors) **81e:00007** 00A10 (03-06)
- Theory of numbers, mathematical analysis and their applications** ★Theory of numbers, mathematical analysis and their applications. A collection of papers dedicated to Academician Ivan Matveevich Vinogradov on his eighty-fifth birthday. A translation of Trudy Mat. Inst. Steklov 142 (1976). Edited by S. M. Nikol'skii. Proc. Steklov Inst. Math. 1979, no. 3. American Mathematical Society, Providence, R.I., 1979. pp. i-vi and 1-289 (1 plate). (Editors) **81a:00014** 00A10 (10-06)
- Theory of operating systems** ★Operációs rendszerek elmélete. (Hungarian) [Theory of operating systems] Fifth Visegrád Winter School held in Visegrád, 1979. Tanulmányok — MTA Számítástech. Automat. Kutató Int. Budapest No. 100 (1979). MTA Számítástech. Automat. Kutató Intézet, Budapest, 1979. pp. 1-387. (Editors) **81f:68043** 68B20 (68-06)
- Theory of optimal decisions** ★Теория оптимальных решений. (Russian) [Theory of optimal decisions] Edited by E. I. Nenahov. Akad. Nauk Ukrain. SSR, Inst. Kibernet., Kiev, 1979. 112 pp. (Editors) **81d:90003** 90-06
- Theory of random processes** ★Теория случайных процессов. Вып. 8. (Russian) [Theory of random processes. No. 8] Edited by I. I. Gihman. "Naukova Dumka", Kiev, 1980. 126 pp. (Editors) **81h:60003** 60-06
- Theory of shells** ★Theory of shells. Proceedings of the Third IUTAM Symposium on Shell Theory, dedicated to the memory of Academician I. N. Vekua, held in Tbilisi, August 22-28, 1978. Edited by Warner Tjardus Koiter and G. K. Mikhailov [G. K. Mikhailov]. North-Holland Publishing Co., Amsterdam-New York, 1980. xi + 704 pp. ISBN 0-444-83338-3 (Editors) **81c:73003** 73-06 (73Lxx)
- Theory of stability and its applications** ★Теория устойчивости и ее приложения. (Russian) [Theory of stability and its applications] Edited by V. D. Irtegov and V. M. Matrosov. "Nauka" Sibirsk. Otdel., Novosibirsk, 1979. 295 pp. (Editors) **81b:34003** 34-06 (34Dxx)
- Thermodynamics** ★Математические проблемы химической термодинамики. (Russian) [Mathematical problems of chemical thermodynamics] Edited by V. A. Mihalov and G. A. Kokovin. "Nauka" Sibirsk. Otdel., Novosibirsk, 1980. 120 pp. (Editors) **81j:80001** 80-06
- Thermomechanics** ★Zagadnienia termomechaniki ciał sprężystych. (Polish) [Problems of the thermomechanics of elastic bodies] Edited and with English papers translated by József Ignaczak. Zakład Narodowy im. Ossolińskich—Wydawnictwo Polskiej Akademii Nauk (Ossolineum), Wrocław, 1978. 274 pp. (Vadim Komkov) **81f:73001** 73-06 (73U05)
- Three-dimensional constructions** ★Расчет пространственных конструкций. Вып. 18. (Russian) [Calculation of three-dimensional constructions. No. 18] Edited by S. A. Alekseev, V. V. Bolotin and V. V. Novozhilov. "Stroizdat", Moscow, 1979. 167 pp. (Editors) **81b:73043** 73K99
- Tilburg** ★Convex analysis and mathematical economics. Proceedings of a Symposium held at the University of Tilburg, Tilburg, February 20, 1978. Edited by Jacobus Kriens. Lecture Notes in Economics and Mathematical Systems, 168. Springer-Verlag, Berlin-New York, 1979. v + 136 pp. ISBN 3-540-09247-1 (Editors) **81j:90001** 90-06 (49-06)
- Time-sequential statistical procedures** ★Time-sequential statistical procedures. Edited by Pranab Kumar Sen. Comm. Statist. A—Theory Methods 7 (1978), no. 4. Marcel Dekker, Inc., New York, 1978. pp. 311-408. (Lionel Weiss) **81b:62141** 62L10 (62G10, 62N05, 62P10)
- Time series** ★Time series. Proceedings of the International Meeting held at Nottingham University, Nottingham, March 26-30, 1979. Edited by Oliver D. Anderson. North-Holland Publishing Co., Amsterdam-New York, 1980. viii + 446 pp. ISBN 0-444-85418-5 (Editors) **81k:62006** 62-06 (62M10, 90A20)
- Time series analysis** ★Bayesian analysis in economic theory and time series analysis. The

- 1977 Savage Dissertation Award Theses. Studies in Bayesian Econometrics, 2. North-Holland Publishing Co., Amsterdam-New York, 1980. xi + 180 pp. ISBN 0-444-85414-2 (Editors) **81h:62190** 62P20 (90A20)
- Tokyo** ★Minimal submanifolds and geodesics. Proceedings of the Japan-United States Seminar held in Tokyo, September 19-22, 1977. Edited by Morio Obata. North-Holland Publishing Co., Amsterdam-New York, 1979. x + 292 pp. (1 plate). ISBN 0-444-83327-8 (Editors) **81d:53002** 53-06
- ★Information processing 80. Proceedings of the IFIP Congress held in Tokyo, October 6-9, 1980, and in Melbourne, October 14-17, 1980. Edited by Simon H. Lavington. IFIP Congress Series, 8. North-Holland Publishing Co., Amsterdam-New York, 1980. xiii + 1070 pp. ISBN 0-444-86034-7 (Editors) **81f:68009** 68-06
- ★Recent developments in statistical inference and data analysis. Proceedings of the International Conference in Statistics held at the Institute of Statistical Mathematics, Tokyo, November 28-30, 1979. Edited by Kameo Matusita. North-Holland Publishing Co., Amsterdam-New York, 1980. ix + 364 pp. ISBN 0-444-86104-1 (Editors) **81j:62009** 62-06
- Topological categories** ★Structure of topological categories. Proceedings of a Conference held at the University of Bremen, September 2-5, 1978. Edited by Horst Herrlich, Rudolf-Eberhard Hoffmann, Hans-Eberhard Forst and Manfred Bernd Wischenewsky. Mathematik—Arbeitspapiere [Mathematics—Publications], 18. Universitäts Bremen, Bremen, 1979. iv + 252 pp. (Editors) **81a:18001** 18-06 (18B30, 54B30)
- Topological spaces and their mappings** ★Топологические пространства и их отображения. (Russian) [Topological spaces and their mappings] Edited by E. I. Engel'son. Latv. Gos. Univ., Riga, 1979. 156 pp. (Editors) **81b:54002** 54-06 (47-06)
- Topological structures** ★Topological structures. II. Part 1. Proceedings of a Symposium on Topology and Geometry held in Amsterdam, October 31-November 2, 1978. Edited by P. C. Baayen and J. van Mill. Mathematical Centre Tracts, 115. Mathematisch Centrum, Amsterdam, 1979. x + 189 pp. ISBN 90-6196-185-8 (Editors) **81a:54001a** 54-06 (55-06, 57-06)
- ★Topological structures. II. Part 2. Proceedings of a Symposium on Topology and Geometry held in Amsterdam, October 31-November 2, 1978. Edited by P. C. Baayen and J. van Mill. Mathematical Centre Tracts, 116. Mathematisch Centrum, Amsterdam, 1979. pp. i-vii and 191-393. ISBN 90-6196-186-6 (Editors) **81a:54001b** 54-06 (55-06, 57-06)
- Topology** ★Algebraic topology. Aarhus 1978. Proceedings of a Symposium held at the University of Aarhus, Aarhus, August 7-12, 1978. Edited by Johan Louis Dupont and Ib Henning Madsen. Lecture Notes in Mathematics, 763. Springer-Verlag, Berlin-New York, 1979. vi + 695 pp. ISBN 3-540-09721-X (Editors) **81b:55001** 55-06 (18F25, 57-06)
- ★Алгебра. Топология. Геометрия. Том 17. (Russian) [Algebra. Topology. Geometry. Vol. 17] Edited by R. V. Gamkrelidze. Итоги Науки и Техники [Progress in Science and Technology] Akad. Nauk SSSR, Vsesojuz. Inst. Nauch. i Tehn. Informacii, Moscow, 1979. 308 pp. (loose errata). (Editors) **81h:20001** 20-06 (54F45)
- ★The Proceedings of the 1979 Topology Conference. Held at Ohio University, Athens, Ohio, 1979. Edited by Włodzimierz Kuperberg, G. M. Reed and Philip Zemor. Topology Proc. 4 (1979), no. 1. (1980). Auburn University, Mathematics Department, Auburn, Ala., 1980. pp. 1-338. (Editors) **81h:54001** 54-06
- ★Topology. Vol. I, II. Proceedings of the Fourth Colloquium held in Budapest, August 7-11, 1978. Edited by A. Császár. Colloquia Mathematica Societatis János Bolyai, 23. North-Holland Publishing Co., Amsterdam-New York, 1980. 1260 pp. ISBN 0-444-85406-1 (Editors) **81h:54001** 54-06 (57-06)
- ★The Proceedings of the 1979 Topology Conference. Held at Ohio University, Athens, Ohio, 1979. Edited by Włodzimierz Kuperberg, G. M. Reed and Philip Zemor. Topology Proc. 4 (1979), no. 2. (1980). Auburn University, Mathematics Department, Auburn, Ala., 1980. pp. 339-645. (Editors) **81h:54001** 54-06 (55-06)
- ★Специальные вопросы алгебры и топологии. (Russian) [Special questions of algebra and topology] Edited by L. G. Mustafaez and R. A. Baïramov. "Ekm", Baku, 1980. 122 pp. (Editors) **81b:20005** 20-06 (08-06, 54H15)
- Toulouse** ★FTCS-8. The Eighth Annual International Conference on Fault-Tolerant Computing held in Toulouse, June 21-23, 1978. Digest of papers. IEEE Computer Society, New York, 1978. xvii + 226 pp. (Editors) **81b:94002** 94-06 (68-06)
- ★Reconnaissance des formes et intelligence artificielle. Tome I, II, III. (French) [Recognition of shapes and artificial intelligence. Vol. I, II, III] Second AFCEP-IRIA Congress held in Toulouse, September 12-14, 1979. Institut de Recherche d'Informatique et d'Automatique (IRIA), Rocquencourt, 1979. Vol. I: 423 pp.; Vol. II: 426 pp.; Vol. III: 368 pp. ISBN 2-7621-0212-3 (Editors) **81f:68007** 68-06 (62-06, 92-06)
- Transactions:**
- Conference of Army Mathematicians** ★Transactions of the Twenty-Sixth Conference of Army Mathematicians. Held in Hanover, N.H., June 10-12, 1980. ARO Report 81, 1. U. S. Army Research Office, Research Triangle Park, N.C., 1981. xii + 400 pp. (Editors) **81m:00008** 00A10
- Transactions of the Moscow Mathematical Society** ★Transactions of the Moscow Mathematical Society, 1980, Issue 1. A translation of Trudy Moskov. Mat. Obšč. 37 (1978). Trans. Moscow Math. Soc. 1980, no. 1. American Mathematical Society, Providence, R.I., 1980. pp. i-v and 1-289. (Editors) **81m:00009** 00A10
- ★Transactions of the Moscow Mathematical Society, 1980, Issue 2. A translation of Trudy Moskov. Mat. Obšč. 38 (1979). Trans. Moscow Math. Soc. 1980, no. 2. American Mathematical Society, Providence, R.I., 1980. pp. i-iv and 1-215. (Editors) **81m:00010** 00A10
- Trends in applications of pure mathematics to mechanics** ★Trends in applications of pure mathematics to mechanics. Vol. II. Papers presented at the Second Symposium held in Kozubnik, September, 1977. Edited by Henryk Zorski. Monographs and Studies in Mathematics, 5. Pitman Publishing, Ltd., London-San Francisco, Calif., 1979. viii + 341 pp. ISBN 0-273-08421-6 (Editors) **81h:73003** 73-06
- Triples** ★Trabajos sobre triples. (Spanish) [Papers on triples] Papers presented at the Seventh Spanish-Portuguese Mathematical Conference held in San Feliu de Guixols, May 26-30, 1980. Alébra, 26. Universidad de Santiago de Compostela, Departamento de Álgebra y Fundamentos, Santiago de Compostela, 1980. 90 pp. ISBN 84-7191-177-9 (Editors) **81e:18002** 18-06
- Trudy Mat. Inst. Steklov.** ★Spectral theory of functions and operators. A translation of

Trudy Mat. Inst. Steklov. 130 (1978). Edited by S. M. Nikol'skii. Proc. Steklov Inst. Math. 1979, no. 4. American Mathematical Society, Providence, R.I., 1980. pp. i-v and 1-233. (Editors) 81j:00010 00A10 (46-06, 47-06)

See also Men'sov, D. E., 81c:42010

Tübingen ★Recent developments in particle and field theory. Lectures and seminars delivered at the Symposium on Particles and Fields held at Tübingen University, Tübingen, June 20-July 1, 1977. Edited by Walter Dietrich. Friedr. Vieweg & Sohn, Braunschweig, 1979. v+422 pp. ISBN 3-528-08426-X (Editors) 81d:81007 81-06 (81G05, 81M05)

Turin memorial volume ★P. Turin memorial volume. Edited by Oved Shisha. J. Approx. Theory 29 (1980), no. 1. Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], New York-London, 1980. pp. 1-89 (1 plate). (Editors) 81j:41001 41-06 (41A99)

Turbulent flows ★Third All-Union Seminar on Turbulent Flows. Part I. Held in Zvenigorod, December 25-29, 1974. Fluid Mech.—Soviet Res. 7 (1978), no. 1. (1979). Scripta Publishing Co., Silver Spring, Md., 1979. pp. 1-167. (Editors) 81d:76004 76-06 (76Fxx)

★Third All-Union Seminar on Turbulent Flows. Part II. Held in Zvenigorod, December 25-29, 1974. Fluid Mech.—Soviet Res. 7 (1978), no. 2. (1979). Scripta Publishing Co., Silver Spring, Md., 1979. pp. i and 1-160. (Editors) 81d:76005 76-06 (76Fxx)

Tutzing ★Quantum theory and the structures of time and space. Vol. 2. In memoriam Werner Heisenberg. Papers presented at the Second Conference held in Tutzing, July 12-15, 1976. Edited by L. Castell, M. Drieschner and C. F. von Weizsäcker. Carl Hanser Verlag, Munich, 1977. 252 pp. ISBN 3-446-12459-4 (Editors) 81j:81002a 81-06

★Quantum theory and the structures of time and space. Vol. 3. Papers presented at the Third Conference held in Tutzing, July 1978. Edited by L. Castell and C. F. von Weizsäcker. Carl Hanser Verlag, Munich, 1979. 200 pp. ISBN 3-446-12911-1 (Editors) 81j:81002b 81-06

★Formale Modelle für Informationssysteme. (German) [Formal model for information systems] GI (Gesellschaft für Informatik) Conference held in Tutzing, May 24-26, 1979. Edited by Heinrich C. Mayr and Bernd E. Meyer. Informatik-Fachberichte [Technical Reports on Information Science], 21. Springer-Verlag, Berlin-New York, 1979. vi+265 pp. ISBN 3-540-09773-2 (Editors) 81m:68003 68-06

Udine ★Algebraic coding theory and applications. Lectures from the Summer School held at the International Centre for Mechanical Sciences (CISM), Udine, July 1978. Edited by Giuseppe Longo. CISM Courses and Lectures, 258. Springer-Verlag, Vienna, 1979. x+528 pp. ISBN 3-211-81544-9 (E. M. Gabidulin) 81k:94026 94Bxx (94-02)

Unification ★First Workshop on Grand Unification. Held at the University of New Hampshire, Durham, N.H., April 10-12, 1980. Edited by Paul H. Frampton, Sheldon L. Glashow and Asim Yildiz. Lie Groups: History, Frontiers and Applications, XI. Math Sci Press, Brookline, Mass., 1980. ix+370 pp. ISBN 0-915692-31-7 (Editors) 81j:81066 81G20

Universal algebra ★Материалы Семинара "Универсальная Алгебра". (Russian) [Abstracts of the Seminar on Universal Algebra] Held at Baku, September 1976. "Elm", Baku, 1979. 23 pp. (Editors) 81j:00001 08-06 (06-06, 20-06)

Urbino ★Synthesis and analysis methods for safety and reliability studies. Proceedings of the NATO Advanced Study Institute held in Urbino, July 3-14, 1978. Edited by G. Apostolakis, S. Garribba and G. Volta. Plenum Press, New York-London, 1980. ix+463 pp. ISBN 0-306-40316-1 (Editors) 81j:93008 93-06 (90-06, 94-06)

Utrecht ★Symposium dédié à A. F. Monna. (French) [Symposium dedicated to A. F. Monna] Held in Utrecht, December 18, 1979. Communications of the Mathematical Institute, Rijksuniversiteit Utrecht, 12. Rijksuniversiteit Utrecht, Mathematical Institute, Utrecht, 1980. 82 pp. (Editors) 81m:00007 00A10 (01A70)

Varenna ★Physics and astrophysics of neutron stars and black holes. Proceedings of the International School of Physics "Enrico Fermi", Course LXV, held at Varenna, July 14-26, 1975. Edited by Riccardo Giacconi and Remo Ruffini. North-Holland Publishing Co., Amsterdam-New York, 1978. xxv+871 pp. ISBN 0-7204-0720-3 (Editors) 81k:83004 83-06 (85-06)

Variational-difference methods in mathematical physics ★Вариационно-разностные методы в математической физике. (Russian) [Variational-difference methods in mathematical physics] Proceedings of the All-Union Conference held in Novosibirsk, 1977. Edited by G. I. Marčuk. Akad. Nauk SSSR Sibsk. Otdel., Vyčisl. Centr, Novosibirsk, 1978. 230 pp. (Editors) 81b:65007 65-06

Variational inequalities and complementarity problems ★Variational inequalities and complementarity problems. Theory and applications. Proceedings of an International School of Mathematics on Variational Inequalities and Complementarity Problems in Mathematical Physics and Economics held in Erice, June 19-30, 1978. Edited by R. W. Cottle, F. Giannessi and J.-L. Lions. A Wiley-Interscience Publication. John Wiley & Sons, Ltd., Chichester, 1980. xvii+408 pp. ISBN 0-471-27610-3 (Editors) 81d:49001 49-06 (49A29, 90-06, 90C33)

Variational inequalities and optimization problems ★Variational inequalities and optimization problems. Proceedings of a Summer School held at Constanța, August 20-30, 1979. Edited by Den Pascali. Ministerul Educației și Încălzirii, Institutul de Încălziri Superior, Constanța, 1979. vi+344 pp. (Editors) 81i:49001 49-06 (65-06)

Various problems related to invariant subspaces ★Various problems related to invariant subspaces. (Japanese) Proceedings of a Symposium held at the Research Institute for Mathematical Sciences, Kyoto University, Kyoto, December 20-22, 1979. Shirakaisikenkyūsho Kōkyūroku No. 377 (1980). Kyoto University, Research Institute for Mathematical Sciences, Kyoto, 1980. pp. i-ii and 1-181. (Editors) 81m:47002 47-06 (47Axx)

Varna ★Трета международна летна школа по теория на вероятностите и математическа статистика. (Bulgarian) [Third International Summer School on Probability Theory and Mathematical Statistics] Held in Varna, May 10-20, 1978. Edited by B. Penkov and S. Stojanov. B. Igar. Akad. Nauk, Sofia, 1980. 194 pp. (Editors) 81j:60004 60-06

Vector bundles and differential equations ★Vector bundles and differential equations. Proceedings of a Conference held in Nice, June 12-17, 1979. Edited by André Hirschowitz. Progress in Mathematics, 7. Birkhäuser, Boston, Mass., 1980. v+249 pp. ISBN 3-7643-3022-8 (Editors) 81i:14002 14-06 (81E10)

Venice ★Data base architecture. Proceedings of the Fifth IFIP Working Conference held in Venice, June 26-29, 1979. Edited by G. Bracchi and G. M. Nijssen. North-Holland Publishing Co., Amsterdam-New York, 1979. x+341 pp. ISBN 0-444-85384-7 (Editors) 81b:68005 68B05 (68H05)

Versailles ★Computing methods in applied sciences and engineering. Proceedings of the Fourth International Symposium held at Versailles, December 10-14, 1979. Edited by R. Glowinski and J.-L. Lions. North-Holland Publishing Co., Amsterdam-New York, 1980. ix+724 pp. ISBN 0-444-86008-8 (Editors) 81b:65001 65-06 (00A69, 76-06)

Vienna ★Performance of computer systems. Proceedings of the Fourth International Symposium on Modeling and Performance Evaluation of Computer Systems held in Vienna, February 6-8, 1979. Edited by Mátys Arató, Alexandre Butrimenko and E. Gelenbe. North-Holland Publishing Co., Amsterdam-New York, 1979. ix+565 pp. ISBN 0-444-85332-4 (Editors) 81a:68006 68-06

★Applied game theory. Proceedings of a Conference at the Institute for Advanced Studies, Vienna, June 13-16, 1978. Edited by S. J. Brame, A. Schotter and G. Schwödiouer. IHS—Studies, 1. Physica Verlag, Würzburg, 1979. 447 pp. ISBN 3-7908-0208-5 (Editors) 81c:90001 90-06 (90Dxx)

Villetaneuse ★Bifurcation and nonlinear eigenvalue problems. Proceedings of a Session held at the Université de Paris XIII, Villetaneuse, October 2-4, 1978. Edited by C. Bardos, J. M. Lasry and M. Schatzman. Lecture Notes in Mathematics, 782. Springer-Verlag, Berlin-New York, 1980. viii+296 pp. ISBN 3-540-09759-9 (Editors) 81c:35001 35-06 (00A69, 35B32, 58E07)

Viscoelasticity ★Вопросы теории упругости и вязкоупругости. (Russian) [Problems in the theory of elasticity and viscoelasticity] Edited by G. B. Kuznetsov. Akad. Nauk SSSR, Ural. Nauch. Centr, Sverdlovsk, 1978. 126 pp. (Editors) 81c:73002 73-06

Visegrád ★Operációs rendszerek elmélete. (Hungarian) [Theory of operating systems] Fifth Visegrád Winter School held in Visegrád, 1979. Tanulmányok—MTA Számítástech. Automat. Kutató Int. Budapest No. 100 (1979). MTA Számítástech. Automat. Kutató Intézet, Budapest, 1979. pp. 1-387. (Editors) 81f:68043 68B20 (68-06)

Vortex motions in a fluid. Stability and separation of a boundary layer; free and quantum vortices ★Вытормые движения жидкости. Устойчивость и отрыв пограничного слоя; свободные и квантовые вихри. (Russian) [Vortex motions in a fluid. Stability and separation of a boundary layer; free and quantum vortices] Translation from the English edited by V. N. Nikolaevskii and G. Ju. Stepanov. Механика: Новое в Зарубежной Науке [Mechanics: Recent Publications in Foreign Science], 21. "Mir", Moscow, 1979. 327 pp. (Editors) 81e:76018 76C05 (76-06, 81-06)

Vorträge der Rheinisch-Westfälischen Akademie der Wissenschaften ★Vorträge der Rheinisch-Westfälischen Akademie der Wissenschaften. No. 288. (German) Westdeutscher Verlag, Opladen, 1979. 68 pp. ISBN 3-531-08288-4 (Editors) 81m:81002 81-06

Warsaw ★Optimization techniques. Part 1. Proceedings of the Ninth IFIP Conference held in Warsaw, September 4-8, 1979. Edited by K. Iracki, K. Malanowski and S. Walukiewicz. Lecture Notes in Control and Information Sciences, 22. Springer-Verlag, Berlin-New York, 1980. xvi+569 pp. ISBN 3-540-10080-6 (Editors) 81j:49001a 49-06 (68-06, 90-06, 92-06, 93-06, 94-06)

★Optimization techniques. Part 2. Proceedings of the Ninth IFIP Conference held in Warsaw, September 4-8, 1979. Edited by K. Iracki, K. Malanowski and S. Walukiewicz. Lecture Notes in Control and Information Sciences, 23. Springer-Verlag, Berlin-New York, 1980. xv+621 pp. ISBN 3-540-10081-4 (Editors) 81j:49001b 49-06 (68-06, 90-06, 92-06, 93-06, 94-06)

Wave propagation ★Вопросы динамической теории распространения сейсмических волн. Вып. XIX. (Russian) [Questions in the dynamical theory of seismic wave propagation. No. 19] Edited by G. I. Petrasen' and A. P. Volin. "Nauka" Leningrad. Otdel., Leningrad, 1979. 200 pp. (Editors) 81b:86003 86A15 (73D99)

Weather modification ★Statistical analysis of weather modification experiments. Papers presented at a Workshop on the Design and Analysis of Weather Modification Experiments held at Florida State University, Tallahassee, Fla., October 26-27, 1978. Edited by Edward J. Wegman and Douglas J. DePriest. Lecture Notes in Statistics, 3. Marcel Dekker, Inc., New York, 1980. x+145 pp. ISBN 0-8247-1177-7 (Editors) 81k:86001 86-06 (62P99, 86A10)

Weißing ★Vorträge aus dem Problemseminar Mathematische Verfahrenstechnik. (German) [Lectures from the Problem Seminar on Mathematical Procedures] Held in Weißing, November 6-10, 1978. Weiterbildungszentrum für Mathematische Kybernetik und Rechentechnik, Informationsverarbeitung, 36. Technische Universität Dresden, Dresden, 1979. 128 pp. (Editors) 81f:65002 65-06

Winnipeg, Man. ★Proceedings of the Ninth Manitoba Conference on Numerical Mathematics and Computing. Held at the University of Manitoba, Winnipeg, Man., September 27-29, 1979. Edited by G. H. J. Van Rees and H. C. Williams. Congressus Numerantium, XXVII. Utilitas Mathematica Publishing, Inc., Winnipeg, Man., 1980. ix+434 pp. ISBN 0-919628-27-3 (Editors) 81j:65011 65-06 (05-06)

Winter School: Abstract Software Specifications ★Abstract software specifications. Proceedings of the Winter School held at the Technical University of Denmark, Copenhagen, January 22-February 2, 1979. Edited by Dines Bjørner. Lecture Notes in Computer Science, 86. Springer-Verlag, Berlin-New York, 1980. xii+567 pp. ISBN 3-540-10007-5 (Editors) 81c:68002 68-06

Karpacz, Theoretical Physics ★Modern trends in the theory of condensed matter. Proceedings of the XVI Karpacz Winter School of Theoretical Physics held in Karpacz, February 19-March 3, 1979. Edited by Andrzej Pkalski and Jerzy A. Przystawa. Lecture Notes in Physics, 115. Springer-Verlag, Berlin-New York, 1980. ix+597 pp. ISBN 3-540-09752-X (Editors) 81b:82002 82-06

Visegrád, Theory of Operating Systems ★Operációs rendszerek elmélete. (Hungarian) [Theory of operating systems] Fifth Visegrád Winter School held in Visegrád, 1979. Tanulmányok—MTA Számítástech. Automat. Kutató Int. Budapest No. 100 (1979). MTA Számítástech. Automat. Kutató Intézet, Budapest, 1979. pp. 1-387. (Editors) 81f:68043 68B20 (68-06)

Wish ★Mathematical statistics and probability theory. Proceedings of the Sixth International Conference held in Wish, December 7-13, 1978. Edited by Witold Kłonecki, Andrzej Kozek and Jan Rosiński. Lecture Notes in Statistics, 2.

Springer-Verlag, New York-Heidelberg, 1980. xxii + 373 pp. ISBN 0-387-90493-X
(Editors) **81g:6206** 62-06 (60-06)

Women and the mathematical mystique ★Women and the mathematical mystique.

Proceedings of the Eighth Annual Hyman Blumberg Symposium on Research in Early Childhood Education held in Boston, Mass., February 1976. Edited by Lynn H. Fox, Linda Brody and Dianne Tobin. Studies of Intellectual Precocity, 5. *Johns Hopkins University Press, Baltimore, Md., 1980. xi + 211 pp. ISBN 0-8018-2341-2* (Editors) **81j:00005** 00A05 (01A80)

Word problems ★Word problems. II. The Oxford book. Outgrowth of a Conference on Decision Problems in Algebra held in Oxford, Summer 1976. Edited by S. I. Adjan [S. I. Adjan], William W. Boone and Graham Higman. Studies in Logic and the Foundations of Mathematics, 95. *North-Holland Publishing Co., Amsterdam-New York, 1980. x + 578 pp. (1 plate). ISBN 0-444-85343-X* (Editors) **81f:03056** 03D40 (03-06, 20-06, 20F10)

Workshop:

Bifurcation Problems and their Numerical Solution ★Bifurcation problems and their numerical solution. Proceedings of the Workshop held at the University of Dortmund, Dortmund, January 15-17, 1980. Edited by H. D. Mittelman and H. Weber. International Series of Numerical Mathematics, 54. *Birkhäuser Verlag, Basel-Boston, Mass., 1980. iii + 243 pp. ISBN 3-7643-1204-1* (Editors) **81i:58003** 58-06 (65-06)

Burnside Groups ★Burnside groups. Proceedings of a Workshop held at the University of Bielefeld, Bielefeld, June-July 1977. Lecture Notes in Mathematics, 806. *Springer-Verlag, Berlin-New York, 1980. ii + 274 pp. ISBN 3-540-10006-7* (Editors) **81j:20002** 20-06

Design and Analysis of Weather Modification Experiments ★Statistical analysis of weather modification experiments. Papers presented at a Workshop on the Design and Analysis of Weather Modification Experiments held at Florida State University, Tallahassee, Fla., October 26-27, 1978. Edited by Edward J. Wegman and Douglas J. DePriest. Lecture Notes in Statistics, 3. *Marcel Dekker, Inc., New York, 1980. x + 145 pp. ISBN 0-8247-1177-7* (Editors) **81k:96001** 86-06 (62P99, 86A10)

Foundations and Applications of Decision Theory ★Foundations and applications of decision theory. Vol. I. Theoretical foundations. Papers from an International Workshop held at the University of Western Ontario, London, Ont., 1975. Edited by C. A. Hooker, J. J. Leach and E. F. McClennen. University of Western Ontario Series in Philosophy of Science, 13. *D. Reidel Publishing Co., Dordrecht-Boston, Mass., 1978. xxiii + 446 pp. ISBN 90-277-0842-8* (Editors) **81a:90002a** 90A05

★Foundations and applications of decision theory. Vol. II. Epistemic and social applications. Papers from an International Workshop held at the University of Western Ontario, London, Ont., 1975. Edited by C. A. Hooker, J. J. Leach and E. F. McClennen. University of Western Ontario Series in Philosophy of Science, 13. *D. Reidel Publishing Co., Dordrecht-Boston, Mass., 1978. xxiii + 208 pp. ISBN 90-277-0844-4* (Editors) **81a:90002b** 90A05

Grand Unification ★First Workshop on Grand Unification. Held at the University of New Hampshire, Durham, N.H., April 10-12, 1980. Edited by Paul H. Frampton, Sheldon L. Glashow and Asim Yildiz. Lie Groups: History, Frontiers and Applications, XI. *Math Sci Press, Brookline, Mass., 1980. ix + 370 pp. ISBN 0-915692-31-7* (Editors) **81j:81066** 81G20

Graph-Grammars and their Application to Computer Science and Biology ★Graph-grammars and their application to computer science and biology. Papers presented at an International Workshop held in Bad Honnef, October 30-November 3, 1978. Edited by Volker Claus, Hartmut Ehrig and Grzegorz Rozenberg. Lecture Notes in Computer Science, 73. *Springer-Verlag, Berlin-New York, 1979. vii + 477 pp. ISBN 3-540-09525-X* (Editors) **81a:68005** 68-06 (92A05)

Graphtheoretic Concepts in Computer Science ★Discrete structures and algorithms. Proceedings of the Workshop WG 79, Fifth Conference on Graphtheoretic Concepts in Computer Science held in Berlin, June 21-23, 1979. Edited by Uwe Pape. *Carl Hanser Verlag, Munich, 1980. xi + 268 pp. ISBN 3-446-13135-3* (Editors) **81m:68002** 68-06

Hadronic Matter at Extreme Energy Density ★Hadronic matter at extreme energy density. Proceedings of a Workshop held at the Ettore Majorana Center, Erice, October 13-21, 1978. Edited by Nicola Cabibbo and Luigi Sertorio. Ettore Majorana International Science Series: Physical Sciences, 2. *Plenum Press, New York-London, 1980. ix + 358 pp. ISBN 0-306-40303-X* (Editors) **81e:81006** 81-06 (81G05)

Workshop: (continued)

Information Linkage between Applied Mathematics and Industry ★Information linkage between applied mathematics and industry. II. Proceedings of the Second Annual Workshop held in Monterey, Calif., February 22-24, 1979. Edited by Arthur L. Schoenstadt, Frank D. Faulkner, Richard Franke and I. Bert Russak. *Academic Press, Inc. [Harcourt Brace Jovanovich, Publishers], New York-London, 1980. xii + 293 pp. ISBN 0-12-628750-3* (Editors) **81j:93004** 93-06

Intrinsic Stochasticity in Plasmas ★Intrinsic stochasticity in plasmas. International Workshop held at the Institut d'Études Scientifiques de Cargèse, Cargèse, June 17-23, 1979. Edited by Guy Laval and Dominique Gresillon. *École Polytechnique, Palaiseau; distributed by Les Éditions de Physique, Orsay, 1979. 443 pp. ISBN 2-7302-0016-9* (Editors) **81e:76006** 76X05 (58F13, 78A35, 82A45)

Lie-Admissible Formulations ★Proceedings of the Second Workshop on Lie-Admissible Formulations. Part A. Review papers. Held at the Science Center, Harvard University, Cambridge, Mass., August 1-8, 1979. *Hadronic J. 2* (1979), no. 6, 1252-2018. *Hadronic Press, Inc., Nonantum, Mass., 1979. pp. 1252-2023.* (Editors) **81a:81005a** 81-06 (17-06)

★Proceedings of the Second Workshop on Lie-Admissible Formulations. Part B. Research papers. Held at the Science Center, Harvard University, Cambridge, Mass., August 1-8, 1979. *Hadronic J. 3* (1979/80), no. 1. *Hadronic Press, Inc., Nonantum, Mass., 1980. pp. 1-725.* (Editors) **81a:81005b** 81-06 (17-06)

New Perspectives on Galileo ★New perspectives on Galileo. Edited by Robert E. Butts and Joseph C. Pitt. University of Western Ontario Series in Philosophy of Science, 14. *D. Reidel Publishing Co., Dordrecht-Boston, Mass., 1978. xvi + 262 pp. ISBN 90-277-0859-2, 90-277-0891-6* (N. Swerdlow) **81a:01013** 01A45 (01A70)

Nuclear Spectroscopy ★Nuclear spectroscopy. Lecture notes from the Workshop held at Gull Lake, Mich., August 27-September 7, 1979. Edited by G. F. Bertsch and D. Kurath. Lecture Notes in Physics, 119. *Springer-Verlag, Berlin-New York, 1980. vii + 250 pp. ISBN 3-540-09970-0* (Editors) **81j:81070** 81G35

Numerical Treatment of Integral Equations ★Numerical treatment of integral equations. Lectures delivered at the Workshop held at the Mathematical Research Institute, Oberwolfach, November 18-24, 1979. Edited by Julius Albrecht and Lothar Collatz. International Series of Numerical Mathematics, 53. *Birkhäuser Verlag, Basel-Boston, Mass., 1980. iii + 275 pp. ISBN 3-7643-1105-3* (Editors) **81j:65009** 65-06 (65R20)

Physical Concepts in Tissue Growth ★(Special issue on physical concepts in tissue growth). Papers presented at an International Workshop held in Neuenahr, November 22-24, 1979. *Collect. Phenom. 3*, no. 3-4. (1981). *Gordon & Breach Science Publishers, New York, 1981. pp. i and 139-320.* (Editors) **81m:92029** 92A09

Robustness in Statistics ★Robustness in statistics. Proceedings of a Workshop held at the Army Research Office, Research Triangle Park, N.C., April 11-12, 1978. Edited by Robert L. Launer and Graham N. Wilkinson. *Academic Press [Harcourt Brace Jovanovich, Publishers], New York-London, 1979. xvi + 296 pp. ISBN 0-12-438150-2* (Colin L. Mallows) **81e:62032** 62F35

Sources of Gravitational Radiation ★Sources of gravitational radiation. Proceedings of the Workshop held at the Battelle Seattle Research Center, Seattle, Wash., July 24-August 4, 1978. Edited by Larry L. Smarr. *Cambridge University Press, Cambridge-New York, 1979. xiii + 505 pp. ISBN 0-521-22778-X* (Editors) **81j:83017** 83C35 (83B05, 85A40)

Supergravity ★Supergravity. Proceedings of the Workshop held at Stony Brook, N.Y., September 27-29, 1979. Edited by P. van Nieuwenhuizen and D. Z. Freedman. *North-Holland Publishing Co., Amsterdam-New York, 1979. xii + 341 pp. ISBN 0-444-85438-X* (Editors) **81j:83001** 83-06

Žilina ★6. Vedecká Konferencia Vysokej Školy Dopravnej. (Slovak) [Sixth Scientific Conference of the College of Transport Engineering] Held at the College of Transport Engineering, Žilina, 1979. Edited by Pavol Grešák. *College of Transport Engineering, Žilina, 1979. 201 pp.* (Editors) **81j:34002** 34-06

Zvenigorod ★Third All-Union Seminar on Turbulent Flows. Part I. Held in Zvenigorod, December 25-29, 1974. *Fluid Mech.—Soviet Res. 7* (1978), no. 1. (1979). *Scripta Publishing Co., Silver Spring, Md., 1979. pp. 1-167.* (Editors) **81d:76004** 76-06 (76Fxx)

★Third All-Union Seminar on Turbulent Flows. Part II. Held in Zvenigorod, December 25-29, 1974. *Fluid Mech.—Soviet Res. 7* (1978), no. 2. (1979). *Scripta Publishing Co., Silver Spring, Md., 1979. pp. i and 1-160.* (Editors) **81d:76005** 76-06 (76Fxx)

ABBREVIATIONS OF NAMES OF SERIALS

Listed below are the abbreviated names of serials used in MATHEMATICAL REVIEWS. An asterisk (*) indicates that the journal has not been previously listed. A paragraph symbol (§) indicates a bibliographic journal. A dagger (†) indicates a monograph series.

This list also contains historical journal abbreviations. Those not still in use have a cross-reference (Continued as: . . .) to the current abbreviation.

- † *AAAS Sel. Sympos. Ser.* AAAS Selected Symposia Series. Westview, Boulder, Colo.
Abacus Abacus. The Journal of The Mathematical Association of Nigeria. (Ikeja)
† *Abh. Akad. Wiss. DDR, Abt. Math. Naturwiss. Tech.*, 1978 Abhandlungen der Akademie der Wissenschaften der DDR, Abteilung Mathematik, Naturwissenschaften, Technik, 1978. [Transactions of the Academy of Sciences of the DDR, Section for Mathematics, Sciences and Technology] Akademie-Verlag, Berlin.
† *Abh. Akad. Wiss. DDR, Abt. Math. Naturwiss. Tech.*, 1979 Abhandlungen der Akademie der Wissenschaften der DDR, Abteilung Mathematik, Naturwissenschaften, Technik, 1979. [Transactions of the Academy of Sciences of the DDR, Section for Mathematics, Sciences and Technology, 1979] Akademie-Verlag, Berlin.
Abh. Akad. Wiss. Göttingen Math.-Phys. Kl. Abhandlungen der Akademie der Wissenschaften in Göttingen. Mathematisch-Physikalische Klasse. (Göttingen)
Abh. Braunschweig. Wiss. Ges. Abhandlungen der Braunschweigischen Wissenschaftlichen Gesellschaft. (Göttingen)
Abh. Braunschweig. Wiss. Gesellsch. Abhandlungen der Braunschweigischen Wissenschaftlichen Gesellschaft. (Göttingen) (Continued as: *Abh. Braunschweig. Wiss. Ges.*)
Abh. Deutsch. Akad. Wiss. Berlin Kl. Math. Phys. Tech. Abhandlungen der Deutschen Akademie der Wissenschaften zu Berlin. Klasse für Mathematik, Physik und Technik. (Berlin)
Abh. Math. Sem. Univ. Hamburg Abhandlungen aus dem Mathematischen Seminar der Universität Hamburg. (Göttingen)
Abh. Sächs. Akad. Wiss. Leipzig Math.-Natur. Kl. Abhandlungen der Sächsischen Akademie der Wissenschaften zu Leipzig. Mathematisch-Naturwissenschaftliche Klasse. (Berlin)
† *Abstracts Amer. Math. Soc.* Abstracts of Papers Presented to the American Mathematical Society. (Providence, R.I.) See *Notices Amer. Math. Soc.* (Beginning with the January, 1980 issue contains abstracts of papers presented at a meeting of the Society.)
† *Abstracts Bulgar. Sci. Lit. Math. Phys. Sci.* Bulgarian Academy of Sciences. Scientific Information Centre. Abstracts of Bulgarian Scientific Literature. Mathematical and Physical Sciences. (Sofia) (Formerly: *Abstracts Bulgarian Sci. Lit. Math. Phys. Astronom. Geophys. Geodes.*)
† *Abstracts Bulgarian Sci. Lit. Math. Phys. Astronom. Geophys. Geodes.* Bulgarian Academy of Sciences. Centre of Scientific Information and Documentation. Abstracts of Bulgarian Scientific Literature. Mathematics, Physics, Astronomy, Geophysics, Geodesy. (Sofia) (Continued as: *Abstracts Bulgar. Sci. Lit. Math. Phys. Sci.*)
Acad. Roy. Belg. Bull. Cl. Sci. Académie Royale de Belgique. Bulletin de la Classe des Sciences. Koninklijke Belgische Académie. Mededelingen van de Klasse der Wetenschappen. (Brussels) (Continued as: *Acad. Roy. Belg. Bull. Cl. Sci.* (5))
Acad. Roy. Belg. Bull. Cl. Sci. (5) Académie Royale de Belgique. Bulletin de la Classe des Sciences. Koninklijke Belgische Académie. Mededelingen van de Klasse der Wetenschappen. 5e Série. (Brussels)
Acad. Roy. Belg. Cl. Sci. Mém. Coll. in-8° Académie Royale de Belgique. Classe des Sciences. Mémoires. Collection in-8°. Koninklijke Belgische Académie. Klasse der Wetenschappen. Verhandelingen. Verzameling in-8°. (Brussels) (Continued as: *Acad. Roy. Belg. Cl. Sci. Mém. Coll. 8°* (2))
Acad. Roy. Belg. Cl. Sci. Mém. Coll. 8° (2) Académie Royale de Belgique. Classe des Sciences. Mémoires. Collection in-8°. Koninklijke Belgische Académie. Klasse der Wetenschappen. Verhandelingen. Verzameling in-8°. 2e Série. (Brussels)
Acad. Serbe Sci. Arts Glas Académie Serbe des Sciences et des Arts. Glas. Classe des Sciences Mathématiques et Naturelles. Nouvelle Série. (Belgrade)
Accad. Naz. Sci. Lett. Arti Modena Atti Mem. Accademia Nazionale di Scienze Lettere e Arti. Modena. Atti e Memorie. (Modena) (Continued as: *Accad. Naz. Sci. Lett. Arti Modena Atti Mem.* (6))
Accad. Naz. Sci. Lett. Arti Modena Atti Mem. (6) Accademia Nazionale di Scienze Lettere e Arti. Modena. Atti e Memorie. (Modena) (Formerly: *Accad. Naz. Sci. Lett. Arti Modena Atti Mem.*)
* *ACM Trans. Database Systems* Association for Computing Machinery. Transactions on Database Systems. (New York)
ACM Trans. Math. Software Association for Computing Machinery. Transactions on Mathematical Software. (New York)
Acta Acad. Abo. Ser. B Acta Academiæ Åboensis. Ser. B. Mathematica et Physica. Matematik-Naturvetenskap-Teknik. (Åbo=Turku)
Acta Acad. Paedagog. Civitate Pécs Ser. 6 Math. Phys. Chem. Tech. Acta Academiæ Paedagogicæ in Civitate Pécs. Seria 6. Mathematica-Physica-Chemica-Technica. (Pécs)
Acta Aritih. Polska Akademia Nauk. Instytut Matematyczny. Acta Arithmetica. (Warsaw)
Acta Astronaut. Acta Astronautica. Journal of the International Academy of Astronautics. (Elmsford, N.Y.)
Acta Astronom. Sinica Acta Astronomica Sinica. Tianwen Xuebao. (Beijing) (Translated as: *Chinese Astronom. Astrophys.*)

- * *Acta Astrophys. Sinica* Acta Astrophysica Sinica. Tianti Wuli Xuebao. (Beijing) (Translated as: *Chinese Astronom. Astrophys.*)
* *Acta Automat. Sinica* Acta Automatica Sinica. Zidonghua Xuebao. (Beijing)
Acta Ci. Compostelana Acta Científica Compostelana. (Santiago de Compostela) (Continued as: *Acta Cient. Compostelana*)
Acta Ci. Indica Acta Ciencia Indica. (Meerut) (Continued as: *Acta Cienc. Indica*)
Acta Ci. Venezolana Acta Científica Venezolana. Asociación Venezolana para el Avance de la Ciencia. (Caracas) (Continued as: *Acta Cient. Venezolana*)
Acta Cienc. Indica Acta Ciencia Indica. (Meerut)
Acta Cient. Compostelana Acta Científica Compostelana. (Santiago de Compostela)
Acta Cient. Venezolana Acta Científica Venezolana. Asociación Venezolana para el Avance de la Ciencia. (Caracas)
Acta Cryst. Sect. A Acta Crystallographica. Section A. Crystal Physics, Diffraction, Theoretical and General Crystallography. (Copenhagen)
Acta Cybernet. Acta Cybernetica. (Szeged)
Acta Fac. Rerum Natur. Univ. Comenian. Math. Acta Facultatis Rerum Naturalium Universitatis Comenianæ. Mathematica. (Bratislava) (Continued as: *Acta Math. Univ. Comenian.*)
Acta Hist. Rerum Natur. Nec Non Tech. Acta Historiæ Rerum Naturalium Nec Non Technicarum. (Prague)
Acta Human. Sci. Univ. Sangio Kyotien. Natur. Sci. Ser. Acta Humanistica et Scientifica Universitatis Sangio Kyotienensis. Natural Science Series. (Kyoto)
Acta Inform. Acta Informatica. (Berlin)
Acta Informal. Acta Informatica. (Berlin) (Continued as: *Acta Inform.*)
Acta Math. Acad. Sci. Hungar. Acta Mathematica Academiae Scientiarum Hungaricæ. (Budapest)
Acta Math. Appl. Sinica Acta Mathematicæ Appligatæ Sinica. Yingyong Shuxue Xuebao. (Beijing)
* *Acta Math. Sci.* Acta Mathematica Scientia. Shuxue Wuli Xuebao. (Wuhan)
Acta Math. Sinica Acta Mathematica Sinica Shuxue Xuebao. (Beijing)
* *Acta Math. Univ. Comenian.* Acta Mathematica Universitatis Comenianæ. (Bratislava) (Formerly: *Acta Fac. Rerum Natur. Univ. Comenian. Math.*)
Acta Math. Vietnam. Acta Mathematica Vietnamica. (Hanoi)
Acta Mech. Acta Mechanica. (Vienna)
Acta Mech. Sinica (Beijing) Acta Mechanica Sinica. Lixue Xuebao. (Beijing)
Acta Mech. Sinica (New York) Acta Mechanica Sinica. (New York)
Acta Mexicana Ci. Tecn. Instituto Politécnico Nacional. Acta Mexicana de Ciencia y Tecnología. (Mexico City) (Continued as: *Acta Mexicana Cienc. Tecn.*)
Acta Mexicana Cienc. Tecn. Instituto Politécnico Nacional. Acta Mexicana de Ciencia y Tecnología. (Mexico City)
Acta Philos. Fenn. Acta Philosophica Fennica. (Amsterdam)
Acta Phys. Acad. Sci. Hungar. Acta Physica Academiae Scientiarum Hungaricæ. (Budapest)
Acta Phys. Austriaca Acta Physica Austriaca. (Vienna)
† *Acta Phys. Austriaca Suppl.* Acta Physica Austriaca Supplement. Springer, Vienna.
Acta Phys. Polon. A Polska Akademia Nauk. Instytut Fizyki. Acta Physica Polonica. A. (Warsaw)
Acta Phys. Polon. B Polska Akademia Nauk. Instytut Fizyki. Acta Physica Polonica. B. (Warsaw)
Acta Phys. Sinica Acta Physica Sinica. Wuli Xuebao. (Beijing)
Acta Phys. Slovaca Acta Physica Slovaca. (Bratislava)
Acta Polytech. Práce ČVUT (4) Acta Polytechnica Práce ČVUT v Praze. (Prague)
Acta Polytech. Scand. Math. and Comput. Mach. Ser. Acta Polytechnica Scandinavica. Mathematics and Computing Machinery Series. (Stockholm) (Continued as: *Acta Polytech. Scand. Math. Comput. Sci. Ser.*)
Acta Polytech. Scand. Math. Comput. Sci. Ser. Acta Polytechnica Scandinavica. Mathematics and Computer Science Series. (Helsinki)
Acta Sci. Math. (Szeged) Acta Universitatis Szegediensis. Acta Scientiarum Mathematicarum. (Szeged)
Acta Sci. Natur. Univ. Pekinensis Acta Scientiarum Naturalium Universitatis Pekinensis. (Peking) (Continued as: *Beijing Daxue Xuebao*)
Acta Sci. Natur. Univ. Pekinensis See *Beijing Daxue Xuebao*
Acta Sci. Vietnam. Acta Scientiarum Vietnamicarum. Sectio Scientiarum Mathematicarum et Physicarum. (Hanoi) (Continued as: *Acta Math. Vietnam.*)
Acta Tech. Acad. Sci. Hungar. Acta Technica Academiae Scientiarum Hungaricæ. (Budapest)
Acta Tech. ČSAV Acta Technica. Československá Akademie Věd. (Prague)
Acta Univ. Carolin.—Math. Phys. Acta Universitatis Carolinae. Mathematica et Physica. (Prague)
Acta Univ. Carolinae—Math. et Phys. Acta Universitatis Carolinae. Mathematica et Physica. (Prague) (Continued as: *Acta Univ. Carolin.—Math. Phys.*)
Acta Univ. Oulu. Ser. A Sci. Rerum Natur. Math. Acta Universitatis Oulensis. Series A. Scientiæ Rerum Naturalium. Mathematica. (Oulu)

- Acta Univ. Tampere. Ser. A* Acta Universitatis Tampereensis. Series A. (Tampere)
Acta Univ. Wratislao. Acta Universitatis Wratislaviensis. (Wrocław) (Continued as: *Acta Univ. Wratislao. Mat. Fiz. Astronom.*)
Acta Univ. Wratislao. Mat. Fiz. Astronom. Acta Universitatis Wratislaviensis. Matematika, Fizyka, Astronomia. (Wrocław)
† *Actualités Sci. Indust.* Actualités Scientifiques et Industrielles. [Current Scientific and Industrial Topics] Hermann, Paris.
Actualités Sci. Indust. Actualités Scientifiques et Industrielles. (Paris)
Acustica Acustica. International Journal of Acoustics. (Stuttgart)
Adapt. Sistemy Avtomat. Upravleniya Kievskii Politehnicheskii Institut. Adaptivnyye Sistemy Avtomaticheskogo Upravleniya. (Kiev)
Adaptivnye Sistemy (Riga) Akademija Nauk Latvīskoi SSR. Institut Elektroniki i Vyčislitel'noi Tehniki. Adaptivnye Sistemy. (Riga)
* *Adv. in Appl. Math.* Advances in Applied Mathematics. (New York)
Adv. in Appl. Probab. Advances in Applied Probability. (Sheffield)
Adv. in Math. Advances in Mathematics. (New York)
Adv. in Mech. Advances in Mechanics. (Warsaw)
† *Advanced Textbooks in Econom.* Advanced Textbooks in Economics. Elsevier, Amsterdam.
† *Advances in Appl. Mech.* Advances in Applied Mechanics. Academic Press, New York.
Advances in Appl. Probability Advances in Applied Probability. (Sheffield) (Continued as: *Adv. in Appl. Probab.*)
† *Advances in Chem. Ser.* Advances in Chemistry Series. Amer. Chem. Soc., Washington, D.C.
† *Advances in Computers* Advances in Computers. Academic Press, New York.
Advances in Math. Advances in Mathematics. (New York) (Continued as: *Adv. in Math.*)
† *Advances in Math. Suppl. Studies* Advances in Mathematics, Supplementary Studies. Academic Press, New York.
† *Advances in Probability and Related Topics* Advances in Probability and Related Topics. Dekker, New York.
† *AECL* AECL. Atomic Energy of Canada, Chalk River, Ont.
Aequationes Math. Aequationes Mathematicae. (Basel)
AEU—Arch. Elektron. Übertragungstechn. AEU. Archiv für Elektronik und Übertragungstechnik. (Stuttgart)
† *Afd. Math. Beslisk.* Afdeling Mathematisk Besliskunde. [Department of Operations Research] Math. Centre, Amsterdam.
† *Afd. Math. Statist.* Afdeling Mathematisk Statistik. [Department of Mathematical Statistics] Math. Centre, Amsterdam.
† *Afd. Numer. Wisk.* Afdeling Numerieke Wiskunde. [Department of Numerical Mathematics] Math. Centre, Amsterdam.
† *Afd. Toegepaste Wisk.* Afdeling Toegepaste Wiskunde. [Department of Applied Mathematics] Math. Centre, Amsterdam.
† *Afd. Zuiv. Wisk.* Afdeling Zuivere Wiskunde. [Department of Pure Mathematics] Math. Centre, Amsterdam.
† *AFIPS Conf. Proc.* AFIPS Conference Proceedings. AFIPS Press, Arlington, Va.
Afrika Mat. Afrika Matematika. The First Pan-African Mathematical Journal. (Paris)
† *Agora Math.* Agora Mathematica. Gauthier-Villars, Paris.
AIAA J. American Institute of Aeronautics and Astronautics. Journal. (New York)
AIChE J. The American Institute of Chemical Engineers. Journal. (New York)
AIIE Trans. American Institute of Industrial Engineers. Transactions. (Norcross, Ga.)
† *AIP Conf. Proc.* AIP Conference Proceedings. American Institute of Physics, New York.
Ajatus Ajatus. Suomen Filosofisen Yhdistyksen Vuosikirja. Yearbook of the Philosophical Society of Finland. (Helsinki)
Akad. Nauk Armjan. SSR Dokl. Akademija Nauk Armjanskoi SSR. Doklady. (Erevan)
Akad. Nauk Azerbaidžan. SSR Dokl. Akademija Nauk Azerbaidžanskoi SSR. Doklady. (Baku)
Akad. Nauk Gruzin. SSR Trudy Tbiliss. Mat. Inst. Razmadze Akademija Nauk Gruzinskoi SSR. Trudy Tbilisskogo Matematicheskogo Instituta im. A.M. Razmadze. (Tbilisi) (Continued as: *Trudy Tbiliss. Mat. Inst. Razmadze Akad. Nauk Gruzin. SSR*)
Akad. Nauk Kazah. SSR Trudy Astrofiz. Inst. Akademija Nauk Kazahskoi SSR. Trudy Astrofizicheskogo Instituta. (Alma-Ata)
Akad. Nauk Kazah. SSR Trudy Inst. Mat. i Meh. Akademija Nauk Kazahskoi SSR. Trudy Instituta Matematiki i Mekhaniki. (Alma-Ata)
Akad. Nauk SSSR Inst. Prikl. Mat. Preprint Akademija Nauk SSSR. Institut Prikladnoi Matematiki. Preprint. (Moscow)
Akad. Nauk SSSR Sibirsk. Otdel. Vyčisl. Centr Preprint Akademija Nauk SSSR. Sibirskoe Otdelenie. Vyčislitelnyi Centr. Preprint. (Novosibirsk)
Akad. Nauk SSSR Trudy Jakutsk. Filial. Ser. Fiz. Akademija Nauk SSSR. Trudy Jakutskogo Filiala. Serija Fizicheskaja. (Moscow)
Akad. Nauk Ukrain. SSR Inst. Kibernet. Preprint Akademija Nauk Ukrainskoi SSR. Institut Kibernetiki. Preprint. (Kiev) (Treated as monograph series.)
Akad. Nauk Ukrain. SSR Inst. Mat. Preprint Akademija Nauk Ukrainskoi SSR. Institut Matematiki. Preprint. (Kiev)
Akad. Nauka i Umjet. Bosne i Hercegovine. Rad. Odjel. Prirod. Mat. Nauka Akademija Nauka i Umjetnosti Bosne i Hercegovine. Radovi. Odjeljenje Prirodnih i Matematičkih Nauka. (Sarajevo) (Continued as: *Akad. Nauka Umjet. Bosne Hercegovine. Rad. Odjel. Prirod. Mat. Nauka*)
Akad. Nauka i Umjet. Bosne i Hercegovine. Rad. Odjel. Tehn. Nauka Akademija Nauka i Umjetnosti Bosne i Hercegovine. Radovi. Odjeljenje Tehničkih Nauka. (Sarajevo) (Continued as: *Akad. Nauka Umjet. Bosne Hercegovine. Rad. Odjel. Tehn. Nauka*)
Akad. Nauka Umjet. Bosne Hercegovine. Rad. Odjel. Prirod. Mat. Nauka Akademija Nauka i Umjetnosti Bosne i Hercegovine. Radovi. Odjeljenje Prirodnih i Matematičkih Nauka. (Sarajevo)
Akad. Nauka Umjet. Bosne Hercegovine. Rad. Odjel. Tehn. Nauka Akademija Nauka i Umjetnosti Bosne i Hercegovine. Radovi. Odjeljenje Tehničkih Nauka. (Sarajevo)
† *Akad. Wiss. Lit. Mainz. Abh. Math.-Naturwiss. Kl.* Akademie der Wissenschaften und der Literatur in Mainz. Abhandlungen der Mathematisch-Naturwissenschaftlichen Klasse. (Wiesbaden)
† *Akad. Wiss. Lit. Mainz. Abh. Math.-Naturwiss. Kl.* Akademie der Wissenschaften und der Literatur in Mainz. Abhandlungen der Mathematisch-Naturwissenschaftlichen Klasse. [Academy of Sciences and Literature in Mainz. Transactions of the Mathematical-Scientific Section] Akademie der Wissenschaften und der Literatur in Mainz, Mainz.
Akust. Ž. Akademija Nauk SSSR. Akustičeskii Žurnal. (Moscow) (Translated as: *Soviet Phys. Acoust.*)
Al. Culukidzis Sahelob. Khutpaisi. Sahelmc. Ped. Inst. Šrom. Al. Culukidzis Sahelob Khutpaisi Sahelmcipho Pedagogiji Institutis Šromebi. (Kutaisi)
Algebra and Logic Algebra and Logic. (New York) (Translation of *Algebra i Logika*)
Algebra i Logika Akademija Nauk SSSR. Sibirskoe Otdelenie. Institut Matematiki. Algebra i Logika. (Novosibirsk) (Translated as: *Algebra and Logic*)
Algebra Universalis Algebra Universalis. (Basel)
Algoritmy i Algoritm. Jazyki Vyčislitel'nyi Centr Akademii Nauk SSSR. Algoritmy i Algoritmičeskije Jazyki. (Moscow)
Algoritmy Algoritmy. Prace Instytutu Maszyn Matematycznych Polskiej Akademii Nauk. (Warsaw)
Aligarh Bull. Math. The Aligarh Bulletin of Mathematics. (Aligarh)
Alkalmaz. Mat. Lapok Alkalmazott Matematikai Lapok. (Budapest)
Allgemein. Statist. Arch. Allgemeines Statistisches Archiv. Organ der Deutschen Statistischen Gesellschaft. (Göttingen)
† *Alt-Neuindische Stud.* Alt- und Neuindische Studien. [Old and New Indian Studies] Franz Steiner Verlag GmbH, Wiesbaden.
Alta Frequenza Alta Frequenza. Rivista di Elettronica e Telecomunicazioni della Associazione Elettrotecnica ed Elettronica Italiana. (Milan)
† *Álgebra* Álgebra. Universidad de Santiago de Compostela, Santiago de Compostela.
† *AMD* AMD. ASME, New York.
Amer. J. Math. American Journal of Mathematics. (Baltimore, Md.)
* *Amer. J. Math. Management Sci.* American Journal of Mathematical and Management Sciences. (Columbus, Ohio)
Amer. J. Phys. American Journal of Physics. (New York)
Amer. Math. Monthly The American Mathematical Monthly. (Washington, D.C.)
† *Amer. Math. Soc. Colloq. Publ.* American Mathematical Society Colloquium Publications. American Mathematical Society, Providence, R.I.
Amer. Math. Soc. Transl. American Mathematical Society Translations. (Providence, R.I.) (Treated as monograph series.)
† *Amer. Math. Soc. Transl.* American Mathematical Society Translations, Series 2. American Mathematical Society, Providence, R.I.
* *Amer. Natur.* The American Naturalist. (Chicago, Ill.)
† *Amer. Philos. Quart. Monograph Ser.* American Philosophical Quarterly Monograph Series. Basil Blackwell, Oxford.
Amer. Sci. American Scientist. (New Haven, Conn.)
† *Amer. Sci. Press Ser. Math. Management Sci.* American Sciences Press Series in Mathematical and Management Sciences. American Sciences Press, Columbus, Ohio.
Amer. Statist. The American Statistician. (Washington, D.C.)
† *AMR* Applied Mechanics Reviews. (New York) See *Appl. Mech. Rev.*
An. Acad. Brasil. Ci. Anais da Academia Brasileira de Ciências. (Rio de Janeiro) (Continued as: *An. Acad. Brasil. Ciênc.*)
An. Acad. Brasil. Ciênc. Anais da Academia Brasileira de Ciências. (Rio de Janeiro)
An. Fac. Ci. Univ. Porto Anais de Faculdade de Ciências. Universidade do Porto. (Porto) (Continued as: *An. Fac. Ciênc. Univ. Porto*)
An. Fac. Ciênc. Univ. Porto Anais de Faculdade de Ciências. Universidade do Porto. (Porto)
An. Inst. Mat. Univ. Nac. Autónoma México Anales del Instituto de Matemáticas. Universidad Nacional Autónoma de México. (Mexico City)
An. Ști. Univ. "Al. I. Cuza" Iași Secț. I a Mat. Analele Științifice ale Universității "Al. I. Cuza" din Iași. Seria Nouă. Secțiunea I a Matematică. (Iași) (Continued as: *An. Științ. Univ. "Al. I. Cuza" Iași Secț. I a Mat. (N.S.)*)
An. Ști. Univ. "Al. I. Cuza" Iași Secț. I b Fiz. Universității "Al. I. Cuza" din Iași. Analele Științifice. Secțiunea I b. Fizica. Seria Nouă. (Iași) (Continued as: *An. Științ. Univ. "Al. I. Cuza" Iași Secț. I b Fiz. (N.S.)*)
An. Științ. Univ. "Al. I. Cuza" Iași Secț. I a Mat. (N.S.) Analele Științifice ale Universității "Al. I. Cuza" din Iași. Seria Nouă. Secțiunea I a Matematică. (Iași)
An. Științ. Univ. "Al. I. Cuza" Iași Secț. I b Fiz. (N.S.) Universității "Al. I. Cuza" din Iași. Analele Științifice. Secțiunea I b. Fizica. Seria Nouă. (Iași)
An. Univ. București Fiz. Analele Universității București. Fizica. (Bucharest)
An. Univ. București Mat. Analele Universității București. Matematica. (Bucharest)
An. Univ. București Ști. Natur. Analele Universității București. Științele Naturii. (Bucharest) (Continued as: *An. Univ. București Fiz. and An. Univ. București Mat.*)
An. Univ. Craiova Mat. Fiz.-Chim. Universității din Craiova. Analele. Matematică, Fizică-Chimie. (Craiova)
An. Univ. Craiova Ser. a-IV-a Anale Universității Craiova Seria a-IV-a. (Craiova) (Continued as: *An. Univ. Craiova Ser. a V-a*)
An. Univ. Craiova Ser. a V-a Analele Universității Craiova. Seria a V-a. (Craiova) (Continued as: *An. Univ. Craiova Mat. Fiz.-Chim.*)
An. Univ. Timișoara Ser. Ști. Fiz.-Chim. Analele Universității din Timișoara. Seria Științe Fizice-Chimice. (Timișoara) (Continued as: *An. Univ. Timișoara Ser. Științ. Fiz.-Chim.*)

- An. Univ. Timișoara Ser. Ști. Mat.* Analele Universității din Timișoara. Seria Științe Matematice. (Timișoara) (Continued as: *An. Univ. Timișoara Ser. Științ. Mat.*)
- An. Univ. Timișoara Ser. Științ. Fiz.-Chim.* Analele Universității din Timișoara. Seria Științe Fizice-Chimice. (Timișoara)
- An. Univ. Timișoara Ser. Științ. Mat.* Analele Universității din Timișoara. Seria Științe Matematice. (Timișoara)
- Anal. Math.* Analysis Mathematica. (Budapest)
- Anal. Numér. Théor. Approx.* L'Analyse Numérique et la Théorie de L'Approximation. (Cluj-Napoca)
- * *Analysis* Analysis. International Journal of Analysis and its Application. (Wiesbaden)
- † *Angew. Statist. Ökonometrie* Angewandte Statistik und Ökonometrie. [Applied Statistics and Econometrics] Vandenhoeck & Ruprecht, Göttingen.
- Ann. Acad. Sci. Fenn. Ser. A I Math.* Suomalaisen Tiedekatemian Toimituksia. Sarja A. Annales Academiæ Scientiarum Fennicæ. Series A I. Mathematica. (Helsinki)
- Ann. Acad. Sci. Fenn. Ser. A I Math. Dissertationes* Annales Academiæ Scientiarum Fennicæ. Series A I. Mathematica Dissertationes. (Helsinki)
- Ann. Acad. Sci. Fenn. Ser. A VI Phys.* Suomalaisen Tiedekatemian Toimituksia. Sarja A. Annales Academiæ Scientiarum Fennicæ. Series A VI. Physica. (Helsinki)
- Ann. Discrete Math.* Annals of Discrete Mathematics. (Amsterdam)
- Ann. École Nat. Sup. Méc. Nantes* Annales. École Nationale Supérieure de Mécanique. (Nantes)
- Ann. Fac. Sci. Toulouse Math. (5)* Toulouse. Faculté des Sciences. Annales. Mathématiques. Série 5. (Toulouse)
- Ann. Fac. Sci. Univ. Nat. Zaire (Kinshasa) Sect. Math.-Phys.* Université Nationale du Zaïre. Faculté des Sciences. Annales. Section Mathématique-Physique. (Kinshasa)
- Ann. Gifu College Ed.* Gifu College of Education. The Annals. (Gifu)
- Ann. Hist. Comput.* Annals of the History of Computing. (Arlington, Va.)
- Ann. Human Genetics* Annals of Human Genetics. (Cambridge)
- Ann. I.N.S.E.E.* Ministère de l'Économie et des Finances. Institut National de la Statistique et des Études Économiques. Annales. (Paris)
- Ann. Inst. Fourier (Grenoble)* Université de Grenoble. Annales de l'Institut Fourier. (Grenoble)
- Ann. Inst. H. Poincaré Sect. A* Annales de l'Institut Henri Poincaré. Section A. Physique Théorique. (Paris) (Continued as: *Ann. Inst. H. Poincaré Sect. A (N.S.)*)
- Ann. Inst. H. Poincaré Sect. A (N.S.)* Annales de l'Institut Henri Poincaré. Section A. Physique Théorique. Nouvelle Série. (Paris)
- Ann. Inst. H. Poincaré Sect. B* Annales de l'Institut Henri Poincaré. Section B. Calcul des Probabilités et Statistique. (Paris) (Continued as: *Ann. Inst. H. Poincaré Sect. B (N.S.)*)
- Ann. Inst. H. Poincaré Sect. B (N.S.)* Annales de l'Institut Henri Poincaré. Section B. Calcul des Probabilités et Statistique. Nouvelle Série. (Paris)
- Ann. Inst. Statist. Math.* Annals of the Institute of Statistical Mathematics. (Tokyo)
- † *Ann. Israel Phys. Soc.* Annals of the Israel Physical Society. American Institute of Physics, New York.
- Ann. Japan Assoc. Philos. Sci.* Annals of the Japan Association for Philosophy of Science. (Tokyo)
- Ann. Mat. Pura Appl.* Annali di Matematica Pura ed Applicata. (Bologna) (Continued as: *Ann. Mat. Pura Appl.*)
- Ann. Mat. Pura Appl. (4)* Annali di Matematica Pura ed Applicata. Serie Quarta. (Bologna)
- Ann. Math. Logic* Annals of Mathematical Logic. (Amsterdam)
- † *Ann. New York Acad. Sci.* Annals of the New York Academy of Sciences. New York Academy of Sciences, New York.
- Ann. of Math.* Annals of Mathematics. (Princeton, N.J.) (Continued as: *Ann. of Math.*)
- † *Ann. of Math. Studies* Annals of Mathematics Studies. Princeton University Press, Princeton, N.J.
- Ann. of Math. (2)* Annals of Mathematics. Second Series. (Princeton, N.J.)
- Ann. of Sci.* Annals of Science. (London)
- Ann. Physics* Annals of Physics. (New York)
- Ann. Physik* Annalen der Physik. (Leipzig) (Continued as: *Ann. Physik* (7))
- Ann. Physik (7)* Annalen der Physik. 7. Folge. (Leipzig)
- Ann. Polon. Math.* Polska Akademia Nauk. Annales Polonici Mathematici. (Warsaw)
- Ann. Probab.* The Annals of Probability. (Hayward, Calif.)
- Ann. Probability* The Annals of Probability. (Hayward, Calif.) (Continued as: *Ann. Probab.*)
- Ann. Sci. École Norm. Sup.* Annales Scientifiques de l'École Normale Supérieure. (Paris) (Continued as: *Ann. Sci. École Norm. Sup.*)
- Ann. Sci. École Norm. Sup. (4)* Annales Scientifiques de l'École Normale Supérieure. Quatrième Série. (Paris)
- Ann. Sci. Kanazawa Univ.* Kanazawa University. College of Liberal Arts. Annals of Science. (Kanazawa)
- Ann. Sci. Math. Québec* Les Annales des Sciences Mathématiques du Québec. (Montreal, Que.)
- Ann. Sci. Univ. Besançon Math.* Annales Scientifiques de l'Université de Besançon. Mathématiques. (Besançon) (Continued as: *Ann. Sci. Univ. Besançon Math.*)
- Ann. Sci. Univ. Besançon Math. (3)* Annales Scientifiques de l'Université de Besançon. Mathématiques. 3e Série. (Besançon)
- Ann. Sci. Univ. Besançon Méc. Phys. Théor.* Annales Scientifiques de l'Université de Besançon. Mécanique et Physique Théorique. (Besançon) (Continued as: *Ann. Sci. Univ. Besançon Méc. Phys. Théor.*)
- Ann. Sci. Univ. Besançon Méc. Phys. Théor. (3)* Annales Scientifiques de l'Université de Besançon. Mécanique et Physique Théorique. 3ème Série. (Besançon)
- Ann. Sci. Univ. Besançon Phys.* Université de Besançon. Annales Scientifiques. Physique. (Besançon)
- Ann. Sci. Univ. Clermont Math.* Annales Scientifiques de l'Université de Clermont. Série Mathématique. (Aubière)
- Ann. Scuola Norm. Sup. Pisa Cl. Sci.* Annali della Scuola Normale Superiore di Pisa. Classe di Scienze. (Pisa) (Continued as: *Ann. Scuola Norm. Sup. Pisa Cl. Sci.*)
- Ann. Scuola Norm. Sup. Pisa Cl. Sci. (4)* Annali della Scuola Normale Superiore di Pisa. Classe di Scienze. Serie IV. (Pisa)
- Ann. Scuola Norm. Sup. Pisa Cl. Sci. Fis. Mat.* Annali Scuola Normale Superiore di Pisa. Scienze. Fisiche e Matematiche. (Pisa) (Continued as: *Ann. Scuola Norm. Sup. Pisa Cl. Sci.*)
- Ann. Soc. Math. Polon. Ser. I Comment. Math. Prace Mat.* See *Comment. Math. Prace Mat.*
- Ann. Soc. Math. Polon. Ser. II Wiadom. Mat.* See *Wiadom. Mat.*
- Ann. Soc. Math. Polon. Ser. III Mat. Stos.* See *Mat. Stos.*
- Ann. Soc. Math. Polon. Ser. IV Fund. Inform.* See *Fund. Inform.* (4)
- Ann. Soc. Sci. Bruxelles Sér. I* Annales de la Société Scientifique de Bruxelles. Série I. Sciences Mathématiques, Astronomiques et Physiques. (Namur)
- Ann. Statist.* The Annals of Statistics. (Hayward, Calif.)
- Ann. Syst. Res.* Annals of Systems Research. (Leiden) (Continued as: *Ann. Systems Res.*)
- † *Ann. Systems Res.* Annals of Systems Research. Stenfort Kroese, Leiden.
- Ann. Systems Res.* Annals of Systems Research. (Leiden) (Formerly: *Ann. Syst. Res.*)
- Ann. Univ. Ferrara Sez. VII* Annali dell'Università di Ferrara. Nuovo Serie. Sezione VII. Scienze Matematiche. (Ferrara) (Continued as: *Ann. Univ. Ferrara Sez. VII (N.S.)*)
- Ann. Univ. Ferrara Sez. VII (N.S.)* Annali dell'Università di Ferrara. Nuovo Serie. Sezione VII. Scienze Matematiche. (Ferrara)
- Ann. Univ. Madagascar Sér. Sci. Nature Math.* Annales de l'Université de Madagascar. Série Sciences de la Nature et Mathématiques. (Tananarive)
- Ann. Univ. Mariae Curie-Skłodowska Sect. A* Annales Universitatis Mariae Curie Skłodowska. Sectio A. Mathematica. (Lublin)
- Ann. Univ. Sarav. Math.-Natur. Fak.* Annales Universitatis Saraviensis. Mathematisch-Naturwissenschaftliche Fakultät. (Berlin)
- Ann. Univ. Sci. Budapest. Eötvös Sect. Math.* Annales Universitatis Scientiarum Budapestinensis de Rolando Eötvös Nominatae. Sectio Mathematica. (Budapest)
- Ann. Univ. Turku. Ser. A I* Annales Universitatis Turkuensis. Series A. I. Astronomica-Chemica-Physica-Mathematica. (Turku)
- Annuaire Univ. Sofia Fac. Math.* Godišnik na Sofijskija Universitet Matematičeski Fakultet. Annuaire de l'Université de Sofia. Faculté de Mathématiques. (Sofia) (Continued as: *Annuaire Univ. Sofia Fac. Math. Méc.*)
- Annuaire Univ. Sofia Fac. Math. Méc.* Annuaire de l'Université de Sofia. Faculté de Sofia. Faculté de Mathématiques et Mécanique. (Sofia) (Also listed as: *Godišnik Sofijsk. Univ. Fak. Mat. Meh.*)
- Annuaire Univ. Sofia Fac. Phys.* Godišnik na Sofijskija Universitet. Fizičeski Fakultet. Annuaire de l'Université de Sofia. Faculté de Physique. (Sofia) (Also listed as: *Godišnik Sofijsk. Univ. Fiz. Fak.*)
- Annual Rep. Fac. Ed. Iwate Univ.* Iwate University. Faculty of Education. Annual Report. (Morioka)
- Annual Rep. Fac. Ed. Iwate* Annual Report of the Faculty of Education. University of Iwate. (Kakuzanwaki) (Continued as: *Annual Rep. Fac. Ed. Iwate Univ.*)
- Anz. Österreich. Akad. Wiss. Math.-Natur. Kl.* Österreichische Akademie der Wissenschaften. Mathematisch-Naturwissenschaftliche Klasse. Anzeiger. (Vienna)
- Anz. Österreich. Akad. Wiss. Math.-Naturwiss. Kl.* Österreichische Akademie der Wissenschaften. Mathematisch-Naturwissenschaftliche Klasse. Anzeiger. (Vienna) (Continued as: *Anz. Österreich. Akad. Wiss. Math.-Natur. Kl.*)
- Apl. Mat.* Československá Akademie Věd. Aplikace Matematiky. (Prague)
- † *Appl. Comput. Sci.* Applied Computer Science. Berichte zur Praktischen Informatik. [Applied Computer Science. Reports on Practical Information Science] Hanser, Munich.
- Appl. Math. Comput.* Applied Mathematics and Computation. (New York)
- † *Appl. Math. Comput.* Applied Mathematics and Computation. Addison-Wesley, Reading, Mass.
- * *Appl. Math. Mech.* Applied Mathematics and Mechanics. Yingyong Shuxue He Lixue. (Chongqing) (Translated as: *Appl. Math. Mech. (English Ed.)*)
- * *Appl. Math. Mech. (English Ed.)* Applied Mathematics and Mechanics. English Edition. (Hong Kong) (Translation of *Appl. Math. Mech.*)
- Appl. Math. Modelling* Applied Mathematical Modelling. (Guildford)
- Appl. Math. Notes* Applied Mathematics Notes. (Montreal, Que.)
- Appl. Math. Optim.* Applied Mathematics and Optimization. An International Journal. (New York)
- † *Appl. Math. Sci.* Applied Mathematical Sciences. Springer, New York.
- † *Appl. Mech. Rev.* Applied Mechanics Reviews. (New York) (Usually abbreviated as *AMR* in the text of *Math. Rev.*)
- Appl. Sci. Res.* Applied Scientific Research. An International Journal on Thermal, Mechanical, and Electromagnetic Phenomena in Continua. (The Hague)
- Applicable Anal.* Applicable Analysis. An International Journal. (New York)
- † *Applications Math.* Applications of Mathematics. Springer, New York.
- † *Approaches to Semiotics* Approaches to Semiotics. Mouton, The Hague.
- * *Arab J. Math.* The Arab Journal of Mathematics. (Baghdad)
- Arabian J. Sci. Engrg.* Arabian Journal for Science and Engineering. (Chichester)
- † *Arbeiten Angew. Statist.* Arbeiten zur Angewandten Statistik [Papers on Applied Statistics] Physica Verlag, Vienna.
- † *Arbeiten Niedersächs. Staats- u. Universitätsbibl. Göttingen* Arbeiten aus der Niedersächsischen Staats- und Universitätsbibliothek Göttingen. [Publications of the Lower Saxony State and University Library in Göttingen] Vandenhoeck & Ruprecht, Göttingen.

- Arbeitsber. Inst. Math. Masch. Datencarb. (Inform.)* Institut für Mathematische Maschinen und Datenverarbeitung (Informatik). Arbeitsberichte. (Erlangen) (Treated as monograph series.)
- † *Arbeitsber. Inst. Math. Masch. u. Datencarb., Band 14* Arbeitsberichte des Instituts für Mathematische Maschinen und Datenverarbeitung, Band 14. [Reports of the Institute for Mathematical Machines and Data Processing, Vol. 14] Friedrich Alexander Universität Erlangen Nürnberg, Erlangen.
- † *Arbeitsber. Rechenzentrum* Arbeitsberichte des Rechenzentrums. [Reports of the Computer Center] Ruhr Universität, Bochum.
- † *Arbeitsbericht* Arbeitsbericht. [Report] Ruhr Universität, Bochum.
- Årbok Unio. Bergen Mat.-Natur. Ser.* Årbok for Universitetet i Bergen. Matematisk-Naturvidenskapelig Serie. (Bergen)
- † *Arbor Scientiarum: Beiträge Wissenschaftsgeschichte, Reihe A: Abhandlungen* Arbor Scientiarum: Beiträge Wissenschaftsgeschichte, Reihe A: Abhandlungen. [Arbor Scientiarum: Contributions to the History of Science, Series A: Proceedings] Gerstenberg, Hildesheim.
- † *Arbor Scientiarum: Beiträge Wissenschaftsgeschichte, Reihe B: Texte* Arbor Scientiarum: Beiträge zur Wissenschaftsgeschichte, Reihe B: Texte. [Arbor Scientiarum: Contributions to the History of Science, Series B: Texts] Gerstenberg, Hildesheim.
- Arch. Automat. i Telemekh.* Polska Akademia Nauk. Komitet Automatyki i Cybernetyki Technicznej. Archiwum Automatyki i Telemekhaniki. (Warsaw) (Continued as: *Arch. Automat. Telemekh.*)
- Arch. Automat. Telemekh.* Polska Akademia Nauk. Komitet Automatyki i Cybernetyki Technicznej. Archiwum Automatyki i Telemekhaniki. (Warsaw)
- Arch. Elek. Übertr.* Archiv für Elektronik und Übertragungstechnik. Electronics and Communication. (Stuttgart) (Continued as: *AEÜ—Arch. Elektron. Übertragungstechn.*)
- Arch. Elektrotech.* Polska Akademia Nauk. Komitet Elektrotechniki. Komitet Elektroniki i Telekomunikacji. Archiwum Elektrotechniki. (Warsaw)
- Arch. Hist. Exact Sci.* Archive for History of Exact Sciences. (Berlin)
- Arch. History Exact Sci.* Archive for History of Exact Sciences. (Berlin) (Continued as: *Arch. Hist. Exact Sci.*)
- Arch. Internat. Hist. Sci.* Archives Internationales d'Histoire des Sciences. (Wiesbaden)
- Arch. Internat. Histoire Sci.* Archives Internationales d'Histoire des Sciences. (Paris) (Continued as: *Arch. Internat. Hist. Sci.*)
- Arch. Math. (Basel)* Archiv der Mathematik. Archives of Mathematics. Archives Mathématiques. (Basel)
- Arch. Math. (Brno)* Spisy Přírodovědecké Fakulty University J. E. Purkyně v Brně. Archivum Mathematicum. (Brno)
- Arch. Math. Logik Grundlag.* Archiv für Mathematische Logik und Grundlagenforschung. (Stuttgart)
- Arch. Math. Logik Grundlagenforsch.* Archiv für Mathematische Logik und Grundlagenforschung. (Stuttgart) (Continued as: *Arch. Math. Logik Grundlag.*)
- Arch. Mech. (Arch. Mech. Stas.)* Polish Academy of Sciences. Institute of Fundamental Technical Research. Archives of Mechanics (Archiwum Mechaniki Stosowanej). (Warsaw)
- Arch. Rational Mech. Anal.* Archive for Rational Mechanics and Analysis. (Berlin)
- *Archaeoastronomy* Archaeoastronomy. (Chalfont St. Giles)
- Archimede* Archimede. Rivista per gli Insegnanti e i Cultori di Matematiche Pure e Applicate. (Florence)
- Ark. Mat.* Arkiv för Matematik. (Djursholm)
- Arkhimedes* Arkhimedes. Suomen Fysikkoseura-Finlands Fysikerforening r.y. Suomen Matemaattinen Yhdistys-Finlands Matematiska Förening r.y. (Helsinki)
- Armjan. Gos. Ped. Inst. Sb. Naučn. Trud. Ser. Fiz.-Mat.* Armjanskij Gosudarstvennyj Pedagogičeskij Institut imeni H. Abovjan. Sbornik Naučnyh Trudov. Serija Fiziko-Matematičeskaja. (Erevan)
- † *ARO Rep. 79* ARO Report 79. U. S. Army Research Office, Research Triangle Park, N.C.
- † *ARO Rep. 80* ARO Report 80. U. S. Army Research Office, Research Triangle Park, N.C.
- † *ARO Rep. 81* ARO Report 81. U. S. Army Research Office, Research Triangle Park, N.C.
- Arquivo Inst. Gulbenkian Ci. A Estud. Mat. Fis.-Mat.* Arquivo do Instituto Gulbenkian de Ciência. A. Estudos Matemáticos e Físico-Matemáticos. (Lisbon)
- Ars Combin.* Ars Combinatoria. (Waterloo, Ont.)
- Ars Combinatoria* Ars Combinatoria. (Waterloo, Ont.) (Continued as: *Ars Combin.*)
- Artificial Intelligence* Artificial Intelligence. An International Journal. (Amsterdam)
- † *Artificial Intelligence Ser.* Artificial Intelligence Series. Elsevier, Amsterdam.
- † *Asoc. Mat. Española* Asociación Matemática Española. [Spanish Mathematical Association] Asociación Matemática Española, Madrid.
- † *Asstérisque* Asstérisque. Société Mathématique de France, Paris.
- Asin Bull.* The Asin Bulletin. International Journal for Actuarial Studies in Non-Life Insurance and Risk Theory. (Leiden)
- † *Astro* Astro. Max-Planck-Institut für Physik und Astrophysik, Munich.
- Astrofizika* Akademija Nauk Armjanskoi SSR. Astrofizika. (Erevan) (Translated as: *Astrophysics*)
- Astrometr. i Astrofiz.* Akademija Nauk Ukrainkoj SSR. Glavnaja Astronomičeskaja Observatorija. Astronometrija i Astrofizika. (Kiev)
- Astronom. and Astrophys.* Astronomy and Astrophysics. (Berlin)
- Astronom. Astrophys. Suppl. Ser.* Astronomy & Astrophysics. Supplement Series. (Orsay)
- Astronom. J.* The Astronomical Journal. (New York)
- Astronom. Nachr.* Astronomische Nachrichten. (Berlin)
- Astronom. Ž.* Akademija Nauk SSSR. Astronomičeskij Žurnal. (Moscow) (Translated as: *Soviet Astronom.*)
- Astrophys. and Space Sci.* Astrophysics and Space Science. (Dordrecht)
- Astrophys. J.* The Astrophysical Journal. (Chicago, Ill.)
- Astrophys. J. Suppl.* Astrophysical Journal. Supplement Series. (Chicago, Ill.)
- † *Astrophys. Space Sci. Lib.* Astrophysics and Space Science Library. Reidel, Dordrecht.
- Astrophysics* Astrophysics. A translation of Astrofizika of the Academy of Sciences of the Armenian SSR. (New York) (Translation of *Astrofizika*)
- † *Athenäum Taschenbücher* Athenäum Taschenbücher. [Athenaeum Paperbacks] Athenäum, Königstein/Ts.
- Atti Accad. Ligure Sci. Lett.* Atti della Accademia Ligure di Scienze e Lettere. (Genoa)
- Atti Accad. Naz. Lincei Mem. Cl. Sci. Fis. Mat. Natur. Sez. Ia* Atti della Accademia Nazionale dei Lincei. Memorie. Classe di Scienze Fisiche, Matematiche e Naturali. Sezione Ia. Matematica, Meccanica, Astronomia, Geodesia e Geofisica. (Rome) (Continued as: *Atti Accad. Naz. Lincei Mem. Cl. Sci. Fis. Mat. Natur. Sez. Ia* (8))
- Atti Accad. Naz. Lincei Mem. Cl. Sci. Fis. Mat. Natur. Sez. Ia* (8) Atti della Accademia Nazionale dei Lincei. Memorie. Classe di Scienze Fisiche, Matematiche e Naturali. Sezione Ia. Matematica, Meccanica, Astronomia, Geodesia e Geofisica. Serie VIII. (Rome)
- Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur.* Atti della Accademia Nazionale dei Lincei. Rendiconti. Classe di Scienze Fisiche, Matematiche e Naturali. (Rome) (Continued as: *Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur.* (8))
- Atti Accad. Naz. Lincei Rend. Cl. Sci. Fis. Mat. Natur.* (8) Atti della Accademia Nazionale dei Lincei. Rendiconti. Classe di Scienze Fisiche, Matematiche e Naturali. Serie VIII. (Rome)
- Atti Accad. Peloritana Pericolanti Cl. Sci. Fis. Mat. Natur.* Accademia Peloritana dei Pericolanti. Classe Scienze, Fisiche, Matematiche e Naturali. Atti. (Messina)
- Atti Accad. Sci. Fis. Mat. Napoli* Atti dell'Accademia delle Scienze Fisiche e Matematiche di Napoli. (Naples)
- Atti Accad. Sci. Ist. Bologna Cl. Sci. Fis. Rend.* Atti della Accademia delle Scienze dell'Istituto di Bologna. Classe di Scienze Fisiche. Rendiconti. (Bologna) (Continued as: *Atti Accad. Sci. Ist. Bologna Cl. Sci. Fis. Rend.* (13))
- Atti Accad. Sci. Ist. Bologna Cl. Sci. Fis. Rend.* (13) Atti della Accademia delle Scienze dell'Istituto di Bologna. Classe di Scienze Fisiche. Rendiconti. Serie XIII. (Bologna)
- Atti Accad. Sci. Lett. Arti Palermo Parte I* Atti della Accademia di Scienze Lettere e Arti di Palermo. Parte Prima. Scienze. (Palermo) (Continued as: *Atti Accad. Sci. Lett. Arti Palermo Parte I* (4))
- Atti Accad. Sci. Lett. Arti Palermo Parte I* (4) Atti della Accademia di Scienze Lettere e Arti di Palermo. Parte Prima. Scienze. Serie Quarta. (Palermo)
- Atti Accad. Sci. Torino Cl. Sci. Fis. Mat. Natur.* Atti della Accademia delle Scienze di Torino. Classe di Scienze Fisiche, Matematiche e Naturali. (Turin)
- † *Atti Convegni Lincei* Atti dei Convegni Lincei. [Acts of the Lincei Conferences] Accademia Nazionale dei Lincei, Rome.
- Atti Sem. Mat. Fis. Univ. Modena* Atti del Seminario Matematico e Fisico dell'Università di Modena. (Modena)
- Atti Soc. Peloritana Sci. Fis. Mat. Natur.* Atti della Società Peloritana di Scienze Fisiche Matematiche e Naturali. (Messina)
- Austral. Comput. J.* The Australian Computer Society. The Australian Computer Journal. (Chippendale)
- Austral. J. Phys.* Australian Journal of Physics. (Melbourne)
- Austral. J. Statist.* The Australian Journal of Statistics. (Canberra)
- Austral. Math. Soc. Gaz.* The Australian Mathematical Society. Gazette. (St. Lucia)
- † *Auswahl* Auswahl. [Selection] Hermann Schroedel Verlag KG, Hannover.
- Automat. Control and Computer Sci.* Automatic Control and Computer Sciences. (New York) (Translation of *Automat. i Vyčisl. Tehn.* (Riga)) (Continued as: *Automat. Control Comput. Sci.*)
- Automat. Control Comput. Sci.* Automatic Control and Computer Sciences. (New York) (Translation of *Automat. i Vyčisl. Tehn.* (Riga))
- Automat. Control Theory Appl.* Automatic Control Theory and Applications. (Calgary, Alta.)
- Automat. Document. and Math. Linguistics* Automatic Documentation and Mathematical Linguistics. (New York) (Translation of *Naučn.-Tehn. Informacija (VINITI) Ser. 2. Informacionnye Processy i Sistemy*)
- Automat. Programming* Automatic Programming. (Oxford)
- Automat. Remote Control* Automation and Remote Control. A translation of *Avtomatika i Telemekhanika*, a publication of the Academy of Sciences of the USSR. (New York) (Translation of *Automat. i Telemekh.*)
- Automatic Control Theory Appl.* Automatic Control Theory and Applications. (Calgary, Alta.) (Continued as: *Automat. Control Theory Appl.*)
- Automatica—J. IFAC* Automatica. The Journal of IFAC. The International Federation of Automatic Control. (Oxford)
- Ash. Norske Vid.-Akad. Oslo I (N.S.)* Avhandlinger Utgitt av det Norske Videnskaps-Akademi i Oslo I. Mat.-Naturv. Klasse. Ny Serie. (Oslo)
- Avtomat. i Izčisl. Tehn.* Avtomatika i Izčislitel'naja Tehnika. (Sofia) (Continued as: *Avtomat. Izčisl. Tehn.*)
- Avtomat. i Telemekh.* Akademija Nauk SSSR. Avtomatika i Telemekhanika. (Moscow) (Translated as: *Automat. Remote Control*)
- Avtomat. i Vyčisl. Tehn.* (Riga) Akademija Nauk Latvīsko SSR. Avtomatika i Vyčislitel'naja Tehnika. (Riga) (Translated as: *Automat. Control Comput. Sci.*)
- Avtomat. i Vyčisl. Tehnika* (Minsk) Minskij Radiotekhičeskij Institut. Avtomatika i Vyčislitel'naja Tehnika. (Minsk)
- Avtomat. Izčisl. Tehn.* Avtomatika i Izčislitel'naja Tehnika. (Sofia)
- Avtomat. Sistemy Upravlen. (LGU)* Leningradskij Gosudarstvennyj Universitet. Avtomatizirovannye Sistemy Upravlenija. (Leningrad)
- Avtomat. Sistemy Upravlenija i Pribery Avtomat.* Avtomatizirovannye Sistemy Upravlenija i Pribery Avtomatiki. (Kharkov)

- Actomat. Upravl. i Vyčisl. Tehnika* Avtomatičeskoe Upravlenie i Vyčislitel'naja Tehnika. (Moscow)
- Aotomatika* Akademiya Nauk Ukrain'skoi RSR. Institut Elektrotehniki. Avtomatika. (Kiev) (Translated as: *Soviet Automat. Control*)
- Aotometrija* Avtometrija. Akademiya Nauk SSSR. Sibirskoe Otdelenie. (Novosibirsk)
- Azerbaidžan. Gos. Univ. Učen. Zap.* Azerbaidžanskii Gosudarstvennyi Universitet imeni M. Kirova. Učenyje Zapiski. (Baku)
- Azerbaidžan. Gos. Univ. Učen. Zap. Ser. Fiz.-Mat. Nauk* Azerbaidžanskii Gosudarstvennyi Universitet im. S. M. Kirova. Učenyje Zapiski. Serija Fiziko-Matematičeskikh Nauk. (Baku) (Continued as: *Azerbaidžan. Gos. Univ. Učen. Zap.*)
- Banach Center Publ.* Banach Center Publications. PWN, Warsaw.
- Bangabasi College Mag.* Bangabasi College Magazine. (Calcutta)
- Bangabasi Morning College Mag.* Bangabasi Morning College Magazine. (Calcutta)
- Balkir. Gos. Univ. Učen. Zap.* Baškiriñii Gosudarstvennyi Universitet. Učenyje Zapiski. (Ufa)
- Bayer. Akad. Wiss. Math.-Natur. Kl. Abh.* Bayerische Akademie der Wissenschaften. Mathematisch-Naturwissenschaftliche Klasse. Abhandlungen. (Munich) (Continued as: *Bayer. Akad. Wiss. Math.-Natur. Kl. Abh. (N.F.)*)
- Bayer. Akad. Wiss. Math.-Natur. Kl. Abh. (N.F.)* Bayerische Akademie der Wissenschaften. Mathematisch-Naturwissenschaftliche Klasse. Abhandlungen. Neue Folge. (Munich)
- Bayer. Akad. Wiss. Math.-Natur. Kl. S.-B.* Bayerische Akademie der Wissenschaften. Mathematisch-Naturwissenschaftliche Klasse. Sitzungsberichte. (Munich) (Continued as: *Bayer. Akad. Wiss. Math.-Natur. Kl. Sitzungsber.*)
- Bayer. Akad. Wiss. Math.-Natur. Kl. Sitzungsber.* Bayerische Akademie der Wissenschaften. Mathematisch-Naturwissenschaftliche Klasse. Sitzungsberichte. (Munich)
- Bayreuth. Math. Schr.* Bayreuther Mathematische Schriften. (Bayreuth)
- Behavioral Sci.* Behavioral Science. Journal of the Society for General Systems Research. (Louisville, Ky.)
- Beihfte Elem. Math.* Beihfte zur Zeitschrift "Elemente der Mathematik". [Supplements to the Journal "Elements of Mathematics"] Birkhäuser, Basel-Boston.
- Beijing Daxue Xuebao* Beijing Daxue Xuebao. Ziran Kexue Ban. Beijing University Journal. Natural Sciences. (Beijing)
- Beijing Daxue Xuebao* See *Acta Sci. Natur. Univ. Pekinensis*
- Beitr. Algebra Geom.* See *Beitr. Martin-Luther-Univ. Halle-Wittenberg M*
- Beitr. Datenverarb. Unternehmensforsch.* Beiträge Datenverarbeitung und Unternehmensforschung. [Contributions to Data Processing and Marketing Research] Verlag Anton Hain, Meisenheim am Glan.
- Beitr. Forschungstech.* Beiträge zur Forschungstechnologie. [Contributions to Research Technology] Akademie-Verlag, Berlin.
- Beitr. Math. Informatik Nachrichtentech.* Beiträge zur Mathematik, Informatik und Nachrichtentech. [Contributions to Mathematics, Information Science and Communications] Herbert Lang, Bern.
- Beiträge Algebra Geom.* Beiträge zur Algebra und Geometrie. (Halle)
- Beiträge Anal.* Beiträge zur Analysis. (Berlin)
- Beiträge Numer. Math.* Beiträge zur Numerischen Mathematik. (Berlin)
- Bell J. Econom.* The Bell Journal of Economics. (New York)
- Bell System Tech. J.* The Bell System Technical Journal. (Murray Hill, N.J.)
- Benchmark Papers Electrical Engrg. Comput. Sci.* Benchmark Papers in Electrical Engineering and Computer Science. Academic Press, New York.
- Ber. ATWD Bericht ATWD.* [Report ATWD] Physikalisch-Technische Bundesanstalt, Braunschweig.
- Ber. Gesellsch. Math. Datenverarb.* Berichte der Gesellschaft für Mathematik und Datenverarbeitung. [Reports of the Society for Mathematics and Data Processing] Oldenbourg, Munich.
- Ber. Math.-Statist. Sekt. Forsch. Graz* Graz. Forschungszentrum. Mathematisch-Statistische Sektion. Berichte. (Graz) (Treated as monograph series.)
- Ber. Math.-Statist. Sekt. Forschungszentrum Graz* Graz. Forschungszentrum. Mathematisch-Statistische Sektion. Berichte. (Graz) (Continued as: *Ber. Math.-Statist. Sekt. Forsch. Graz*)
- Ber. Univ. Jyväskylä Math. Inst.* Jyväskylä. Universität. Mathematisches Institut. Bericht. (Jyväskylä)
- Bericht Bericht.* [Report] Forschungszentrum Graz, Graz.
- Bericht Bericht.* [Report] Universität Karlsruhe, Fakultät der Mathematik, Karlsruhe.
- Bericht Bericht.* [Report] Zentralinstitut für Angewandte Mathematik, Kernforschungsanlage Jülich, Jülich.
- Bericht Bericht.* [Report] Universität Hamburg, Institut für Informatik, Hamburg.
- B.I. Hochschultaschenbücher* B.I. Hochschultaschenbücher. [B.I. University Paperbacks] Bibliographisches Institut, Mannheim.
- Bibl. Arch. Roman.* Ser. II: Linguistica Bibliotheca dell' "Archivum Romanicum", Serie II: Linguistica. [Library of the "Archivum Romanicum", Series II: Linguistics] Leo S. Olschki Editore, Florence.
- Bibl. "Kvant"* Библиотека "Квант". [Library "Kvant"] Nauka, Moscow.
- Bibl. Mat.* Biblioteczka Matematyczna. [Mathematics Library] Wydawnictwa Szkolne i Pedagogiczne, Warsaw.
- Bibl. Mat.* Biblioteczka Matematyczna. [Mathematics Library] PWN, Warsaw.
- Bibl. Math.* Bibliotheca Mathematica. [Mathematics Library] North-Holland, Amsterdam-New York.
- Bibl. Problem.* Biblioteczka Problemów. [Problems Library] PWN, Warsaw.
- Biblio. France* Bibliographie de la France. (Paris)
- Biblio. Sci. Nat. Helv.* Bibliographia Scientiae Naturalis Helvetica. (Bern)
- Biographien Hervorragender Naturwissenschaftler, Techniker und Mediziner* Biographies of Distinguished Scientists, Technologists and Physicians. Teubner, Leipzig.
- Biol. Cybernet.* Biological Cybernetics. (Berlin)
- Biomathematics* Biomathematics. Springer, New York.
- Biometrical J.* Biometrical Journal. (Berlin)
- Biometrics* Biometrics. Journal of the Biometric Society. (Washington, D.C.)
- Biometrika* Biometrika. (London)
- Biometrische Z.* Biometrische Zeitschrift. (Berlin) (Continued as: *Biometrical J.*)
- BIT BIT* Nordisk Tidsskrift for Informationsbehandling (BIT). (Copenhagen)
- Bul. Lubel. Towarz. Nauk. Mat. Fiz. Chem.* Biuletyn Lubelskiego Towarzystwa Naukowego. Matematyka. Fizyka. Chemia. (Warsaw)
- Bul. Wojsk. Akad. Tech.* Biuletyn Wojskowej Akademii Technicznej im. Jarosława Dąbrowskiego. (Warsaw)
- Bjull. Inst. Teoret. Astronom.* Akademiya Nauk Sojuz Sovetskikh Socialističeskikh Respublik. Bjulleten' Instituta Teoretičeskoi Astronomii. (Moscow)
- Bol. Mat.* Boletín de Matemáticas. (Bogotá)
- Bol. Mat. Estatist. Fis.* Boletim de Matemática, Estatística e Física. (São Paulo)
- Bol. Soc. Brasil. Mat.* Boletim da Sociedade Brasileira de Matemática. (Rio de Janeiro)
- Bol. Soc. Mat. Mexicana* Boletín de la Sociedad Matemática Mexicana. (Mexico City) (Continued as: *Bol. Soc. Mat. Mexicana* (2))
- Bol. Soc. Mat. Mexicana* (2) Boletín de la Sociedad Matemática Mexicana. Segunda Serie. (Mexico City)
- Bol. Soc. Paran. Mat.* (2) Boletim da Sociedade Paranaense de Matemática. 2ª Série. (Paraná)
- Boll. Un. Mat. Ital.* Bollettino della Unione Matematica Italiana. (Bologna) (Continued as: *Boll. Un. Mat. Ital. A* and *Boll. Un. Mat. Ital. B*)
- Boll. Un. Mat. Ital. A* Unione Matematica Italiana. Bollettino. A. (Bologna) (Formerly: *Boll. Un. Mat. Ital.*)
- Boll. Un. Mat. Ital. A* (5) Unione Matematica Italiana. Bollettino. A. Serie V. (Bologna)
- Boll. Un. Mat. Ital. B* Unione Matematica Italiana. Bollettino. B. (Bologna) (Formerly: *Boll. Un. Mat. Ital.*)
- Boll. Un. Mat. Ital. B* (5) Unione Matematica Italiana. Bollettino. B. Serie V. (Bologna)
- Boll. Un. Mat. Ital. C* (5) Unione Matematica Italiana. Bollettino. C. Serie V. Analisi Funzionale e Applicazioni. (Bologna)
- Bonn. Math. Schr.* Bonner Mathematische Schriften. (Bonn) (Treated as monograph series.)
- Bonner Math. Schriften* Bonner Mathematische Schriften. [Bonn Mathematical Publications] Mathematisches Institut der Universität, Bonn.
- Books in Library and Information Sci.* Books in Library and Information Science. Dekker, New York.
- Boston Studies Philos. Sci.* Boston Studies in the Philosophy of Science. Reidel, Dordrecht.
- British J. Hist. Sci.* British Society for the History of Science. British Journal for the History of Science. (Chalfont St Giles)
- British J. Math. Statist. Psych.* The British Journal of Mathematical and Statistical Psychology. (Leicester)
- British J. Math. Statist. Psychology* The British Journal of Mathematical and Statistical Psychology. (London) (Continued as: *British J. Math. Statist. Psych.*)
- British J. Philos. Sci.* The British Journal for the Philosophy of Science. (Aberdeen)
- British Nat. Biblio.* British National Bibliography. (London)
- BS110* Centre National de la Recherche Scientifique. Bulletin Signalétique 110. Informatique. Automatique. Recherche Opérationnelle. Gestion. (Paris) See *Bull. Signal.* 110
- Buchreihe Atomkernenergie* Buchreihe der Atomkernenergie. [Book Series on Nuclear Energy] Verlag Karl Thieme, Munich.
- Bul. Akad. Științe RSS Moldova.* Buletinul Academiei de Științe a RSS Moldovenești. (Kishinev) (Continued as: *Izv. Akad. Nauk Moldav. SSR Ser. Fiz.-Tehn. Mat. Nauk*)
- Bul. Inst. Politehn. București* Buletinul Institutului Politehnic București. (Bucharest) (Continued as: *Bul. Inst. Politehn. București Ser. Chim.-Metal.*, *Bul. Inst. Politehn. București Ser. Electrotehn.*, and *Bul. Inst. Politehn. București Ser. Mec.*)
- Bul. Inst. Politehn. București Ser. Chim.-Metal.* Institutului Politehnic "Gheorghe Gheorghiu-Dej" București. Buletinul. Seria Chimie-Metalurgie. (Bucharest)
- Bul. Inst. Politehn. București Ser. Electrotehn.* Institutului Politehnic "Gheorghe Gheorghiu-Dej" București. Buletinul. Seria Electrotehnică. (Bucharest)
- Bul. Inst. Politehn. București Ser. Mec.* Institutului Politehnic "Gheorghe Gheorghiu-Dej" București. Buletinul. Seria Mecanică. (Bucharest)
- Bul. Inst. Politehn. Iași* Buletinul Institutului Politehnic din Iași. Serie Nouă. (Iași) (Continued as: *Bul. Inst. Politehn. Iași (N.S.)*)
- Bul. Inst. Politehn. Iași (N.S.)* Buletinul Institutului Politehnic din Iași. Serie Nouă. (Iași) (Continued as: *Bul. Inst. Politehn. Iași Sect. I*) (Formerly: *Bul. Inst. Politehn. Iași*)
- Bul. Inst. Politehn. Iași Sect. I* Institutului Politehnic din Iași. Buletinul. Secția I. Matematică. Mecanică Teoretică. Fizică. (Iași)
- Bul. Ști. Inst. Politehn. Cluj* Buletinul Științific al Institutului Politehnic din Cluj. (Cluj) (Continued as: *Bul. Ști. Inst. Politehn. Cluj Ser. Construc.*, *Bul. Ști. Inst. Politehn. Cluj Ser. Electromec.*, and *Bul. Ști. Inst. Politehn. Cluj Ser. Mec.*)
- Bul. Ști. Inst. Politehn. Cluj Ser. Construc.* Institutului Politehnic Cluj. Buletinul Științific. Seria Construcții. (Cluj) (Continued as: *Bul. Științ. Inst. Politehn. Cluj Ser. Construc.*) (Formerly: *Bul. Ști. Inst. Politehn. Cluj*)
- Bul. Ști. Inst. Politehn. Cluj Ser. Electromec.* Buletinul Științific al Institutului Politehnic Cluj. Seria Electromecanică. (Cluj) (Continued as: *Bul. Științ. Inst. Politehn. Cluj Ser. Electromec.*) (Formerly: *Bul. Ști. Inst. Politehn. Cluj*)
- Bul. Ști. Inst. Politehn. Cluj Ser. Mec.* Buletinul Științific al Institutului Politehnic Cluj. Seria Mecanică. (Cluj) (Continued as: *Bul. Științ. Inst. Politehn. Cluj Ser. Mec.*) (Formerly: *Bul. Ști. Inst. Politehn. Cluj*)

- Bul. Ști. Tehn. Inst. Politehn. Timișoara Ser. Mat.-Fiz.-Mec. Teoret. Apl.* Buletinul Științific și Tehnic al Institutului Politehnic Timișoara. Seria Matematică-Fizică-Mecanică Teoretică și Aplicată. (Timișoara) (Continued as: *Bul. Ști. Tehn. Inst. Politehn. "Traian Vuia" Timișoara*)
- Bul. Ști. Tehn. Inst. Politehn. "Traian Vuia" Timișoara* Institutului Politehnic "Traian Vuia" Timișoara. Buletinul Științific și Tehnic. (Timișoara) (Continued as: *Bul. Științ. Tehn. Inst. Politehn. "Traian Vuia" Timișoara*) (Formerly: *Bul. Ști. Tehn. Inst. Politehn. Timișoara Ser. Mat.-Fiz.-Mec. Teoret. Apl.*)
- Bul. Științ. Inst. Politehn. Cluj-Napoca* Al Institutului Politehnic Cluj-Napoca. Buletinul Științific. (Cluj-Napoca) (Continued as: *Bul. Științ. Inst. Politehn. Cluj-Napoca Ser. Architect.-Construc.*, *Bul. Științ. Inst. Politehn. Cluj-Napoca Ser. Chim. Metal.*, *Bul. Științ. Inst. Politehn. Cluj-Napoca Ser. Construc. Maș.*, *Bul. Științ. Inst. Politehn. Cluj-Napoca Ser. Electrotehn.-Energet.-Inform.*, and *Bul. Științ. Inst. Politehn. Cluj-Napoca Ser. Mat.-Fiz.-Mec. Apl.*)
- Bul. Științ. Inst. Politehn. Cluj-Napoca Ser. Architect.-Construc.* Al Institutului Politehnic Cluj-Napoca. Buletinul Științific. Seria Arhitectură-Construcții. (Cluj-Napoca) (Mathematical Reviews does not review this seria.)
- Bul. Științ. Inst. Politehn. Cluj-Napoca Ser. Chim. Metal.* Al Institutului Politehnic Cluj-Napoca. Buletinul Științific. Seria Chimie-Metalurgie. (Cluj-Napoca)
- Bul. Științ. Inst. Politehn. Cluj-Napoca Ser. Construc. Maș.* Al Institutului Politehnic Cluj-Napoca. Buletinul Științific. Seria Construcții de Mașini. (Cluj-Napoca) (Mathematical Reviews does not review this seria.)
- Bul. Științ. Inst. Politehn. Cluj-Napoca Ser. Electrotehn.-Energet.-Inform.* Al Institutului Politehnic Cluj-Napoca. Buletinul Științific. Seria Electrotehnică-Energetică-Informatică. (Cluj-Napoca)
- Bul. Științ. Inst. Politehn. Cluj-Napoca Ser. Mat.-Fiz.-Mec. Apl.* Al Institutului Politehnic Cluj-Napoca. Buletinul Științific. Seria Matematică-Fizică-Mecanică Aplicată. (Cluj-Napoca)
- Bul. Științ. Inst. Politehn. Cluj Ser. Construc.* Institutului Politehnic Cluj. Buletinul Științific. Seria Construcții. (Cluj) (Continued as: *Bul. Științ. Inst. Politehn. Cluj-Napoca*)
- Bul. Științ. Inst. Politehn. Cluj Ser. Electromec.* Buletinul Științific al Institutului Politehnic Cluj. Seria Electromecanică. (Cluj) (Continued as: *Bul. Științ. Inst. Politehn. Cluj-Napoca*)
- Bul. Științ. Inst. Politehn. Cluj Ser. Mec.* Buletinul Științific al Institutului Politehnic Cluj. Seria Mecanică. (Cluj) (Continued as: *Bul. Științ. Inst. Politehn. Cluj-Napoca*)
- Bul. Științ. Tehn. Inst. Politehn. "Traian Vuia" Timișoara* Institutului Politehnic "Traian Vuia" Timișoara. Buletinul Științific și Tehnic. (Timișoara)
- Bul. Univ. Brașov Ser. A Mec. Apl.* Buletinul Universității din Brașov Seria A Mecanică Aplicată Construcții de Mașini. (Brașov) (Continued as: *Univ. Brașov Lucrări Științ.*)
- Bul. Univ. Brașov Ser. C* Universitatea din Brașov. Buletinul. Seria C. (Brașov)
- Bul. Univ. Brașov Ser. C Mat. Fiz. Chim. Ști. Natur.* Buletinul. Universitatea din Brașov. Seria C. Matematică, Fizică, Chimie, Științe Naturale. (Brașov) (Continued as: *Univ. Brașov Lucrări Științ.*)
- Bul. Univ. Galați Fasc. II Mat. Fiz. Mec. Teoret.* Universitatea din Galați. Buletinul. Fascicula II. Matematică, Fizică, Mecanică Teoretică. (Galați)
- Bul. Univ. Sighetor Tirană. Șk. Nat.* Buletin Universității Sighetor i Tirană Fakulteti i Shkencave te Natyrë. (Tiranë)
- Bulgar. J. Phys.* Bulgarian Journal of Physics. (Sofia)
- Bull. Acad. Polon. Sci. Sér. Sci. Math.* L'Académie Polonaise des Sciences. Bulletin. Série des Sciences Mathématiques. (Warsaw)
- Bull. Acad. Polon. Sci. Sér. Sci. Math. Astronom. Phys.* Bulletin de l'Académie Polonaise des Sciences. Série des Sciences Mathématiques, Astronomiques et Physiques. (Warsaw) (Continued as: *Bull. Acad. Polon. Sci. Sér. Sci. Math. and Bull. Acad. Polon. Sci. Sér. Sci. Phys. Astronom.*)
- Bull. Acad. Polon. Sci. Sér. Sci. Phys. Astronom.* L'Académie Polonaise des Sciences. Bulletin. Série des Sciences Physiques et Astronomiques. (Warsaw)
- Bull. Acad. Polon. Sci. Sér. Sci. Tech.* Bulletin de l'Académie Polonaise des Sciences. Série des Sciences Techniques. (Warsaw)
- Bull. Acad. Serbe Sci. Arts Cl. Sci. Math. Natur.* Académie Serbe des Sciences et des Arts. Classe des Sciences Mathématiques et Naturelles. Bulletin. (Belgrade) (Continued as: *Bull. Acad. Serbe Sci. Arts Cl. Sci. Math. Natur. (N.S.)*)
- Bull. Acad. Serbe Sci. Arts Cl. Sci. Math. Natur. (N.S.)* Académie Serbe des Sciences et des Arts. Classe des Sciences Mathématiques et Naturelles. Bulletin. Nouvelle Série. (Belgrade)
- Bull. Acad. Serbe Sci. Arts Cl. Sci. Math. Natur. Sci. Math.* Bulletin de l'Académie Serbe des Sciences et des Arts. Classe des Sciences Mathématiques et Naturelles Sciences. Mathématiques. (Belgrade) (Continued as: *Bull. Acad. Serbe Sci. Arts Cl. Sci. Math. Natur.*)
- *Bull. Aichi Univ. Ed. Natur. Sci.* Bulletin of Aichi University of Education. Natural Science. (Kariya)
- Bull. Amer. Math. Soc.* Bulletin of the American Mathematical Society. (Providence, R.I.) (Continued as: *Bull. Amer. Math. Soc. (N.S.)*)
- Bull. Amer. Math. Soc. (N.S.)* American Mathematical Society. Bulletin. New Series. (Providence, R.I.)
- Bull. Arts Sci. Dio. Univ. Ryukyus Math. Natur. Sci.* University of the Ryukyus. Arts & Science Division. Mathematics & Natural Sciences. Bulletin. (Naha) (Continued as: *Bull. Sci. Engrg. Dio. Univ. Ryukyus Math. Natur. Sci.*)
- Bull. Assoc. Enseign. Math. Sér. B* Association des Enseignants de Mathématiques. Bulletin. Série B. (Rabat)
- Bull. Astronom. Inst. Czechoslovakia* Astronomical Institutes of Czechoslovakia. Bulletin. (Prague)
- Bull. Austral. Math. Soc.* Bulletin of the Australian Mathematical Society. (St. Lucia)
- Bull. Calcutta Math. Soc.* Bulletin of the Calcutta Mathematical Society. (Calcutta)
- Bull. Central Res. Lab. O.I.T.* Bulletin of the Central Research Laboratory. Osaka Institute of Technology. (Osaka)
- Bull. College Sci. (Baghdad)* Bulletin of the College of Science. (Baghdad) (Continued as: *Iraqi J. Sci.*)
- Bull. College Sci. Univ. Ryukyus* University of the Ryukyus. College of Science. Bulletin. (Naha)
- Bull. Dept. Gen. Ed. College Sci. Tech. Nihon Univ.* Bulletin of Department of General Education. College of Science and Technology. Nihon University. (Narashino)
- Bull. Direction Études Rech. Sér. C Math. Inform.* Électricité de France. Bulletin de la Direction des Études et Recherches. Série C. Mathématiques. Informatique. (Grenoble)
- Bull. Direction Études Recherches Sér. C Math. Informat.* Électricité de France. Bulletin de la Direction des Études et Recherches. Série C. Mathématiques. Informatique. (Clamart) (Continued as: *Bull. Direction Études Rech. Sér. C Math. Inform.*)
- *Bull. Fac. Ed. Kagoshima Univ. Natur. Sci.* Bulletin of the Faculty of Education. Kagoshima University. Natural Science. (Kagoshima) (Formerly: *Bull. Fac. Ed. Univ. Kagoshima*)
- Bull. Fac. Ed. Univ. Kagoshima* Bulletin of the Faculty of Education. University of Kagoshima. (Kagoshima) (Continued as: *Bull. Fac. Ed. Kagoshima Univ. Natur. Sci.*)
- Bull. Fac. Ed. Utsunomiya Univ. Sect. 2* Utsunomiya University. Faculty of Education. Section 2. Bulletin. (Utsunomiya)
- Bull. Fac. Ed. Wakayama Univ. Natur. Sci.* Wakayama University. Faculty of Education. Bulletin. Natural Science. (Wakayama)
- Bull. Fac. Engrg. Hiroshima Univ.* Bulletin of the Faculty of Engineering. Hiroshima University. (Hiroshima)
- Bull. Fac. Engrg. Miyazaki Univ.* Bulletin of the Faculty of Engineering. Miyazaki University. (Miyazaki)
- Bull. Fac. Gen. Ed. Gifu Univ.* Gifu University. Faculty of General Education. Bulletin. (Gifu)
- *Bull. Fac. School Ed. Hiroshima Univ. Part II* Bulletin of the Faculty of School Education. Hiroshima University. Part II. (Hiroshima)
- Bull. Fac. Sci. Assiut Univ.* Assiut University. Bulletin of the Faculty of Science. (Assiut)
- Bull. Fac. Sci. Engrg. Chuo Univ.* Chuo University. Faculty of Science and Engineering. Bulletin. (Tokyo)
- Bull. Fac. Sci. Ibaraki Univ. Ser. A* Bulletin of the Faculty of Science. Ibaraki University. Series A. Mathematics. (Mito)
- *Bull. Fac. Sci. King Abdul Aziz Univ.* Bulletin of the Faculty of Science. King Abdul Aziz University. (Jeddah)
- Bull. Fac. Sci. Riyadh Univ. (2)* Bulletin of the Faculty of Science. Riyadh University. Series II. Physical and Mathematical Sciences. (Riyad)
- Bull. Fukuoka Univ. Ed. III* Bulletin of Fukuoka University of Education. Part III. Natural Sciences. (Fukuoka)
- Bull. Géodésique* Bulletin Géodésique. (Paris)
- Bull. Gifu College Ed.* Bulletin of Gifu College of Education. (Gifu) (Continued as: *Ann. Gifu College Ed.*)
- Bull. Inst. Internat. Statist.* Bulletin de l'Institut International de Statistique. (Calcutta)
- Bull. Inst. Math. Acad. Sinica* Bulletin of the Institute of Mathematics. Academia Sinica. (Taipei)
- Bull. Inst. Math. Appl.* Bulletin of the Institute of Mathematics and its Applications. (Southend-on-Sea)
- Bull. Iranian Math. Soc.* Iranian Mathematical Society. Bulletin. (Tehran)
- Bull. JSME* Bulletin of the Japan Society of Mechanical Engineers. (Tokyo)
- Bull. Korean Math. Soc.* Bulletin of the Korean Mathematical Society. (Seoul)
- Bull. Kyoto Univ. Ed. Ser. B* Bulletin of the Kyoto University of Education. Series B. Mathematics and Natural Science. (Kyoto)
- Bull. Kyushu Inst. Tech. Math. Natur. Sci.* Bulletin of the Kyushu Institute of Technology. Mathematics, Natural Science. (Tobata)
- *Bull. Liaison Rech. Inform. Automat.* Bulletin de Liaison de la Recherche en Informatique et Automatique. (Rocquencourt)
- Bull. London Math. Soc.* The Bulletin of the London Mathematical Society. (London)
- Bull. Malaysian Math. Soc.* Malaysian Mathematical Society. Bulletin. (Kuala Lumpur) (Continued as: *Bull. Malaysian Math. Soc. (2)*)
- Bull. Malaysian Math. Soc. (2)* Malaysian Mathematical Society. Bulletin. Second Series. (Kuala Lumpur)
- *Bull. Math.* George O. Okikiolu. Bulletin of Mathematics. (London)
- *Bull. Math. Assoc. India* Bulletin of the Mathematical Association of India. (Kanpur)
- Bull. Math. Biol.* Bulletin of Mathematical Biology. (Elmsford, N.Y.)
- Bull. Math. Biology* Bulletin of Mathematical Biology. (New York) (Continued as: *Bull. Math. Biol.*)
- Bull. Math. Soc. Sci. Math. R. S. Roumanie* Bulletin Mathématique de la Société des Sciences Mathématiques de la République Socialiste de Roumanie. (Bucharest) (Continued as: *Bull. Math. Soc. Sci. Math. R. S. Roumanie (N.S.)*)
- Bull. Math. Soc. Sci. Math. R. S. Roumanie (N.S.)* Bulletin Mathématique de la Société des Sciences Mathématiques de la République Socialiste de Roumanie. Nouvelle Série. (Bucharest)
- Bull. Math. Statist.* Bulletin of Mathematical Statistics. (Fukuoka)
- Bull. Nagoya Inst. Tech.* Bulletin of Nagoya Institute of Technology. (Nagoya)
- Bull. Nara Univ. Ed. Natur. Sci.* Bulletin of Nara University of Education. Natural Science. (Nara)
- Bull. Number Theory Related Topics* Bulletin of Number Theory and Related Topics. (Buenos Aires)

- **Bull. Osaka Prefect. Tech. College* Bulletin of Osaka Prefectural Technical College. (Osaka)
- **Bull. Sci. Conseil Acad. RSF Yougoslav. Sect. A* Bulletin Scientifique. Conseil des Académies de la RSF de Yougoslavie. Section A. (Zagreb)
- Bull. Sci. Engrg. Dio. Univ. Ryukyus Math. Natur. Sci.* University of the Ryukyus. Science & Engineering Division. Mathematics & Natural Sciences. Bulletin. (Naha) (Continued as: *Bull. College Sci. Univ. Ryukyus*)
- Bull. Sci. Engrg. Res. Lab. Waseda Univ.* Bulletin of Science and Engineering Research Laboratory. Waseda University. (Tokyo)
- Bull. Sci. Math.* Bulletin des Sciences Mathématiques. (Paris) (Continued as: *Bull. Sci. Math.* (2))
- Bull. Sci. Math. (2)* Bulletin des Sciences Mathématiques. 2e Série. (Paris)
- **Bull. Seismol. Soc. Amer.* Bulletin of the Seismological Society of America. (Berkeley, Calif.)
- **Bull. Signal. 110* Centre National de la Recherche Scientifique. Bulletin Signalétique 110. Informatique. Automatique. Recherche Opérationnelle. Gestion. (Paris) (Usually abbreviated as *BS 110* in the text of *Math. Rev.*)
- **Bull. Soc. Franco-Japon. Sci. Pures Appl.* Bulletin de la Société Franco-Japonaise des Sciences Pures et Appliquées. (Tokyo)
- Bull. Soc. Math. Belg.* Bulletin de la Société Mathématique de Belgique. (Brussels) (Continued as: *Bull. Soc. Math. Belg. Sér. A* and *Bull. Soc. Math. Belg. Sér. B*)
- **Bull. Soc. Math. Belg. Sér. A* Bulletin de la Société Mathématique de Belgique. Série A. (Brussels) (Formerly: *Bull. Soc. Math. Belg.*)
- **Bull. Soc. Math. Belg. Sér. B* Bulletin de la Société Mathématique de Belgique. Série B. (Brussels) (Formerly: *Bull. Soc. Math. Belg.*)
- Bull. Soc. Math. France* Bulletin de la Société Mathématique de France. (Paris)
- Bull. Soc. Math. France Mém.* Société Mathématique de France. Bulletin. Mémoire. (Paris) (Continued as: *Mém. Soc. Math. France (N.S.)*)
- Bull. Soc. Math. France Suppl. Mém.* Société Mathématique de France. Bulletin. Supplément. Mémoire. (Paris) (Continued as: *Bull. Soc. Math. France Mém.*)
- Bull. Soc. Math. Grèce* Bulletin de la Société Mathématique de Grèce. (Athens) (Continued as: *Bull. Soc. Math. Grèce (N.S.)*)
- Bull. Soc. Math. Grèce (N.S.)* Bulletin de la Société Mathématique de Grèce. Nouvelle Série. (Athens)
- Bull. Soc. Math. Phys. Macédoine* Bulletin de la Société des Mathématiciens et des Physiciens de la République Populaire de Macédoine. Bilten na Društvo na Matematikarite i Fizikarite od Socialistička Republika Makedonija. (Skopje) (Continued as: *Mat. Bilten*)
- Bull. Soc. Roy. Sci. Liège* Bulletin de la Société Royale des Sciences de Liège. (Liège)
- Bull. Soc. Sci. Lett. Lódz* Bulletin de la Société des Sciences et des Lettres de Lódz. (Lódz)
- Bull. Soc. Sci. Lettres Lódz* Bulletin de la Société des Sciences et des Lettres de Lódz. (Lódz) (Continued as: *Bull. Soc. Sci. Lett. Lódz*)
- Bull. Tokyo Gakugei Univ.* Bulletin of Tokyo Gakugei University. (Tokyo) (Continued as: *Bull. Tokyo Gakugei Univ.* (4))
- Bull. Tokyo Gakugei Univ. (4)* Bulletin of Tokyo Gakugei University. Series IV. (Tokyo)
- Bull. Univ. Osaka Prefect. Ser. A* Bulletin of University of Osaka Prefecture. Series A. Engineering and Natural Sciences. (Sakai)
- Bull. Univ. Osaka Prefecture Ser. A* Bulletin of University of Osaka Prefecture. Series A. Engineering and Natural Sciences. (Osaka) (Continued as: *Bull. Univ. Osaka Prefect. Ser. A*)
- Bull. Yamagata Univ. Natur. Sci.* Bulletin of the Yamagata University. Natural Science. (Yamagata)
- **Burg Monographs in Sci.* Burg Monographs in Science. Burg Verlag AG, Basel.
- **Bull. Sec. Mat. Soc. Catalana Cienc. Fis. Quím. Mat.* Butlletí de la Secció de Matemàtiques de la Societat Catalana de Ciències Físiques, Químiques i Matemàtiques. (Barcelona)
- **Bull. Soc. Catalana Cienc. Fis. Quím. Mat. (2)* Butlletí de la Societat Catalana de Ciències Físiques, Químiques i Matemàtiques. Segona època. (Barcelona)
- C. R. Acad. Bulgare Sci.* Doklady Bolgarskoj Akademii Nauk. Comptes Rendus de l'Académie Bulgare des Sciences. (Sofia)
- C. R. Acad. Sci. Paris Sér. A-B* Comptes Rendus Hebdomadaires des Séances de l'Académie des Sciences. Séries A et B. (Paris) (Continued as: *C. R. Acad. Sci. Paris Sér. I Math.*, *C. R. Acad. Sci. Paris Sér. II Méc. Phys. Chim. Sci. Terre Sci. Univers.* and *C. R. Acad. Sci. Paris Sér. III Sci. Vie*)
- **C. R. Acad. Sci. Paris Sér. I Math.* Comptes Rendus des Séances de l'Académie des Sciences. Série I. Mathématique. (Paris) (Formerly: *C. R. Acad. Sci. Paris Sér. A-B*)
- **C. R. Acad. Sci. Paris Sér. II Méc. Phys. Chim. Sci. Terre Sci. Univers* Comptes Rendus des Séances de l'Académie des Sciences. Série II. Mécanique, Physique, Chimie, Sciences de la Terre, Sciences de l'Univers. (Paris) (Formerly: *C. R. Acad. Sci. Paris Sér. A-B*)
- **C. R. Acad. Sci. Paris Sér. III Sci. Vie* Comptes Rendus des Séances de l'Académie des Sciences. Série III. Sciences de la Vie. (Paris) (Formerly: *C. R. Acad. Sci. Paris Sér. A-B*)
- C. R. Acad. Sci. Paris Vie Académique* Comptes Rendus Hebdomadaires des Séances de l'Académie des Sciences. Vie Académique. (Paris)
- C. R. Math. Rep. Acad. Sci. Canada* La Société Royale du Canada. L'Académie des Sciences. Comptes Rendus Mathématiques. (Mathematical Reports). (Toronto/Waterloo)
- **CAD of Electron. Circuits* CAD of Electronic Circuits. Elsevier, Amsterdam.
- Cahiers Centre Études Rech. Opér.* Cahiers du Centre d'Études de Recherche Opérationnelle. (Brussels)
- Cahiers Centre Études Recherche Opér.* Cahiers du Centre d'Études de Recherche Opérationnelle. (Brussels) (Continued as: *Cahiers Centre Études Rech. Opér.*)
- **Cahiers Math. Montpellier* Cahiers Mathématiques Montpellier. Université des Sciences et Techniques du Languedoc, Montpellier.
- **Cahiers Sci.* Cahiers Scientifiques. [Scientific Reports] Gauthier-Villars, Paris.
- Cahiers Topologie Géom. Différentielle* Cahiers de Topologie et Géométrie Différentielle. (Amiens)
- Calcolo* Calcolo. (Pisa)
- Calcutta Statist. Assoc. Bull.* Calcutta Statistical Association Bulletin. (Calcutta)
- **Cambridge Comput. Sci. Texts* Cambridge Computer Science Texts. Cambridge University Press, Cambridge.
- **Cambridge Monographs Math. Phys.* Cambridge Monographs on Mathematical Physics. Cambridge University Press, Cambridge.
- **Cambridge Monographs Mech. Appl. Math.* Cambridge Monographs on Mechanics and Applied Mathematics. Cambridge University Press, Cambridge.
- **Cambridge Tracts in Math.* Cambridge Tracts in Mathematics. Cambridge University Press, Cambridge.
- Canad. J. Math.* Canadian Journal of Mathematics. Journal Canadien de Mathématiques. (Ottawa, Ont.)
- Canad. J. Phys.* Canadian Journal of Physics. (Ottawa, Ont.)
- Canad. J. Statist.* The Canadian Journal of Statistics. (Montreal, Que.)
- Canad. Math. Bull.* Canadian Mathematical Bulletin. (Montreal, Que.)
- Caribbean J. Sci. Math.* The Caribbean Journal of Science and Mathematics. (St. Thomas)
- **Carolina Lecture Ser.* Carolina Lecture Series. University of North Carolina, Department of Mathematics, Chapel Hill, N.C.
- **Carus Math. Monographs* Carus Mathematical Monographs. Mathematical Association of America, Washington, D.C.
- Časopis Pěst. Mat.* Československá Akademie Věd. Časopis Pro Pěstování Matematiky. (Prague)
- **CBMS-NSF Regional Conf. Ser. in Appl. Math.* CBMS-NSF Regional Conference Series in Applied Mathematics. Society for Industrial and Applied Mathematics, Philadelphia, Pa.
- **CBMS Regional Conf. Ser. in Math.* CBMS Regional Conference Series in Mathematics. American Mathematical Society, Providence, R.I.
- **CCA* Computer and Control Abstracts. (New York) See *Comput. Control Abstracts*
- Čečeno-Inguš. Gos. Ped. Inst. Učen. Zap.* Čečeno-Ingušskij Gosudarstvennyj Pedagogičeskij Institut. Učenyje Zapiski. (Groznyj)
- Celestial Mech.* Celestial Mechanics. (Dordrecht)
- Čeljabinsk. Gos. Ped. Inst. Trudy* Čeljabinskij Gosudarstvennyj Pedagogičeskij Institut. Trudy. (Chelyabinsk)
- Centaurus* Centaurus. (Copenhagen)
- **Centre Math., CNRS* Centre de Mathématiques Équipe de Recherche Associée au CNRS. [Mathematics Center, CNRS Research Group] École Normale Supérieure, Paris.
- **CERN 80* CERN 80. CERN, Geneva.
- **CERN 81* CERN 81. CERN, Geneva.
- **Cesta k Vědění* Cesta k Vědění. [Path to Knowledge] Academia, Prague.
- Chem. Engrg. J.* The Chemical Engineering Journal. An International Journal of Research and Development. (Lausanne)
- Chem. Phys.* Chemical Physics. (Amsterdam)
- Chem. Phys. Lett.* Chemical Physics Letters. (Amsterdam)
- Chinese Ann. Math.* Chinese Annals of Mathematics. Shuxue Niankan. (Shanghai)
- Chinese Astronom.* Chinese Astronomy. (Oxford) (Translation of *Acta Astronom. Sinica*) (Continued as: *Chinese Astronom. Astrophys.*)
- **Chinese Astronom. Astrophys.* Chinese Astronomy and Astrophysics. (Oxford) (Selected translation of *Acta Astronom. Sinica* and *Acta Astrophys. Sinica*) (Formerly: *Chinese Astronom.*)
- Chinese J. Math.* Chinese Journal of Mathematics. (Taipei)
- Chinese J. Phys. (Peking)* Chinese Journal of Physics. Peking. A translation of *Acta Physica Sinica* of the Chinese Academy of Sciences, Peking. (New York) (Translation of *Acta Phys. Sinica*)
- Cho-sŏn In-min Kong-hwa-kuk Kwa-hak-wŏn T'ong-bo* (Academy of Science of the People's Republic of Korea. Bulletin) Cho-sŏn Min-ju-ŭi In-min Kong-hwa-kuk Kwa-hak-wŏn. Tong-bo. (Pyongyang)
- **Cienc. Mat. (Havana)* Ciencias Matemáticas. (Havana)
- Cienc. Tecn.* Ciencia y Tecnología. (San José)
- Ciencias Ser. I Mat.* Ciencias. Serie I. Matemática. (Havana)
- Čisl. Metody Meh. Spočn. Sredy* Akademija Nauk SSSR. Sibirskoe Otdelenie. Vychislitel'nyy Centr. Čislennyye Metody Mehaniki Spočnoi Sredy. (Novosibirsk)
- **CISM Courses and Lectures* CISM Courses and Lectures. Springer, Vienna.
- Čitn. Gos. Ped. Inst. Učen. Zap.* Čitinskij Gosudarstvennyj Pedagogičeskij Institut. Učenyje Zapiski. (Chita)
- CL & CL—Comput. Linguist. Comput. Lang.* Computational Linguistics and Computer Languages. (Budapest)
- **Clustering Phenom. Nuclei* Clustering Phenomena in Nuclei. Vieweg, Braunschweig.
- **Col. Monograf. Mem. Mat.* Colección de Monografías y Memorias de Matemáticas. [Collection of Monographs and Memoirs in Mathematics] Instituto "Jorge Juan" de Matemáticas, Madrid.
- **Coll. Dir. Études Rech. Elec. France* Collection de la Direction des Études et Recherches d'Électricité de France. [Collection of the Department of Studies and Research in Electricity of France] Éditions Eyrolles, Paris.
- **Coll. d'Écologie* Collection d'Écologie. [Ecology Collection] Masson, Paris.
- **Coll. École Norm. Sup. Jeunes Filles* Collection de l'École Normale Supérieure de Jeunes Filles. [Collection of the École Normale Supérieure de Jeunes Filles] École Normale Supérieure de Jeunes Filles, Paris.
- **Coll. Enseignement Sci.* Collection Enseignement des Sciences. [Collection: The Teaching of Science] Hermann, Paris.

- † *Coll. Hist. Sci.* Collection d'Histoire des Sciences. [Collection: History of the Sciences] Vrin, Paris.
- † *Coll. "Programmation": Rech. Opér. Appl.* Collection "Programmation": Recherche Opérationnelle Appliquée. [Collection "Programming": Applied Operational Research] Gauthier-Villars, Paris.
- † *Coll. Sci. Mat.* Collana di Scienze Matematiche. [Collection of the Mathematical Sciences] Pàtron, Bologna.
- † *Coll. Travaux Acad. Internat. Hist. Sci.* Collection des Travaux de l'Académie Internationale d'Histoire des Sciences. [Collection of the Transactions of the International Academy of the History of Science] Franz Steiner Verlag GmbH, Wiesbaden.
- Collect. Math.* Consejo Superior de Investigaciones Científicas. Universidad de Barcelona. *Collectanea Mathematica*. Seminario Matemático de Barcelona. (Barcelona)
- Collect. Papers Math. Soc. Wakayama Univ.* Collected Papers of the Mathematical Society of Wakayama University. (Wakayama)
- Collect. Phenom.* Collective Phenomena. An International Journal of Discussion and Speculation. (London)
- † *Collected Studies Ser.* Collected Studies Series. Variorum, London.
- Colloq. Math.* Colloquium Mathematicum. (Warsaw)
- † *Colloq. Math. Soc. János Bolyai* Colloquia Mathematica Societatis János Bolyai. North-Holland, Amsterdam-New York.
- † *Colloques Internat. CNRS* Colloques Internationaux du Centre National de la Recherche Scientifique. [International Colloquia of the CNRS] CNRS, Paris.
- † *Colloques Nat. CNRS* Colloques Nationaux du Centre National de la Recherche Scientifique. [National Colloquia of the CNRS] CNRS, Paris.
- * *Combinatória* Combinatória. Estudos e Pesquisas. (São Paulo)
- * *Combinatorica* Combinatorica. An International Journal of the János Bolyai Mathematical Society. (Budapest/Amsterdam)
- Comm. ACM* Communications of the Association for Computing Machinery. (New York)
- Comm. Algebra* Communications in Algebra. (New York)
- Comm. Dublin Inst. Adv. Stud. Ser. A* Communications of the Dublin Institute for Advanced Studies. Series A. (Dublin)
- Comm. Dublin Inst. Adv. Studies Ser. A* Communications of the Dublin Institute for Advanced Studies. Series A. (Dublin) (Continued as: *Comm. Dublin Inst. Adv. Stud. Ser. A*)
- Comm. Fac. Sci. Univ. Ankara Sér. A* Communications de la Faculté des Sciences de l'Université d'Ankara. Série A. Mathématiques-Physique-Astronomie. (Ankara) (Continued as: *Comm. Fac. Sci. Univ. Ankara Sér. A₁ Math.*, *Comm. Fac. Sci. Univ. Ankara Sér. A₂ Phys.*, and *Comm. Fac. Sci. Univ. Ankara Sér. A₃ Astronom.*)
- Comm. Fac. Sci. Univ. Ankara Sér. A₁ Math.* Université d'Ankara. Faculté des Sciences. Communications. Série A₁. Mathématiques. (Ankara)
- Comm. Fac. Sci. Univ. Ankara Sér. A₂ Phys.* Université d'Ankara. Faculté des Sciences. Communications. Série A₂. Physique. (Ankara)
- Comm. Fac. Sci. Univ. Ankara Sér. A₃ Astronom.* Université d'Ankara. Faculté des Sciences. Communications. Série A₃. Astronomie. (Ankara)
- Comm. Math. Phys.* Communications in Mathematical Physics. (Berlin)
- Comm. Partial Differential Equations* Communications in Partial Differential Equations. (New York)
- Comm. Pure Appl. Math.* Communications on Pure and Applied Mathematics. (New York)
- Comm. Roy. Soc. Edinburgh Phys. Sci.* The Royal Society of Edinburgh. Communications Physical Sciences. (Edinburgh)
- Comm. Statist. A—Theory Methods* Communications in Statistics. A. Theory and Methods. (New York)
- Comm. Statist. B—Simulation Comput.* Communications in Statistics. B. Simulation and Computation. (New York)
- Comm. Statist.—Simulation Comput.* Communications in Statistics. Simulation and Computation. (New York) (Continued as: *Comm. Statist. B—Simulation Comput.*)
- Comm. Statist.—Theory Methods* Communications in Statistics. Theory and Methods. (New York) (Continued as: *Comm. Statist. A—Theory Methods*)
- Comment. Math. Helv.* Commentarii Mathematici Helvetici. (Basel)
- Comment. Math. Prace Mat.* Roczniki Polskiego Towarzystwa Matematycznego. Seria I. Commentationes Mathematicae. Prace Matematyczne. (Warsaw)
- Comment. Math. Special Issue* Commentationes Mathematicae. Special Issue. (Warsaw)
- Comment. Math. Univ. Carolin.* Commentationes Mathematicae Universitatis Carolinae. (Prague)
- Comment. Math. Univ. Carolinae* Commentationes Mathematicae Universitatis Carolinae. (Prague) (Continued as: *Comment. Math. Univ. Carolin.*)
- Comment. Math. Univ. St. Paul.* Commentarii Mathematici Universitatis Sancti Pauli. (Tokyo)
- Comment. Phys.-Math.* See *Soc. Sci. Fenn. Comment. Phys.-Math.*
- Comment. Phys.-Math. Dissertationes* See *Soc. Sci. Fenn. Comment. Phys.-Math.*
- † *Commun. and Cybernet.* Communication and Cybernetics. Springer, Berlin.
- † *Commun. Math. Inst. Rijksunivers. Utrecht* Communications of the Mathematical Institute, Rijksuniversiteit Utrecht. Rijksuniversiteit Utrecht, Mathematical Institute, Utrecht.
- Compositio Math.* Compositio Mathematica. (Dordrecht)
- † *Comprendre et Appliquer* Comprendre et Appliquer. [Comprehension and Application] Masson, Paris.
- Comput. & Fluids* Computers & Fluids. An International Journal. (Elmsford, N.Y.)
- Comput. & Structures* Computers & Structures. An International Journal. (Elmsford, N.Y.)
- † *Comput. Control Abstracts* Computer and Control Abstracts. (London) (Usually abbreviated as CCA in the text of *Math. Rev.*)
- Comput. Electr. Engrg.* Computers & Electrical Engineering. An International Journal. (Elmsford, N.Y.)
- Comput. J.* The Computer Journal. (London)
- Comput. Lang.* Computer Languages. An International Journal. (Oxford)
- Comput. Math. Appl.* Computers & Mathematics with Applications. An International Journal. (Elmsford, N.Y.)
- Comput. Methods Appl. Mech. Engrg.* Computer Methods in Applied Mechanics and Engineering. (Amsterdam)
- Comput. Networks* Computer Networks. International Journal of Distributed Information. (Amsterdam)
- * *Comput. Phys. Comm.* Computer Physics Communications. An International Journal Devoted to Computational Physics and Computer Programs in Physics. (Amsterdam)
- † *Comput. Rev.* Computing Reviews. (New York) (Usually abbreviated as CR in the text of *Math. Rev.*)
- † *Comput. Sci. Monographs* Computer Science Monographs. Institute of Statistical Mathematics, Tokyo.
- † *Comput. Suppl.* Computing Supplementum. Springer, Vienna.
- Comput. Surveys* Computing Surveys. ACM. Association for Computing Machinery. (New York)
- † *Computer Engrg. Ser.* Computer Engineering Series. Crane Russak, New York.
- † *Computers and Geology* Computers and Geology. Pergamon, Elmsford, N.Y.
- Computers & Structures* Computers & Structures. (New York) (Continued as: *Comput. & Structures*)
- † *Computers and their Appl.* Computers and their Applications. Horwood, Chichester.
- Computing* Computing. Archiv für Informatik und Numerik. (Vienna)
- Conceptus* Conceptus. Zeitschrift für Philosophie. (Innsbruck)
- † *Conf. e Studi Accad. Polacca Sci., Bibl. Centro Studi Roma* Conferenze e Studi Accademia Polacca delle Scienze, Biblioteca e Centro di Studi a Roma. [Lectures and Courses of the Polish Academy of Sciences, Library and Study Center of Rome] Ossolineum, Wrocław.
- Conf. Sem. Mat. Univ. Bari* Conferenze del Seminario di Matematica dell'Università di Bari. (Bari)
- * *Congr. Numer.* Congressus Numerantium. (Winnipeg, Man.)
- † *Congress. Numer.* Congressus Numerantium. Utilitas Mathematica, Winnipeg, Man.
- † *Contemp. Math.* Contemporary Mathematics. American Mathematical Society, Providence, R.I.
- † *Contrib. Centro Linceo Interdisc. Sci. Mat. Appl.* Contributi del Centro Linceo Interdisciplinare di Scienze Matematiche e loro Applicazioni. [Contributions of the Linceo Interdisciplinary Center for Mathematical Sciences and their Applications] Accademia Nazionale dei Lincei, Rome.
- † *Contrib. Econom. Anal.* Contributions to Economic Analysis. Elsevier, Amsterdam.
- Control Cybernet.* Polish Academy of Sciences. Institute of Applied Cybernetics. Control and Cybernetics. (Warsaw)
- † *Control Systems Theory* Control and Systems Theory. Dekker, New York.
- Cosmic Res.* Cosmic Research. (New York) (Translation of *Kosmiches. Issled.*)
- † *Cowles Foundation Monographs* Cowles Foundation Monographs. Yale University Press, New Haven, Conn.
- † *CR* Computing Reviews. (New York) See *Comput. Rev.*
- Cryptologia* Cryptologia. (Albion, Mich.)
- † *Cuadern. Inst. Mat. Beppo Levi* Cuadernos del Instituto de Matemática "Beppo Levi". [Notes of the Beppo Levi Institute of Mathematics] Universidad Nacional de Rosario, Rosario.
- † *Cuadern. Teorema* Cuadernos Teorema. [Teorema Notes] Universidad de Valencia, Departamento de Logica y Filosofia de la Ciencia, Valencia.
- † *Current Index Statist. Appl. Methods Theory* Current Index to Statistics. Applications, Methods and Theory. (Washington, D.C.)
- † *Current Math. Publ.* Current Mathematical Publications. (Providence, R.I.)
- † *Cursos Congr. Univ. Santiago de Compostela* Cursos y Congresos de la Universidad de Santiago de Compostela. [Courses and Conferences of the University of Santiago de Compostela] Universidad de Santiago de Compostela, Santiago de Compostela.
- † *Cursos Sem. Tesis PEAM* Cursos, Seminarios y Tesis del PEAM. [Courses, Seminars and Theses of PEAM] Universidad del Zulia, Maracaibo.
- Čuvas. Gos. Ped. Inst. Učen. Zap.* Čuvaškii Gosudarstvennyi Pedagogičeskii Institut im. I. Ja. Jakovleva. Učenyje Zapiski. (Cheboksary) (May also appear as: *Čuvas. Gos. Univ. i Čuvas. Gos. Ped. Inst. Učen. Zap.*)
- Čuvas. Gos. Univ. i Čuvas. Gos. Ped. Inst. Učen. Zap.* Čuvaškii Gosudarstvennyi Universitet im. I. N. Ul'janova. Čuvaškii Gosudarstvennyi Pedagogičeskii Institut im. I. Ja. Jakovleva. Učenyje Zapiski. (Cheboksary) (May also appear as: *Čuvas. Gos. Ped. Inst. Učen. Zap.*)
- Cybernet. Systems* Cybernetics and Systems. An International Journal. (Washington, D.C.)
- † *Cybernet. Systems Ser.* Cybernetics and Systems Series. Abacus Press, Tunbridge Wells.
- Cybernetica* Cybernetica. (Namur)
- Cybernetics* Cybernetics. (New York) (Translation of *Kibernetika* (Kiev))
- Czechoslovak J. Phys.* Československá Akademie Nauk. Československii Fyzikální Žurnal. Czechoslovak Academy of Sciences. Czechoslovak Journal of Physics (Prague) (Continued as: *Czechoslovak J. Phys. B*)
- Czechoslovak J. Phys. B* Československá Akademie Nauk. Československii Fyzikální Žurnal. Czechoslovak Academy of Sciences. Czechoslovak Journal of Physics. B (Prague)
- Czechoslovak Math. J.* Československá Akademie Nauk. Československii Matematikální Žurnal. Czechoslovak Mathematical Journal. (Prague)
- Dagestan. Gos. Univ. Učen. Zap.* Dagestanskii Gosudarstvennyi Universitet im. V. I. Lenina. Učenyje Zapiski. (Makhachkala)

- Dal'nevostochn. Gos. Unio. Učen. Zap.* Dal'nevostochnyi Gosudarstvennyi Universitet. Učenyje Zapiski. Serija Fiziko-Matematičeskikh Nauk. (Vladivostok)
- Dal'nevostochn. Mat. Sb.* Dal'nevostochnyi Matematičeskii Sbornik. Ministerstvo Prosveščeniia RSFSR Habarovskii Gosudarstvennyi Institut. (Khabarovsk)
- Danske Vid. Selsk. Mat.-Fys. Medd.* Det Kongelige Danske Videnskabskabernes Selskab Matematisk-Fysiske Meddelelser. (Copenhagen) (Continued as: *Mat.-Fys. Medd. Danske Vid. Selsk.*)
- Defence Sci. J.* Defence Science Journal. (Delhi)
- Delft Progr. Rep.* Delft Progress Report. (Delft)
- Delft Progr. Rep. Ser. F* Delft Progress Report. Series F. (Delft) (Continued as: *Delft Progr. Rep.*) (Formerly: *Delft Progress Rep. Ser. F*)
- Delft Progr. Rep. Ser. F* Delft Progress Report. Series F. (Delft) (Continued as: *Delft Progr. Rep. Ser. F*)
- Delta (Madison)* Delta. University of Wisconsin. (Madison, Wis.) (Continued as: *Math. Mag.*)
- Delta (Waukesha)* Delta. Waukesha Mathematical Society. (Waukesha, Wis.) (Continued as: *Delta (Madison)*)
- Demonstratio Math.* Demonstratio Mathematica. (Warsaw)
- Denshi Tsushin Gakkai Ronbunshi Sect. A-D* See *Electron. Comm. Japan*
- † *Depi. Math.* No. 1978 Department of Mathematics, No. 1978. Chalmers University of Technology, Göteborg.
- † *Deutsch. Biblio. Wöchentl. Verzeich. Amtsblatt Deutsch. Bibliothek Ser. A* Deutsche Bibliographie. Wöchentliches Verzeichnis. Amtsblatt der Deutschen Bibliothek. Reihe A. (Frankfurt)
- † *Deutsch. Biblio. Wöchentl. Verzeich. Amtsblatt Deutsch. Bibliothek Ser. B* Deutsche Bibliographie. Wöchentliches Verzeichnis. Amtsblatt der Deutschen Bibliothek. Reihe B. (Frankfurt)
- † *Deutsch. Biblio. Wöchentl. Verzeich. Ser. C* Deutsche Bibliographie. Wöchentliches Verzeichnis. Reihe C. (Frankfurt)
- † *Deutsch. Nationalbiblio. Reihe A* Deutsche Nationalbibliographie. Reihe A. Neuerscheinungen des Buchhandels. (Leipzig)
- † *Deutsch. Nationalbiblio. Reihe B* Deutsche Nationalbibliographie. Reihe B. Neuerscheinungen Ausserhalb des Buchhandels. (Leipzig)
- † *Deutsch-Taschenbücher* Deutsch-Taschenbücher. [Deutsch Paperbacks] Harri Deutsch, Frankfurt/Main.
- † *Develop. in Cell Biology* Developments in Cell Biology. Elsevier/North-Holland Biomedical Press, Amsterdam.
- † *Develop. in Mech.* Developments in Mechanics. Kansas State University, Manhattan, Kan.
- † *Develop. in Statist.* Developments in Statistics. Academic Press, New York.
- Dialectica* Dialectica. International Review of Philosophy of Knowledge. (Bienne)
- Dialogue* Dialogue. Canadian Philosophical Review. Revue Canadienne de Philosophie. (Ottawa, Ont.)
- Differential'nye Uračenija* Differential'nye Uračenija. (Minsk) (Translated as: *Differential Equations*)
- Differential'nye Uračenija i Primenen.*—Trudy Sem. Processy Optimal. Upravlenija i Sekcija Institut Fiziki i Matematiki Akademii Nauk Litovskoi SSR. Differential'nye Uračenija i ih Primenenie. Trudy Respublikanskogo Naučnogo Seminara "Processy Optimal'nogo Upravlenija". I Sekcija. (Vilnius)
- Differential'nye Uračenija i Vyčisl. Mat.* Differential'nye Uračenija i Vyčislitel'naja Matematika. (Saratov)
- Differential'nye Uračenija (Rjazan')* Rjazan. Gosudarstvennyi Pedagogičeskii Institut. Matematičeskij Kafedr. Sbornik Trudov. Differential'nye Uračenija. (Rjazan) (Continued as: *Differential'nye Uračenija (Rjazan')*)
- Differential'nye Uračenija (Rjazan)* Rjazan. Gosudarstvennyi Pedagogičeskii Institut. Matematičeskij Kafedr. Sbornik Trudov. Differential'nye Uračenija. (Rjazan)
- Differential Equations* Differential Equations. (New York) (Translation of *Differential'nye Uračenija*)
- Digital Process.* Digital Processes. An International Journal on the Theory and Design of Digital Systems. (St. Saphorin)
- Dinamika i Pročnost' Mašin* Dinamika i Pročnost' Mašin. (Har'kov)
- Dinamika Sistem* Gor'kovskii Gosudarstvennyi Universitet. Dinamika Sistem. (Gorki)
- Dinamika Splošn. Sredy* Institut Gidrodinamiki Sibirskogo Otdelenija Akademii Nauk SSSR. Dinamika Splošnoi Sredy. (Novosibirsk)
- * *Dirāsāt Res. J. Natur. Sci.* Dirāsāt. A Research Journal. Natural Sciences. (Amman)
- Discrete Appl. Math.* Discrete Applied Mathematics. (Amsterdam)
- Discrete Math.* Discrete Mathematics. (Amsterdam)
- † *Discussion Papers* Discussion Papers. London School of Economics, Graduate School of Geography, London.
- Diskret. Analiz* Akademija Nauk SSSR. Sibirskoe Otdelenie. Institut Matematiki. Diskretnyi Analiz. Sbornik Trudov. (Novosibirsk)
- † *Disquis. Math. Hungar.* Disquisitiones Mathematicae Hungaricae. [Hungarian Mathematics Investigations] Akadémiai Kiadó, Budapest.
- † *Diss. ETH* Diss. ETH. Juris Druck und Verlag, Zurich.
- † *Diss. Johannes Kepler-Univ. Linz* Dissertationen der Johannes Kepler-Universität Linz. [Dissertationen of the Johannes Kepler University of Linz] VWGO, Vienna.
- † *Diss. Techn. Univ. Wien* Dissertationen der Technischen Universität Wien. [Dissertationes of the Technical University of Vienna] VWGO, Vienna.
- Dissertationes Math. (Rozprawy Mat.)* Polska Akademia Nauk. Instytut Matematyczny. Dissertationes Mathematicae. Rozprawy Matematyczne. (Warsaw)
- † *Djela* Djela. [Monographs] Akad. Nauk i Umjetnost. Bosne i Hercegovine, Sarajevo.
- † *DM 80* DM 80. Karl Marx University of Economics, Budapest.
- † *DMV Sem.* DMV Seminar. Birkhäuser, Boston.
- † *Doc. Sci. XVe Siècle* Documents Scientifiques du XVe Siècle. [15th Century Scientific Documents] Slatkine Reprints, Geneva.
- † *Doc. Tracal* Document de Travail. [Research Report] Université de Franche-Comté, Besançon.
- Dokl. Akad. Nauk BSSR* Doklady Akademii Nauk BSSR. (Minsk)
- Dokl. Akad. Nauk SSSR* Doklady Akademii Nauk SSSR. (Moscow) (Mathematics section translated as: *Soviet Math. Dokl.*)
- Dokl. Akad. Nauk Tadžik. SSR* Doklady Akademii Nauk Tadžikskoi SSR. (Dushanbe)
- Dokl. Akad. Nauk Ukrain. SSR Ser. A* Akademija Nauk Ukrainkoj SSR. Doklady. Serija A. Fiziko-Matematičeskije i Tehničeskije Nauki. (Kiev) (Ukrainian version: *Dopovidi Akad. Nauk Ukrain. SSR Ser. A*)
- Dokl. Akad. Nauk UzSSR* Doklady Akademii Nauk UzSSR. (Tashkent)
- † *Dolciani Math. Exp.* The Dolciani Mathematical Expositions. Mathematical Association of America, Washington, D.C.
- Dopovidi Akad. Nauk Ukrain. RSR Ser. A* Dopovidi Akademii Nauk Ukrainkoj RSR. Serija A. (Kiev) (Russian version: *Dokl. Akad. Nauk Ukrain. SSR Ser. A*)
- Dopovidi Akad. Nauk Ukrain. RSR Ser. B* Dopovidi Akademii Nauk Ukrainkoj RSR. Serija B. (Kiev)
- Duke Math. J.* Duke Mathematical Journal. (Durham, N.C.)
- † *Duke Univ. Math. Ser.* Duke University Mathematics Series. Duke University, Mathematics Department, Durham, N.C.
- Dušanbin. Gos. Ped. Inst. Učen. Zap.* Dušanbinskii Gosudarstvennyi Pedagogičeskii Institut im. T. G. Ševčenko. Učenyje Zapiski. (Dushanbe)
- DVT—Dějiny Věd a Techniky* Dějiny Věd a Techniky. Společnost pro Dějiny Věd a Techniky. (Prague) (Continued as: *DVT—Dějiny Věd Tech.*)
- DVT—Dějiny Věd Tech.* Dějiny Věd a Techniky. Společnost pro Dějiny Věd a Techniky. (Prague)
- † *Dynamic Econ. Theory and Appl.* Dynamic Economics: Theory and Applications. Elsevier, New York.
- Econom. Comp. Econom. Cybernet. Stud. Res.* Economic Computation and Economic Cybernetics Studies and Research. (Bucharest) (Continued as: *Econom. Comput. Econom. Cybernet. Stud. Res.*)
- Econom. Comput. Econom. Cybernet. Stud. Res.* Economic Computation and Economic Cybernetics Studies and Research. (Bucharest)
- Econom. Lett.* Economics Letters. (Amsterdam)
- Econometrica* Econometrica. Journal of the Econometric Society. (Chicago, Ill.)
- Ed. Stud. Math.* Educational Studies in Mathematics. (Dordrecht)
- Eesti NSV Tead. Akad. Füüs. Astronoom. Inst. Uurim.* Eesti NSV Teaduste Akadeemia Füüsika ja Astronoomia Instituudi Uurimused. (Trudy Instituta Fiziki i Astronomii Akademii Nauk Estonskoi SSR). (Tartu) (Continued as: *Eesti NSV Tead. Akad. Füüs. Inst. Uurim.*)
- Eesti NSV Tead. Akad. Füüs. Inst. Uurim.* NSV Teaduste Akadeemia. Füüsika Instituudi Uurimused. Eesti. Akademia Nauk Estonkoi SSR. Institut Fiziki. Trudy. (Tartu)
- Eesti NSV Tead. Akad. Tartu Astronoom. Observo. Publ.* Eesti NSV Teaduste Akadeemia Tartu Astronoomia Observatooriumi Publikatsioonid. (Tartu)
- Eesti NSV Tead. Akad. Toimetised Füüs.-Mat.* Eesti NSV Teaduste Akadeemia Toimetised. Füüsika-Matemaatika. Izvestija Akademii Nauk Estonskoi SSR. Serija Fizika-Matematika. (Tallin)
- Egyptian Statist. J.* The Egyptian Statistical Journal. (Giza/Cairo)
- † *EIR-Bericht* EIR-Bericht. [EIR Report] Eidgenössische Institut für Reaktorforschung, Würenlingen.
- Ekonom. i Mat. Metody* Ekonomika i Matematičeskije Metody. (Moscow)
- Ekonom.-Mat. Obzor* Československá Akademie Věd. Ekonomicko-Matematický Obzor. (Prague)
- Elabuz. Gos. Ped. Inst. Učen. Zap.* Elabuzskii Gosudarstvennyi Pedagogičeskii Institut. Učenyje Zapiski. (Kazan)
- † *Elec. Engrg. and Electronics* Electrical Engineering and Electronics. Dekker, New York.
- Electron. Comm. Japan* Electronics and Communications in Japan. The Transactions of the Institute of Electronics and Communication Engineers of Japan. (Washington, D.C.) (Partial translation of *Denshi Tsushin Gakkai Ronbunshi Sect. A-D*) (See also *Systems-Comput.-Controls*)
- Electron. Commun. Japan* Electronics and Communications in Japan. The Transactions of the Institute of Electronics and Communication Engineers of Japan. (Washington, D.C.) (Partial translation of *Denshi Tsushin Gakkai Ronbunshi Sect. A-D*) (See also *Systems-Computers-Controls*) (Continued as: *Electron. Comm. Japan*)
- † *Electron. Electric. Engin. Res. Stud.: Control Theory Appl. Stud. Ser.* Electronic & Electrical Engineering Research Studies: Control Theory and Applications Studies Series. Research Studies Press [Wiley], Chichester.
- † *Electron. Electric. Engin. Res. Stud.: Pattern Recog. Image Process. Ser.* Electronic & Electrical Engineering Research Studies: Pattern Recognition & Image Processing Series. Research Studies Press [Wiley], Chichester.
- Electron. Lett.* Electronics Letters. (London)
- Elektroenerget. i Avtomat. (Kishinev)* Akademija Nauk Moldavskoi SSR. Otdelenie Energetičeskoi Kibernetiki. Elektroenergetika i Avtomatika. (Kishinev)
- Elektron. Informationsverarb. Kybernet.* Elektronische Informationsverarbeitung und Kybernetik. (Berlin)
- Elektron. Informationsverarb. Kybernetik* Elektronische Informationsverarbeitung und Kybernetik. (Berlin) (Continued as: *Elektron. Informationsverarb. Kybernet.*)
- † *Elektron. Rechnen und Regeln* Elektronisches Rechnen und Regeln. [Electronic Computing and Control] Akademie-Verlag, Berlin.
- † *Elektron. Rechnen und Regeln, Sonderband* Elektronisches Rechnen und Regeln, Sonderband. [Electronic Computing and Control, Special Issue] Akademie-Verlag, Berlin.

- Elektronika i Modelirovanie* Akademiya Nauk Ukrainoi SSR. Institut Elektrodinamika. Elektronika i Modelirovanie. (Kiev)
- Elektronnoe Modelirovanie* Elektronnoe Modelirovanie. (Kiev)
- Elem. Math.* Elemente der Mathematik. Revue de Mathématiques Élémentaires. Rivista de Matematica Elementare. (Basel)
- Elem. Math. Suppl.* Elemente der Mathematik. Supplement. (Basel) (Treated as monograph series.)
- † *Elem. Math. vom Höheren Standpunkt aus* Elemente der Mathematik vom Höheren Standpunkt aus. [Elements of Mathematics from a Higher Viewpoint] Birkhäuser, Basel-Boston.
- * *Eleutheria* Eleutheria. Liberty; Mathematical Journal of the Seminar of P. Zervos. (Athens)
- Encyclopaedia Math.* Utah Academy of Sciences, Arts, and Letters. Journal. (Salt Lake City, Utah)
- † *Encyclopedia Math. Appl.* Encyclopedia of Mathematics and its Applications. Addison-Wesley, Reading, Mass.
- Engng. Cybernetics* Engineering Cybernetics. English Edition of Tehnicheskaja Kibernetika. (Silver Spring, Md.) (Translation of *Izv. Akad. Nauk SSSR Tehn. Kibernet.*)
- Enseign. Math.* (2) L'Enseignement Mathématique. Revue Internationale. IIe Série. (Geneva)
- Enseignement Math.* L'Enseignement Mathématique. Revue Internationale. (Geneva) (Continued as: *Enseign. Math.* (2))
- † *Episteme* Episteme. Reidel, Dordrecht.
- Erevan. Gos. Univ. Učen. Zap. Estestv. Nauki* Erevanskij Gosudarstvennyj Universitet. Učenyje Zapiski. Estestvennyje Nauki. (Erevan)
- † *Erfahrung und Denken* Erfahrung und Denken. [Experience and Thought] Duncker & Humblot, Berlin.
- † *Ergeb. Math. Grenzgeb.* Ergebnisse der Mathematik und ihrer Grenzgebiete. [Results in Mathematics and Related Areas] Springer, Berlin.
- * *Ergodic Theory Dynamical Systems* Ergodic Theory and Dynamical Systems. (New York)
- † *Erträge der Forschung* Erträge der Forschung. [Research Results] Wissenschaftliche Buchgesellschaft, Darmstadt.
- † *ESE* ESE. Ecole Supérieure d'Electricité, Gif-sur-Yvette.
- † *Esquisses Math.* Esquisses Mathématiques. [Mathematical Sketches] Université Paris VII, Paris.
- Estadist. Española* Instituto Nacional de Estadística. Estadística Española. (Madrid)
- Estadística* Inter-American Statistical Institute. Estadística. (Washington, D.C.)
- † *ESZK* ESZK. Computing Center for Universities, Department of Applied Mathematics, Budapest.
- † *Ettore Majorana Internat. Sci. Ser.: Phys. Sci.* Ettore Majorana International Science Series: Physical Sciences. Consultants Bureau, New York.
- Euclides* (Groningen) Euclides. Maandblad voor de Didactic van de Wiskunde. (Groningen)
- European J. Combin.* European Journal of Combinatorics. (London)
- European J. Oper. Res.* European Journal of Operational Research. (Amsterdam)
- * *European J. Phys.* European Journal of Physics. (London)
- † *Excursions Rec. Math. Ser.* Excursions in Recreational Mathematics Series. Baywood, Farmingdale, N.Y.
- † *Exempla Logica* Exempla Logica. Francke, Munich.
- Experiment. Tech. Phys.* Experimentelle Technik der Physik. (Berlin)
- Fac. Ingen. Agrimensura. Montevideo Publ. Didact. Inst. Mat. Estadist.* Facultad de Ingeniería y Agrimensura. Montevideo. Publicaciones Didácticas del Instituto de Matemática y Estadística. (Montevideo)
- Fak. Mat. Univ. Kiril Metodij Skopje Godišen Zb.* Skopje. Univerzitet Kiril i Metodij. Fakultet na Matematička. Godišen Zbornik. (Skopje)
- Fak. Mat. Univ. Kiril Metodij Skopje Godišen Zb. Special Issue* Skopje. Univerzitet Kiril i Metodij. Fakultet na Matematička. Godišen Zbornik. Special Issue. (Skopje)
- Fasc. Math.* Politechnika Poznańska. Instituta Matematyca. Fasciculi Mathematici. (Poznań)
- Fibonacci Quart.* The Fibonacci Quarterly. Official Organ of the Fibonacci Association. (Santa Clara, Calif.)
- † *Fields and Quanta* Fields and Quanta. (London)
- † *Filos. Voprosy Fiz.* Философские Вопросы Физики. [Philosophical Problems in Physics] Izdat. Leningrad. Univ., Leningrad.
- Fiz. Elementar. Častic i Atom. Jadr.* Ob'edinenyj Institut Jadernyh Issledovanij. Dubna. Fizika Elementarnyh Častic i Atomnogo Jadra. (Moscow) (Translated as: *Societ J. Particles and Nuclei*)
- Fiz.-Mat. Spis. B"lgar. Akad. Nauk.* B"lgarska Akademiya na Naukite Fizičeski Institut. Matematičeski Institut. Fiziko-Matematičesko Spisanie. (Sofia)
- † *Fizicheskaja Mehanika* Физическая Механика. [Physical Mechanics] Izdat. Leningrad. Univ., Leningrad.
- Fizika* (Zagreb) Fizika. A Journal of Experimental and Theoretical Physics. (Zagreb)
- Fluid Dynamics* Fluid Dynamics. (New York) (Translation of *Izv. Akad. Nauk SSSR Meh. Židk. Gaza*)
- Fluid Mech.—Soviet Res.* Fluid Mechanics. Soviet Research. (Silver Spring, Md.)
- † *FOA Rep., Vol. 12* FOA Reports, Vol. 12. National Defence Research Institute, Stockholm.
- Formosan Sci.* Formosan Science. (Taipei)
- † *Forsch. Ber. Evangel. Studiengemeinsch.* Forschungen und Berichte der Evangelischen Studiengemeinschaft. [Research and Reports of the Evangelical Study Society] Klett, Stuttgart.
- † *Forschungs- und Seminarber. Bereich Mech. Univ. Hannover F79* Forschungs- und Seminarberichte aus dem Bereich der Mechanik der Universität Hannover F79. [Research and Seminar Reports in Mechanics of the University of Hanover F79] Universität Hannover, Bereich der Mechanik, Hannover.
- † *Forschungsber. Fachbereich Bauwesen* Forschungsbericht aus dem Fachbereich Bauwesen. [Research Reports of the Department of Construction Engineering] Universität Essen, Fachbereich Bauwesen, Essen.
- † *Forschungsber. des Landes Nordrhein-Westfalen* Forschungsberichte des Landes Nordrhein-Westfalen. [Research Reports of the State of North Rhine-Westphalia] Westdeutscher Verlag, Cologne.
- Fortschr. Phys.* Fortschritte der Physik. (Berlin)
- Fortschr. Physik* Fortschritte der Physik. (Berlin) (Continued as: *Fortschr. Phys.*)
- † *Fortschritt-Ber. VDI Zeitschr., Reihe 8* Fortschritt-Berichte der VDI Zeitschriften, Reihe 8: Mess-, Steuerungs- und Regelungstechnik. [Progress Reports of the VDI Journals, Series 8: Measure, Control and Regulation Technique] VDI, Düsseldorf.
- † *Fortschritt-Ber. VDI Zeitschr., Reihe 11* Fortschritt-Berichte der VDI Zeitschriften, Reihe 11. [Progress Reports of the VDI Journals, Series 11] VDI, Düsseldorf.
- Found. Control Engng.* Technical University of Poznań. Institute of Control Engineering. Foundations of Control Engineering. (Poznań)
- Found. Lang.* International Journal of Language and Philosophy. Foundations of Language. (Dordrecht) (Formerly: *Found. Language*)
- Found. Language* International Journal of Language and Philosophy. Foundations of Language. (Dordrecht) (Continued as: *Found. Lang.*)
- Found. Phys.* Foundations of Physics. (New York)
- † *Freiberger Forschungshfte D* Freiberger Forschungshfte D. [Freiberg Research Notes D] Deutscher Verlag Grundstoffindustrie, Leipzig.
- † *Freiburger Intervall-Berichte* Freiburger Intervall-Berichte. [Freiburg Interval Reports] Universität Freiburg, Institut für Angewandte Mathematik, Freiburg im Breisgau.
- † *Frontiers in Phys.* Frontiers in Physics. Benjamin, Reading, Mass.
- † *Frontiers in Systems Res.* Frontiers in Systems Research. Nijhoff, Leiden.
- Funct. Approx. Comment. Math.* Uniwersytet im. Adama Mickiewicza w Poznaniu. Instytut Matematyki. Functiones et Approximatio Commentarii Mathematici. (Poznań)
- Functional Anal. Appl.* Functional Analysis and its Applications. (New York) (Translation of *Funkcional. Anal. i Priložen.*)
- Fund. Inform.* (4) Roczniki Polskiego Towarzystwa Matematycznego. Seria IV. Fundamenta Informaticae. (Warsaw)
- Fund. Informat.* Fundamenta Informaticae. (Warsaw) (Continued as: *Fund. Inform.* (4))
- Fund. Math.* Polska Akademia Nauk. Fundamenta Mathematicae. (Warsaw)
- * *Fund. Sci.* Fundamenta Scientiae. (Oxford)
- † *Fundamental Stud. in Comput. Sci.* Fundamental Studies in Computer Science. Elsevier, Amsterdam.
- Funkcial. Ekvac.* Fako de l'Funkcialaj Ekvacioj Japana Matematika Societo. Funkcialaj Ekvacioj. Serio Internacia. (Kobe)
- Funkcional. Anal. i Priložen.* Akademiya Nauk SSSR. Funkcional'nyi Analiz i ego Priloženija. (Moscow) (Translated as: *Functional Anal. Appl.*)
- Fuzzy Sets and Systems* Fuzzy Sets and Systems. (Amsterdam)
- Gac. Mat. (Madrid)* Gaceta Matemática. (Madrid) (Continued as: *Gaceta Mat.* (I) (Madrid))
- Gaceta Mat.* (I) (Madrid) Gaceta Matemática. Primera Serie. (Madrid)
- Gamoqeneb. Math. Inst. Sem. Mohsen. Anotacie.* Tbilisi Universiteti. Gamoqenebithi Matematikis Institutis Seminar. Mohsenebatha Anotaciebi. (Tbilisi) See *Sem. Inst. Prikl. Mat. Dokl.*
- Ganita* Ganita Bharati Ganita Parisad. (Lucknow)
- Ganita Bhāratī* Ganita Bhāratī. Indian Society for History of Mathematics. Bulletin. (Ranchi)
- Gaodeng Xuexiao Jisuan Shuxue Xuebao* See *Numer. Math. J. Chinese Univ.*
- Gaoneng Wuli Yu He Wuli* See *Phys. Energi. Fort. Phys. Nuclear.*
- * *Garyounis Sci. Bull.* Garyounis Scientific Bulletin. (Benghazi)
- † *Gasdinamika i Teploobmen* Гасдинамика и Теплообмен. [Gas Dynamics and Heat Transfer] Izdat. Leningrad. Univ., Leningrad.
- Gauss-Ges. Göttingen Mitt.* Gauss-Gesellschaft e. V. Göttingen. Mitteilungen. (Göttingen)
- Gaz. Mat. (Bucharest)* Gazeta Matematică. Publicație Lunară Pentru Tineret. (Bucharest)
- Gaz. Mat. (Lisbon)* Gazeta de Matemática. (Lisbon)
- Gaz. Mat. Publ. Lunară Pentru Tineret* Gazeta Matematică Publicație Lunară Pentru Tineret. (Bucharest) (Continued as: *Gaz. Mat. (Bucharest)*)
- Gaz. Mat. Ser. A* Societatea de Științe Matematice din R. P. R. Gazeta Matematică. Publicație Pentru Studiul și Răspîndirea Științelor Matematice. Seria A. (Bucharest) (Continued as: *Gaz. Mat. Publ. Lunară Pentru Tineret*)
- Gen. Relativity Gravitation* General Relativity and Gravitation. (New York)
- † *Gendai Sūgaku* Gendai Sūgaku. [Modern Mathematics] Iwanami Shoten, Tokyo.
- † *Gendai Sūgaku Enshū Sōsho* Gendai Sūgaku Enshū Sōsho. [Modern Mathematics Exercise Series] Iwanami Shoten, Tokyo.
- General Relativity and Gravitation* General Relativity and Gravitation. (London) (Continued as: *Gen. Relativity Gravitation*)
- General Topology and Appl.* General Topology and its Applications. (Amsterdam) (Continued as: *General Topology Appl.*)
- General Topology Appl.* General Topology and its Applications. (Amsterdam) (Continued as: *Topology Appl.*)
- Genetics* Genetics. A Periodical Record of Investigations Bearing on Heredity and Variation. (Austin, Tex.)
- Geod. Inst. Medd.* Geodætisk Institut. Meddelelse. (Copenhagen)
- Geodæt. Inst. Medd.* Geodætisk Institut. Meddelelse. (Copenhagen) (Continued as: *Geod. Inst. Medd.*)

- † *Geodät. Geophys. Veröffentlichungen, Reihe III* [Geodetic and Geophysical Publications, Series III] Akademie der Wissenschaften der DDR, Berlin.
- Geodes. Mapp. Photogramm.* Geodesy Mapping and Photogrammetry. (Washington, D.C.) (Partial translation of *Izv. Vysš. Učebn. Zaved. Geod. i Aérofot.*)
- Geom. Dedicata* Geometriae Dedicata. (Dordrecht)
- Geometriae Dedicata* Geometriae Dedicata. (Dordrecht) (Continued as: *Geom. Dedicata*)
- Gibridnye Vyčisl. Mašiny i Kompleksy* Gibridnye Vyčislitel'nye Mašiny i Kompleksy. (Kiev)
- Gidroaëromeh. i Teor. Uprugosti* Gidroaëromehanika i Teorija Uprugosti. (Kharkov)
- Gidromeh. (Kiev)* Akademija Nauk Ukrainkoj SSR. Institut Gidromehaniki.
- Gidromehanika.* (Kiev)
- Giorn. Econom. Ann. Econom.* Giornale degli Economisti e Annali de Economia. (Milan) (Continued as: *Giorn. Econom. Ann. Econom. (N.S.)*)
- Giorn. Econom. Ann. Econom. (N.S.)* Giornale degli Economisti e Annali de Economia. (Milan) (Formerly: *Giorn. Econom. Ann. Econom.*)
- Giorn. Mat. Battaglini* Giornale di Matematiche di Battaglini. (Naples) (Continued as: *Giorn. Mat. Battaglini* (6))
- Giorn. Mat. Battaglini* (6) Giornale di Matematiche di Battaglini. Serie 6. (Naples) (Formerly: *Giorn. Mat. Battaglini*)
- Glas. Mat. Ser. III* Društvo Matematičara i Fizičara S. R. Hrvatske. Glasnik Matematički. Serija III. (Zagreb)
- Glasgow Math. J.* Glasgow Mathematical Journal. (Edinburgh)
- Glasnik Mat. Ser. III* Društvo Matematičara i Fizičara S. R. Hrvatske. Glasnik Matematički. Serija III. (Zagreb) (Continued as: *Glas. Mat. Ser. III*)
- † *GMD-Stud.* GMD-Studien. [GMD Studies] Gesellschaft für Mathematik und Datenverarbeitung, Bonn.
- Godišnik Sofijsk. Unio. Fak. Mat. Meh.* See *Annuaire Unio. Sofia Fac. Math. Méc.*
- Godišnik Sofijsk. Unio. Fiz. Fak.* See *Annuaire Unio. Sofia Fac. Phys.*
- Godišnik Visš. Himikotehn. Inst. (Burgas)* Godišnik Visšija Himikotehnologički Institut. Burgas. (Sofia)
- Godišnik Visš. Inž.-Stroitel. Inst.* Godišnik na Visšija Inžerno-Stroitel'nija Institut. (Sofia)
- * *Godišnik Visš. Ped. Inst. Šumen Prirod.-Mat. Fak.* Godišnik na Visšija Pedagogičeski Institut v Šumen. Prirodo-Matematički Fakultet. (Sofia)
- Godišnik Visš. Tehn. Učebn. Zaved. Fiz.* Godišnik na Visšite Tehnički Učebni Zavedenija. Fizika. (Sofia) (Continued as: *Godišnik Visš. Učebn. Zaved. Tehn. Fiz.*)
- Godišnik Visš. Tehn. Učebn. Zaved. Mat.* Godišnik na Visšite Tehnički Učebni Zavedenija. Matematika. (Sofia)
- Godišnik Visš. Tehn. Učebn. Zaved. Priložna Meh.* Godišnik na Visšite Tehnički Učebni Zavedenija. Priložna Mehanika. (Sofia) (Continued as: *Godišnik Visš. Učebn. Zaved. Tehn. Meh.*)
- Godišnik Visš. Učebn. Zaved. Priložna Mat.* Godišnik na Visšite Učebni Zavedenija. Priložna Matematika. (Sofia)
- Godišnik Visš. Učebn. Zaved. Tehn. Fiz.* Godišnik na Visšite Učebni Zavedenija. Tehnički Fizika. (Sofia)
- Godišnik Visš. Učebn. Zaved. Tehn. Meh.* Godišnik na Visšite Učebni Zavedenija. Tehnički Mehanika. (Sofia)
- Go'koo. Gos. Unio. Učen. Zap.* Go'kovskij Gosudarstvennyj Universitet. Učenyje Zapiski. (Gorki)
- † *Göttinger Wirtsch. Sozialwissensch. Stud.* Göttinger Wirtschafts- und Sozialwissenschaftliche Studien. [Göttingen Studies in Economics and Social Sciences] Verlag Otto Schwartz, Göttingen.
- Građevin. Fak. Sarajevo Rad.* Sarajevo. Građevinski Fakultet. Radovi. (Sarajevo)
- Građevinski Fak. Sarajevo Rad.* Sarajevo. Građevinski Fakultet. Radovi. (Sarajevo) (Continued as: *Građevin. Fak. Sarajevo Rad.*)
- † *Graduate Texts in Math.* Graduate Texts in Mathematics. Springer, New York.
- Gravitacija i Teor. Otnositel'nosti* Kazanskij Gosudarstvennyj Universitet. Gravitacija i Teorija Otnositel'nosti. (Kazan)
- † *Griffin's Statist. Monograph Ser.* Griffin's Statistical Monograph Series. Charles Griffin, London.
- † *Grundkurs Math.* Grundkurs Mathematik. [Foundational Course in Mathematics] Vieweg, Braunschweig.
- † *Grundkurs Phys.* Grundkurs Physik. [Fundamentals of Physics] Steinkopff, Darmstadt.
- † *Grundlagen Math. Inform.* Grundlagen der Mathematik und Informatik. [Foundations of Mathematics and Information Science] Rheinisch-Westfälische Technische Hochschule, Aachen.
- † *Grundlehren Math. Wiss.* Grundlehren der Mathematischen Wissenschaften. [Fundamental Principles of Mathematical Sciences] Springer, Berlin.
- † *Grundwissen Math.* Grundwissen Mathematik: Programm zur Wiederholung von Grundbegriffen und Verfahren. [Basic Knowledge of Mathematics: Refresher Course in the Basic Principles and Procedures] Herder, Freiburg im Breisgau.
- Gruz. Politehn. Inst. Trudy* Gruzinskij Politehnički Institut im. V. I. Lenina. Trudy. (Tbilisi) See *V. I. Lenin. Sakharth. Politekh. Inst. Samecn. Šrom.*
- Gujarat Statist. Rev.* Gujarat Statistical Review. (Ahmedabad)
- Hadronic J.* Hadronic Journal. (Nonantum, Mass.)
- Hak-sul Chi Kōn'guk Taehakkyo, Haksul Yōn'guwon.* Hak-sul Chi. (Kōn'guk University. Research Institute. Research Journal). (Seoul)
- † *Handbook Appl. Math. Guidebook* Handbook of Applicable Mathematics Guidebook. Wiley, New York.
- † *Handbook of Statistics* Handbook of Statistics. Elsevier, Amsterdam.
- Hardy-Ramanujan J.* Hardy-Ramanujan Journal. (Bombay)
- † *Harvester Readings Hist. Sci. Philos.* Harvester Readings in the History of Science and Philosophy. Harvester, Brighton.
- † *Heidelberger Taschenbücher* Heidelberger Taschenbücher. [Heidelberg Paperbacks] Springer, Berlin.
- Helv. Phys. Acta* Helvetica Physica Acta. Societatis Physicae Helveticae Commentaria Publica. (Basel)
- † *Heubner Foundation Monograph Ser.* S.S. Heubner Foundation Monograph Series. Huebner Foundation, Philadelphia, Pa.
- Hiroshima Math. J.* Hiroshima Mathematical Journal. (Hiroshima)
- † *Hist. Learn. Sci. Finland* History of Learning and Science in Finland. Societas Scientiarum Fennica, Helsinki.
- Hist. of Sci.* History of Science. An Annual Review of Literature, Research, and Teaching. (Chalfont St. Giles)
- Historia Math.* Historia Mathematica. (New York)
- * *Historia Sci.* Historia Scientiarum. International Journal of the History of Science Society of Japan. (Tokyo) (Formerly: *Japan. Stud. Hist. Sci.*)
- Hitotsubashi J. Arts Sci.* Hitotsubashi Journal of Arts & Sciences. Hitotsubashi University. (Tokyo)
- † *Hochschulbücher für Math.* Hochschulbücher für Mathematik. [University Books for Mathematics] VEB Deutscher Verlag der Wissenschaften, Berlin.
- † *Hochschulbücher für Phys.* Hochschulbücher für Physik. [University Books for Physics] VEB Deutscher Verlag der Wissenschaften, Berlin.
- † *HochschulSammlung Ingenieurwiss. Datenerarbeitung* HochschulSammlung Ingenieurwissenschaft Datenverarbeitung. [Hochschul Collection: Engineering Science and Data Processing] HochschulVerlag, Stuttgart.
- † *HochschulSammlung Naturwiss. Informatik.* HochschulSammlung Naturwissenschaft Informatik. [Hochschul Collection: Natural Science and Information Sciences] HochschulVerlag, Stuttgart.
- † *HochschulSammlung Naturwiss. Math.* HochschulSammlung Naturwissenschaft Mathematik. [Hochschul Collection: Natural Science and Mathematics] HochschulVerlag, Stuttgart.
- Hokkaido Math. J.* Hokkaido Mathematical Journal. (Sapporo)
- Houston J. Math.* Houston Journal of Mathematics. (Houston, Tex.)
- Huazhong Gongxueyuan Xuebao* See *J. Huazhong Inst. Tech.*
- Human. Ser. 4 Lógica Mat.* Humanidades. Serie 4. Lógica Matemática. (Havana) (Formerly: *Humanidades Ser. 4 Lógica Mat.*)
- Humanidades Ser. 4 Lógica Mat.* Humanidades. Serie 4. Lógica Matemática. (Havana) (Continued as: *Human. Ser. 4 Lógica Mat.*)
- IBM J. Res. Develop.* International Business Machines Corporation. Journal of Research and Development. (Armonk, N.Y.)
- IBM Systems J.* International Business Machines Corporation. Systems Journal. (Armonk, N.Y.)
- † *IEE Control Engrg. Ser.* IEE Control Engineering Series. Peter Peregrinus, Stevenage.
- IEEE Trans. Acoust. Speech Signal Process.* Institute of Electrical and Electronics Engineers. Transactions on Acoustics, Speech, and Signal Processing. (New York)
- IEEE Trans. Aerospace and Electron. Systems* Institute of Electrical and Electronics Engineers. Transactions on Aerospace and Electronic Systems. (New York) (Continued as: *IEEE Trans. Aerospace Electron. Systems*)
- IEEE Trans. Aerospace Electron. Systems* Institute of Electrical and Electronics Engineers. Transactions on Aerospace and Electronic Systems. (New York)
- IEEE Trans. Antennas and Propagation* Institute of Electrical and Electronics Engineers. Transactions on Antennas and Propagation. (New York)
- IEEE Trans. Audio Electroacoust.* Institute of Electrical and Electronics Engineers. Transactions on Audio and Electroacoustics. (New York) (Continued as: *IEEE Trans. Acoust. Speech Signal Process.*)
- IEEE Trans. Automat. Control* Institute of Electrical and Electronics Engineers. Transactions on Automatic Control. (New York)
- IEEE Trans. Automatic Control* Institute of Electrical and Electronics Engineers. Transactions on Automatic Control. (New York) (Continued as: *IEEE Trans. Automat. Control*)
- IEEE Trans. Circuits and Systems* Institute of Electrical and Electronics Engineers. Transactions on Circuits and Systems. (New York)
- IEEE Trans. Comm.* Institute of Electrical and Electronics Engineers. Transactions on Communications. (New York)
- IEEE Trans. Comput.* Institute of Electrical and Electronics Engineers. Transactions on Computers. (New York)
- IEEE Trans. Computers* Institute of Electrical and Electronics Engineers. Transactions on Computers. (New York) (Continued as: *IEEE Trans. Comput.*)
- IEEE Trans. Geosci. Electron.* Institute of Electrical and Electronics Engineers. Transactions on Geoscience Electronics. (New York) (Continued as: *IEEE Trans. Geosci. Remote Sensing*)
- IEEE Trans. Geosci. Electronics* Institute of Electrical and Electronics Engineers. Transactions on Geoscience Electronics. (New York) (Continued as: *IEEE Trans. Geosci. Electron.*)
- * *IEEE Trans. Geosci. Remote Sensing* Institute of Electrical and Electronics Engineers. Transactions on Geoscience and Remote Sensing. (New York) (Formerly: *IEEE Trans. Geosci. Electron.*)
- IEEE Trans. Inform. Theory* Institute of Electrical and Electronics Engineers. Transactions on Information Theory. (New York)
- IEEE Trans. Information Theory* Institute of Electrical and Electronics Engineers. Transactions on Information Theory. (New York) (Continued as: *IEEE Trans. Inform. Theory*)
- IEEE Trans. Microwave Theory Tech.* Institute of Electrical and Electronics Engineers. Transactions on Microwave Theory and Techniques. (New York)
- IEEE Trans. Plasma Sci.* Institute of Electrical and Electronics Engineers. Transactions on Plasma Science. (New York)
- IEEE Trans. Reliab.* Institute of Electrical and Electronics Engineers. Transactions on Reliability. (New York)

- IEEE Trans. Software Engrg.* Institute of Electrical and Electronics Engineers. Transactions on Software Engineering. (New York)
- IEEE Trans. Systems Man Cybernet.* Institute of Electrical and Electronic Engineers. Transactions on Systems, Man, and Cybernetics. (New York)
- † *IFIP Congress Ser.* IFIP Congress Series. Elsevier, New York.
- † *IHS—Studies* IHS—Studies. Physica Verlag, Vienna.
- † *IIASA Proc. Ser.* IIASA Proceedings Series. Pergamon, Elmsford, N.Y.
- IJAA Internat. J. Appl. Anal.* IJAA. International Journal of Applied Analysis. (Calcutta)
- Illinois J. Math.* Illinois Journal of Mathematics. (Urbana, Ill.)
- * *IMA J. Appl. Math.* IMA (Institute of Mathematics and its Applications). Journal of Applied Mathematics. (London) (Formerly: *J. Inst. Math. Appl.*)
- * *IMA J. Numer. Anal.* IMA (Institute of Mathematics and its Applications). Journal of Numerical Analysis. (London) (Formerly: *J. Inst. Math. Appl.*)
- † *Immunology Ser.* Immunology Series. Dekker, New York.
- Indag. Math.* See *Nederl. Akad. Wetensch. Indag. Math.*
- Indian J. Engrg. Math.* Indian Journal of Engineering Mathematics. (Agra)
- Indian J. Hist. Sci.* Indian Journal of History of Science. National Institute of Sciences of India. (New Delhi)
- Indian J. History Sci.* Indian Journal of History of Science. National Institute of Sciences of India. (New Delhi) (Continued as: *Indian J. Hist. Sci.*)
- Indian J. Math.* Indian Journal of Mathematics. (Allahabad)
- Indian J. Mech. Math.* Indian Journal of Mechanics and Mathematics. (Calcutta)
- Indian J. Pure Appl. Math.* Indian Journal of Pure and Applied Mathematics. (New Delhi)
- Indian J. Pure Appl. Phys.* Indian Journal of Pure and Applied Physics. (New Delhi)
- † *Indian Sci. Abstracts* Indian Science Abstracts. (New Delhi)
- Indiana Univ. Math. J.* Indiana University Mathematics Journal. (Bloomington, Ind.)
- † *Indust. Engineering* Industrial Engineering. Dekker, New York.
- Indust. Math.* Industrial Mathematics. (Detroit, Mich.)
- INFOR—Canad. J. Oper. Res. Inform. Process.* INFOR. Canadian Journal of Operational Research and Information Processing. (Guelph, Ont.)
- INFOR—Canad. J. Operational Res. and Information Processing* INFOR. Canadian Journal of Operational Research and Information Processing. (Toronto, Ont.) (Continued as: *INFOR—Canad. J. Oper. Res. Inform. Process.*)
- Inform. and Control* Information and Control. (New York)
- Inform.-Elektron.* Információ-Elektronika. A Közpointi Statisztikai Hivatal Folyóirata. (Budapest)
- † *Inform. Kybernet. Rechentech.* Informatik. Kybernetik. Rechentechnik. [Information. Cybernetics. Computing] Akademie-Verlag, Berlin.
- Inform. Process. Japan* Information Processing in Japan. (Tokyo) (Partial translation of *Joho-shori*) (Continued as: *J. Inform. Process.*)
- Inform. Process. Lett.* Information Processing Letters. (Amsterdam)
- Inform. Process. Mach.* Information Processing Machines. (Prague)
- Inform. Sci.* Information Sciences. An International Journal. (New York)
- † *Inform. Sci. Humaines* Informatique et Sciences Humaines. [Information and Social Sciences] Institut des Sciences Humaines Appliquées, Paris.
- Inform. Systems* Information Systems. An International Journal. (Oxford) (Formerly: *Information Syst.*)
- Informác.-Elektron.* Információ-Elektronika. A Közpointi Statisztikai Hivatal Folyóirata. (Budapest) (Continued as: *Inform.-Elektron.*)
- † *Informatik-Ber.* Informatik-Berichte. [Reports on Information Science] Universität Bonn, Institut für Informatik, Bonn.
- † *Informatik-Fachber.* Informatik-Fachberichte. [Technical Reports on Information Science] Springer, Berlin.
- † *Informatika* Информатика. [Information Science] Akad. Nauk SSSR, Vsesojuz. Inst. Nauk. i Tehn. Informacii, Moscow.
- Information and Control* Information and Control. (New York) (Continued as: *Inform. and Control*)
- Information Processing in Japan* Information Processing in Japan. (Tokyo) (Partial translation of *Joho-shori*) (Continued as: *J. Information Processing*)
- Information Processing Lett.* Information Processing Letters. (Amsterdam) (Continued as: *Inform. Process. Lett.*)
- Information Processing Machines* Information Processing Machines. (Prague) (Continued as: *Inform. Process. Mach.*)
- Information Sci.* Information Sciences. An International Journal. (New York) (Continued as: *Inform. Sci.*)
- Information Syst.* Information Systems. An International Journal. (Oxford) (Continued as: *Inform. Systems*)
- Ingr.-Arch.* Ingenieur-Archiv. (Berlin) (Continued as: *Ingr.-Arch.*)
- Ingr.-Arch.* Ingenieur-Archiv. (Berlin) (Formerly: *Ingr.-Arch.*)
- Inst. Hautes Études Sci. Publ. Math.* Institut des Hautes Études Scientifiques. Publications Mathématiques. (Paris)
- † *Inst. Math. Statist. Bull.* Institute of Mathematical Statistics. Bulletin. (Hayward, Calif.)
- Inst. Meh. Moskov. Gos. Univ. Naučn. Trudy* Institut Mehaniki Moskovskogo Gosudarstvennogo Universiteta. Naučnye Trudy. (Moscow)
- † *Institutiones Math.* Institutiones Mathematicae. [Mathematical Methods] Academic Press, New York.
- Integral Equations Operator Theory* Integral Equations and Operator Theory. (Basel)
- † *Interdisciplinary Math.* Interdisciplinary Mathematics. Math Sci Press, Brookline, Mass.
- † *Interdisciplinary Systems Res.* Interdisciplinary Systems Research. Birkhäuser, Basel-Boston.
- Internat. Econom. Rev.* International Economic Review. (Osaka/Philadelphia, Pa.)
- Internat. J. Bio-Med. Comput.* International Journal of Bio-Medical Computing. (Barking)
- Internat. J. Circuit Theory Appl.* International Journal of Circuit Theory and Applications. (Chichester)
- Internat. J. Comput. & Fluids* An International Journal. Computers & Fluids. (New York) (Continued as: *Comput. & Fluids*)
- Internat. J. Comput. Inform. Sci.* International Journal of Computer and Information Sciences. (New York)
- Internat. J. Comput. Information Sci.* International Journal of Computer and Information Sciences. (New York) (Continued as: *Internat. J. Comput. Inform. Sci.*)
- Internat. J. Comput. Math.* International Journal of Computer Mathematics. Section A. Programming Theory and Methods. Section B. Computational Methods. (London)
- Internat. J. Control* International Journal of Control. (London)
- Internat. J. Electron.* International Journal of Electronics. (London)
- Internat. J. Engrg. Sci.* International Journal of Engineering Science. (Oxford)
- Internat. J. Fracture* International Journal of Fracture. (Dordrecht)
- Internat. J. Game Theory* International Journal of Game Theory. (Vienna)
- Internat. J. Gen. Syst.* International Journal of General Systems. Methodology, Applications, Education. (New York) (Continued as: *Internat. J. Gen. Systems*)
- Internat. J. Gen. Systems* International Journal of General Systems. Methodology, Applications, Education. (New York)
- Internat. J. Man-Mach. Stud.* International Journal of Man-Machine Studies. (London)
- Internat. J. Man-Machine Studies* International Journal of Man-Machine Studies. (London) (Continued as: *Internat. J. Man-Mach. Stud.*)
- Internat. J. Math. Ed. Sci. Tech.* International Journal of Mathematical Education in Science and Technology. (London)
- Internat. J. Math. Math. Sci.* International Journal of Mathematics and Mathematical Sciences. (Greenville, N.C.)
- Internat. J. Non-Linear Mech.* International Journal of Non-Linear Mechanics. (Elmsford, N.Y.)
- Internat. J. Numer. Analyt. Methods Geomech.* International Journal for Numerical and Analytical Methods in Geomechanics. (Chichester)
- Internat. J. Numer. Methods Engrg.* International Journal for Numerical Methods in Engineering. (Chichester)
- * *Internat. J. Numer. Methods Fluids* International Journal for Numerical Methods in Fluids. (Chichester)
- Internat. J. Policy Anal. Inform. Systems* International Journal of Policy Analysis and Information Systems. (New York)
- Internat. J. Solids and Structures* International Journal of Solids and Structures. (Elmsford, N.Y.)
- Internat. J. Systems Sci.* International Journal of Systems Science. (London)
- Internat. J. Theoret. Phys.* International Journal of Theoretical Physics. (New York)
- Internat. Logic Rev.* International Logic Review. Rassegna Internazionale di Logica. (Bologna)
- † *Internat. Math. News* International Mathematical News. (Vienna)
- † *Internat. Schriftenreihe Numer. Math.* Internationale Schriftenreihe zur Numerischen Mathematik. [International Series of Numerical Mathematics] Birkhäuser, Basel-Boston.
- † *Internat. Ser. Appl. Systems Anal.* International Series on Applied Systems Analysis. Wiley, New York.
- † *Internat. Ser. Mod. Appl. Math. Comput. Sci.* International Series in Modern Applied Mathematics and Computer Science. Pergamon, Elmsford, N.Y.
- † *Internat. Ser. Monographs in Natural Philos.* International Series of Monographs in Natural Philosophy. Pergamon, Elmsford, N.Y.
- † *Internat. Ser. Monographs Pure Appl. Math.* International Series of Monographs in Pure and Applied Mathematics. Pergamon, Elmsford, N.Y.
- † *Internat. Ser. Natural Philos.* International Series in Natural Philosophy. Pergamon, Elmsford, N.Y.
- † *Internat. Ser. Nonlinear Math.: Theory, Methods Appl.* International Series in Nonlinear Mathematics: Theory, Methods and Applications. Pergamon, Elmsford, N.Y.
- † *Internat. Ser. Numer. Math.* International Series of Numerical Mathematics. Birkhäuser, Basel-Boston.
- † *Internat. Ser. Pure Appl. Math.* International Series in Pure and Applied Mathematics. Pergamon, Elmsford, N.Y.
- Internat. Statist. Rev.* International Statistical Review. Revue Internationale de Statistique. (Edinburgh)
- Invent. Math.* Inventiones Mathematicae. (Berlin)
- Investigación Oper.* Investigación Operacional. (Havana)
- Inž.-Fiz. Ž.* Inženerno-Fizički Žurnal. (Minsk) (Translated as: *J. Engrg. Phys.*)
- Inž.-Stroitel. Inst. Kuibyšev. Sb. Trudov* Moskovskii Ordena Trudovogo Krasnogo Znamenii Inženerno-Stroitel'nyi Institut im. V. V. Kuibyševa. Sbornik Trudov. (Moscow)
- Inž. Ž. Meh. Tverd. Tela* Inženernyi Žurnal. Mehanika Tverdogo Tela. (Moscow) (Continued as: *Izv. Akad. Nauk SSSR Meh. Tverd. Tela*)
- Iraqi J. Sci.* Iraqi Journal of Science. (Baghdad)
- Irkutsk. Politehn. Inst. Trudy* Glavnoe Upravlenie Politehnicheskikh, Mašinostroitel'nykh i Energeticheskikh VUZov. Irkutskii Politehnicheskii Institut. Trudy. (Irkutsk)
- † *ISD Bericht* ISD Bericht. [ISD Report] University of Stuttgart, Stuttgart.
- † *ISI Lecture Notes* ISI Lecture Notes. Macmillan of India, New Delhi.
- Isis* Isis. An International Review Devoted to the History of Science and Civilization. (Philadelphia, Pa.)
- Islamabad J. Sci.* Islamabad Journal of Sciences. Journal of Mathematics and Sciences. (Islamabad)
- Israel J. Math.* Israel Journal of Mathematics. (Jerusalem)

- Israel J. Tech.* Israel Journal of Technology. (Jerusalem)
- Issled. Nekotorykh Voprosov Mat. Kibernet.* Issledovaniya Nekotorykh Voprosov Matematicheskoi Kibernetiki. (Tbilisi) See *Math. Kibernet. Zogierth. Sakith. Gamkov.*
- Issled. Operacii i ASU* Kievskii Gosudarstvennyi Universitet. Issledovanie Operacii i ASU. (Kiev)
- Issled. Operacii i Statist. Modelirovanie* Leningradskii Gosudarstvennyi Universitet im. A. A. Zdanova. Issledovanie Operacii i Statisticheskoe Modelirovanie. (Leningrad)
- Issled. Prikl. Mat.* Kazanskii Universitet. Issledovaniya po Prikladnoi Matematike. (Kazan)
- Issled. Teor. Plastin i Obolochek* Kazanskii Universitet. Issledovaniya po Teorii Plastin i Obolochek. (Kazan)
- Ist. Lombardo Accad. Sci. Lett. Rend. A* Istituto Lombardo. Accademia di Scienze e Lettere. Rendiconti. Scienze Matematiche, Fisiche, Chimiche e Geologiche. A. (Milan) (Continued as: *Istit. Lombardo Accad. Sci. Lett. Rend. A*)
- Ist. Veneto Sci. Lett. Arti Atti Cl. Sci. Mat. Natur.* Istituto Veneto di Scienze, Lettere ed Arti. Venezia. Atti. Classe di Scienze Matematiche e Naturali. (Venice) (Continued as: *Istit. Veneto Sci. Lett. Arti Atti Cl. Sci. Mat. Natur.*)
- Istanbul Tek. Univ. Bül.* Istanbul Teknik Üniversitesi Bülteni. Bulletin of the Technical University of Istanbul. (Istanbul)
- Istanbul Univ. Fen Fak. Mecm. Ser. A* İstanbul Üniversitesi Fen Fakültesi Mecmuası. A Serisi. Sırfı ve Tatbiki Matematik. Revue de la Faculté des Sciences de l'Université d'Istanbul. Série A. Mathématiques Pures et Appliquées. (Istanbul)
- Istit. Lombardo Accad. Sci. Lett. Rend. A* Istituto Lombardo. Accademia di Scienze e Lettere. Rendiconti. Scienze Matematiche, Fisiche, Chimiche e Geologiche. A. (Milan)
- Istit. Veneto Sci. Lett. Arti Atti Cl. Sci. Mat. Natur.* Istituto Veneto di Scienze, Lettere ed Arti. Venezia. Atti. Classe di Scienze Matematiche e Naturali. (Venice)
- Istor.-Astronom. Issled.* Istoriko-Astronomicheskie Issledovaniya. (Moscow)
- Istor. Estestvozn. Tehn. Armen.* Akademija Nauk Armjanskoi SSR. Istoriya Estestvoznaniya i Tehniki v Armenii. (Erevan)
- Istor.-Mat. Issled.* Istoriko-Matematicheskie Issledovaniya. (Moscow)
- Itogi Nauki—Serija "Matematika" (Progress in Science—Mathematical Series)* Itogi Nauki—Serija "Matematika" (Progress in Science—Mathematical Series). (Moscow) (Translated as: *J. Soviet Math.*)
- Ivanov. Gos. Ped. Inst. Učen. Zap.* Ivanovskii Gosudarstvennyi Pedagogicheskii Institut im. D. A. Furmanova. Ivanovskoe Matematicheskoe Obščestvo. Učenyje Zapiski. (Ivanovo) (Continued as: *Ivanov. Gos. Univ. Učen. Zap.*)
- Ivanov. Gos. Univ. Učen. Zap.* Ivanovskii Gosudarstvennyi Universitet. Učenyje Zapiski. (Ivanovo)
- Izv. Acad. Sci. USSR Atmospher. Ocean. Phys.* Izvestiya Academy of Sciences USSR. Atmospheric and Oceanic Physics. (Washington, D.C.) (Translation of *Izv. Akad. Nauk SSSR Ser. Fiz. Atmosfer. i Okeana*)
- Izv. Acad. Sci. USSR Phys. Solid Earth* Izvestiya Academy of Sciences USSR. Physics of the Solid Earth. (Washington, D.C.) (Translation of *Izv. Akad. Nauk SSSR Ser. Fiz. Zemli*)
- Izv. Akad. Nauk Armjan. SSR Ser. Fiz.* Izvestija Akademii Nauk Armjanskoi SSR. Serija Fizika. (Erevan)
- Izv. Akad. Nauk Armjan. SSR Ser. Mat.* Izvestija Akademii Nauk Armjanskoi SSR. Serija Matematika. (Erevan) (Translated as: *Soviet J. Contemporary Math. Anal.*)
- Izv. Akad. Nauk Armjan. SSR Ser. Meh.* Izvestija Akademii Nauk Armjanskoi SSR. Serija Mekhanika. (Erevan)
- Izv. Akad. Nauk Armjan. SSR Ser. Tehn. Nauk* Izvestija Akademii Nauk Armjanskoi SSR Serija Tehnicheskikh Nauk. (Erevan)
- Izv. Akad. Nauk Azerbaidžan. SSR Ser. Fiz.-Tehn. Mat. Nauk* Izvestija Akademii Nauk Azerbaidžanskoi SSR. Serija Fiziko-Tehnicheskikh i Matematicheskikh Nauk. (Baku)
- Izv. Akad. Nauk Kazah. SSR Ser. Fiz.-Mat.* Izvestija Akademii Nauk Kazahskoi SSR. Serija Fiziko-Matematicheskaja. (Alma-Ata)
- Izv. Akad. Nauk Kirgiz. SSR* Izvestija Akademii Nauk Kirgizskoi SSR. (Frunze)
- Izv. Akad. Nauk Moldav. SSR* Izvestija Akademii Nauk Moldavskoi SSR. (Kishinev) See *Bul. Akad. Ştiinţe RSS Moldoven.* (Continued as: *Izv. Akad. Nauk Moldav. SSR Ser. Fiz.-Tehn. Mat. Nauk*)
- Izv. Akad. Nauk Moldav. SSR Ser. Fiz.-Tehn. Mat. Nauk* Izvestija Akademii Nauk Moldavskoi SSR Serija Fiziko-Tehnicheskikh i Matematicheskikh Nauk. (Kishinev)
- Izv. Akad. Nauk SSSR Meh. Toerd. Tela* Izvestija Akademii Nauk SSSR. Mekhanika Tverdogo Tela. (Moscow) (Translated as: *Mech. Solids*) (Formerly: and *Inž. Ž. Meh. Toerd. Tela*)
- Izv. Akad. Nauk SSSR Meh. Židk. Gaza* Akademija Nauk SSSR. Izvestija Akademii Nauk SSSR. Mekhanika Židkosti i Gaza. (Moscow) (Translated as: *Fluid Dynamics*)
- Izv. Akad. Nauk SSSR Ser. Fiz. Atmosfer. i Okeana* Izvestija Akademii Nauk SSSR. Serija Fizika Atmosfery i Okeana. (Moscow) (Translated as: *Izv. Acad. Sci. USSR Atmospher. Ocean. Phys.*)
- Izv. Akad. Nauk SSSR Ser. Fiz. Zemli* Izvestija Akademii Nauk SSSR Serija Fizika Zemli. (Moscow) (Translated as: *Izv. Acad. Sci. USSR Phys. Solid Earth*)
- Izv. Akad. Nauk SSSR Ser. Mat.* Izvestija Akademii Nauk SSSR. Serija Matematika. (Moscow) (Translated as: *Math. USSR-Izv.*)
- Izv. Akad. Nauk SSSR Tehn. Kibernet.* Izvestija Akademii Nauk SSSR. Tehnicheskaja Kibernetika. (Moscow) (Translated as: *Engng. Cybernetics*)
- Izv. Akad. Nauk Tadžik. SSR Otdel. Fiz.-Mat. i Geol.-Him. Nauk* Izvestija Akademii Nauk Tadžikskoi SSR. Otdelenie Fiziko-Matematicheskikh i Geologo-Himicheskikh Nauk. (Dushanbe)
- Izv. Akad. Nauk Turkm. SSR Ser. Fiz.-Tehn. Him. Geol. Nauk* Izvestija Akademii Nauk Turkmenskoi SSR. Serija Fiziko-Tehnicheskikh, Himicheskikh i Geologicheskikh Nauk. (Ashkhabad)
- Izv. Akad. Nauk UzSSR Ser. Fiz.-Mat. Nauk* Izvestija Akademii Nauk UzSSR. Serija
- Fiziko-Matematicheskikh Nauk. UzSSR Fanlar Akademijasining Ahboroti. Fizika-Matematika Fanlari Serijasi. (Tashkent)
- Izv. Kazan. Fil. Akad. Nauk SSSR Ser. Fiz.-Mat. i Tehn. Nauk* Izvestija Kazanskogo Filiala Akademii Nauk SSSR. Serija Fiziko-Matematicheskikh i Tehnicheskikh Nauk. (Kazan)
- Izv. Severo-Kavkaz. Naučn. Centra Vysš. Školy Ser. Estestv. Nauk* Izvestija Severo-Kavkazskogo Nauchnogo Centra Vysšei Školy Estestvenne Nauki. (Rostov-on-Don)
- Izv. Severo-Kavkaz. Naučn. Centra Vysš. Školy Ser. Tehn. Nauk* Izvestija Severo-Kavkazskogo Nauchnogo Centr Vysšei Školy. Serija Tehnicheskije Nauki. (Rostov-on-Don)
- Izv. Sibirsk. Otdel. Akad. Nauk SSSR* Izvestija Sibirskogo Otdeleniya. Akademija Nauk SSSR. (Novosibirsk) (Continued as: *Izv. Sibirsk. Otdel. Akad. Nauk SSSR Ser. Tehn. Nauk*)
- Izv. Sibirsk. Otdel. Akad. Nauk SSSR Ser. Tehn. Nauk* Izvestija Sibirskogo Otdeleniya. Akademija Nauk SSSR. Serija Tehnicheskikh Nauk. (Novosibirsk)
- Izv. Tomsk. Politehn. Inst.* Izvestija Tomskogo Ordena Trudovogo Krasnogo Znameni Politehnicheskogo Instituta im. S. M. Kirova. (Tomsk)
- Izv. Voronež. Gos. Ped. Inst.* Izvestija Voronežskogo Gosudarstvennogo Pedagogicheskogo Instituta. (Voronezh)
- Izv. Vuzov* See *Izv. Vysš. Učebn. Zaved. Matematika*
- Izv. Vysš. Učebn. Zaved. Aviacion. Tehn.* Izvestija Vysšikh Učebnykh Zavedenii. Aviacionnaja Tehnika. (Kazan) (Translated as: *Soviet Aeronaut.*)
- Izv. Vysš. Učebn. Zaved. Elektromekhanika* Izvestija Vysšikh Učebnykh Zavedenii. Elektromekhanika. (Novocherkassk)
- Izv. Vysš. Učebn. Zaved. Fizika* Izvestija Vysšikh Učebnykh Zavedenii Fizika. (Tomsk) (Translated as: *Soviet Phys. J.*)
- Izv. Vysš. Učebn. Zaved. Geod. i Aerofot.* Izvestija Vysšikh Učebnykh Zavedenii. Geodezija i Aerofotos'emka. (Moscow)
- Izv. Vysš. Učebn. Zaved. Matematika* Izvestija Vysšikh Učebnykh Zavedenii Matematika. (Kazan) (Translated as: *Soviet Math. (Iz. VUZ)*)
- Izv. Vysš. Učebn. Zaved. Radiofizika* Izvestija Vysšikh Učebnykh Zavedenii. Radiofizika. (Gorki) (Translated as: *Radiophys. and Quantum Electronics*)
- J. Acoust. Soc. Amer.* Acoustical Society of America. Journal. (New York)
- J. Algebra* Journal of Algebra. (New York)
- J. Algorithms* Journal of Algorithms. (New York)
- J. Amer. Statist. Assoc.* Journal of the American Statistical Association. (Washington, D.C.)
- J. Analyse Math.* Journal d'Analyse Mathématique. (Jerusalem)
- J. Animal Ecology* The Journal of Animal Ecology. (Oxford)
- J. Appl. Math. Mech.* Journal of Applied Mathematics and Mechanics. Translation of the Soviet journal Prikladnaja Matematika i Mekhanika. (Oxford) (Translation of *Prikl. Mat. Meh.*)
- J. Appl. Mech. Tech. Phys.* Journal of Applied Mechanics and Technical Physics. (New York) (Translation of *Ž. Prikl. Meh. i Tehn. Fiz.*)
- J. Appl. Probab.* Journal of Applied Probability. (Sheffield)
- J. Appl. Probability* Journal of Applied Probability. (Sheffield) (Continued as: *J. Appl. Probab.*)
- J. Approx. Theory* Journal of Approximation Theory. (New York)
- J. Approximation Theory* Journal of Approximation Theory. (New York) (Continued as: *J. Approx. Theory*)
- J. Assoc. Comput. Mach.* Journal of the Association for Computing Machinery. (New York)
- J. Astronaut. Sci.* American Astronautical Society. Journal of the Astronautical Sciences. (Alexandria, Va.)
- J. Atmospheric Sci.* Journal of the Atmospheric Sciences. (Boston, Mass.)
- J. Austral. Math. Soc. Ser. A* Australian Mathematical Society. Journal. Series A. (St. Lucia)
- J. Austral. Math. Soc. Ser. B* Australian Mathematical Society. Journal. Series B. Applied Mathematics. (St. Lucia)
- J. Birla Inst. Tech. and Sci. Pilani* Journal of the Birla Institute of Technology and Science. (Pilani) (Continued as: *J. Birla Inst. Tech. Sci.*)
- J. Birla Inst. Tech. Sci.* Journal of the Birla Institute of Technology and Science. (Pilani) (Formerly: *J. Birla Inst. Tech. and Sci. Pilani*)
- J. Chem. Phys.* The Journal of Chemical Physics. (New York)
- J. Chinese Inst. Engrs.* Chinese Institute of Engineers. Journal. (Taipei)
- J. College Engrg. Nihon Univ. Ser. B* Nihon University. College of Engineering. Journal. Series B. (Koriyama)
- J. Combin. Inform. System Sci.* Journal of Combinatorics, Information & System Sciences. (Delhi)
- J. Combin. Theory Ser. A* Journal of Combinatorial Theory. Series A. (New York)
- J. Combin. Theory Ser. B* Journal of Combinatorial Theory. Series B. (New York)
- J. Combinatorial Theory Ser. A* Journal of Combinatorial Theory. Series A. (New York) (Continued as: *J. Combin. Theory Ser. A*)
- J. Combinatorial Theory Ser. B* Journal of Combinatorial Theory. Series B. (New York) (Continued as: *J. Combin. Theory Ser. B*)
- J. Combinatorics Information Syst. Sci.* Journal of Combinatorics, Information & System Sciences. (Delhi) (Continued as: *J. Combin. Inform. System Sci.*)
- J. Comput. Appl. Math.* Journal of Computational and Applied Mathematics. (Antwerp)
- J. Comput. Chem.* Journal of Computational Chemistry. (New York)
- J. Comput. Phys.* Journal of Computational Physics. (New York)
- J. Comput. System Sci.* Journal of Computer and System Sciences. (New York)
- J. Computational Phys.* Journal of Computational Physics. (New York) (Continued as: *J. Comput. Phys.*)
- J. Cuneiform Stud.* Journal of Cuneiform Studies. (New Haven, Conn.)

- J. Cybernet.* Journal of Cybernetics. Transactions of the American Society for Cybernetics. (Washington, D.C.) (Contents include translations from related Japanese and Russian journals) (Continued as: *Cybernet. Systems*)
- J. Design Automat. Fault-Tolerant Comput.* Journal of Design Automation & Fault-Tolerant Computing. (Woodland Hills, Calif.) (Continued as: *J. Digital Systems*)
- J. Differential Equations* Journal of Differential Equations. (New York)
- J. Differential Geom.* Journal of Differential Geometry. (Bethlehem, Pa.)
- J. Differential Geometry* Journal of Differential Geometry. (Bethlehem, Pa.) (Continued as: *J. Differential Geom.*)
- J. Digital Systems* Journal of Digital Systems. (Rockville, Md.)
- J. Econom.* Journal of Econometrics. (Amsterdam) (Continued as: *J. Econometrics*)
- **J. Econom. Behavior Organization* Journal of Economic Behavior & Organization. (Amsterdam)
- **J. Econom. Dynamics Control* Journal of Economic Dynamics & Control. (Amsterdam)
- J. Econom. Theory* Journal of Economic Theory. (New York)
- J. Econometrics* Journal of Econometrics. (Lausanne)
- J. Elasticity* Journal of Elasticity. (Dordrecht)
- J. Elisha Mitchell Sci. Soc.* Journal of the Elisha Mitchell Scientific Society. (Chapel Hill, N.C.)
- J. Engrg. Math.* Journal of Engineering Mathematics. (Dordrecht)
- J. Engrg. Phys.* Journal of Engineering Physics. (New York) (Translation of *Inzh. Fiz.* Z.)
- J. Fac. Ed. Saga Univ. Part I* Saga University. Faculty of Education. Journal. Part I. (Saga)
- J. Fac. Engrg. Chiba Univ.* Journal of the Faculty of Engineering. Chiba University. (Chiba)
- J. Fac. Engrg. Univ. Tokyo Ser. B* Journal of the Faculty of Engineering. University of Tokyo. Series B. (Tokyo)
- J. Fac. Sci. Karadeniz Tech. Univ.* Karadeniz Teknik Üniversitesi Temel Bilimler Fakültesi. Dergisi. (Karadeniz Technical University. Faculty of Sciences. Journal.) Series MA: Mathematics. (Trabzon)
- J. Fac. Sci. Riyad Univ.* Riyadh University. Faculty of Science. Journal. (Riyad)
- J. Fac. Sci. Shinshu Univ.* Journal of the Faculty of Science. Shinshu University. (Matsumoto)
- J. Fac. Sci. Univ. Tokyo Sect. IA Math.* Journal of the Faculty of Science. University of Tokyo. Section IA. Mathematics. (Tokyo)
- **J. Finance* The Journal of Finance. (New York)
- J. Fluid Mech.* Journal of Fluid Mechanics. (Cambridge)
- J. Franklin Inst.* Journal of the Franklin Institute. (Oxford)
- J. Funct. Anal.* Journal of Functional Analysis. (New York)
- J. Functional Analysis* Journal of Functional Analysis. (New York) (Continued as: *J. Funct. Anal.*)
- J. Geom.* Journal of Geometry. (Basel)
- J. Geometry* Journal of Geometry. (Basel) (Continued as: *J. Geom.*)
- J. Graph Theory* Journal of Graph Theory. (New York)
- J. Guidance Control* Journal of Guidance and Control. (New York)
- J. Hist. Arabic Sci.* Journal for the History of Arabic Science. (Aleppo)
- J. Hist. Astronom.* Journal for the History of Astronomy. (Chalfont St. Giles)
- J. Hokkaido Univ. Ed. Sect. II A* Journal of Hokkaido University of Education. Section II A. (Sapporo)
- J. Huazhong Inst. Tech.* Journal of Huazhong Institute of Technology. Huazhong Gongxueyuan Xuebao (Zhongguo Kexue Shuxue Zhuanji). (Wuhan)
- J. Indian Acad. Math.* Indian Academy of Mathematics. Journal. (Indore)
- J. Indian Inst. Sci.* Indian Institute of Science. Journal. (Bangalore)
- J. Indian Math. Soc.* The Journal of the Indian Mathematical Society. (Madras) (Continued as: *J. Indian Math. Soc. (N.S.)*)
- J. Indian Math. Soc. (N.S.)* The Journal of the Indian Mathematical Society. New Series. (Delhi)
- **J. Indian Soc. Statist. Oper. Res.* Journal of the Indian Society of Statistics and Operations Research. (Aligarh)
- J. Indian Statist. Assoc.* Journal of the Indian Statistical Association. (Poona)
- **J. Inform. Optim. Sci.* Journal of Information & Optimization Sciences. (Delhi)
- J. Inform. Process.* Journal of Information Processing. (Tokyo)
- J. Information Processing* Journal of Information Processing. (Tokyo) (Continued as: *J. Inform. Process.*) (Formerly: *Information Processing in Japan*)
- J. Inst. Math. Appl.* Journal of the Institute of Mathematics and its Applications. (New York) (Continued as: *IMA J. Appl. Math.* and *IMA J. Numer. Anal.*)
- J. Integral Equations* Journal of Integral Equations. (New York)
- J. Interdisciplinary Modeling Simulation* Journal of Interdisciplinary Modeling and Simulation. (New York)
- J. Internat. Assoc. Math. Geol.* Journal of the International Association for Mathematical Geology. (New York)
- J. Internat. Assoc. Mathematical Geol.* Journal of the International Association for Mathematical Geology. (New York) (Continued as: *J. Internat. Assoc. Math. Geol.*)
- J. Japan Statist. Soc.* Journal of the Japan Statistical Society (Nihon Tōkei Gakkai Kaibō). (Tokyo)
- J. Jiwaji Univ.* Jiwaji University. Journal. (Gwalior)
- J. Karnatak Univ. Sci.* Journal of the Karnatak University. Science. (Dharwar)
- J. Korean Math. Soc.* Journal of the Korean Mathematical Society. (Seoul)
- J. London Math. Soc.* The Journal of the London Mathematical Society. (London) (Continued as: *J. London Math. Soc. (2)*)
- J. London Math. Soc. (2)* The Journal of the London Mathematical Society. Second Series. (London)
- J. Madras Univ. B* Journal of the Madras University. B. Contributions in Mathematics, Physical and Biological Sciences. (Madras)
- J. Madurai Kamaraj Univ.* Madurai Kamaraj University. Journal. (Madurai)
- J. Madurai Univ.* Madurai University. Journal. (Madurai) (Continued as: *J. Madurai Kamaraj Univ.*)
- J. Math. Anal. Appl.* Journal of Mathematical Analysis and Applications. (New York)
- J. Math. and Sci.* Journal of Mathematics and Sciences. (Islamabad) (Continued as: *Islamabad J. Sci.*)
- J. Math. Biol.* Journal of Mathematical Biology. (New York)
- J. Math. Econom.* Journal of Mathematical Economics. (Amsterdam)
- J. Math. (Jabalpur)* Journal of Mathematics. (Jabalpur) (Continued as: *J. Math. (Jabalpur) (N.S.)*)
- J. Math. (Jabalpur) (N.S.)* Journal of Mathematics. New Series. (Jabalpur)
- J. Math. Kyoto Univ.* Journal of Mathematics of Kyoto University. (Kyoto)
- J. Math. Phys.* Journal of Mathematical Physics. (New York)
- J. Math. Phys. Sci.* Journal of Mathematical and Physical Sciences. (Madras)
- J. Math. Psych.* Journal of Mathematical Psychology. (New York)
- J. Math. Pures Appl.* Journal de Mathématiques Pures et Appliquées. (Paris) (Continued as: *J. Math. Pures Appl. (9)*)
- J. Math. Pures Appl. (9)* Journal de Mathématiques Pures et Appliquées. Neuvième Série. (Paris)
- **J. Math. Res. Exposition* Journal of Mathematical Research & Exposition. Shuxue Yanjiu Yu Pinglun. (Wuhan)
- J. Math. Sci.* Journal of Mathematical Sciences. The Society of Mathematical Sciences. (Delhi)
- J. Math. Soc. Japan* Journal of the Mathematical Society of Japan. (Tokyo)
- J. Math. Sociol.* The Journal of Mathematical Sociology. (London)
- J. Math. Tokushima Univ.* Journal of Mathematics. Tokushima University. (Tokushima)
- J. Mathematical and Physical Sci.* Journal of Mathematical and Physical Sciences. (Madras) (Continued as: *J. Math. Phys. Sci.*)
- J. Mathematical Phys.* Journal of Mathematical Physics. (New York) (Continued as: *J. Math. Phys.*)
- J. Mathematical Psychology* Journal of Mathematical Psychology. (New York) (Continued as: *J. Math. Psych.*)
- J. Mathematical Sociology* The Journal of Mathematical Sociology. (London) (Continued as: *J. Math. Sociol.*)
- J. Maulana Azad College Tech.* Maulana Azad College of Technology. Journal. (Bhopal)
- J. Méc. Appl.* Journal de Mécanique Appliquée. (Paris)
- J. Mécanique* Journal de Mécanique. (Paris)
- J. Mech. Phys. Solids* Journal of the Mechanics and Physics of Solids. (Oxford)
- J. Multivariate Anal.* Journal of Multivariate Analysis. (New York)
- J. Nat. Chiao Tung Univ.* National Chiao Tung University. Journal. (Hsinchu)
- J. Natur. Sci. and Math.* The Journal of Natural Sciences and Mathematics. (Lahore) (Continued as: *J. Natur. Sci. Math.*)
- J. Natur. Sci. Math.* The Journal of Natural Sciences and Mathematics. (Lahore)
- J. Number Theory* Journal of Number Theory. (New York)
- J. of M. A. C. T.* Journal of the Maulana Azad College of Technology. (Bhopal) (Continued as: *J. Maulana Azad College Tech.*)
- J. Oper. Res. Soc.* Operational Research Society Journal. (Oxford)
- J. Oper. Res. Soc. Japan* Journal of the Operations Research Society of Japan. (Tokyo)
- J. Operations Res. Soc. Japan* Journal of the Operations Research Society of Japan. (Tokyo) (Continued as: *J. Oper. Res. Soc. Japan*)
- J. Operator Theory* Journal of Operator Theory. (Bucharest)
- J. Opt. Soc. Amer.* Journal of the Optical Society of America. (New York)
- J. Optim. Theory Appl.* Journal of Optimization Theory and Applications. (New York)
- J. Optimization Theory Appl.* Journal of Optimization Theory and Applications. (New York) (Continued as: *J. Optim. Theory Appl.*)
- J. Philos. Logic* Journal of Philosophical Logic. (Dordrecht)
- J. Phys. A* Journal of Physics. A. Mathematical and General. (Bristol)
- J. Phys. B* Journal of Physics. B. Atomic and Molecular Physics. (Bristol)
- J. Phys. Soc. Japan* Journal of the Physical Society of Japan. (Tokyo)
- J. Physique* Le Journal de Physique. (Orsay)
- J. Proc. Roy. Soc. New South Wales* Royal Society of New South Wales. Journal and Proceedings. (Sydney)
- J. Pure Appl. Algebra* Journal of Pure and Applied Algebra. (Amsterdam)
- J. Pure Appl. Sci.* Middle East Technical University. Journal of Pure and Applied Sciences. Orta Doğu Teknik Üniversitesi. Temel ve Uygulamalı Bilimler Dergisi. (Ankara)
- J. Recreational Math.* Journal of Recreational Mathematics. (Farmingdale, N.Y.)
- J. Reine Angew. Math.* Journal für die Reine und Angewandte Mathematik. (Berlin)
- J. Res. Nat. Bur. Standards* National Bureau of Standards. Journal of Research. (Washington, D.C.)
- J. Res. Nat. Bur. Standards Sect. B* Journal of Research of the National Bureau of Standards. Section B. Mathematical Sciences. (Washington, D.C.) (Continued as: *J. Res. Nat. Bur. Standards*)
- J. Rheol.* Journal of Rheology. (New York)
- J. Roy. Statist. Soc. Ser. A* Journal of the Royal Statistical Society. Series A. General. (London)
- J. Roy. Statist. Soc. Ser. B* Journal of the Royal Statistical Society. Series B. Methodological. (London)
- J. Roy. Statist. Soc. Ser. C* Journal of the Royal Statistical Society. Series C. Applied Statistics. (London)
- J. Roy. Statist. Soc. Ser. C Appl. Statist.* Journal of the Royal Statistical Society. Series C. Applied Statistics. (London)

- C. Applied Statistics. (London) (Continued as: *J. Roy. Statist. Soc. Ser. C*)
- J. Saitama Univ. Fac. Ed. Math. Natur. Sci.* Saitama University. Faculty of Education. Journal. Mathematics and Natural Science. (Urawa)
- J. Sci. Engrg. Res.* Journal of Science and Engineering Research. (Kharagpur)
- J. Sci. (Karachi)* University of Karachi. Journal of Science. (Karachi) (Continued as: *Karachi Univ. J. Sci.*)
- **J. Sci. Res.* Journal of Scientific Research. (Bhopal)
- J. Sci. Res. Banaras Hindu Univ.* The Journal of Scientific Research of the Banaras Hindu University. (Varanasi)
- J. Shivaji Univ.* Journal of Shivaji University. (Kolhapur) (Continued as: *J. Shivaji Univ. (Sci.)*)
- J. Shivaji Univ. (Sci.)* Shivaji University. Journal. (Science). (Kolhapur)
- J. Singapore Nat. Acad. Sci.* Singapore National Academy of Science. Journal. (Singapore)
- **J. Sound Vibration* Journal of Sound and Vibration. (London)
- J. Soviet Math.* Journal of Soviet Mathematics. (New York) (Translation of *Itogi Nauki—Serija "Matematika" (Progress in Science—Mathematical Series), Problemy Matematicheskogo Analiza (Problems in Mathematical Analysis)*, and *Zap. Nauch. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)*)
- J. Stat. Plann. Inference* Journal of Statistical Planning Inference. (Amsterdam) (Continued as: *J. Statist. Plann. Inference*)
- J. Statist. Comp. and Simulation* Journal of Statistical Computation and Simulation. (New York) (Continued as: *J. Statist. Comput. Simulation*)
- J. Statist. Comput. Simulation* Journal of Statistical Computation and Simulation. (New York)
- J. Statist. Phys.* Journal of Statistical Physics. (New York)
- J. Statist. Plann. Inference* Journal of Statistical Planning Inference. (Amsterdam)
- J. Statist. Res.* Journal of Statistical Research. (Dacca)
- J. Structural Learning* Journal of Structural Learning. (London)
- **J. Structural Mech.* Journal of Structural Mechanics. (New York)
- J. Symbolic Logic* The Journal of Symbolic Logic. (Providence, R.I.)
- J. Systems Software* The Journal of Systems and Software. (New York)
- J. Tech. Bengal Engrg. College* Journal of Technology. Bengal Engineering College. (Howrah)
- J. Tech. Phys.* Polish Academy of Sciences. Institute of Fundamental Technological Research. Journal of Technical Physics. (Warsaw)
- J. Theoret. Biol.* Journal of Theoretical Biology. (London)
- **J. Time Ser. Anal.* Journal of Time Series Analysis. (Clevedon)
- J. Tsuda College* Journal of Tsuda College. (Tokyo)
- J. Univ. Bombay* Journal of the University of Bombay. (Bombay) (Continued as: *J. Univ. Bombay (N.S.)*)
- J. Univ. Bombay (N.S.)* Journal of the University of Bombay. New Series. (Bombay)
- J. Univ. Kuwait Sci.* The Journal of the University of Kuwait. Science. (Kuwait)
- J. Univ. Poona* University of Poona. Journal. (Poona)
- J. Warburg and Courtauld Inst.* Journal of the Warburg and Courtauld Institutes. (London) (Continued as: *J. Warburg Courtauld Inst.*)
- J. Warburg Courtauld Inst.* Journal of the Warburg and Courtauld Institutes. (London)
- Jadernaja Fiz.* Akademija Nauk SSSR. Jadernaja Fizika. (Moscow) (Translated as: *Soviet J. Nuclear Phys.*)
- Jahresber. Deutsch. Math.-Verein.* Jahresbericht der Deutschen Mathematiker-Vereinigung. (Stuttgart)
- Janus* Janus. Revue Internationale de l'Histoire des Sciences, de la Médecine, de la Pharmacie et de la Technique. (Amsterdam)
- Japan. J. Math.* Science Council of Japan. Japanese Journal of Mathematics. (Tokyo) (Continued as: *Japan. J. Math. (N.S.)*)
- Japan. J. Math. (N.S.)* Science Council of Japan. Japanese Journal of Mathematics. New Series. (Tokyo)
- Japan. Stud. Hist. Sci.* Japanese Studies in the History of Science. (Tokyo) (Continued as: *Historia Sci.*)
- Jaroslav. Gos. Ped. Inst. Dokl. Nauch. Konfer.* Jaroslavskii Gosudarstvennyi Pedagogicheskii Institut. Doklady na Nauchnykh Konferencijah. (Jaroslavl')
- Jaroslav. Gos. Ped. Inst. Učen. Zap.* Jaroslavskii Gosudarstvennyi Pedagogicheskii Institut im. K. D. Ušinskogo. Učenyje Zapiski. (Jaroslavl')
- Jaroslav. Tehn. Inst. Fiz.-Mat. Nauk. Sb. Nauch. Trudov* Jaroslavskii Tehnologičeskii Institut. Fiziko-Matematičeskie Nauki. Sbornik Nauchnykh Trudov. (Jaroslavl')
- Jber. Deutsch. Math.-Verein.* Jahresbericht der Deutschen Mathematiker-Vereinigung. (Stuttgart) (Continued as: *Jahresber. Deutsch. Math.-Verein.*)
- **Jbuch.* Jahrbuch über die Fortschritte der Mathematik. (Berlin)
- Jbuch. Heidelberger Akad. Wiss.* Heidelberger Akademie der Wissenschaften. Jahrbuch. (Heidelberg)
- Jinuan Shuxue* See *Math. Numer. Sinica*
- Jñānabha* Jñānabha. The Vijnana Parishad of India. Bundelkhand University. (Orai)
- Jñānabha Sect. A* Jñānabha. Section A. Dayanand Vedic Postgraduate College. Kanpur University. (Orai) (Continued as: *Jñānabha*)
- **Johns Hopkins Ser. in Math. Sci.* Johns Hopkins Series in the Mathematical Sciences. Johns Hopkins University Press, Baltimore, Md.
- Joho-shori* See *Information Processing in Japan*
- **JPL Publ. 78* JPL Publication 78. California Institute of Technology, Jet Propulsion Laboratory, Pasadena, Calif.
- Kabardino-Balkarsk. Gos. Univ. Učen. Zap.* Kabardino-Balkarskii Gosudarstvennyi Universitet. Učenyje Zapiski. (Nalchik)
- Kalinin. Gos. Ped. Inst. Učen. Zap.* Kalininskii Gosudarstvennyi Pedagogicheskii Institut im. M. I. Kalinina. Učenyje Zapiski. (Kalinin)
- Kaliningrad. Gos. Ped. Inst. Učen. Zap.* Kaliningradskii Gosudarstvennyi Pedagogicheskii Institut. Učenyje Zapiski. (Kaliningrad)
- Kaliningrad. Gos. Univ. Differentsial'naja Geom. Mnogoobraz. Figur* Kaliningradskogo Gosudarstvennogo Universitet. Differentsial'naja Geometrija Mnogoobraznykh Figur. (Kaliningrad)
- Kaliningrad. Gos. Univ. Trudy Kaf. Teoret. i Eksper. Fiz.* Kaliningradskii Gosudarstvennyi Universitet. Trudy Kafedry Teoreticheskoi i Eksperimental'noi Fiziki. (Kaliningrad)
- Kaliningrad. Gos. Univ. Učen. Zap.* Kaliningradskii Gosudarstvennyi Universitet. Učenyje Zapiski. (Kaliningrad)
- **Kanō Memorial Lectures* Kanō Memorial Lectures. Princeton University Press, Princeton, N.J.
- Karachi Math. Assoc. Riazi (Souvenir)* Riazi. Souvenir of the Karachi Mathematics Association. (Karachi)
- Karachi Univ. J. Sci.* Karachi University. Journal of Science. (Karachi)
- Kazakh. Gos. Ped. Inst. Učen. Zap.* Kazakhskii Gosudarstvennyi Pedagogicheskii Institut im. Abajy. Učenyje Zapiski. (Alma-Ata) (May also appear as: *Alma-Atin. Gos. Ped. Inst. Učen. Zap.*)
- Kazan. Gos. Univ. Učen. Zap.* Kazanskii Ordena Trudovogo Krasnogo Znameni Gosudarstvennyi Universitet im. V. I. Ul'janova-Lenina. Učenyje Zapiski. (Kazan)
- Keio Engrg. Rep.* Keio Engineering Reports. (Yokohama)
- Keio Math. Sem. Rep.* Keio Mathematical Seminar Reports. (Yokohama)
- Kemerov. Gos. Ped. Inst. Učen. Zap.* Kemerovskii Gosudarstvennyi Pedagogicheskii Institut. Učenyje Zapiski. (Kemerovo)
- Kenkyū Kyō—Gakushūin Kōtōka* Memoirs of Gakushūin High School. (Tokyo)
- Kexue Tongbao* Chinese Academy of Science. Kexue Tongbao (Science Bulletin). (Peking) (Continued as: *Kexue Tongbao (Chinese)*)
- Kexue Tongbao (Chinese)* Chinese Academy of Science. Kexue Tongbao (Science Bulletin). (Beijing) (Translated as: *Kexue Tongbao (English)*)
- Kexue Tongbao (English)* Chinese Academy of Science. Kexue Tongbao (Science Bulletin). A Monthly Journal of Science. (Beijing) (Translation of *Kexue Tongbao (Chinese)*)
- Kibernet. i Vyčisl. Tehn.* Akademija Nauk Ukrainkoj SSR. Institut Kibernetiki. Kibernetika i Vyčislitel'naja Tehnika. (Kiev)
- Kibernetika (Kiev)* Otdelenie Matematiki, Mekhaniki i Kibernetiki Akademii Nauk Ukrainkoj SSR. Kibernetika. (Kiev) (Translated as: *Cybernetics*)
- **Kinokuniya Sūgaku Sōsho* Kinokuniya Sūgaku Sōsho. [Kinokuniya Mathematics Collection] Kinokuniya Book Store, Tokyo.
- Kišinev. Gos. Univ. Učen. Zap.* Kišinevskii Gosudarstvennyi Universitet. Učenyje Zapiski. (Kišinev)
- Klasični Nauch. Spisi Mat. Inst. Beograd* Beograd. Matematički Institut. Klasični Nauch. Spisi. (Belgrade) (Continued as: *Klasični Nauch. Spisi Mat. Inst. Beograd. (N.S.)*)
- Klasični Nauch. Spisi Mat. Inst. Beograd. (N.S.)* Beograd. Matematički Institut. Klasični Nauch. Spisi. Nova Serija. (Belgrade)
- **Kleine Ergänzungssreihe Hochschulbüchern Math.* Kleine Ergänzungssreihe zu den Hochschulbüchern für Mathematik. [Brief Supplemental Series to University Books for Mathematics] VEB Deutscher Verlag der Wissenschaften, Berlin.
- **Kleine Naturwiss. Bibliothek* Kleine Naturwissenschaftliche Bibliothek. [Little Scientific Library] Teubner, Leipzig.
- **Knižnaja Letopis* Knížnaja Letopis. (Moscow)
- Knižnice Odborn. Véd. Spisů Vysoké. Učení Tech. v Brně* Knížnice Odborných a Vědeckých Spisů Vysokého Učení Technického v Brně. Vysoké Učení Technické v Brně. (Brno) (Continued as: *Knižnice Odborn. Véd. Spisů Vysoké. Učení Tech. v Brně B*)
- Knižnice Odborn. Véd. Spisů Vysoké. Učení Tech. v Brně A* Knížnice Odborných a Vědeckých Spisů Vysokého Učení Technického v Brně. Vysoké Učení Technické v Brně A. (Brno)
- Knižnice Odborn. Véd. Spisů Vysoké. Učení Tech. v Brně B* Knížnice Odborných a Vědeckých Spisů Vysokého Učení Technického v Brně. Vysoké Učení Technické v Brně B. (Brno)
- **Knjiz. Sigma* Knjizica Sigma. [Sigma Library] University of Ljubljana, Ljubljana.
- Knowledge Practice Math.* Knowledge and Practice of Mathematics. Shuxuede Shijian Yu Renshi. (Beijing)
- Kodai Math. J.* Kodai Mathematical Journal. (Tokyo)
- Kōdai Math. Sem. Rep.* Kōdai Mathematical Seminar Reports. (Tokyo) (Continued as: *Kodai Math. J.*)
- Kolomen. Ped. Inst. Učen. Zap.* Kolomenskii Pedagogicheskii Institut. Učenyje Zapiski. (Kolomna)
- Kombin. Anal.* Kombinatornyi Analiz. Moskovskii Gosudarstvennyi Universitet imeni M. V. Lomonosova. (Moscow)
- Kombinatornyi Anal.* Kombinatornyi Analiz. Moskovskii Gosudarstvennyi Universitet imeni M. V. Lomonosova. (Moscow) (Continued as: *Kombin. Anal.*)
- Kongress Tagungsber.* See *Wiss. Beitr. Martin-Luther-Univ. Halle-Wittenberg M*
- **Konzepte Zeitgemäss. Physikunterrichts* Konzepte eines Zeitgemässen Physikunterrichts. [Concepts of Current Teaching Methods of Physics] Hermann Schroedel Verlag KG, Hannover.
- **Korean Sci. Abstracts* Korean Scientific Abstracts. (Seoul)
- Kosmiches. Issled.* Kosmicheskie Issledovaniya. (Moscow) (Translated as: *Cosmic Res.*)
- Kostrom. Gos. Ped. Inst. Učen. Zap.* Kostromskii Gosudarstvennyi Pedagogicheskii Institut im. N. A. Nekrasova. Učenyje Zapiski. (Jaroslavl')
- Közl.—MTA Számítástech. Automat. Kutató Int. Budapest* Közlemények. MTA Számítástech. Automat. Kutató Int. Budapest. (Budapest)
- Közlemények—MTA Számítástech. Automat. Kutató Int. Budapest* Közlemények. MTA Számítástech. Automat. Kutató Int. Budapest. (Budapest) (Continued as: *Közl.—MTA Számítástech. Automat. Kutató Int. Budapest*)
- Krasnojarsk. Politehn. Inst. Sb. Nauch. Trudov Meh. Fak.* Krasnojarskii Politehnicheskii

- Institut. Sbornik Naučnyh Trudov Mehaničeskogo Fakul'teta. (Krasnoyarsk)
- Kristallografiya See *Soviet Phys. Cryst.*
- Kuban. Gos. Univ. Naučn. Trudy Kubanskii Gosudarstvennyi Universitet. Naučnye Trudy. (Krasnodar)
- Kuibyshev. Gos. Ped. Inst. Naučn. Trudy Kuibyshevskii Gosudarstvennyi Pedagogičeskii Institut. Naučnye Trudy. (Kuibyshev)
- Kuibyshev. Gos. Ped. Inst. Učen. Zap. Ministerstvo Prosveščeniya RSFSR. Kuibyshevskii Gosudarstvennyi Pedagogičeskii Institut im. V. V. Kuibysheva. Učenyje Zapiski. (Kuibyshev) (Continued as: *Kuibyshev. Gos. Ped. Inst. Naučn. Trudy*)
- Kumamoto J. Sci. (Math.) Kumamoto Journal of Science. (Mathematics). (Kumamoto)
- Kumamoto J. Sci. Ser. A Kumamoto Journal of Science. Series A. Mathematics, Physics and Chemistry. (Kumamoto) (Continued as: *Kumamoto J. Sci. (Math.)*)
- †Kurs Vysšei Mat. i Mat. Fiz. Kurs Vysšei Matematiki i Matematicheskoi Fiziki. [Course in Higher Mathematics and Mathematical Physics] Nauka, Moscow.
- Kursk. Gos. Ped. Inst. Učen. Zap. Kurskii Gosudarstvennyi Pedagogičeskii Institut. Učenyje Zapiski. (Belgorod)
- Koant Akademija Nauk SSSR i Akademija Pedagogičeskikh Nauk SSSR. Kvant. Naučno-populjarnyi Fiziko-matematičeskii Žurnal. (Moscow)
- Kvantovaja Elektronika Kvantovaja Elektronika. (Kiev)
- Kwansei Gakuin Univ. Annual Stud. Kwansei Gakuin University. Annual Studies. (Nishinomiya)
- Kwart. Hist. Nauk. Tech. Polska Akademia Nauk. Zakład Historii Nauki i Techniki. Kwartalnik Historii Nauki i Techniki. (Warsaw)
- Kwart. Hist. Nauki i Tech. Polska Akademia Nauk. Zakład Historii Nauki i Techniki. Kwartalnik Historii Nauki i Techniki. (Warsaw) (Continued as: *Kwart. Hist. Nauk. Tech.*)
- Kybernetes Kybernetes. An International Journal of Cybernetics and General Systems. (Blackburn)
- Kybernetika (Prague) Kybernetika. (Prague)
- Kybernetika (Prague) Suppl. Kybernetika. Supplement. (Prague)
- Kyungpook Math. J. Kyungpook National University. Kyungpook Mathematical Journal. (Taegu)
- †Lab. Math. Pures Marseille CNRS Laboratoire de Mathématiques Pures de Marseille associé au CNRS. [Marseille Laboratory of Pure Mathematics in Association with the CNRS] Université d'Aix-Marseille I, UER de Mathématiques, Marseille.
- Labdev—J. Sci. Tech. Part A Labdev. Journal of Sciences and Technology. Part A. Physical Sciences. (Kanpur)
- †LAFI ЛАФИ. Akad. Nauk Latv. SSR, Salaspils.
- *Large Scale Systems Large Scale Systems. Theory and Applications. (Amsterdam)
- Lato. Gos. Univ. Učen. Zap. Latviiskii Gosudarstvennyi Universitet im. Petra Stučki. Učenyje Zapiski. (Riga) (Also listed as: *Latoijas Valsts Univ. Zināt. Raksti*)
- Lato. Mat. Ežegodnik Latviiskii Gosudarstvennyi Universitet imeni P. Stučki. Latviiskii Matematičeskii Ežegodnik. (Riga)
- Latoišsk. Gos. Univ. Učen. Zap. Latviiskii Gosudarstvennyi Universitet im. Petra Stučki. Učenyje Zapiski. (Riga) (Also listed as: *Latoijas Valsts Univ. Zināt. Raksti*)
- Latoišsk. Mat. Ežegodnik. Latviiskii Gosudarstvennyi Universitet imeni P. Stučki. Latviiskii Matematičeskii Ežegodnik. (Riga) (Continued as: *Lato. Mat. Ežegodnik*)
- Latoijas PSR Zināt. Akad. Vēstis Latvijas PSR Zinātņu Akademijas Vēstis. Izvestija Akademii Nauk Latvii SSR. (Riga)
- Latoijas PSR Zināt. Akad. Vēstis Fiz. Tehn. Zināt. Sēr. Latvijas PSR Zinātņu Akademijas Vēstis. Fizikas un Tehnikas Zinātņu Sērija. Izvestija Akademii Nauk Latvii SSR. Sērija Fizikā un Tehnikā. (Riga)
- Latoijas Valsts Univ. Zināt. Raksti PSRS Augstākās Izglītības Ministrija. Pētera Stučkas Latvijas Valsts Universitāte. Zinātniskie Raksti. Ministerstvo Vysshego Obrazovaniya. Latviiskii Gosudarstvennyi Universitet im. Petra Stučki. Učenyje Zapiski. (Riga) (See also *Lato. Gos. Univ. Učen. Zap.*)
- †Le Mathématicien Le Mathématicien. [The Mathematician] Presses Universitaires de France, Paris.
- †Le Psychologue Le Psychologue. [The Psychologist] Presses Universitaires de France, Paris.
- †Lecture Notes Lecture Notes. University of Copenhagen, Institute of Mathematical Statistics, Copenhagen.
- †Lecture Notes Lecture Notes. University of Delaware, Institute for Mathematical Sciences, Newark, Del.
- †Lecture Notes and Suppl. in Phys. Lecture Notes and Supplements in Physics. Benjamin, Reading, Mass.
- †Lecture Notes in Biomath. Lecture Notes in Biomathematics. Springer, Berlin.
- †Lecture Notes in Chem. Lecture Notes in Chemistry. Springer, Berlin.
- †Lecture Notes in Comput. Sci. Lecture Notes in Computer Science. Springer, Berlin.
- †Lecture Notes in Control and Information Sci. Lecture Notes in Control and Information Sciences. Springer, Berlin.
- †Lecture Notes in Econom. and Math. Systems Lecture Notes in Economics and Mathematical Systems. Springer, Berlin.
- †Lecture Notes in Math. Lecture Notes in Mathematics. Springer, Berlin.
- †Lecture Notes in Med. Inform. Lecture Notes in Medical Informatics. Springer, Berlin.
- †Lecture Notes in Phys. Lecture Notes in Physics. Springer, Berlin.
- †Lecture Notes in Pure and Appl. Math. Lecture Notes in Pure and Applied Mathematics. Dekker, New York.
- †Lecture Notes in Statist. Lecture Notes in Statistics. Springer, New York.
- †Lecture Notes Series Lecture Notes Series. Aarhus Universitet, Matematisk Institut, Aarhus.
- †Lectures in Appl. Math. Lectures in Applied Mathematics. American Mathematical Society, Providence, R.I.
- †Lectures in Math. Lectures in Mathematics. Kinokuniya Book Store, Tokyo.
- †Lectures Math. Life Sci. Lectures on Mathematics in the Life Sciences. American Mathematical Society, Providence, R.I.
- †Lehr- Handbücher Ingenieurwiss. Lehr- und Handbücher der Ingenieurwissenschaften. [Textbooks and Manuals for the Engineering Sciences] Birkhäuser, Basel-Boston.
- †Lehrbücher Monograph. Geb. Exakten Wissensch., Math. Reihe Lehrbücher und Monographien aus dem Gebiete der Exakten Wissenschaften (LMW). Mathematische Reihe. [Textbooks and Monographs in the Exact Sciences. Mathematical Series] Birkhäuser, Basel-Boston.
- †Leitfäden Angew. Math. Mech. Leitfäden der Angewandten Mathematik und Mechanik. [Guides to Applied Mathematics and Mechanics] Teubner, Stuttgart.
- Leningrad. Gos. Ped. Inst. Učen. Zap. Leningradskii Gosudarstvennyi Pedagogičeskii Institut imeni A. I. Gercena. Učenyje Zapiski. (Leningrad)
- Leningrad. Gos. Univ. Učen. Zap. Leningradskii Gosudarstvennyi Ordena Lenina Universitet imeni A. A. Ždanova. Učenyje Zapiski. (Leningrad)
- Leningrad. Gos. Univ. Učen. Zap. Ser. Mat. Nauk Leningradskii Gosudarstvennyi Ordena Lenina Universitet imeni A. A. Ždanova. Učenyje Zapiski. Sērija Matematičeskikh Nauk. (Leningrad) (Continued as: *Leningrad. Gos. Univ. Učen. Zap.*)
- Leningrad. Inž.-Ekonom. Inst. Trudy Leningradskii Inženerno-Ekonomičeskii Institut imeni Pal'miro Tol'jatti. Trudy. (Leningrad)
- Leningrad. Inž.-Stroitel. Inst. Sb. Trudov Leningradskii Inženerno-Stroitel'skii Institut. Sbornik Trudov. (Leningrad)
- Leningrad. Meh. Inst. Sb. Trudov (LMI) Leningradskii Mehaničeskii Institut. Sbornik Trudov (LMI). (Leningrad)
- Leningrad. Politehn. Inst. Trudy Leningradskii Politehničeskii Institut im. M. I. Kalinina. Trudy LPI. (Leningrad)
- †Leonhardi Euleri Opera Omnia, Ser. 2 Leonhardi Euleri Opera Omnia, Series Secunda: Opera Mechanica et Astronomica. Orell Füssli, Zurich.
- †Leonhardi Euleri Opera Omnia, Ser. 4A Leonhardi Euleri Opera Omnia, Series Quarta A: Commmercium Epistolicum. Orell Füssli, Zurich.
- †Letopis' Žurnal'nyh Statei Letopis' Žurnal'nyh Statei. (Moscow)
- Lett. Math. Phys. Letters in Mathematical Physics. A Journal for the Rapid Dissemination of Short Contributions in the Field of Mathematical Physics. (Dordrecht)
- Lett. Nuovo Cimento Lettere al Nuovo Cimento. Rivista Internazionale della Società Italiana di Fisica. (Bologna) (Continued as: *Lett. Nuovo Cimento (2)*)
- Lett. Nuovo Cimento (2) Lettere al Nuovo Cimento. Rivista Internazionale della Società Italiana di Fisica. Serie 2. (Bologna)
- *Libertas Math. Libertas Mathematica. (Berkeley, Calif.)
- †Library of Theoria Library of Theoria. Gleerup, Lund.
- Libyan J. Sci. The Libyan Journal of Science. (Tripoli)
- †Lie Groups: Hist., Frontiers and Appl. Lie Groups: History, Frontiers and Applications. Math Sci Press, Brookline, Mass.
- Linear Algebra and Appl. Linear Algebra and its Applications. (New York) (Continued as: *Linear Algebra Appl.*)
- Linear Algebra Appl. Linear Algebra and its Applications. (New York)
- Linear and Multilinear Algebra Linear and Multilinear Algebra. (New York)
- Lithuanian Math. J. Lithuanian Mathematical Journal. (New York) (Translation of *Litovsk. Mat. Sb.*)
- Lithuanian Math. Trans. Lithuanian Mathematical Transactions. (New York) (Translation of *Litovsk. Mat. Sb.*) (Continued as: *Lithuanian Math. J.*)
- Litovsk. Fiz. Sb. Lietuvos TSR Mokslų Akademija. Lietuvos TSR Aukštiosios Mokyklos. Lietuvos Fizikos Rinkiny. Akademija Nauk Litovskoi SSR. Vysšie Školy Litovskoi SSR. Litovskii Fizikičeskii Sbornik. (Vilnius) (Translated as: *Soviet Phys. —Collection*)
- Litovsk. Mat. Sb. Lietuvos TSR Mokslų Akademija. Lietuvos TSR Aukštiosios Mokyklos. Lietuvos Matematikos Rinkiny. Akademija Nauk Litovskoi SSR. Vysšie Učebnye Zavedeniya Litovskoi SSR. Litovskii Matematičeskii Sbornik. (Vilnius) (Translated as: *Lithuanian Math. J.*)
- Lixue Xuebao See *Acta Mech. Sinica (Beijing)*
- *Lixue Yu Shijian Lixue Yu Shijian. Mechanics and Practice. (Beijing)
- †Logik Grundlagen Math. Logik und Grundlagen der Mathematik. [Logic and Foundations of Mathematics] Vieweg, Braunschweig.
- Logique et Anal. (N.S.) Logique et Analyse. Nouvelle Série. (Louvain)
- Logique et Analyse Logique et Analyse. (Louvain) (Continued as: *Logique et Anal. (N.S.)*)
- †London Math. Soc. Lecture Note Ser. London Mathematical Society Lecture Note Series. Cambridge University Press, Cambridge.
- †London Math. Soc. Monographs London Mathematical Society Monographs. Academic Press, New York.
- Lucrări Ști. Inst. Ped. Galați Lucrări Științifice. Institutul Pedagogic Galați. (Galați)
- *Luso J. Sci. Tech. Luso. Journal of Science and Technology. (Zomba)
- L'vov. Politehn. Inst. Naučn. Zap. Ser. Fiz.-Mat. MVO USSR. L'vovskii Politehničeskii Institut. Naučnye Zapiski. Sērija Fiziko-Matematičeskaja. (Lvov)
- †MAA Stud. Math. MAA Studies in Mathematics. Mathematical Association of America, Washington, D.C.
- †Machine Intelligence Workshop Machine Intelligence Workshop. Halsted [Wiley], New York.
- †Macmillan Lectures in Math. Macmillan Lectures in Mathematics. Macmillan of India, New Delhi.
- Magnetohydrodynamics Magnetohydrodynamics. (A translation of *Magnitnaya Gidrodinamika* of the Academy of Sciences of the Latvian SSR). (New York) (Translation of *Magnit. Gidrodinamika*)
- Magnit. Gidrodinamika Akademija Nauk Latvii SSR. Magnitnaja Gidrodinamika. (Riga) (Translated as: *Magnetohydrodynamics*)
- Magyar Tud. Akad. Mat. Fiz. Oszt. Közl. A Magyar Tudományos Akademi

- Matematikai és Fizikai Tudományok Osztályának Közleményei. (Budapest) (Continued as: *Alkalmaz. Mat. Lapok*)
- Makedon. Akad. Nauk. Umet. Odel. Prirod.-Mat. Nauk. Prirozi Makedonska Akademija na Naukite i Umetnostite. Oddelenie za Prirodo-Matematički Nauki. Prirozi. (Skopje)*
- Management Sci.* Management Science. Journal of the Institute of Management Science. Application and Theory Series. (Providence, R.I.)
- Manifold* Manifold. A Mathematics Magazine. (Coventry)
- Manuscripta Math.* Manuscripta Mathematica. (Berlin)
- Mat. Bilten* Matematički Bilten. (Skopje)
- Mat. Časopis Sloven. Akad. Vied* Matematički Časopis Slovenske Akademije Vied. (Bratislava) (Continued as: *Math. Slovaca*)
- Mat. Enseñanza* Matemáticas y Enseñanza. (Mexico City)
- Mat. Enseñanza Univ.* Matemática Enseñanza Universitaria. (Bogotá)
- * *Mat. Fak. Univ. Kiril Metodij Skopje Godišen Zb.* Matematički Fakultet. Univerzitet Kiril i Metodij. Skopje. Godišen Zbornik. (Skopje) (Formerly: *Prirod.-Mat. Fak. Univ. Kiril Metodij Skopje Godišen Zb.*)
- Mat. Fiz.* Akademija Nauk Ukrainkoj SSR. Institut Matematiki. Matematičeskaja Fizika. (Kiev)
- Mat. Fiz. i Funkcional. Anal.* Matematičeskaja Fizika i Funkcional'nyj Analiz. Akademija Nauk Ukrainkoj SSR. Fiziko-Tehničeskij Institut Nizkih Temperatur. (Kharkov)
- Mat.-Fys. Medd. Danske Vid. Selsk.* Matematičeskije Meddelelser udgivet af Det Kongelige Danske Videnskabernes Selskab. (Copenhagen)
- Mat. Issled.* Akademija Nauk Moldavskoj SSR. Institut Matematiki s Vyčislitel'nym Centrom. Matematičeskije Issledovaniya. (Kishinev)
- Mat. Lapok* Matematikai Lapok. Bolyai János Matematikai Társulat. (Budapest)
- Mat. Metody i Fiz.-Meh. Polja* Akademija Nauk Ukrainkoj SSR. L'vovskij Filial Matematičeskij Fiziki Instituta Matematiki. Matematičeskije Metody i Fiziko-Mehaničeskije Polja. (Kiev)
- Mat. Metody v Social. Nauk.—Trudy Sem. Proceasy Optimal. Upravleniya II Sekcija* Institut Fiziki i Matematiki Litovskoj SSR. Matematičeskije Metody v Social'nyh Naukah. Trudy Respublikanskogo Nauchnogo Seminara "Proceasy Optimal'nogo Upravleniya". II Sekcija. (Vilnius)
- † *Mat.: Novoe Zarub. Nauke* Математика: Новое в Зарубежной Науке. [Mathematics: Recent Publications in Foreign Science] Izdat. "Mir", Moscow.
- Mat. Sb.* Matematičeskij Sbornik. Novaja Serija. (Moscow) (Translated as: *Math. USSR-Sb.*) (Continued as: *Mat. Sb. (N.S.)*)
- Mat. Sb. (N.S.)* Matematičeskij Sbornik. Novaja Serija. (Moscow) (Translated as: *Math. USSR-Sb.*)
- Mat. Sb. (Tomsk)* Tomsk. Gosudarstvennyj Universitet. Matematičeskij Sbornik. (Tomsk)
- † *Mat. Sem. SNTL* Matematičeskij Seminár SNTL. [Mathematical Seminar SNTL] SNTL, Prague.
- Mat. Stos.* Matematika Stosowana. (Warsaw) (Continued as: *Mat. Stos. (3)*)
- Mat. Stos. (3)* Roczniki Polskiego Towarzystwa Matematycznego. Seria III. Matematika Stosowana. (Warsaw)
- † *Mat. USP Math. Einzelwissensch.* Materialien des USP Mathematisierung der Einzelwissenschaften. [Materials of the USP Mathematization of the Sciences] Universität Bielefeld, Bielefeld.
- Mat. v Škole* Ministerstvo Prosvetšeniya RSSR. Matematika v Škole. (Moscow)
- Mat. Vesnik* Društvo Matematičara, Fizičara i Astronoma SRS i Matematički Institut-Beograd. Matematički Vesnik. Nova Serija. (Belgrade)
- Mat. Voprosy Upravlén. Proizvodstvom* Moskovskij Gosudarstvennyj Universitet. Mekhaniko-Matematičeskij Fakultet. Matematičeskije Voprosy Upravleniya Proizvodstvom. (Moscow)
- Mat. Zametki* Akademija Nauk Sojuza SSR. Matematičeskije Zametki. (Moscow) (Translated as: *Math. Notes*)
- Matth. Match.* (Mülheim)
- Matematiche (Catania)* Le Matematiche. (Catania)
- Matematika (Belgrade)* Matematika. (Belgrade) (Continued as: *Matematika (Sarajevo)*)
- Matematika—Period. Sb. Perevodov Inostran. Statei* Matematika. Periodičeskij Sbornik Perevodov Inostrannykh Statei. (Moscow)
- * *Matematika (Sarajevo)* Matematika. (Sarajevo) (Formerly: *Matematika (Belgrade)*)
- Materialy Sem. Kibernet.* Akademija Nauk Moldavskoj SSR. Materialy Seminara po Kibernetike. (Kishinev)
- † *Mat.—Fiz.* Matematika—Fizika. [Mathematics—Physics] University of Ljubljana, Ljubljana.
- † *Math. and its Applications* Mathematics and its Applications. Gordon & Breach, New York.
- † *Math. and its Applications* Mathematics and its Applications. Reidel, Dordrecht.
- Math. Ann.* Mathematische Annalen. (Berlin)
- † *Math. Anwendungen Phys. Tech.* Mathematik und ihre Anwendungen in Physik und Technik. [Mathematics and its Applications in Physics and Technology] Geest & Portig, Leipzig.
- † *Math.—Arbeitspapiere* Mathematik—Arbeitspapiere. [Mathematics—Publications] Univ. Bremen, Bremen.
- Math. Balkanica* Mathematica Balkanica. (Belgrade)
- Math. Biosci.* Mathematical Biosciences. An International Journal. (New York)
- † *Math. Centre Tracts* Mathematical Centre Tracts. Math. Centre, Amsterdam.
- Math. Chronicle* Mathematical Chronicle. (Auckland)
- Math. Colloq. Univ. Cape Town* Mathematics Colloquium University of Cape Town. (Cape Town)
- Math. Comp.* Mathematics of Computation. (Providence, R.I.)
- Math. Comput.* Mathematics of Computation. (Providence, R.I.) (Continued as: *Math. Comp.*)
- Math. Comput. Simulation* Mathematics and Computers in Simulation. (Amsterdam)
- † *Math. Concepts and Methods in Sci. and Engrg.* Mathematical Concepts and Methods in Science and Engineering. Consultants Bureau, New York.
- † *Math. Dept. Rep.* Mathematics Department Report. James Cook University of North Queensland, Townsville.
- † *Math., Didaktik Unterrichtspraxis* Mathematik, Didaktik und Unterrichtspraxis. [Mathematics, Teaching Methods and Practice] Oldenbourg, Munich.
- Math. Ed. (Siwan)* The Mathematics Education. (Siwan)
- Math. Education* The Mathematics Education. (Siwan) (Continued as: *Math. Ed. (Siwan)*)
- † *Math. Expositions* Mathematical Expositions. University of Toronto Press, Toronto, Ont.
- † *Math. Forschungsber.* Mathematische Forschungsberichte. [Mathematical Research Reports] VEB Deutscher Verlag der Wissenschaften, Berlin.
- Math. Gaz.* The Mathematical Gazette. (Leicester)
- † *Math. Ingen. Naturwiss. Ökonon. Sonstige Anwendungsorient. Berufe* Mathematik für Ingenieure Naturwissenschaftler Ökonomen und Sonstige Anwendungsorientierte Berufe. [Mathematics for Engineers, Natural Scientists, Economists and Other Application-oriented Occupations] Harri Deutsch, Frankfurt/Main.
- † *Math. Ingenieure, Naturwiss., Ökonomen Landwirte* Mathematik für Ingenieure, Naturwissenschaftler, Ökonomen und Landwirte. Teubner, Leipzig.
- Math. Intelligencer* The Mathematical Intelligencer. (Berlin)
- Math. J. Okayama Univ.* Mathematical Journal of Okayama University. (Okayama)
- Math. Japon.* Mathematica Japonica. (Osaka)
- Math. Kibernet. Zogierth. Sakith. Gamokw.* Matematikuri Kibernetikis Zogierthi Sakithxis Gamokwewa. Tbilisii Sahelmicpho Universiteti Gamonebitshi Matematikis Instituti. (Tbilisi) (Also listed as: *Issled. Nekotorykh Voprosov Mat. Kibernet.*)
- † *Math. Lecture Note Ser.* Mathematics Lecture Note Series. Benjamin/Cummings Publishing Co., Reading, Mass.
- † *Math. Lecture Ser.* Mathematics Lecture Series. Publish or Perish, Wilmington, Del.
- † *Math. Lehrbücher Monogr., I. Abt.: Math. Lehrbücher* Mathematische Lehrbücher und Monographien, I. Abteilung: Mathematische Lehrbücher. [Mathematical Textbooks and Monographs, Part 1: Mathematical Textbooks] Akademie-Verlag, Berlin.
- † *Math. Lehrbücher Monogr., II. Abt.: Math. Monogr.* Mathematische Lehrbücher und Monographien, II. Abteilung: Mathematische Monographien. [Mathematical Textbooks and Monographs, Part 2: Mathematical Monographs] Akademie-Verlag, Berlin.
- † *Math. Lehrer* Mathematik für Lehrer. [Mathematics for Teachers] VEB Deutscher Verlag der Wissenschaften, Berlin.
- Math. Mag.* Mathematics Magazine. (Washington, D.C.) (Incorporated Delta (Madison) in Fall of 1976.)
- Math. Medley* Mathematical Medley. (Singapore)
- Math. Methods Appl. Sci.* Mathematical Methods in the Applied Sciences. (Stuttgart)
- † *Math. Methods Oper. Res.* Mathematical Methods of Operations Research. Akadémiai Kiadó, Budapest.
- * *Math. Modelling* Mathematical Modelling. (New York)
- † *Math. Monograph.* Mathematische Monographien. [Mathematical Monographs] VEB Deutscher Verlag der Wissenschaften, Berlin.
- Math. Nachr.* Mathematische Nachrichten. (Berlin)
- † *Math.-Naturwiss. Bibliothek* Mathematisch-Naturwissenschaftliche Bibliothek. [Mathematical-Scientific Library] Teubner, Leipzig.
- † *Math. Naturwiss. Tech.* Mathematik für Naturwissenschaft und Technik. [Mathematics for Science and Technology] VEB Deutscher Verlag der Wissenschaften, Berlin.
- Math. Notae* Mathematicae Notae. Boletín del Instituto de Matemática. (Rosario)
- † *Math. Notes* Mathematical Notes. Princeton University Press, Princeton, N.J.
- Math. Notes* Mathematical Notes of the Academy of Sciences of the USSR. (New York) (Translation of *Mat. Zametki*)
- * *Math. Numer. Sinica* Mathematica Numerica Sinica. Jisuan Shuxue. (Beijing)
- Math. Oper. Res.* Mathematics of Operations Research. (Providence, R.I.)
- Math. Operationsforsch. Statist.* Mathematische Operationsforschung und Statistik. (Berlin) (Continued as: *Math. Operationsforsch. Statist. Ser. Optimization and Math. Operationsforsch. Statist. Ser. Statist.*)
- Math. Operationsforsch. Statist. Ser. Optim.* Mathematische Operationsforschung und Statistik Series Optimization. (Berlin)
- Math. Operationsforsch. Statist. Ser. Optimization* Mathematische Operationsforschung und Statistik Series Optimization. (Berlin) (Continued as: *Math. Operationsforsch. Statist. Ser. Optim.*) (Formerly: *Math. Operationsforsch. Statist.*)
- Math. Operationsforsch. Statist. Ser. Statist.* Mathematische Operationsforschung und Statistik Series Statistics. (Berlin)
- † *Math. Phys. Appl. Math.* Mathematical Physics and Applied Mathematics. Reidel, Dordrecht.
- † *Math. Phys. Monograph Ser.* Mathematical Physics Monograph Series. Addison-Wesley, Reading, Mass.
- Math.-Phys. Semesterber.* Mathematisch-Physikalische Semesterberichte. (Göttingen) (Continued as: *Math. Semesterber.*)
- † *Math. Phys. Stud.* Mathematical Physics Studies. Reidel, Dordrecht.
- † *Math. Physiker* Mathematik für Physiker. [Mathematics for Physicists] Bibliographisches Institut, Mannheim.
- Math. Proc. Cambridge Philos. Soc.* Mathematical Proceedings of the Cambridge Philosophical Society. (Cambridge)
- Math. Programming* Mathematical Programming. (Amsterdam)
- Math. Programming Stud.* Mathematical Programming Study. (Amsterdam)
- Math. Rep. College General Ed. Kyushu Univ.* Mathematical Reports of College of General Education. Kyushu University. (Fukuoka) (Continued as: *Math. Rep. Kyushu Univ.*)

- Math. Rep. Kyushu Univ.* Mathematical Reports of College of General Education. Kyushu University. (Fukuoka)
- Math. Rep. Toyama Univ.* Toyama University. Mathematics Reports. (Toyama)
- † *Math. Research* Mathematical Research. Akademie-Verlag, Berlin.
- † *Math. Rev.* Mathematical Reviews. (Providence, R.I.) (Usually abbreviated as *MR* in the text of *Math. Rev.*)
- Math. Scand.* Mathematica Scandinavica. (Copenhagen)
- † *Math. Schülerbücherei* Mathematische Schülerbücherei. [Mathematical Library for Students] Teubner, Leipzig.
- * *Math. Sci.* The Mathematical Scientist. (Canberra)
- † *Math. Sci. Engrg.* Mathematics in Science and Engineering. Academic Press, New York.
- Math. Sci. Humaines* Centre de Mathématique Sociale. École Pratique des Hautes Études. Mathématiques et Sciences Humaines. (Paris)
- Math. Sem. (Delhi)* The Mathematics Seminar. (Delhi) (Formerly: *Math. Seminar*)
- Math. Sem. Notes Kobe Univ.* Kobe University. Mathematics Seminar Notes. (Kobe)
- Math. Sem. Notes Kobe Univ. Second Ed.* Kobe University. Mathematics Seminar Notes. Second Edition. (Kobe)
- * *Math. Semesterber.* Mathematische Semesterberichte. (Göttingen) (Formerly: *Math.-Phys. Semesterber.*)
- Math. Seminar* The Mathematics Seminar. (Delhi) (Continued as: *Math. Sem. (Delhi)*)
- Math. Slovaca* Mathematica Slovaca. (Bratislava)
- Math. Social Sci.* Mathematical Social Sciences. (Amsterdam)
- Math. Student* The Mathematics Student. (Delhi)
- † *Math. Surveys* Mathematical Surveys. American Mathematical Society, Providence, R.I.
- † *Math. Systems in Econom.* Mathematical Systems in Economics. Verlag Anton Hain, Meisenheim am Glan.
- Math. Systems Theory* Mathematical Systems Theory. (New York)
- Math. USSR-Izv.* Mathematics of the USSR-Izvestija. (Providence, R.I.) (Translation of *Izv. Akad. Nauk SSSR Ser. Mat.*)
- Math. USSR-Sb.* Mathematics of the USSR-Sbornik. (Providence, R.I.) (Translation of *Mat. Sb. (N.S.)*)
- † *Math. Wirtschaftswiss.* Mathematik für Wirtschaftswissenschaftler. [Mathematics for Economists] Bibliographisches Institut, Mannheim.
- Math. Z.* Mathematische Zeitschrift. (Berlin)
- Mathematica (Cluj)* Societatea de Științe Matematice și Fizice din R.P.R. Filiala Cluj. Mathematica. (Cluj-Napoca)
- † *Mathematicians of Our Time* Mathematicians of Our Time. MIT Press, Cambridge, Mass.
- † *Mathematik 9* Mathematik 9. [Mathematics 9] VDF, Zurich.
- Mathematika* Mathematika. A Journal of Pure and Applied Mathematics. (London)
- Matrix Tensor Quart.* The Tensor Club of Great Britain. The Matrix and Tensor Quarterly. (London)
- † *Matscience Rep.* Matscience Report. Inst. Math. Sci., Madras.
- * *MATYC J.* The Mathematics Association of Two-Year Colleges. Journal. (Garden City, N.Y.)
- MC* Mathematics of Computation. (Providence, R.I.) (Reviewed as: *Math. Comp.*)
- † *MC Syllabus* MC Syllabus. Math. Centre, Amsterdam.
- † *MC Varia* MC Varia. Math. Centre, Amsterdam.
- Meccanica—J. Ital. Assoc. Theoret. Appl. Mech.* Meccanica. Journal of the Italian Association of Theoretical and Applied Mechanics. (Milan)
- Mech. Res. Comm.* Mechanics Research Communications. (Elmsford, N.Y.)
- Mech. Solids* Mechanics of Solids. (New York) (Translation of *Izv. Akad. Nauk SSSR Meh. Toerd. Tela*)
- Mech. Teoret. Stos.* Polskie Towarzystwo Mechaniki Teoretycznej i Stosowanej. Mechanika Teoretyczna i Stosowana. (Warsaw)
- Mechanics of Solids* Mechanics of Solids. (New York) (Translation of *Izv. Akad. Nauk SSSR Meh. Toerd. Tela*) (Continued as: *Mech. Solids*)
- † *Med. Inform. Statist.* Medizinische Informatik und Statistik. [Medical Information Science and Statistics] Springer, Berlin.
- Med. Konink. Acad. Wetensch. België* Mededelingen van de Koninklijke Academie voor Wetenschappen, Letteren en Schone Kunsten van België. Klasse der Wetenschappen. (Brussels)
- Med. Konink. Acad. Wetensch. Lett. Schone Kunst. België Kl. Wetensch.* Mededelingen van de Koninklijke Academie voor Wetenschappen, Letteren en Schone Kunsten van België. Klasse der Wetenschappen. (Brussels) (Continued as: *Med. Konink. Acad. Wetensch. België*)
- † *Meh.: Novee Zarub. Nauke* Механика: Новое в Зарубежной Науке. [Mechanics: Recent Publications in Foreign Science] Izdat. "Mir", Moscow.
- Meh. Toerd. Tela* Akademija Nauk Ukrainkoj SSR. Institut Prikladnoj Matematiki i Mechaniki. Mechanika Tverdogo Tela. (Kiev)
- Mehanika—Period. Sb. Perevodov Inostran. Statei* Механика. Periodičeskij Sbornik Perevodov Inostrannykh Statei. (Moscow)
- Mehanika Polimerov* Akademija Nauk Latvīskoī SSR. Institut. Mehaniki Polimerov. Mehanika Polimerov. (Riga)
- Melekess. Gos. Ped. Inst. Učen. Zap.* Melekesskij Gosudarstvennyj Pedagogičeskij Institut. Učenyje Zapiski. (Melekess)
- Mem. Accad. Sci. Torino Cl. Sci. Fis. Mat. Natur.* Memorie dell'Accademia delle Scienze di Torino. Classe di Scienze Fisiche, Matematiche e Naturali. (Turin) (Continued as: *Mem. Accad. Sci. Torino Cl. Sci. Fis. Mat. Natur.* (4))
- Mem. Accad. Sci. Torino Cl. Sci. Fis. Mat. Natur.* (4) Memorie dell'Accademia delle Scienze di Torino. Classe di Scienze Fisiche, Matematiche e Naturali. Serie 4. (Turin) (Continued as: *Mem. Accad. Sci. Torino Cl. Sci. Fis. Mat. Natur.* (5))
- Mem. Accad. Sci. Torino Cl. Sci. Fis. Mat. Natur.* (5) Accademia delle Scienze di Torino. Memorie. Classe di Scienze Fisiche, Matematiche e Naturali. Serie V. (Turin)
- Mem. Amer. Math. Soc.* Memoirs of the American Mathematical Society. (Providence, R.I.)
- † *Mem. Amer. Philos. Soc.* Memoirs of the American Philosophical Society. American Philosophical Society, Philadelphia, Pa.
- Mem. Defense Acad.* Memoirs of the Defense Academy. Mathematics, Physics, Chemistry and Engineering. (Yokosuka) (Continued as: *Mem. Nat. Defense Acad.*)
- Mem. Ehime Univ. Natur. Sci. Ser. A* Memoirs of the Ehime University. Natural Science. Series A. (Matsuyama)
- Mem. Ehime Univ. Sect. III Engrg.* Ehime University. Memoirs. Section III. Engineering. (Matsuyama)
- Mem. Fac. Ed. Kumamoto Univ. Natur. Sci.* Kumamoto University. Faculty of Education. Memoirs. Natural Science. (Kumamoto)
- Mem. Fac. Ed. Kumamoto Univ. Sect. I* Memoirs of the Faculty of Education. Kumamoto University. Section I. Natural Science. (Kumamoto) (Continued as: *Mem. Fac. Ed. Kumamoto Univ. Natur. Sci.*)
- Mem. Fac. Ed. Shiga Univ. Natur. Sci.* Shiga University. Faculty of Education. Memoirs. Natural Science. (Otsu)
- Mem. Fac. Ed. Shimane Univ. Natur. Sci.* Shimane University. Faculty of Education. Memoirs. Natural Science. (Matsue)
- Mem. Fac. Engrg. Hiroshima Univ.* Memoirs of the Faculty of Engineering. Hiroshima University. (Hiroshima)
- Mem. Fac. Engrg. Kyoto Univ.* Memoirs of the Faculty of Engineering. Kyoto University. (Kyoto)
- Mem. Fac. Engrg. Miyazaki Univ.* Memoirs of the Faculty of Engineering. Miyazaki University. (Miyazaki)
- Mem. Fac. Gen. Ed. Kumamoto Univ. Natur. Sci.* Kumamoto University. Faculty of General Education. Natural Sciences. Memoirs. (Kumamoto)
- Mem. Fac. Indust. Arts Kyoto Tech. Univ. Sci. and Tech.* Memoirs of the Faculty of Industrial Arts. Kyoto Technical University. Science and Technology. (Kyoto)
- Mem. Fac. Lit. Sci. Shimane Univ. Natur. Sci.* Memoirs of the Faculty of Literature and Science. Shimane University. Natural Sciences. (Matsue) (Continued as: *Mem. Fac. Sci. Shimane Univ.*)
- Mem. Fac. Sci. Kōchi Univ. Ser. A Math.* Kōchi University. Faculty of Science. Memoirs. Series A. Mathematics. (Kōchi)
- Mem. Fac. Sci. Kyushu Univ. Ser. A* Memoirs of the Faculty of Science. Kyushu University. Series A. Mathematics. (Fukuoka)
- Mem. Fac. Sci. Shimane Univ.* Shimane University. Faculty of Science. Memoirs. (Matsue)
- † *Mém. Inst. Hautes Études Chinoises* Mémoires de l'Institut des Hautes Études Chinoises. [Memoirs of the Institute of Higher Chinese Studies] Collège de France, Paris.
- Mem. Kitami Inst. Tech.* Memoirs of the Kitami Institute of Technology. (Kitami)
- Mem. Kyoto Tech. Univ. Sci. Tech.* Memoirs of the Faculty of Industrial Arts. Kyoto Technical University. Science and Technology. (Kyoto)
- † *Mem. Mat. Inst. Jorge Juan* Memorias de Matemática del Instituto "Jorge Juan". [Mathematical Memoirs of the Jorge Juan Institute] Consejo Superior de Investigaciones Científicas, Madrid.
- Mem. Muroran Inst. Tech.* Memoirs of the Muroran Institute of Technology. (Muroan)
- Mem. Nat. Defense Acad.* Memoirs of the National Defense Academy. Mathematics, Physics, Chemistry and Engineering. (Yokosuka)
- Mem. Numer. Math.* Memoirs of Numerical Mathematics. (Kyoto)
- Mem. Osaka Inst. Tech. Ser. A* Memoirs of the Osaka Institute of Technology. Series A. Science & Technology. (Osaka)
- Mem. Osaka Kyoiku Univ. III Natur. Sci. Appl. Sci.* Memoirs of Osaka Kyoiku University. III. Natural Science and Applied Science. (Osaka)
- Mem. Real Acad. Ci. Art. Barcelona* Memorias de la Real Academia de Ciencias y Artes de Barcelona. (Barcelona) (Continued as: *Mem. Real Acad. Cienc. Artes Barcelona*)
- Mem. Real Acad. Ci. Exact. Fis. Natur. Madrid* Memorias de la Real Academia de Ciencias Exactas, Físicas y Naturales de Madrid. Serie de Ciencias Exactas. (Madrid) (Continued as: *Mem. Real Acad. Cienc. Exact. Fis. Natur. Madrid*)
- Mem. Real Acad. Cienc. Artes Barcelona* Memorias de la Real Academia de Ciencias y Artes de Barcelona. (Barcelona)
- Mem. Real Acad. Cienc. Exact. Fis. Natur. Madrid* Memorias de la Real Academia de Ciencias Exactas, Físicas y Naturales de Madrid. Serie de Ciencias Exactas. (Madrid)
- Mem. School Engrg. Okayama Univ.* Memoirs of the School of Engineering. Okayama University. (Okayama)
- Mem. School Sci. Engrg. Waseda Univ.* Memoirs of the School of Science and Engineering. Waseda University. (Tokyo)
- † *Mem. Ser. Calcutta Math. Soc.* Memoir Series of the Calcutta Mathematical Society. Calcutta Mathematical Society, Calcutta.
- Mem. Soc. Astronom. Ital.* Memorie della Società Astronomica Italiana. (Milan) (Continued as: *Mem. Soc. Astronom. Ital. (N.S.)*)
- Mem. Soc. Astronom. Ital. (N.S.)* Memorie della Società Astronomica Italiana. Nuova Serie. (Milan)
- * *Mém. Soc. Math. France (N.S.)* Mémoire de la Société Mathématique de France. Nouvelle Série. (Paris) (Formerly: *Bull. Soc. Math. France Mém.*)
- Mém. Soc. Roy. Sci. Liège Coll. in-8* Mémoires de la Société Royale des Sciences de Liège. Collection in-8. (Liège)
- † *Memoirs* Memoirs. Aarhus Universitet, Matematisk Institut, Aarhus.
- Menemui Mat.* Menemui Matematik. (Discovering Mathematics). (Kuala Lumpur)

- † *Methoden Verfahren Math. Phys.* Methoden und Verfahren der Mathematischen Physik. [Methods and Procedures in Mathematical Physics] Peter Lang, Frankfurt-am-Main.
- † *Méthodes Math. Inform.* Méthodes Mathématiques de l'Informatique. [Mathematical Methods of Information Science] Dunod, Paris.
- † *Méthodes Sociologie* Méthodes de la Sociologie. [Sociological Methods] Mouton, Paris-The Hague.
- † *Metody Račeta Obolochek* Методы Расчета Оболочек. [Methods for Calculating Shells] Naukova Dumka, Kiev.
- * *Metody Diskret. Analiz.* Metody Diskretnogo Analiza. (Novosibirsk)
- Metody i Modeli Upravleniya* Rīzākļi Gosudarstvennyĭ Politehnicheskii Institut. Metody i Modeli Upravleniya. (Riga)
- Metody Vyčisl.* Leningradskii Ordena Lenina Gosudarstvennyĭ Universitet im. A. A. Zdanova. Kafedra Vyčislitel'noi Matematiki i Vyčislitel'nyi Centr. Metody Vyčislēnī. (Leningrad)
- * *Métrica* Métrica. Estudos e Pesquisas em Matemática. (São Paulo)
- Metrika* Metrika. (Vienna)
- Metroecon.* Metroeconomica. Rivista Internazionale di Economica. (Bologna) (Continued as: *Metroeconomica*)
- Metroeconomica* Metroeconomica. Rivista Internazionale di Economica. (Bologna)
- Metron* Metron. (Rome)
- METU J. Pure Appl. Sci.* Middle East Technical University. Journal of Pure and Applied Sciences. Orta Doğu Teknik Üniversitesi. Temel ve Uygulamalı Bilimler Dergisi. (Ankara) (Continued as: *J. Pure Appl. Sci.*)
- METU Studies Develop.* Middle East Technical University. Studies in Development. (Ankara) (Continued as: *Stud. Develop.*)
- MIC—Modeling Identification Control* Modeling, Identification and Control. A Norwegian Research Bulletin. (Oslo)
- Michigan Math. J.* The Michigan Mathematical Journal. (Ann Arbor, Mich.)
- Mind* Mind. A Quarterly Review of Philosophy. (Oxford)
- Miscelánea Mat.* Miscelánea Matemática. (Mexico City)
- † *MIT East Asian Sci. Ser.* MIT East Asian Science Series. MIT Press, Cambridge, Mass.
- † *MIT Press Ser. Comput. Sci.* MIT Press Series in Computer Science. MIT Press, Cambridge, Mass.
- † *MIT Press Ser. Signal Process., Optim. Control* MIT Press Series in Signal Processing, Optimization, and Control. MIT Press, Cambridge, Mass.
- † *Mitt. Geodät. Inst. Tech. Univ. Graz* Mitteilungen des Geodätischen Instituts der Technischen Universität Graz. [Reports of the Geodesic Institute of the Technical University of Graz] Technische Universität Graz, Graz.
- * *Mitt. Math. Ges. DDR* Mitteilungen. Mathematische Gesellschaft der Deutschen Demokratischen Republik. (Berlin)
- Mitt. Math. Ges. Hamburg* Mitteilungen der Mathematischen Gesellschaft in Hamburg. (Hamburg)
- Mitt. Math. Gesell. Hamburg* Mitteilungen der Mathematischen Gesellschaft in Hamburg. (Hamburg) (Continued as: *Mitt. Math. Ges. Hamburg*)
- Mitt. Math. Sem. Giessen* Mitteilungen aus dem Mathematischen Seminar Giessen. (Giessen)
- Mitt. Verein. Schweiz. Versicherungsmath.* Vereinigung Schweizerischer Versicherungsmathematiker. Mitteilungen. (L'Association des Actuaires Suisses. Bulletin). (Bern)
- † *Mitteilung* Mitteilung. [Report] Deutsche Forschungsinst. Versuchsanst. Luft-Raumfahrt, Cologne.
- Modelirovanie Ekonom. Processov* Otdelenie Ekonomicheskoi Kibernetiki Ekonomicheskogo Fakulteta Moskovskogo Gosudarstvennogo Universiteta im. M. V. Lomonosova. Modelirovanie Ekonomicheskikh Processov. (Moscow)
- † *Moderne Lehrtexte: Wirtschaftswiss.* Moderne Lehrtexte: Wirtschaftswissenschaften. [Modern Textbooks: Economics] Westdeutscher Verlag, Cologne.
- † *Moderne Math. Elem. Darstellung* Moderne Mathematik in Elementarer Darstellung. [Modern Mathematics in Elementary Presentation] Vandenhoeck & Ruprecht, Göttingen.
- Molecular Phys.* Molecular Physics. (London)
- Molod. Nauch. Rabotnik* Erevanskii Gosudarstvennyĭ Universitet. Molodoi Nauchnyi Rabotnik. (Erevan)
- Monatsh. Math.* Monatshefte für Mathematik. (Vienna)
- † *Monograf. Dziejow Nauk. Tech.* Monografie z Dziejow Nauki i Techniki. [Monographs in the History of Science and Technology] Ossolineum, Wrocław.
- † *Monograf. Inst. Mat.* Monografias del Instituto de Matemáticas. [Monographs of the Institute of Mathematics] Universidad Nacional Autónoma de México, Instituto de Matemáticas, Mexico City.
- † *Monograf. Mat.* Monografie Matematyczne. [Mathematical Monographs] PWN, Warsaw.
- † *Monograf. Mat.* Monografias de Matemática. [Mathematical Monographs] IMPA, Rio de Janeiro.
- † *Monograf. Mat.* Monografias de Matemática. [Mathematical Monographs] Instituto "Jorge Juan" de Matemáticas, Madrid.
- † *Monograf. Mat. Pura Apl.* Monografias de Matemática Pura e Aplicada. [Monographs in Pure and Applied Mathematics] Instituto de Matemática, Estatística e Ciência da Computação, Universidade Estadual de Campinas, Campinas.
- † *Monograph. Enseign. Math.* Monographies de l'Enseignement Mathématique. [Monographs in the Teaching of Mathematics] Université de Genève, Enseignement Mathématique, Geneva.
- † *Monograph. Linguist. Math.* Monographies de Linguistique Mathématique. [Monographs in Mathematical Linguistics] Dunod, Paris.
- † *Monograph. Sci. Maison Franco-Japon.* Monographies Scientifiques de la Maison Franco-Japonaise. [Scientific Monographs of the Maison Franco-Japonaise] Maison Franco-Japon., Tokyo.
- † *Monograph.. Wissenschaftstheorie Grundlagenforsch.* Monographien Wissenschaftstheorie und Grundlagenforschung. [Monographs: Theory of Science and Fundamental Research] Scriptor Verlag, Kronberg/Ts.
- † *Monographs Population Biol.* Monographs in Population Biology. Princeton University Press, Princeton, N.J.
- † *Monographs Stud. Math.* Monographs and Studies in Mathematics. Pitman, Boston, Mass.
- † *Monographs Surveys Water Res. Engrg.* Monographs and Surveys in Water Resource Engineering. Pitman, Boston, Mass.
- † *Monographs Textbooks Mech. Solids Fluids: Mech. Anal.* Monographs and Textbooks on Mechanics of Solids and Fluids: Mechanics and Analysis. Sijthoff & Noordhoff International Publishers, Alphen aan den Rijn.
- † *Monographs Textbooks Mech. Solids Fluids: Mech. Continua* Monographs and Textbooks on Mechanics of Solids and Fluids: Mechanics of Continua. Sijthoff & Noordhoff International Publishers, Alphen aan den Rijn.
- † *Monographs Textbooks Mech. Solids Fluids: Mech. Dynam. Systems* Monographs and Textbooks on Mechanics of Solids and Fluids: Mechanics of Dynamical Systems. Sijthoff & Noordhoff International Publishers, Alphen aan den Rijn.
- † *Monographs Textbooks Mech. Solids Fluids: Mech. Elastic Stability* Monographs and Textbooks on Mechanics of Solids and Fluids: Mechanics of Elastic Stability. Sijthoff & Noordhoff International Publishers, Alphen aan den Rijn.
- † *Monographs Textbooks Mech. Solids Fluids: Mech. Surface Structures* Monographs and Textbooks on Mechanics of Solids and Fluids: Mechanics of Surface Structures. Sijthoff & Noordhoff International Publishers, Alphen aan den Rijn.
- † *Monographs Textbooks Pure Appl. Math.* Monographs and Textbooks in Pure and Applied Math. Dekker, New York.
- Monthly Notices Roy. Astronom. Soc.* Royal Astronomical Society. Monthly Notices. (Oxford)
- Moscow Univ. Math. Bull.* Moscow University Mathematics Bulletin. (New York) (Translation of the mathematics section of *Vestnik Moskov. Univ. Ser. I Mat. Meh.*)
- Moscow Univ. Phys. Bull.* Moscow University Physics Bulletin. (New York) (Translation of the physics section of *Vestnik Moskov. Univ. Ser. III Fiz. Astronom.*)
- Moskov. Aviacion. Inst. Ordžonikidze Trudy* Moskovskii Ordena Lenina Aviacionnyi Institut im. Sergo Ordžonikidze. Trudy. (Moscow)
- Moskov. Gos. Ped. Inst. Učen. Zap.* Moskovskii Gosudarstvennyĭ Pedagogicheskii Institut im. V. I. Lenina. Učenyje Zapiski. (Moscow)
- Moskov. Gos. Univ. Soobšč. Gos. Astronom. Inst. Šternberg* Moskovskii Gosudarstvennyĭ Universitet im. M. V. Lomonosova. Soobščeniia Gosudarstvennogo Astronomicheskogo Instituta im. P. K. Šternberga. (Moscow)
- Moskov. Gos. Univ. Trudy Gos. Astronom. Inst. Šternberg* Moskovskii Gosudarstvennyĭ Universitet im. M. V. Lomonosova. Trudy Gosudarstvennogo Astronomicheskogo Instituta im. P. K. Šternberga. (Moscow)
- Moskov. Gos. Zaočn. Ped. Inst. Sb. Nauch. Trudov* Moskovskii Gosudarstvennyi Zaočnyi Pedagogicheskii Institut. Sbornik Nauchnykh Trudov. (Moscow)
- Moskov. Inst. Elektron. Mašinostroenija—Trudy MIEM* Moskovskii Institut Elektron-nogo Mašinostroenija. Trudy MIEM. (Moscow)
- Moskov. Inst. Inž. Železnodorozh. Transporta Trudy* Moskovskii Institut Inženerov Železnodorozhnogo Transporta. Trudy. (Moscow)
- Moskov. Inž.-Stroitel. Inst. Sb. Trudov* Moskovskii Inženerno-Stroitel'skii Institut im. V. V. Kuibysheva. Sbornik Trudov. (Moscow)
- Moskov. Lesotehn. Inst. Nauch. Trudy* Moskovskii Lesotekhnicheskii Institut. Nauchnye Trudy. (Moscow)
- Moskov. Oblast. Ped. Inst. Učen. Zap.* Moskovskii Oblastnoi Pedagogicheskii Institut. Učenyje Zapiski. (Moscow)
- † *MR* Mathematical Reviews. (Providence, R.I.) See *Math. Rev.*
- Muromsk. Gos. Ped. Inst. Učen. Zap.* Muromskii Gosudarstvennyĭ Pedagogicheskii Institut. Učenyje Zapiski. (Vladimir)
- Nachr. Akad. Wiss. Göttingen Math.-Phys. Kl. II* Nachrichten der Akademie der Wissenschaften in Göttingen. II. Mathematisch-Physikalische Klasse. (Göttingen)
- Nachrichtentech. Elektronik* Nachrichtentechnik. Elektronik. Technischwissenschaftliche Zeitschrift für die Gesamte Elektronische Nachrichtentechnik. (Berlin)
- † *Nachrichtentech* Nachrichtentechnik. [Communications Technology] Springer, Berlin.
- Nadežn. i Kontrol' Kačestva* Elementarnoe Priloženie k Žurnalu Standarty i Kačestvo Gosudarstvennyĭ Komitet Standartov Soveta Ministrov SSR. Nadežnost' i Kontrol' Kačestva. (Moscow)
- Nagoya Math. J.* Nagoya Mathematical Journal. (Nagoya)
- Nanjing Daxue Xuebao* Nanjing Daxue Xuebao. Ziran Kexue Ban. Nanjing University Journal. Natural Sciences. (Nanjing)
- † *Nanta Iremica* Nanta Iremica. Université de Nantes, Nantes.
- Nanta Math.* Nanyang University. Nanta Mathematica. (Singapore)
- Nanyang Univ. J. Part III* Nanyang University. Journal. Part III. Natural Sciences. (Singapore)
- Narisi Istor. Prirodznau. i Tehn.* Narisi z Istorii Prirodznaustva i Tehniki. (Kiev)
- † *NATO Adv. Study Inst. Ser., Ser. B: Physics* NATO Advanced Study Institute Series, Ser. B: Physics. Consultants Bureau, New York.
- † *NATO Adv. Study Inst. Ser., Ser. C: Math. Phys. Sci.* NATO Advanced Study Institute Series, Ser. C: Mathematical and Physical Sciences. Reidel, Dordrecht.
- † *NATO Adv. Study Inst. Ser., Ser. E: Appl. Sci.* NATO Advanced Study Institute Series, Ser. E: Applied Sciences. Sijthoff & Noordhoff International Publishers, Alphen aan den Rijn.
- † *NATO Conf. Series* NATO Conference Series. Consultants Bureau, New York.
- Natur. Sci. Rep. Ochanomizu Univ.* Natural Science Report of the Ochanomizu University. (Tokyo)
- Naturalia Naturalia.* (São Paulo)
- Nauch.-Tehn. Informacija (VINITI) Ser. 2. Informacionnye Procezy i Sistemy*

- Akademija Nauk SSSR. Vsesojuznyj Institut Naučnoj i Tehničkoj Informacii. Naučno-Tehničkaja Informacija. Serija 2. Informacionnye Processy i Sistemy. (Moscow) (Translated as: *Automat. Document. and Math. Linguistics*)
- Naval Res. Logist. Quart. Naval Research Logistics Quarterly. (Washington, D.C.)
- NEC Res. Develop. NEC Research and Development (Technical Journal of Nippon Electric Co., Ltd.). (Tokyo)
- NEC Res. Development NEC Research and Development (Technical Journal of Nippon Electric Co., Ltd.). (Tokyo) (Continued as: *NEC Res. Develop.*)
- Nederl. Akad. Wetensch. Indag. Math. Koninklijke Nederlandse Akademie van Wetenschappen. Indagationes Mathematicae. (Amsterdam) (Same as: *Nederl. Akad. Wetensch. Proc. Ser. A*)
- Nederl. Akad. Wetensch. Proc. Ser. A See *Nederl. Akad. Wetensch. Indag. Math.*
- Nederl. Akad. Wetensch. Proc. Ser. A Koninklijke Nederlandse Akademie van Wetenschappen. Proceedings. Series A. Mathematical Sciences. (Amsterdam) (Same as: *Nederl. Akad. Wetensch. Indag. Math.*) (Continued as: *Nederl. Akad. Wetensch. Indag. Math.*)
- Nederl. Akad. Wetensch. Proc. Ser. B Koninklijke Nederlandse Akademie van Wetenschappen. Proceedings. Series B. Physical Sciences. (Amsterdam)
- Nederl. Akad. Wetensch. Verslag Afd. Natuurk. Koninklijke Nederlandse Akademie van Wetenschappen. Verslag van de Gewone Vergadering van de Afdeling Natuurkunde. (Amsterdam)
- Nepali Math. Sci. Rep. The Nepali Mathematical Sciences Report. (Kathmandu)
- Networks Networks. An International Journal. (New York)
- † New Math. Library New Mathematical Library. Mathematical Association of America, Washington, D.C.
- New Zealand Math. Mag. The New Zealand Mathematics Magazine. (Auckland)
- New Zealand Oper. Res. New Zealand Operational Research. (Wellington)
- Nieuw Arch. Wisk. Nieuw Archief voor Wiskunde. (Groningen) (Continued as: *Nieuw Arch. Wisk.* (3))
- Nieuw Arch. Wisk. (3) Nieuw Archief voor Wiskunde. Derde Serie. (Amsterdam)
- Nieuw Tijdschr. Wisk. Nieuw Tijdschrift voor Wiskunde. (Dordrecht)
- Nigerian J. Sci. University of Ibadan. Nigerian Journal of Science. (Ibadan)
- † NLR TR NLR TR. National Lucht- en Ruimtevaart Laboratorium, Amsterdam.
- Nonlinear Anal. Nonlinear Analysis. (Oxford)
- † Nonlinear Programming Nonlinear Programming. Academic Press, New York.
- Nordisk Mat. Tidsskr. Nordisk Matematisk Tidsskrift. (Oslo) (Continued as: *Normat*)
- Nordisk Tidsskr. Informationsbehandling (BIT) Nordisk Tidsskrift for Informationsbehandling. (Copenhagen) (Continued as: *BIT*)
- Nordisk Tidsskr. Informationsbehandling (BIT) See *BIT*
- Normat Normat. Nordisk Matematisk Tidsskrift. (Oslo)
- Norske Vid.-Akad. Oslo Mat.-Natur. Kl. Skr. Norske Videnskaps-Akademi i Oslo. Matematisk-Naturvidenskapelig Klasse. Skrifter. (Oslo) (Continued as: *Norske Vid.-Akad. Oslo Mat.-Natur. Kl. Skr.* (N.S.)) (Formerly: *Skr. Norske Vid.-Akad. Oslo I*)
- Norske Vid.-Akad. Oslo Mat.-Natur. Kl. Skr. (N.S.) Norske Videnskaps-Akademi i Oslo. Matematisk-Naturvidenskapelig Klasse. Skrifter. (Oslo)
- Norske Vid. Selsk. Forh. (Trondheim) Det Kongelige Norske Videnskabers Selskabs Forhandling. (Trondheim)
- Norske Vid. Selsk. Skr. (Trondheim) Det Kongelige Norske Videnskabers Selskabs Skrifter. (Trondheim)
- † North-Holland Math. Library North-Holland Mathematical Library. North-Holland, Amsterdam-New York.
- † North-Holland Math. Studies North-Holland Mathematics Studies. North-Holland, Amsterdam-New York.
- † North-Holland Ser. Gen. Systems Res. North-Holland Series in General Systems Research. North-Holland, Amsterdam-New York.
- † North-Holland Ser. in Appl. Math. and Mech. North-Holland Series in Applied Mathematics and Mechanics. Elsevier, New York.
- † North-Holland Ser. System Sci. Engrg. North-Holland Series in System Science and Engineering. North-Holland, Amsterdam-New York.
- † Notas Algebra Anal. Notas de Álgebra y Análisis. [Notes on Algebra and Analysis] Universidad Nacional del Sur, Instituto de Matemática, Bahía Blanca.
- Notas Ci. Ser. M Mat. Notas Científicas Serie M. Matemática. (Lima) (Continued as: *Notas Cient. Ser. M Mat.*)
- Notas Cient. Ser. M Mat. Notas Científicas Serie M. Matemática. (Lima) (Formerly: *Notas Ci. Ser. M Mat.*)
- † Notas Geom. Topol. Notas de Geometría y Topología. [Notes on Geometry and Topology] Universidad Nacional del Sur, Instituto de Matemática, Bahía Blanca.
- † Notas Inst. Mat. Estatist. Univ. São Paulo, Ser. Mat. Notas do Instituto de Matemática e Estatística da Universidade de São Paulo, Série Matemática. [Notes of the Institute of Mathematics and Statistics of the University of São Paulo, Mathematics Series] Universidade de São Paulo, São Paulo.
- † Notas Mat. Notas de Matemática. [Mathematical Notes] Elsevier, Amsterdam.
- † Note Technique 1979 Note Technique 1979. [Technical Report 1979] Office Nat. Études Recherches Aéropatiales, Chatillon.
- Notes and Records Roy. Soc. London Notes and Records of the Royal Society of London. (London)
- † Notes on Pure Math. Notes on Pure Mathematics. Australian National University, Canberra.
- † Notices Amer. Math. Soc. Notices of the American Mathematical Society. (Providence, R.I.) See *Abstracts Amer. Math. Soc.* (Beginning with the January, 1980 issue only contains the program of the meeting of the Society.)
- Notre Dame J. Formal Logic Notre Dame Journal of Formal Logic. (Notre Dame, Ind.)
- Noûs Noûs. (Bloomington, Ind.)
- † Nouveau Cours de Math. Nouveau Cours de Mathématiques. [New Course in Mathematics] Librairie Vuibert, Paris.
- Nova Acta Leopoldina (N.F.) Nova Acta Leopoldina. Abhandlungen der Deutschen Akademie der Naturforscher Leopoldina. Neue Folge. (Leipzig)
- Novgorod. Gos. Ped. Inst. Učen. Zap. Novgorodskij Gosudarstvennyj Pedagogičeskij Institut. Učenyje Zapiski. (Novgorod)
- † Novi Zb. Mat. Prob. Novi Zbornik Matematičkih Problema. [New Collection of Mathematical Problems] Naučna Knjiga, Belgrade.
- Novosibirsk. Gos. Ped. Inst. Naučn. Trudy Novosibirskij Gosudarstvennyj Pedagogičeskij Institut. Naučnye Trudy. (Novosibirsk)
- † Noye Knigi SSSR Noye Knigi SSSR. (Moscow)
- NTM Schr. Geschichte Natur. Tech. Medizin NTM Schriftenreihe für Geschichte der Naturwissenschaften Technik und Medizin. (Leipzig)
- NTM Schr. Geschichte Naturwiss. Tech. Medizin NTM Schriftenreihe für Geschichte der Naturwissenschaften Technik und Medizin. (Leipzig) (Continued as: *NTM Schr. Geschichte Natur. Tech. Medizin*)
- Nuclear Phys. A Nuclear Physics. A. (Amsterdam)
- Nuclear Phys. B Nuclear Physics. B. (Amsterdam)
- Numer. Funct. Anal. Optim. Numerical Functional Analysis and Optimization. (New York)
- Numer. Math. Numerische Mathematik. (Berlin)
- † Numer. Math. Ingenieure Physiker Numerische Mathematik für Ingenieure und Physiker. [Numerical Mathematics for Engineers and Physicists] Springer, Berlin.
- Numer. Math. J. Chinese Univ. Numerical Mathematics. A Journal of Chinese Universities. Gaodeng Xueiao Jisuan Shuxue Xuebao. (Nanjing)
- Nuovo Cimento A II Nuovo Cimento. A. (Bologna) (Continued as: *Nuovo Cimento A* (11))
- Nuovo Cimento A (11) II Nuovo Cimento. A. Serie 11. (Bologna)
- Nuovo Cimento B II Nuovo Cimento. B. (Bologna) (Continued as: *Nuovo Cimento B* (11))
- Nuovo Cimento B (11) II Nuovo Cimento. B. Serie 11. (Bologna)
- O Eukleides A—Agymnasio (N.S.) O Eukleides; Ekdose Tes Ellenikes Mathematai. A. Agymnasio. Nea Seira. (Athens)
- O Eukleides B—Lykeio (N.S.) O Eukleides; Ekdose Tes Ellenikes Mathematai. B. Lykeio. Nea Seira. (Athens)
- Obs. Astronom. Univ. Nac. La Plata Ser. Astronom. Observatorio Astronómico de la Universidad Nacional de La Plata. Serie Astronómica. (La Plata)
- Obščestv. Nauki v Uzbek. Obščestvennye Nauki v Uzbekistane. (Tashkent)
- Obzornik Mat. Fiz. Društvo Matematikov, Fizikov in Astronomov SRS. Obzornik za Matematiko in Fiziko. (Ljubljana)
- † Occasional Publ. in Math. Occasional Publications in Mathematics. Massey University, Department of Mathematics, Palmerston North.
- † Odjel. Teh. Nauka Odjeljenje Tehničkih Nauka. [Technical Sciences Section] Akad. Nauk. i Umjetnost. Bosne i Hercegovine, Sarajevo.
- † Omega Omega. Wiedza Powszechna, Warsaw.
- Omsk. Inst. Inž. Železnodorož. Transporta Naučn. Trudy Omskij Institut Inženerov Železnodorožnogo Transporta. Naučnye Trudy. (Omsk)
- † Oper. Program. Systems Ser. Operating and Programming Systems. Series. Elsevier, Amsterdam.
- Oper. Res. Operations Research. The Journal of the Operations Research Society of America. (Baltimore, Md.)
- Oper. Res. Quart. Operational Research Quarterly. (Bristol) (Formerly: *Operational Res. Quart.*)
- Operational Res. Quart. Operational Research Quarterly. (Bristol) (Continued as: *J. Oper. Res. Soc. and Oper. Res. Quart.*)
- Operations Res. Operations Research. The Journal of the Operations Research Society of America. (Baltimore, Md.) (Continued as: *Oper. Res.*)
- † Operations Research Verfahren Operations Research Verfahren. [Operations Research Procedures] Verlag Anton Hain, Meisenheim am Glan.
- † Operator Theory: Advances and Appl. Operator Theory: Advances and Applications. Birkhäuser, Basel-Boston.
- Opsearch Opsearch. The Journal of the Operational Research Society of India. (New Delhi)
- Optica Acta Optica Acta. (London)
- Optimal Control Appl. Methods Optimal Control Applications & Methods. (Chichester)
- Optimal. Planirovanie Optimal'noe Planirovanie. Akademija Nauk SSSR. Sibirskoe Otdelenie. Institut Matematiki. (Novosibirsk)
- Optimizacija Akademija Nauk SSSR. Sibirskoe Otdelenie. Institut Matematiki. Optimizacija. (Novosibirsk)
- OR Operations Research. The Journal of the Operations Research Society of America. (Baltimore, Md.) See *Oper. Res.*
- Orenburg. Gos. Ped. Inst. Učen. Zap. Orenburgskij Gosudarstvennyj Pedagogičeskij Institut im. V. P. Čkalova. Učenyje Zapiski. (Chelyabinsk)
- Organon Organon. Institut d'Histoire de la Science et de la Technique auprès de l'Académie Polonaise des Sciences. (Warsaw)
- Orlov. Gos. Ped. Inst. Učen. Zap. Orlovskij Gosudarstvennyj Pedagogičeskij Institut. Učenyje Zapiski. (Orel)
- Orsk. Gos. Ped. Inst. Učen. Zap. Orskij Gosudarstvennyj Pedagogičeskij Institut im. T. G. Ševčenko. Učenyje Zapiski. (Orsk)
- Osaka J. Math. Osaka Journal of Mathematics. (Osaka)
- Österreich. Akad. Wiss. Math.-Natur. Kl. Denkschr. Österreichische Akademie der Wissenschaften. Mathematisch-Naturwissenschaftliche Klasse. Denkschriften. (Vienna)
- Österreich. Akad. Wiss. Math.-Natur. Kl. S.-B. II Österreichische Akademie der Wissenschaften. Mathematisch-Naturwissenschaftliche Klasse. Sitzungsberichte. Abh.

- lung II. Mathematik, Astronomie, Physik, Meteorologie und Technik. (Vienna) (Continued as: *Österreich. Akad. Wiss. Math.-Naturwiss. Kl. S.-B. II*)
- Österreich. Akad. Wiss. Math.-Natur. Kl. Sitzungsber. II* Österreichische Akademie der Wissenschaften. Mathematisch-Naturwissenschaftliche Klasse. Sitzungsberichte. Abteilung II. Mathematik, Astronomie, Physik, Meteorologie und Technik. (Vienna)
- Österreich. Akad. Wiss. Math.-Naturwiss. Kl. Denkschr.* Österreichische Akademie der Wissenschaften. Mathematisch-Naturwissenschaftliche Klasse. Denkschriften. (Vienna) (Continued as: *Österreich. Akad. Wiss. Math.-Natur. Kl. Denkschr.*)
- Österreich. Akad. Wiss. Math.-Natur. Kl. S.-B. II* Österreichische Akademie der Wissenschaften. Mathematisch-Naturwissenschaftliche Klasse. Sitzungsberichte. Abteilung II. Mathematik, Astronomie, Physik, Meteorologie und Technik. (Vienna) (Continued as: *Österreich. Akad. Wiss. Math.-Natur. Kl. Sitzungsber. II*) (Formerly: *Österreich. Akad. Wiss. Math.-Natur. Kl. S.-B. II*)
- † *Ostwalds Klassiker der Exakten Wissenschaften.* (Ostwald's Classics of the Exact Sciences) Geest & Portig, Leipzig.
- Otor i Peredacha Informacii* Otor i Peredacha Informacii. Akademija Nauk Ukrainkoj SSR. Fiziko-Mehaničeskij Institut. (Kiev)
- Pacific J. Math.* Pacific Journal of Mathematics. (Carmel Valley, Calif.)
- † *Paideia Studies in Nature of Modern Math.* Paideia Studies in the Nature of Modern Mathematics. Paideia, Memphis, Tenn.
- † *Pallas Paperbacks* Pallas Paperbacks. Reidel, Dordrecht.
- Papers and Proc. Roy. Soc. Tasmania* Papers and Proceedings of the Royal Society of Tasmania. (Hobart) (Continued as: *Papers Proc. Roy. Soc. Tasmania*)
- Papers Proc. Roy. Soc. Tasmania* Papers and Proceedings of the Royal Society of Tasmania. (Hobart)
- † *Particles and Fields Subseries* Particles and Fields Subseries. American Institute of Physics, New York.
- Pattern Recognition* The Journal of the Pattern Recognition Society. (Oxford)
- Penz. Ped. Inst. Učen. Zap.* Penzenskij Pedagogičeskij Institut im. V. G. Belinskogo. Učenyje Zapiski. (Penza)
- Penz. Politehn. Inst. Učen. Zap. Mat. Meh.* Penzenskij Politehničeskij Institut. Matematika i Mehanička. Učenyje Zapiski. (Penza)
- * *Performance Evaluation* Performance Evaluation. An International Journal. (Amsterdam)
- Period. Mat.* Periodico di Matematiche. (Rome) (Continued as: *Period. Mat.* (5))
- Period. Mat. (5)* Periodico di Matematiche. Serie V. (Rome)
- Period. Math. Hungar.* Periodica Mathematica Hungarica. Journal of the János Bolyai Mathematical Society. (Budapest)
- Perm. Gos. Ped. Inst. Učen. Zap.* Permskij Gosudarstvennyj Pedagogičeskij Institut. Učenyje Zapiski. (Perm)
- Perm. Gos. Univ. Učen. Zap.* Permskij Gosudarstvennyj Universitet imeni A. M. Gor'kogo. Učenyje Zapiski. (Perm)
- Perm. Politehn. Inst. Sb. Naučn. Trudov* Permskij Politehničeskij Institut. Sbornik Naučnyh Trudov. (Perm)
- Petrozavodsk. Gos. Univ. Učen. Zap.* Petrozavodskij Gosudarstvennyj Universitet. Učenyje Zapiski. (Petrozavodsk)
- † *Phase Trans. Phenom.* Phase Transition Phenomena. Elsevier, Amsterdam.
- Philips J. Res.* Philips Journal of Research. (Eindhoven)
- Philips Res. Rep.* Philips Research Reports. (Eindhoven) (Continued as: *Philips J. Res.*)
- Philips Res. Rep. Suppl.* Philips Research Reports. Supplements. (Eindhoven)
- † *Philos. Abhandlungen* Philosophische Abhandlungen. [Philosophical Essays] Vittorio Klostermann, Frankfurt.
- † *Philos. Bibliothek* Philosophische Bibliothek. [Philosophical Library] Felix Meiner Verlag, Hamburg.
- Philos. Forum Quart.* The Philosophical Forum. A Quarterly. (Boston, Mass.)
- Philos. Math.* Philosophia Mathematica. An International Journal for Philosophy of Modern Mathematics. (Norfolk, Va.)
- Philos. Natur.* Philosophia Naturalis. Archiv für Naturphilosophie und die Philosophischen Grenzgebiete der Exakten Wissenschaften und Wissenschaftsgeschichte. (Königstein/Ts.)
- Philos. Quart.* The Philosophical Quarterly. (St. Andrews)
- Philos. Sci.* Philosophy of Science. (East Lansing, Mich.)
- Philos. Stud.* Philosophical Studies. (Dordrecht)
- Philos. Studies* Philosophical Studies. (Dordrecht) (Continued as: *Philos. Stud.*)
- Philos. Trans. Roy. Soc. London Ser. A* Philosophical Transactions of the Royal Society of London. Series A. Mathematical and Physical Sciences. (London)
- Phys. A* Physica. A. Europhysics Journal. (Amsterdam)
- Phys. B + C* Physica B + C. Europhysics Journal. B: Low Temperature and Solid State Physics. C: Atomic, Molecular and Plasma Physics, Optics. (Amsterdam)
- Phys. D* Physica D. Nonlinear Phenomena. (Amsterdam)
- * *Phys. Energi. Fort. Phys. Nuclear.* Physica Energie Fortis et Physica Nuclearis. Gaoneng Wuli Yu He Wuli. (Beijing)
- Phys. Fluids* The Physics of Fluids. (New York)
- Phys. Lett. A* Physics Letters. A. (Amsterdam)
- Phys. Lett. B* Physics Letters. B. (Amsterdam)
- Phys. Norveg.* Physica Norvegica. (Oslo)
- Phys. Rep.* Physics Reports. Section C of Physics Letters. (Amsterdam)
- Phys. Rep. Kumamoto Univ.* Physics Reports of the Kumamoto University. (Kumamoto)
- Phys. Rev. A* Physical Review. A. General Physics. (New York) (Continued as: *Phys. Rev. A* (3))
- Phys. Rev. A (3)* Physical Review. A. General Physics. Third Series. (New York)
- Phys. Rev. B* Physical Review. B. Solid State. (New York) (Continued as: *Phys. Rev. B* (3))
- Phys. Rev. B (3)* Physical Review. B. Condensed Matter. Third Series. (New York)
- Phys. Rev. C* Physical Review. C. Nuclear Physics. (New York) (Continued as: *Phys. Rev. C* (3))
- Phys. Rev. C (3)* Physical Review. C. Nuclear Physics. Third Series. (New York)
- Phys. Rev. D* Physical Review. D. Particles and Fields. (New York) (Continued as: *Phys. Rev. D* (3))
- Phys. Rev. D (3)* Physical Review. D. Particles and Fields. Third Series. (New York)
- Phys. Rev. Lett.* Physical Review Letters. (New York)
- † *Phys. Sci. Data* Physical Sciences Data. Elsevier, Amsterdam.
- Phys. Scripta* Physica Scripta. (Stockholm)
- Phys. Status Solidi (B)* Physica Status Solidi. B. Basic Research. (Berlin)
- Physis—Riv. Internaz. Storia Sci.* Physis. Rivista Internazionale di Storia della Scienza. (Florence)
- Pi Mu Epsilon J.* Pi Mu Epsilon Journal. (Rapid City, S.D.)
- * *Plasma Phys.* Plasma Physica. (Bristol/Elmsford, N.Y.)
- PLISKA Stud. Math. Bulg.* PLISKA Studia Mathematica Bulgarica. (Sofia)
- PLISKA Studia Math. Bulg.* PLISKA Studia Mathematica Bulgarica. (Sofia) (Continued as: *PLISKA Stud. Math. Bulg.*)
- Plovdiv. Univ. Naučn. Trud.* Plovdivskij Universitet. Naučni Trudove. (Plovdiv)
- Podstawy Sterowania* Podstawy Sterowania. Polska Akademia Nauk. Centrum Badań Naukowych w Woj. Katowickim. Zakład Systemów Automatyki Kompleksowej. (Gliwice/Kraków/Warsaw)
- Pokroky Mat. Fyz. Astronom.* Jednota Československých Matematiků a Fyziku. Pokroky Matematiky, Fyziky a Astronomie. (Prague)
- Polish Acad. Sci. Inst. Philos. Sociol. Bull. Sect. Logic* Polish Academy of Sciences. Institute of Philosophy and Sociology. Bulletin of the Section of Logic. (Wrocław)
- † *Polska Biblio. Analit. Mech.* Polska Akademia Nauk. Instytut Podstawowych Problemów Techniki. Polska Bibliografia Analityczna. Mechanika. Polish Scientific Abstracts. Mechanics. (Warsaw)
- † *Poly* Poly (Schriftenreihe der Eidgenössischen Technischen Hochschule, Zurich). [Poly (Series of the Federal Technical University of Zurich)] Birkhäuser, Basel-Boston.
- † *Popul. Lekcii Mat.* Популярная Лекция по Математике. [Popular Lectures on Mathematics] Nauka, Moscow.
- † *Pored. S'vremen. Mat.* Поредак Съвременна Математика. [Series in Modern Mathematics] Nauka i Izkustvo, Sofia.
- Portugal. Math.* Portugaliae Mathematica. (Lisbon)
- Portugal. Phys.* Portugaliae Physica. (Lisbon)
- † *Posebna Izdan.* Posebna Izdanja. [Special Editions] Srpska Akad. Nauk i Umetnost, Belgrade.
- † *Posebna Izdan.* Posebna Izdanja. [Special Editions] Matematički Institut, Belgrade.
- † *Postdiplom. Sem. Fiz.* Postdiplomski Seminar iz Fizike. [Postgraduate Seminar in Physics] University of Ljubljana, Ljubljana.
- † *Postdiplom. Sem. Mat.* Postdiplomski Seminar iz Matematike. [Postgraduate Seminar in Mathematics] University of Ljubljana, Ljubljana.
- Postepy Cybernet.* Postepy Cybernetyki. Kwartalnik Naukowy. (Wrocław)
- † *Potsdamer Forschungen* Potsdamer Forschungen (Wissenschaftliche Schriftenreihe der Pädagogischen Hochschule "Karl Liebknecht" Potsdam, Reihe B). [Potsdam Research (Scientific Reports of the Potsdam Teachers College "Karl Liebknecht", Series B)] Pädagogische Hochschule "Karl Liebknecht", Potsdam.
- † *Prace Dėjim. Pfirod. Vėd* Práce z Dėjin Pfirodních Vėd. [Works in the History of Natural Sciences] Ústav Československých a Světových Dėjin Československé Vėd, Prague.
- Prace Inst. Maszyn Przepływowych* Prace Instytutu Maszyn Przepływowych. Transactions of the Institute of Fluid-Flow Machinery. (Warsaw)
- † *Prace IPI PAN* Prace IPI PAN. [ICS PAS Reports] Polsk. Akad. Nauk, Inst. Podstaw Informat., Warsaw.
- Prace Nauk. Inst. Cybernet. Tech. Politech. Wrocław. Ser. Konfer.* Wrocław. Politechnika. Instytut Cybernetyki Technicznej. Prace Naukowe. Seria Konferencje. (Wrocław)
- Prace Nauk. Inst. Cybernet. Tech. Politech. Wrocław. Ser. Monograf.* Wrocław. Politechnika. Instytut Cybernetyki Technicznej. Prace Naukowe. Seria Monografie. (Wrocław)
- Prace Nauk. Inst. Cybernet. Tech. Politech. Wrocław. Ser. Stud. Materiały* Wrocław. Politechnika. Instytut Cybernetyki Technicznej. Prace Naukowe. Seria Studia i Materiały. (Wrocław)
- Prace Nauk. Inst. Cybernet. Techn. Politech. Wrocław. Ser. Konfer.* Wrocław. Politechnika. Instytut Cybernetyki Technicznej. Prace Naukowe. Seria Konferencje. (Warsaw) (Continued as: *Prace Nauk. Inst. Cybernet. Tech. Politech. Wrocław. Ser. Konfer.*)
- Prace Nauk. Inst. Cybernet. Techn. Politech. Wrocław. Ser. Monograf.* Wrocław. Politechnika. Instytut Cybernetyki Technicznej. Prace Naukowe. Seria Monografie. (Wrocław) (Continued as: *Prace Nauk. Inst. Cybernet. Tech. Politech. Wrocław. Ser. Monograf.*)
- Prace Nauk. Inst. Cybernet. Techn. Politech. Wrocław. Ser. Stud. i Materiały* Wrocław. Politechnika. Instytut Cybernetyki Technicznej. Prace Naukowe. Seria Studia i Materiały. (Wrocław) (Continued as: *Prace Nauk. Inst. Cybernet. Tech. Politech. Wrocław. Ser. Stud. Materiały*)
- Prace Nauk. Inst. Mat. Fiz. Teoret. Politechn. Wrocław. Ser. Monograf.* Prace Naukowe Instytutu Matematyki i Fizyki Teoretycznej Politechniki Wrocławskiej. Seria Monografie. (Breslau) (Continued as: *Prace Nauk. Inst. Mat. Politech. Wrocław. Ser. Monograf.*)
- Prace Nauk. Inst. Mat. Politech. Wrocław. Ser. Konfer.* Wrocław. Politechnika Wrocławska. Instytut Matematyki. Prace Naukowe. Seria Konferencje. (Wrocław)
- Prace Nauk. Inst. Mat. Politech. Wrocław. Ser. Monograf.* Wrocław. Politechnika Wrocławska. Instytut Matematyki. Prace Naukowe. Seria Monografie. (Wrocław)
- Prace Nauk. Inst. Mat. Politech. Wrocław. Ser. Stud. Materiały* Politechniki

- Wrocławskiej. Instytutu Matematyki. Prace Naukowe. Seria Studia i Materiały. (Wrocław)
- † *Prace Nauk. Univ. Śląsk. Katowic.* Prace Naukowe Uniwersytetu Śląskiego w Katowicach. [Scientific Publications of the University of Silesia] Univ. Śląski, Katowice.
- † *Prace Wrocław. Towarz. Nauk. Ser. A* Prace Wrocławskiego Towarzystwa Naukowego, Seria A. [Works of the Wrocław Society of Science, Series A] Ossolineum, Wrocław.
- Prague Bull. Math. Linguist.* Prague Bulletin of Mathematical Linguistics. (Prague)
- Prague Stud. Math. Linguist.* Prague Studies in Mathematical Linguistics. (Prague)
- Prakt. Akad. Athēnōn* Praktika tēs Akademias Athēnōn. (Athens)
- Pramāṇa* Pramāṇa; a Journal of Physics. (Bangalore)
- † *Pratique Systēm. Logiques* Pratique des Systēm. Logiques. [Applications of Logical Systems] Tech. et Documentation, Paris.
- Praxis Math.* Praxis der Mathematik. (Cologne)
- † *Preprint 79* Препринт 79. [Preprint 79] Inst. Kibernet., Kiev.
- † *Preprint 80* Препринт 80. [Preprint 80] Inst. Kibernet., Kiev.
- † *Pribl. Metod. Rešen. Differencial. Uravnen.* Približnyye Metody Rešenija Differencial'nyh Uravnenij. (Kiev)
- Pribory i Sistemy Avtomat.* Pribory i Sistemy Avtomatiki. (Kharkov)
- Pribory i Sistemy Upravlenija* Pribory i Sistemy Upravlenija. (Moscow)
- Prikl. Geom. i Inžener. Grafika* Prikladnaja Geometrija i Inženernaja Grafika. (Kiev)
- Prikl. Mat. i Programirovanie* Akademija Nauk Moldavskoi SSR. Institut Matematiki s Vyčislitel'nym Centrom. Prikladnaja Matematika i Programirovanie. (Kishinev)
- Prikl. Mat. Meh.* Akademija Nauk SSSR. Otdelenie Tehničeskikh Nauk. Institut Mekhaniki. Prikladnaja Matematika i Mekhanika. (Moscow) (Translated as: *J. Appl. Math. Mech.*)
- Prikl. Meh.* Akademija Nauk Ukrainsoi SSR. Otdelenie Matematiki, Mekhaniki i Kibernetiki. Prikladnaja Mekhanika. (Kiev) (Translated as: *Soviet Appl. Mech.*)
- Prikl. Problemy Proč. i Plast.* Gor'kovskij Gosudarstvennyj Universitet imeni N. I. Lobačevskogo. Prikladnye Problemy Pročnosti i Plastičnosti. (Gorki)
- Primenen. Mat. Ekonom.* Leningradskij Ordena Lenina Gosudarstvennyj Universitet imeni A. A. Ždanova. Kafedra i Laboratorija Ekonomiko-Matematičeskikh Metodov. Primenenie Matematiki v Ekonomike. (Leningrad)
- Primenen. Metodov Vyčisl. Mat. i ĖVM o Tehn.-Ėkonom. Rasčet.* Kazanskij Gosudarstvennyj Universitet imeni V. I. Ul'janova-Lenina. Trudy Vyčislitel'nogo Centra. Primenenie Metodov Vyčislitel'noi Matematiki i ĖVM v Tehniko-Ėkonomičeskikh Rasčetah. (Kazan)
- Primenen. Metodov Vyčisl. Mat. i Vyčisl. Tehn. dlia Rešenija Naučno-Issled. i Narodnohožajstvo. Zadač.* Vyčislitel'nyi Centr Voronežskogo Gosudarstvennogo Universiteta imeni Leninskogo Komsomola. Primenenie Metodov Vyčislitel'noi Matematiki i Vyčislitel'noi Tehniki dlia Rešenija Naučno-Issledovatel'skikh i Narodnohožajstvennyh Zadač. (Voronezh)
- Primenen. Teor. Verojatnost. i Mat. Statist.* Primenenie Teorii Verojatnostei i Matematičeskoj Statistiki. (Vilnius)
- † *Princeton Math. Ser.* Princeton Mathematical Series. Princeton University Press, Princeton, N.J.
- † *Princeton Stud. Math. Econom.* Princeton Studies in Mathematical Economics. Princeton University Press, Princeton, N.J.
- Prirod.-Mat. Fak. Univ. Kiril i Metodij Skopje Godišen Zb.* Prirodno-Matematička Fakultet na Univerzitetot Kiril i Metodij Skopje. Godišen Zbornik. (Skopje) (May also appear as: *Univ. Kiril Metodij—Skopje Fac. Math.*)
- Prirod.-Mat. Fak. Univ. Kiril Metodij Skopje Godišen Zb.* Prirodno-Matematička Fakultet na Univerzitetot Kiril i Metodij Skopje. Godišen Zbornik. (Skopje) (May also appear as: *Univ. Kiril Metodij—Skopje Fac. Math.*) (Continued as: *Mat. Fak. Univ. Kiril Metodij Skopje Godišen Zb.*)
- Probab. Math. Statist.* Probability and Mathematical Statistics. (Warsaw/Wrocław)
- † *Probl. Mat. Anal.* Проблемы Математического Анализа. [Problems of Mathematical Analysis] Izdat. Leningrad. Univ., Leningrad.
- † *Probl. Mat. Fiz.* Проблемы Математической Физики. [Problems in Mathematical Physics] Izdat. Leningrad. Univ., Leningrad.
- † *Problemata* Problemata. Frommann-Holzboog, Stuttgart.
- Probleme der Kybernetik* Probleme der Kybernetik. (Berlin) (Translation of *Probleme Kibernet.*) (Continued as: *Systems Theory Res.*)
- Problemi Tehn. Kibernet.* Problemi na Tehničeskata Kibernetika. Problems of Engineering Cybernetics. (Sofia)
- Problems Control Inform. Theory/Problemy Upravlen. Teor. Inform.* Problems of Control and Information Theory. Problemy Upravlenija i Teorii Informacii. (Budapest)
- Problems in geometry* Problems in geometry in the key word index. (Moscow)
- Problems Inform. Transmission* Problems of Information Transmission. (New York) (Translation of *Problemy Pereдачи Informacii*)
- † *Probleme de Automat* Probleme de Automatizare. [Problems of Automation] Editura Academiei Republicii Socialiste România, Bucharest.
- Problems of Control and Information Theory/Problemy Upravlenija i Teorii Informacii* Problems of Control and Information Theory. Problemy Upravlenija i Teorii Informacii. (Budapest) (Continued as: *Problems Control Inform. Theory/Problemy Upravlen. Teor. Inform.*)
- Problems of Information Transmission* Problems of Information Transmission. (New York) (Translation of *Problemy Pereдачи Informacii*) (Continued as: *Problems Inform. Transmission*)
- Problemy Jader. Fiz. i Kosm. Lučei* Problemy Jadernoї Fiziki i Kosmiceskikh Lučei. (Kharkov)
- Problemy Kibernet.* Problemy Kibernetiki. (Moscow)
- Problemy Mat.* Bydgoszcz. Wyższa Szkoła Pedagogiczna. Zeszyty Naukowe. Problemy Matematyczne. (Bydgoszcz)
- Problemy Mat. Anal. Slož. Sistem* Voronežskij Gosudarstvennyj Universitet. Problemy Matematičeskogo Analiza Složnyh Sistem. (Voronezh)
- Problemy Matematičeskogo Analiza (Problems in Mathematical Analysis)* Problemy Matematičeskogo Analiza (Problems in Mathematical Analysis). (Leningrad) (Translated as: *J. Soviet Math.*)
- Problemy Pereдачи Informacii* Akademija Nauk SSSR. Institut Problem Pereдачи Informacii Akademii Nauk SSSR. Problemy Pereдачи Informacii. (Moscow) (Translated as: *Problems Inform. Transmission*)
- Problemy Slučaj. Poiska* Akademija Nauk Latvīskoi SSR. Institut Ėlektroniki i Vyčislitel'noi Tehniki. Problemy Slučajnogo Poiska. (Riga)
- Problemy Teor. Gravitacii i Ėlement. Častic* Problemy Teorii Gravitacii i Ėlementarnyh Častic. (Moscow)
- Proc. Amer. Math. Soc.* Proceedings of the American Mathematical Society. (Providence, R.I.)
- Proc. Edinburgh Math. Soc.* Proceedings of the Edinburgh Mathematical Society. (Edinburgh) (Continued as: *Proc. Edinburgh Math. Soc. (2)*)
- Proc. Edinburgh Math. Soc. (2)* Proceedings of the Edinburgh Mathematical Society. Series II. (Edinburgh)
- Proc. Fac. Sci. Tokai Univ.* Proceedings of the Faculty of Science of Tokai University. (Tokyo)
- * *Proc. IEE-A* Institution of Electrical Engineers. Proceedings. A. Physical Sciences, Measurement and Instrumentation. (London) (Formerly: *Proc. Inst. Electr. Engrs.*)
- * *Proc. IEE-B* Institution of Electrical Engineers. Proceedings. B. Electric Power Applications. (London) (Formerly: *Proc. Inst. Electr. Engrs.*)
- * *Proc. IEE-C* Institution of Electrical Engineers. Proceedings. C. Generation, Transmission and Distribution. (London) (Formerly: *Proc. Inst. Electr. Engrs.*)
- * *Proc. IEE-D* Institution of Electrical Engineers. Proceedings. D. Control Theory and Applications. (London) (Formerly: *Proc. Inst. Electr. Engrs.*)
- * *Proc. IEE-E* Institution of Electrical Engineers. Proceedings. E. Computers and Digital Techniques. (London) (Formerly: *Proc. Inst. Electr. Engrs.*)
- * *Proc. IEE-F* Institution of Electrical Engineers. Proceedings. F. Communication, Radar and Signal Processing. (London) (Formerly: *Proc. Inst. Electr. Engrs.*)
- * *Proc. IEE-G* Institution of Electrical Engineers. Proceedings. G. Electronic Circuit and Systems. (London) (Formerly: *Proc. Inst. Electr. Engrs.*)
- * *Proc. IEE-H* Institution of Electrical Engineers. Proceedings. H. Microwaves, Optics and Antennas. (London) (Formerly: *Proc. Inst. Electr. Engrs.*)
- * *Proc. IEE-I* Institution of Electrical Engineers. Proceedings. I. Solid-State and Electronic Devices. (London) (Formerly: *Proc. Inst. Electr. Engrs.*)
- Proc. IEEE* Institute of Electrical and Electronics Engineers. Proceedings. (New York)
- * *Proc. Indian Acad. Sci. Chem. Sci.* Indian Academy of Sciences. Proceedings. Chemical Sciences. (Bangalore) (Formerly: *Proc. Indian Acad. Sci. Sect. A Chem. Sci.*)
- * *Proc. Indian Acad. Sci. Earth Planetary Sci.* Indian Academy of Sciences. Proceedings. Earth and Planetary Sciences. (Bangalore) (Formerly: *Proc. Indian Acad. Sci. Sect. A Earth Planetary Sci.*)
- * *Proc. Indian Acad. Sci. Math. Sci.* Indian Academy of Sciences. Proceedings. Mathematical Sciences. (Bangalore) (Formerly: *Proc. Indian Acad. Sci. Sect. A Math. Sci.*)
- Proc. Indian Acad. Sci. Sect. A* Proceedings of the Indian Academy of Sciences. Section A. (Bangalore) (Continued as: *Proc. Indian Acad. Sci. Sect. A Chem. Sci., Proc. Indian Acad. Sci. Sect. A Earth Planetary Sci., and Proc. Indian Acad. Sci. Sect. A Math. Sci.*)
- Proc. Indian Acad. Sci. Sect. A Chem. Sci.* Indian Academy of Sciences. Proceedings. Section A. Chemical Sciences. (Bangalore) (Continued as: *Proc. Indian Acad. Sci. Chem. Sci.*)
- Proc. Indian Acad. Sci. Sect. A Earth Planetary Sci.* Indian Academy of Sciences. Proceedings. Section A. Earth and Planetary Sciences. (Bangalore) (Continued as: *Proc. Indian Acad. Sci. Earth Planetary Sci.*)
- Proc. Indian Acad. Sci. Sect. A Math. Sci.* Indian Academy of Sciences. Proceedings. Section A. Mathematical Sciences. (Bangalore) (Continued as: *Proc. Indian Acad. Sci. Math. Sci.*)
- Proc. Indian Nat. Sci. Acad. Part A* Proceedings of the Indian National Science Academy. Part A. Physical Sciences. (New Delhi)
- Proc. Inst. Elec. Engrs.* Proceedings of the Institution of Electrical Engineers. Electronics. Power. Control & Science. (London) (Continued as: *Proc. Inst. Electr. Engrs.*)
- Proc. Inst. Electr. Engrs.* Proceedings of the Institution of Electrical Engineers. Electronics. Power. Control & Science. (London) (Continued as: *Proc. IEE-A, Proc. IEE-B, Proc. IEE-C, Proc. IEE-D, Proc. IEE-E, Proc. IEE-F, Proc. IEE-G, Proc. IEE-H, and Proc. IEE-I*)
- Proc. Inst. Statist. Math.* The Proceedings of the Institute of Statistical Mathematics. (Tokyo)
- † *Proc. Internat. School of Phys. "Enrico Fermi"* Proceedings of the International School of Physics "Enrico Fermi". Elsevier, New York.
- Proc. Japan Acad.* Proceedings of the Japan Academy. (Tokyo) (Continued as: *Proc. Japan Acad. Ser. A Math. Sci. and Proc. Japan Acad. Ser. B Phys. Biol. Sci.*)
- Proc. Japan Acad. Ser. A Math. Sci.* Japan Academy. Proceedings. Series A. Mathematical Sciences. (Tokyo)
- Proc. Japan Acad. Ser. B Phys. Biol. Sci.* Japan Academy. Proceedings. Series B. Physical and Biological Sciences. (Tokyo)
- Proc. London Math. Soc.* Proceedings of the London Mathematical Society. (London) (Continued as: *Proc. London Math. Soc. (3)*)
- Proc. London Math. Soc. (3)* Proceedings of the London Mathematical Society. Third Series. (London)
- Proc. Math. Phys. Soc. Egypt* Proceedings of the Mathematical and Physical Society. (Giza/Cairo)

- Proc. Nat. Acad. Sci. India Sect. A* Proceedings of the National Academy of Sciences, India, Section A. (Allahabad)
- Proc. Nat. Acad. Sci. U.S.A.* Proceedings of the National Academy of Sciences of the United States of America. (Washington, D.C.)
- † *Proc. P. N. Lebedev Phys. Inst.* Proceedings of the P. N. Lebedev Physics Institute. Consultants Bureau, New York.
- Proc. Pakistan Statist. Assoc.* Proceedings of the Pakistan Statistical Association. (Lahore)
- Proc. Rajasthan Acad. Sci.* The Proceedings of the Rajasthan Academy of Sciences. (Pilani)
- Proc. Roy. Irish Acad. Sect. A* Proceedings of the Royal Irish Academy. Section A. (Dublin)
- Proc. Roy. Soc. Canada* Proceedings of the Royal Society of Canada. (Ottawa, Ont.) (Continued as: *Proc. Roy. Soc. Canada* (4)) (Formerly: *Trans. Roy. Soc. Canada*)
- Proc. Roy. Soc. Canada* (4) Proceedings of the Royal Society of Canada. Fourth Series. (Ottawa, Ont.)
- Proc. Roy. Soc. Edinburgh Sect. A* Proceedings of the Royal Society of Edinburgh. Section A. Mathematical and Physical Sciences. (Edinburgh)
- Proc. Roy. Soc. London Ser. A* Proceedings of the Royal Society. London. Series A. Mathematical and Physical Sciences. (London)
- Proc. Roy. Soc. Ser. A* Proceedings of the Royal Society. Series A. Mathematical and Physical Sciences. (London) (Continued as: *Proc. Roy. Soc. London Ser. A*)
- Proc. Steklov Inst. Math.* Proceedings of the Steklov Institute of Mathematics. (Providence, R.I.) (Translation of *Trudy Mat. Inst. Steklov.*)
- † *Proc. Sympos. Appl. Math.* Proceedings of Symposia in Applied Mathematics. American Mathematical Society, Providence, R.I.
- † *Proc. Sympos. Pure Math.* Proceedings of Symposia in Pure Mathematics. American Mathematical Society, Providence, R.I.
- Proc. (Trudy) P. N. Lebedev Phys. Inst.* Proceedings (Trudy) of the P. N. Lebedev Physics Institute. (New York) (Translation of *Trudy Fiz. Inst. Lebedev.*)
- Proc. West Virginia Acad. Sci.* West Virginia Academy of Science. Proceedings. (Morgantown, W. Va.)
- Procesy Optimal. Upravljenia Trudy Sem. I Sekcija* See *Diferencijal'nye Uravnenija i Primenen.*—*Trudy Sem. Procesy Optimal. Upravljenia I Sekcija*
- Procesy Optimal. Upravljenia Trudy Sem. II Sekcija* See *Mat. Metody v Social. Nauk.*—*Trudy Sem. Procesy Optimal. Upravljenia II Sekcija*
- Procesy Optimal. Upravljenia Trudy Sem. V Sekcija* See *Statist. Problemy Upravljenia*—*Trudy Sem. Procesy Optimal. Upravljenia V Sekcija*
- † *Profiles* Profiles. Reidel, Dordrecht.
- Progr. Math. (Allahabad)* Academy for Progress of Mathematics of the University of Allahabad. Progress of Mathematics. (Allahabad)
- Progr. Theoret. Phys.* Progress of Theoretical Physics. (Kyoto)
- Progr. Theoret. Phys. Suppl.* Progress of Theoretical Physics. Supplement. (Kyoto)
- Programming and Comput. Software* Programming and Computer Software. (New York) (Translation of *Programirovanie*)
- † *Programming Lang. Ser.* Programming Languages Series. Elsevier, New York.
- Programirovanie Akademija Nauk SSSR* Programirovanie. (Moscow) (Translated as: *Programming and Comput. Software*)
- Programirovanie EVM* Programirovanie EVM. (Vilnius)
- † *Progress in Math.* Progress in Mathematics. Birkhäuser, Boston.
- † *Progress in Particle and Nuclear Phys.* Progress in Particle and Nuclear Physics. Pergamon, Elmsford, N.Y.
- † *Progress in Phys.* Progress in Physics. Birkhäuser, Basel-Boston.
- † *Project Hist. Biblioblog.* Project for Historical Bibliobibliography. University of Newcastle upon Tyne, Newcastle.
- Przegląd Statyst.* Polska Akademia Nauk. Komitet Statystyki i Ekonometrii. Przegląd Statystyczny. (Warsaw)
- Psychometrika* Psychometrika. A Journal Devoted to the Development of Psychology as a Quantitative Rational Science. (Baltimore, Md.)
- Pubbl. IAC* Istituto per le Applicazioni del Calcolo del Consiglio Nazionale delle Ricerche. Pubblicazioni. (Rome)
- Pubbl. Ist. Mat. Appl. Fac. Ingegneria Univ. Stud. Roma* Università degli Studi di Roma. Facoltà di Ingegneria. Istituto di Matematica Applicata. Pubblicazioni. (Rome) (Continued as: *Pubbl. Ist. Mat. Appl. Fac. Ingr. Univ. Stud. Roma Quaderno*)
- Pubbl. Ist. Mat. Appl. Fac. Ingr. Univ. Stud. Roma Quaderno* Università degli Studi di Roma. Facoltà di Ingegneria. Istituto di Matematica Applicata. Pubblicazioni. (Rome)
- Publ. Centre Rech. Math. Pures* Publications du Centre de Recherches en Mathématiques Pures. (Neuchâtel) (Continued as: *Publ. Centre Rech. Math. Pures* (1))
- Publ. Centre Rech. Math. Pures* (1) Publications du Centre de Recherches en Mathématiques Pures. Série 1. (Neuchâtel)
- † *Publ. Centre Recherches Math. Pures, Sér. 3* Publications du Centre de Recherches en Mathématiques Pures, Série 3. [Publications of the Research Center for Pure Mathematics, Series 3] Université de Neuchâtel, Centre de Recherches en Mathématiques Pures, Neuchâtel.
- † *Publ. Dep. Desenho* Publicações do Departamento de Desenho. [Publications of the Department of Desenho] Univ. Fed. Parana, Parana.
- Publ. Dép. Math. (Lyon)* Publications du Département de Mathématiques. Faculté des Sciences de Lyon. (Lyon)
- Publ. Économétriques* Publications Économétriques. (Paris)
- † *Publ. Inst. Mat., Vol. 1* Publicaciones del Instituto de Matemática, Vol. 1. [Publications of the Mathematics Institute, Vol. 1] Universidad de la Republica, Facultad de Ingeniería, Instituto de Matemática, Montevideo.
- Publ. Inst. Math. (Beograd)* Institut Mathématique. Publications. Nouvelle Série. (Belgrade) (Continued as: *Publ. Inst. Math. (Beograd)* (N.S.))
- Publ. Inst. Math. (Beograd)* (N.S.) Institut Mathématique. Publications. Nouvelle Série. (Belgrade)
- † *Publ. Inst. Math. Univ. Nancago* Publications de l'Institut Mathématique de l'Université de Nancago. [Publications of the Mathematical Institute of the University of Nancago] Hermann, Paris.
- † *Publ. Inst. Math. Univ. Strasbourg* Publications de l'Institut de Mathématiques de l'Université de Strasbourg. [Publications of the Mathematical Institute of the University of Strasbourg] Hermann, Paris.
- Publ. Inst. Statist. Univ. Paris* Publications de l'Institut de Statistique de l'Université de Paris. (Paris)
- † *Publ. Intern. Postgrado* Publicaciones Internas del Postgrado. [Internal Postgraduate Publications] Universidad del Zulia, Maracaibo.
- Publ. Math. Debrecen* Universitatis Debreceniensis. Institutum Mathematicum. Publicationes Mathematicae. (Debrecen)
- † *Publ. Math. Orsay 80* Publications Mathématiques d'Orsay 80. [Mathematical Publications of Orsay 80] Université Paris XI, Orsay.
- † *Publ. Math. Orsay 81* Publications Mathématiques d'Orsay 81. [Mathematical Publications of Orsay 81] Université Paris XI, Orsay.
- † *Publ. Math. Res. Center Univ. Wisconsin* Publication of the Mathematics Research Center, University of Wisconsin. Academic Press, New York.
- † *Publ. Math. Res. Inst. Istanbul* Publication of the Mathematical Research Institute, Istanbul. University of Istanbul, Mathematical Research Institute, Istanbul.
- † *Publ. Math. Soc. Japan* Publications of the Mathematical Society of Japan. Princeton University Press, Princeton, N.J.
- Publ. Math. Univ. Bordeaux* Université de Bordeaux. Publications Mathématiques. (Talence)
- † *Publ. Ramanujan Inst.* Publications of the Ramanujan Institute. Ramanujan Institute, Madras.
- Publ. Res. Inst. Math. Sci.* Kyoto University. Research Institute for Mathematical Sciences. Publications. (Kyoto)
- Publ. Sec. Mat. Univ. Autònoma Barcelona* Publicacions de la Secció de Matemàtiques. Universitat Autònoma de Barcelona. (Barcelona)
- † *Publ. Sec. Mat. Fac. Ci.* Publicaciones de la Sección de Matemática de la Facultad de Ciencias. [Publications of the Mathematics Section of the Science Faculty] Universidad de Madrid, Madrid.
- Publ. Sémin. Géom. Univ. Neuchâtel Sér. 2* Publications du Séminaire de Géométrie de l'Université de Neuchâtel. Série 2. (Neuchâtel) (Treated as monograph series.)
- Publ. Sémin. Géom. Univ. Neuchâtel Sér. 3* Publications du Séminaire de Géométrie de l'Université de Neuchâtel. Série 3. (Neuchâtel) (Treated as monograph series.)
- † *Publ. Sem. Mat. Garcia de Galdeano* Publicaciones del Seminario Matemático Garcia de Galdeano. [Publications of the Garcia de Galdeano Mathematics Seminar] Universidad de Zaragoza, Facultad de Ciencias, Zaragoza.
- Publ. Tehn. Fak. u Sarajevu* Publikacije Tehničkog Fakulteta u Sarajevu. (Sarajevo)
- * *Publ. U.E.R. Math. Pures Appl. IRMA* Publications de l'Unité d'Enseignement et de Recherche de Mathématiques Pures et Appliquées. Institut de Recherche de Mathématiques Avancées. (Lille)
- † *Publ. Univ. Europ.* Publications Universitaires Européennes. [European University Publications] Peter Lang, Frankfurt-am-Main.
- † *Publ. Univ. Joensuu, Ser. BI* Publications of the University of Joensuu, Series BI. University of Joensuu, Joensuu.
- † *Publ. Univ. Toulouse-Le Mirail, Sér. A* Publications de l'Université de Toulouse-Le Mirail, Série A. [Publications of the University of Toulouse-Le Mirail, Series A] Université de Toulouse-Le Mirail, Toulouse.
- Punjab Univ. J. Math. (Lahore)* Punjab University. Journal of Mathematics. (Lahore)
- † *Pure and Appl. Math.* Pure and Applied Mathematics. Academic Press, New York.
- Pure Appl. Math. Sci.* Pure and Applied Matematika Series. (Saharanpur)
- Quad. Mathesis Cosenza* Mathesis di Cosenza. Quaderni. (Rome)
- Questions Math.* Questions Mathematicae. (Pretoria)
- † *Quantitative Appl. in the Social Sciences* Quantitative Applications in the Social Sciences. Sage Publications, Beverly Hills, Calif.
- † *Quantitative Meth. Unternehmungplanung* Quantitative Methoden der Unternehmensplanung. [Quantitative Methods in Marketing Research] Verlag Anton Hain, Meisenheim am Glan.
- Quart. Appl. Math.* Quarterly of Applied Mathematics. (Providence, R.I.)
- Quart. J. Math. Oxford Ser.* The Quarterly Journal of Mathematics. Oxford. Second Series. (Oxford) (Continued as: *Quart. J. Math. Oxford Ser.* (2))
- Quart. J. Math. Oxford Ser. (2)* The Quarterly Journal of Mathematics. Oxford. Second Series. (London)
- Quart. J. Mech. Appl. Math.* The Quarterly Journal of Mechanics and Applied Mathematics. (London)
- † *Que sais-je? Que sais-je? [What Do I Know?]* Presses Universitaires de France, Paris.
- † *Queen's Papers in Pure and Appl. Math.* Queen's Papers in Pure and Applied Mathematics. Queen's University, Kingston, Ont.
- † *Quellen Stud. Philos.* Quellen und Studien zur Philosophie. [Sources and Studies in Philosophy] Walter de Gruyter, Berlin.
- † *R & E R & E.* Helderemann, Berlin.
- RAAG Res. Notes* Research Notes and Memoranda of Applied Geometry for Preventing Natural Philosophy. Post-RAAG Reports. (Tokyo)
- Rad Jugoslav. Akad. Znan. Umjet.* Rad Jugoslavenske Akademije Znanosti i Umjetnosti. (Zagreb)
- Radio Engng. Electron. Phys.* Radio Engineering and Electronic Physics. Translation of Radiotekhnika i Elektronika, a U.S.S.R. Academy of Sciences Publication. (Silver Spring, Md.) (Translation of *Radiotekhn. i Elektron.*)
- Radio Sci.* Radio Science. (Washington, D.C.)

- Radiophys. and Quantum Electronics* Radiophysics and Quantum Electronics. A translation of the Izvestiya Vysish Uchebnykh Zavedenii Radiofizika of the Ministry of Higher Education of the USSR. (New York) (Translation of *Izv. Vys. Ucheb. Zaved. Radiofizika*)
- Radiotekhn. (Har'kov)* Har'kovskij Ordena Trudovogo Krasnogo Znamenii Gosudarstvennyi Universitet imeni A. M. Gor'kogo. Radiotekhnika. (Kharkov)
- Radiotekhn. i Elektron. Akademiya Nauk SSSR. Radiotekhnika i Elektronika.* (Moscow) (Translated as: *Radio Engng. Electron. Phys.*)
- RAIRO Anal. Numér.* RAIRO Analyse Numérique. (Paris)
- RAIRO Automat.* RAIRO Automatique. (Paris)
- RAIRO Inform.* RAIRO Informatique. (Paris)
- RAIRO Inform. Théor.* RAIRO Informatique Théorique. (Paris)
- RAIRO Inform.* RAIRO Informatique. (Paris) (Continued as: *RAIRO Inform.*) (Formerly: *Rev. Française Automat. Inform. Rech. Opér. Sér. Bleue*)
- RAIRO Inform. Théor.* RAIRO Informatique Théorique. (Paris) (Continued as: *RAIRO Inform. Théor.*) (Formerly: *Rev. Française Automat. Inform. Rech. Opér. Sér. Rouge Inform. Théor.*)
- RAIRO Rech. Opér.* RAIRO Recherche Opérationnelle. (Paris)
- RAIRO Recherche Opér.* RAIRO Recherche Opérationnelle. (Paris) (Continued as: *RAIRO Rech. Opér.*) (Formerly: *Rev. Française Automat. Inform. Recherche Opérationnelle Sér. Verte*)
- Rajasthan Univ. Stud. Statist.* Rajasthan University Studies in Statistics. Science Series. (Rajasthan) (Formerly: *Rajasthan Univ. Studies Statist.*)
- Rajasthan Univ. Studies Statist.* Rajasthan University Studies in Statistics. Science Series. (Rajasthan) (Continued as: *Rajasthan Univ. Stud. Statist.*)
- Ranchi Univ. Math. J.* Ranchi University Mathematical Journal. (Ranchi)
- Ratio* Ratio. (Oxford)
- † *Raymond W. Brink Selected Math. Papers* Raymond W. Brink Selected Mathematical Papers. Mathematical Association of America, Washington, D.C.
- † *Razred Mat., Fiz. Teh. Vede, Dela* Razred za Matematične, Fizikalne in Tehnične Vede, Dela. [Class of Mathematics, Physics and Technology, Works] Slovenska Akademija Znanosti in Umetnosti, Ljubljana.
- RCA Rev.* RCA Review. (Princeton, N.J.)
- Real Anal. Exchange* Real Analysis Exchange. (Macomb, Ill.)
- Recent Progr. Natur. Sci. Japan* Recent Progress of Natural Sciences in Japan. (Tokyo)
- Rech. Aéropat.* La Recherche Aéropatiale. (Châtillon) (Translated as: *Rech. Aéropat.* (English))
- Rech. Aéropat.* (English) La Recherche Aéropatiale. English edition. (Châtillon) (Translation of *Rech. Aéropat.*)
- Recherche Aéropat.* La Recherche Aéropatiale. (Châtillon) (Continued as: *Rech. Aéropat.*)
- Regelungstech.* Regelungstechnik. Zeitschrift für Steuerung, Regelung und Prozessdatenverarbeitung. (Munich) (Continued as: *Regelungstechnik*)
- Regelungstechnik* Regelungstechnik. Zeitschrift für Steuerung, Regelung und Prozessdatenverarbeitung. (Munich) (Formerly: *Regelungstech.*)
- † *Regensburger Trichter* der Regensburger Trichter. [The Regensburg Funnel] Universität Regensburg, Regensburg.
- † *Reihe Informat.* Reihe Informatik. [Information Science Series] Bibliographisches Institut, Mannheim.
- Relevance Logic Newsl.* Relevance Logic Newsletter. (Edwardsville, Ill.)
- Rend. Accad. Naz. XL* Accademia Nazionale dei XL. Rendiconti. (Rome) (Continued as: *Rend. Accad. Naz. XL* (4))
- Rend. Accad. Naz. XL* (4) Accademia Nazionale dei XL. Rendiconti Serie IV. (Rome) (Continued as: *Rend. Accad. Naz. XL* (5))
- Rend. Accad. Naz. XL* (5) Accademia Nazionale dei XL. Rendiconti. Serie V. (Rome)
- Rend. Accad. Sci. Fis. Mat. Napoli* Società Nazionale di Scienze, Lettere ed Arti in Napoli. Rendiconto dell'Accademia delle Scienze Fisiche e Matematiche. (Naples) (Continued as: *Rend. Accad. Sci. Fis. Mat. Napoli* (4))
- Rend. Accad. Sci. Fis. Mat. Napoli* (4) Società Nazionale di Scienze, Lettere ed Arti in Napoli. Rendiconto dell'Accademia delle Scienze Fisiche e Matematiche. Serie IV. (Naples)
- Rend. Circ. Mat. Palermo* Rendiconti del Circolo Matematico di Palermo. (Palermo) (Continued as: *Rend. Circ. Mat. Palermo* (2))
- Rend. Circ. Mat. Palermo* (2) Rendiconti del Circolo Matematico di Palermo. Serie II. (Palermo)
- Rend. Ist. Mat. Univ. Trieste* Rendiconti dell'Istituto di Matematica dell'Università di Trieste. (Trieste) (Continued as: *Rend. Ist. Mat. Univ. Trieste*)
- Rend. Ist. Mat. Univ. Trieste* Rendiconti dell'Istituto di Matematica dell'Università di Trieste. (Trieste)
- Rend. Mat.* Rendiconti di Matematica. Università degli Studi di Roma. Istituto Matematico Guido Castelnuovo. Istituto di Matematica Applicata. Istituto Nazionale di Alta Matematica. (Rome) (Continued as: *Rend. Mat.* (6))
- Rend. Mat.* (6) Rendiconti di Matematica. Università degli Studi di Roma. Istituto Matematico Guido Castelnuovo. Istituto di Matematica Applicata. Istituto Nazionale di Alta Matematica. (Rome) (Continued as: *Rend. Mat.* (7))
- * *Rend. Mat.* (7) Rendiconti di Matematica. Serie VII. Università degli Studi Roma. Istituto Matematico Guido Castelnuovo. Istituto di Matematica Applicata. Istituto Nazionale di Alta Matematica. (Rome) (Formerly: *Rend. Mat.* (6))
- Rend. Sem. Fac. Sci. Univ. Cagliari* Rendiconti del Seminario della Facoltà di Scienze della Università di Cagliari. (Cagliari)
- † *Rend. Sem. Mat. Brescia* Rendiconti del Seminario Matematico di Brescia. [Reports of the Mathematics Seminar of Brescia] Università Cattolica, Milan.
- Rend. Sem. Mat. Fis. Milano* Rendiconti del Seminario Matematico e Fisico di Milano. (Milan)
- Rend. Sem. Mat. Univ. e Politec. Torino* Rendiconti del Seminario Matematico (già
- "Conferenze di Fisica e di Matematica") Università e Politecnico di Torino. (Turin) (Continued as: *Rend. Sem. Mat. Univ. Politec. Torino*)
- Rend. Sem. Mat. Univ. Padova* Rendiconti del Seminario Matematico dell'Università di Padova. (Padua)
- Rend. Sem. Mat. Univ. Politec. Torino* Rendiconti del Seminario Matematico (già "Conferenze di Fisica e di Matematica") Università e Politecnico di Torino. (Turin)
- Rep. Comput. Centre Univ. Tokyo* Report of the Computer Centre. University of Tokyo. (Tokyo)
- Rep. Fac. Engrg. Kanagawa Univ.* Kanagawa University. Faculty of Engineering. Reports. (Yokohama)
- Rep. Fac. Engrg. Oita Univ.* Oita University. Faculty of Engineering. Reports. (Oita)
- Rep. Fac. Sci. Engrg. Saga Univ. Math.* Reports of the Faculty of Science and Engineering. Saga University. Mathematics. (Saga)
- Rep. Fac. Sci. Kagoshima Univ.* Reports of the Faculty of Science of Kagoshima University. (Kagoshima)
- Rep. Fac. Sci. Shizuoka Univ.* Reports of the Faculty of Science. Shizuoka University. (Shizuoka)
- Rep. Fac. Tech. Kanagawa Univ.* Kanagawa University. Faculty of Technology. Reports. (Yokohama) (Continued as: *Rep. Fac. Engrg. Kanagawa Univ.*)
- Rep. Inst. High Speed Mech. Tôhoku Univ.* Tôhoku University. Institute of High Speed Mechanics. Reports. (Sendai)
- Rep. Math. Logic* Reports on Mathematical Logic. (Warsaw/Kraków)
- Rep. Math. Phys.* Reports on Mathematical Physics. (Oxford)
- † *Rep. MATH 1981* Report MATH 1981. Akademie der Wissenschaften der DDR, Zentralinstitut für Mathematik und Mechanik, Berlin.
- Rep. Mathematical Phys.* Reports on Mathematical Physics. (Amsterdam) (Continued as: *Rep. Math. Phys.*)
- † *Rep. MECH 1981* Report MECH 1981. Akademie der Wissenschaften der DDR, Zentralinstitut für Mathematik und Mechanik, Berlin.
- Rep. Progr. Phys.* Reports on Progress in Physics. (Bristol)
- Rep. Statist. Appl. Res. Un. Japan. Sci. Engrs.* Reports of Statistical Application Research. Union of Japanese Scientists and Engineers. (Tokyo)
- Rep. Univ. Electro-Comm.* Reports of the University of Electro-Communications. (Tokyo)
- Rep. Univ. Electro-Comm.* Reports of the University of Electro-Communications. (Tokyo) (Continued as: *Rep. Univ. Electro-Comm.*)
- † *Rep. 1980* Report 1980. Akademie der Wissenschaften der DDR, Zentralinstitut für Mathematik und Mechanik, Berlin.
- † *Report* Report. Katholieke Universiteit, Mathematisch Instituut, Nijmegen.
- República Venezuela Bol. Acad. Ci. Fis. Mat. Natur.* República de Venezuela. Boletín de la Academia de Ciencias Físicas, Matemáticas y Naturales. (Caracas) (Continued as: *República Venezuela Bol. Acad. Cienc. Fis. Mat. Natur.*)
- República Venezuela Bol. Acad. Cienc. Fis. Mat. Natur.* República de Venezuela. Boletín de la Academia de Ciencias Físicas, Matemáticas y Naturales. (Caracas)
- * *Res. Act. Fac. Sci. Engrg. Tokyo Denki Univ.* Research Activities. The Faculty of Science and Engineering of Tokyo Denki University. (Tokyo)
- Res. Bull. Fac. Ed. Oita Univ.* The Research Bulletin of the Faculty of Education. Oita University. (Oita)
- Res. Bull. Meisei Univ.* Meisei University. Research Bulletin. (Tokyo)
- Res. Bull. Panjab Univ.* Research Bulletin of the Panjab University. (Chandigarh) (Continued as: *Res. Bull. Panjab Univ. (N.S.)*)
- Res. Bull. Panjab Univ. (N.S.)* Research Bulletin of the Panjab University. New Series. (Chandigarh)
- Res. Inst. Fund. Inform. Sci. Res. Rep.* Kyushu University. Research Institute of Fundamental Information Science. Research Report. (Fukuoka)
- Res. Inst. Fund. Information Sci. Res. Rep.* Kyushu University. Research Institute of Fundamental Information Science. Research Report. (Fukuoka) (Continued as: *Res. Inst. Fund. Inform. Sci. Res. Rep.*)
- † *Res. Notes in Math.* Research Notes in Mathematics. Pitman, Boston, Mass.
- Res. Notes Memoranda Appl. Geom. Post-RAAG* Research Association of Applied Geometry. Research Notes and Memoranda of Applied Geometry in Post-RAAG. (Tokyo) (Continued as: *RAAG Res. Notes*)
- Res. Rep. Anan Tech. College* Research Reports of the Anan Technical College. (Anan)
- Res. Rep. Inst. Inform. Sci. Tech. Tokyo Denki Univ.* Tokyo Denki University. Institute of Information Science & Technology. Research Reports. (Tokyo)
- Res. Rep. Kushihiro Tech. College* Research Reports. Kushihiro Technical College. (Kushihiro)
- Res. Rep. Miyagi Tech. College* Miyagi Technical College. Research Reports. (Sendai)
- Res. Rep. Nagaoka Tech. College* Research Reports of the Nagaoka Technical College. (Nagaoka)
- Res. Rep. Tokyo Denki Univ.* Tokyo Denki University. Research Reports. (Tokyo)
- Res. Rep. Tokyo Electr. Engrg. College* Research Reports of Tokyo Electrical Engineering College. (Tokyo) (Continued as: *Res. Rep. Tokyo Denki Univ.*) (Formerly: *Res. Rep. Tokyo Electrical Engrg. College*)
- Res. Rep. Tokyo Electrical Engrg. College* Research Reports of Tokyo Electrical Engineering College. (Tokyo) (Continued as: *Res. Rep. Tokyo Electr. Engrg. College*)
- Resultate Math.* Resultate der Mathematik. (Basel)
- Rev. Acad. Ci. Zaragoza* Revista de la Academia de Ciencias Exactas, Físico-Químicas y Naturales de Zaragoza. (Zaragoza) (Continued as: *Rev. Acad. Cienc. Zaragoza* (2))
- Rev. Acad. Cienc. Zaragoza* (2) Revista de la Academia de Ciencias Exactas, Físico-Químicas y Naturales de Zaragoza. Serie 2. (Zaragoza)
- Rev. Anal. Numer. Teoria Aproximației* Revista de Analiză Numerică și Teoria Aproximației. (Cluj)

- Rev. Anal. Numér. Théor. Approx.* Revue d'Analyse Numérique et de la Théorie de l'Approximation. (Cluj) (Continued as: *Anal. Numér. Théor. Approx.*)
- Rev. Anal. Numér. Théor. Approximation* Revue d'Analyse Numérique et de la Théorie de l'Approximation. (Cluj) (Continued as: *Rev. Anal. Numér. Théor. Approx.*)
- Rev. CETHEDEC* Revue du Centre d'Études Théoriques de la Détection et des Communications. (Paris)
- Rev. CETHEDEC Cahier* Revue du Centre d'Études Théoriques de la Détection et des Communications. Cahier. (Paris)
- Rev. Ci. (Lima)* Revista de Ciencias. (Lima) (Continued as: *Rev. Cienc. (Lima)*)
- Rev. Ci. Mat. Univ. Lourenço Marques* Revista de Ciências Matemáticas. Universidade de Lourenço Marques. (Maputo) (Continued as: *Rev. Ci. Mat. Univ. Lourenço Marques Sér. A*)
- Rev. Ci. Mat. Univ. Lourenço Marques Sér. A* Revista de Ciências Matemáticas Universidade de Lourenço Marques. Série A. (Lourenço Marques) (Continued as: *Rev. Cienc. Mat. Univ. Lourenço Marques*) (Formerly: *Rev. Ci. Mat. Univ. Lourenço Marques*)
- Rev. Cienc. (Lima)* Revista de Ciencias. (Lima)
- Rev. Cienc. Mat. Univ. Lourenço Marques* Revista de Ciências Matemáticas. Universidade de Lourenço Marques. (Maputo)
- Rev. Colombiana Mat.* Revista Colombiana de Matemáticas. (Bogotá)
- Rev. Econom. Statist.* The Review of Economics and Statistics. (Amsterdam)
- Rev. Econom. Stud.* The Review of Economic Studies. (Edinburgh)
- Rev. Française Automat. Inform. Rech. Opér. Sér. Bleue* Revue Française d'Automatique, Informatique et Recherche Opérationnelle Série Bleue. (Paris) (Continued as: *RAIRO Inform.*) (Formerly: *Rev. Française Automat. Informat. Recherche Opérationnelle Sér. Bleue*)
- Rev. Française Automat. Inform. Rech. Opér. Sér. Jaune* Revue Française d'Automatique, Informatique et Recherche Opérationnelle Série Jaune. (Paris) (Continued as: *RAIRO Automat.*) (Formerly: *Rev. Française Automat. Informat. Recherche Opérationnelle Sér. Jaune*)
- Rev. Française Automat. Inform. Rech. Opér. Sér. Rouge Anal. Numér.* Revue Française d'Automatique, Informatique et Recherche Opérationnelle Série Rouge. Analyse Numérique. (Paris) (Continued as: *RAIRO Anal. Numér.*) (Formerly: *Rev. Française Automat. Informat. Recherche Opérationnelle Sér. Rouge Anal. Numér.*)
- Rev. Française Automat. Inform. Rech. Opér. Sér. Rouge Inform. Théor.* Revue Française d'Automatique, Informatique et Recherche Opérationnelle série Rouge Informatique Théorique. (Paris) (Continued as: *RAIRO Inform. Théor.*) (Formerly: *Rev. Française Automat. Informat. Recherche Opérationnelle Sér. Rouge Inform. Théor.*)
- Rev. Française Automat. Inform. Rech. Opér. Sér. Verte* Revue Française d'Automatique, Informatique et Recherche Opérationnelle Série Verte. (Paris) (Continued as: *RAIRO Rech. Opér.*) (Formerly: *Rev. Française Automat. Informat. Recherche Opérationnelle Sér. Verte*)
- Rev. Française Automat. Informat. Recherche Opérationnelle Sér. Bleue* Revue Française d'Automatique, Informatique et Recherche Opérationnelle Série Bleue. (Paris) (Continued as: and *RAIRO Inform.*)
- Rev. Française Automat. Informat. Recherche Opérationnelle Sér. Jaune* Revue Française d'Automatique, Informatique et Recherche Opérationnelle Série Jaune. (Paris) (Continued as: and *RAIRO Automat.*)
- Rev. Française Automat. Informat. Recherche Opérationnelle Sér. Rouge Anal. Numér.* Revue Française d'Automatique, Informatique et Recherche Opérationnelle Série Rouge. Analyse Numérique. (Paris) (Continued as: and *RAIRO Anal. Numér.*)
- Rev. Française Automat. Informat. Recherche Opérationnelle Sér. Rouge Inform. Théor.* Revue Française d'Automatique, Informatique et Recherche Opérationnelle série Rouge Informatique Théorique. (Paris) (Continued as: and *RAIRO Inform. Théor.*)
- Rev. Française Automat. Informat. Recherche Opérationnelle Sér. Verte* Revue Française d'Automatique, Informatique et Recherche Opérationnelle Série Verte. (Paris) (Continued as: and *RAIRO Recherche Opér.*)
- *Rev. Geophys. Space Phys.* Reviews of Geophysics and Space Physics. (Washington, D.C.)
- Rev. Histoire Sci. Appl.* Revue d'Histoire des Sciences et de leurs Applications. (Paris)
- Rev. Ingr.* Universidad Católica Argentina. Facultad de Ciencias Fisicomatemáticas e Ingeniería. Revista da Ingeniería. (Buenos Aires)
- Rev. Internat. Philos.* Revue Internationale de Philosophie. (Wetteren)
- Rev. Mat. Hisp.-Amer.* Revista Matemática Hispano-Americana. (Madrid) (Continued as: *Rev. Mat. Hisp.-Amer.* (4))
- Rev. Mat. Hisp.-Amer.* (4) Revista Matemática Hispano-Americana. 4. Serie. (Madrid)
- Rev. Mexicana Astronom. Astrofis.* Revista Mexicana de Astronomía y Astrofísica. (Mexico City)
- Rev. Mexicana Fis.* Revista Mexicana de Física. (Mexico City)
- Rev. Modern Phys.* Reviews of Modern Physics. (New York)
- Rev. Questions Sci.* Revue des Questions Scientifiques. (Namur)
- Rev. Real Acad. Ci. Exact. Fis. Natur. Madrid* Real Academia de Ciencias Exactas, Físicas y Naturales de Madrid. Revista. (Madrid) (Continued as: *Rev. Real Acad. Cienc. Exact. Fis. Natur. Madrid*)
- Rev. Real Acad. Cienc. Exact. Fis. Natur. Madrid* Real Academia de Ciencias Exactas, Físicas y Naturales de Madrid. Revista. (Madrid)
- Rev. Roumaine Math. Pures Appl.* Académie de la République Populaire Roumaine. Revue Roumaine de Mathématiques Pures et Appliquées. (Bucharest)
- Rev. Roumaine Phys.* Revue Roumaine de Physique. (Bucharest)
- Rev. Roumaine Sci. Tech. Sér. Électrotech. Énergét.* Revue Roumaine des Sciences Techniques. Série Électrotechnique et Énergétique. (Bucharest)
- Rev. Roumaine Sci. Tech. Sér. Méc. Appl.* Revue Roumaine des Sciences Techniques. Série de Mécanique Appliquée. (Bucharest)
- Rev. Statist. Appl.* Revue de Statistique Appliquée. Centre d'Enseignement et de Recherche de Statistique Appliquée. (Paris)
- Rev. Tech. Thomson-CSF* Revue Technique Thomson-CSF. (Paris)
- Rev. Técn. Fac. Ingr. Univ. Zulia* Universidad del Zulia. Facultad de Ingeniería. Revista Técnica. (Maracaibo)
- Rev. Un. Mat. Argentina* Revista de la Unión Matemática Argentina. (Buenos Aires)
- Rheol. Acta* Rheologica Acta. An International Journal of Rheology. (Darmstadt)
- Rice Univ. Stud.* Rice University Studies. (Houston, Tex.)
- Rice Univ. Studies* Rice University Studies. (Houston, Tex.) (Continued as: *Rice Univ. Stud.*)
- Ricerca (Napoli)* La Ricerca. Rivista di Matematiche Pure ed Applicate. (Naples) (Continued as: *Ricerca* (4) (Napoli))
- Ricerca (4) (Napoli)* La Ricerca. Matematiche Pure ed Applicate. Serie IV. (Naples)
- *Ricerche Automat.* Ricerche di Automatica. (Gubbio)
- Ricerche Mat.* Ricerche di Matematica. (Naples)
- Rigas Politehn. Inst. Zinjtj. Raksti* Rigas Politehniskais Institūts. Rīzījī Politehniskīj Institut. Učēnye Zapiski. Rigas Politehniskais Institūts Zinītijskie Raksti. (Riga)
- Riv. Mat. Sci. Econom. Social.* Rivista di Matematica per le Scienze Economiche e Sociali. (Milan)
- Riv. Mat. Univ. Parma* Rivista di Matematica della Università di Parma. (Parma) (Continued as: *Riv. Mat. Univ. Parma* (4))
- Riv. Mat. Univ. Parma* (4) Rivista di Matematica della Università di Parma. Serie IV. (Parma)
- Riv. Nuovo Cimento* Rivista del Nuovo Cimento. (Bologna) (Continued as: *Riv. Nuovo Cimento* (2))
- Riv. Nuovo Cimento* (2) Rivista del Nuovo Cimento. Serie 2. (Bologna) (Continued as: *Riv. Nuovo Cimento* (3)) (Formerly: *Riv. Nuovo Cimento*)
- Riv. Nuovo Cimento* (3) La Rivista del Nuovo Cimento. Serie 3. (Bologna)
- Rjazan. Gos. Ped. Inst. Učen. Zap.* Rjazzanskij Gosudarstvennyj Pedagogičeskij Institut. Učēnye Zapiski. (Ryazan)
- Rocky Mountain J. Math.* The Rocky Mountain Journal of Mathematics. (Tempe, Ariz.)
- †Rororo Vieweg* Rororo Vieweg. Rowohlt, Reinbek.
- Rostock. Math. Kolloq.* Rostocker Mathematisches Kolloquium. (Rostock)
- †Rostocker Phys. Manuskr.* Rostocker Physikalische Manuskripte. [Rostock Manuscripts in the Physical Sciences] Wilhelm-Pieck-Universität, Rostock.
- Rostov-na-Donu Gos. Univ. Učen. Zap.* Rostovskij-na-Donu Gosudarstvennyj Universitet. Učēnye Zapiski. (Rostov-on-Don)
- Rozprawy Československé Akad. Věd Řada Mat. Přírod. Věd* Rozprawy Československé Akademie Věd Řada Matematických a Přírodních Věd. (Prague)
- Rozprawy Elektrotech.* Polska Akademia Nauk. Instytut Technologii Elektronowej. Rozprawy Elektrotechniczne. (Warsaw)
- Rozprawy Inż.* Polska Akademia Nauk. Instytut Podstawowych Problemów Techniki. Rozprawy Inżynierskie. (Warsaw)
- Rozprawy Politech. Poznań* Politechnika Poznańska. Rozprawy. (Poznań)
- RSB Ekonom. Promysl. D* Akademiya Nauk SSSR. Vsesojuznyj Institut Naučnoi i Tehničeskoj Informacii. Referativnyj Sbornik. Ekonomika Promyšlennosti. D. Primenenie Matematičeskikh Metodov v Ekonomičeskikh Issledovanijah i Planirovanii. (Moscow)
- Russian Math. Surveys* Russian Mathematical Surveys. A translation of the survey articles and of selected biographical articles in *Uspehi Matematičeskikh Nauk*. (London) (Translation of *Uspehi Mat. Nauk*)
- †RZ Automat. Telemeh. i Vyčisl. Tehn.* Akademiya Nauk SSSR. Institut Naučnoi Informacii. Referativnyj Žurnal. Avtomatika, Telemekhanika i Vychislitel'naja Tehnika. (Moscow)
- †RZ Fiz.* Akademiya Nauk SSSR. Institut Naučnoi Informacii. Referativnyj Žurnal. Fizika. (Moscow)
- †RZ Informat.* Akademiya Nauk SSSR. Vsesojuznyj Institut Naučnoi i Tehničeskoj Informacii. Referativnyj Žurnal. Informatika. (Moscow)
- †RZ Kibernet.* Akademiya Nauk SSSR. Institut Naučnoi Informacii. Referativnyj Žurnal. Kibernetika. (Moscow) (Usually abbreviated as *RZKibernet* in the text of *Math. Rev.*) (Continued as: *RZ Mat. V* and *RZ Tehn. Kibernet.*)
- †RZ Mat.* Akademiya Nauk SSSR. Institut Naučnoi Informacii. Referativnyj Žurnal. Matematika. (Moscow) (Usually abbreviated as *RZMat* in the text of *Math. Rev.*)
- †RZ Mat. V* Akademiya Nauk SSSR. Institut Naučnoi i Tehničeskoj. Referativnyj Žurnal. Matematika V. (Moscow) (Formerly: *RZ Kibernet.*)
- †RZ Meh.* Akademiya Nauk SSSR. Institut Naučnoi Informacii. Referativnyj Žurnal. Mehanika. (Moscow) (Usually abbreviated as *RZMeh* in the text of *Math. Rev.*)
- †RZ Tehn. Kibernet.* Akademiya Nauk SSSR. Institut Naučnoi i Tehničeskoj. Referativnyj Žurnal. Tehničeskaja Kibernetika. (Moscow) (Usually abbreviated as *RZTehn. Kibernet.* in the text of *Math. Rev.*)
- †RZKibernet* Akademiya Nauk SSSR. Institut Naučnoi Informacii. Referativnyj Žurnal. Kibernetika. (Moscow) See *RZ Kibernet.*
- †RZMat* Akademiya Nauk SSSR. Institut Naučnoi Informacii. Referativnyj Žurnal. Matematika. (Moscow) See *RZ Mat.*
- †RZMeh* Akademiya Nauk SSSR. Institut Naučnoi Informacii. Referativnyj Žurnal. Mehanika. (Moscow) See *RZ Meh.*
- †RZTehn. Kibernet.* Akademiya Nauk SSSR. Institut Naučnoi i Tehničeskoj. Referativnyj Žurnal. Tehničeskaja Kibernetika. (Moscow) See *RZ Tehn. Kibernet.*
- Sakharth. SSR Mecn. Akad. Gamothl. Centr. Šrom.* Sakharthvelos SSR Mecnierebatha Akademis Gamothvliithi Centrš Romebi. (Tbilisi) See *Trudy Vyčisl. Centra Akad. Nauk Gruzin. SSR*
- Sakharth. SSR Mecn. Akad. Mathw. Sistem. Inst. Šrom.* Sakharthvelos SSR

- Mecnierebatha Akademia. Marthwis Sistemebis Institutu Šromebi. (Tbilisi) See *Trudy Inst. Sistem Upravleniya Akad. Nauk Gruzin. SSR*
- Sakharth. SSR Mecn. Akad. Math. Inst. Šrom. Sakharthvelos SSR Mecnierebatha Akademia A. Razmadzis Šabelobis Tbilisis Matematikis Institutis. Šromebi. (Tbilisi) See *Trudy Tbilis. Mat. Inst. Razmadze Akad. Nauk Gruzin. SSR*
- Sakharth. SSR Mecn. Akad. Moambe Sakharthvelos SSR Mecnierebatha Akademis Moambe. (Tbilisi) See *Soobšč. Akad. Nauk Gruzin. SSR*
- † *Sammlung Götschen* Sammlung Götschen. [Götschen Collection] Walter de Gruyter, Berlin.
- † *Sammlung Wichmann, N.F.* Sammlung Wichmann, Neue Folge. [Wichmann Collection, New Series] Herbert Wichmann Verlag, Karlsruhe.
- Sankhyā Ser. A* Sankhyā (Statistics). The Indian Journal of Statistics. Series A. (Calcutta)
- Sankhyā Ser. B* Sankhyā (Statistics). The Indian Journal of Statistics. Series B. (Calcutta)
- Saratov. Gos. Ped. Inst. Učen. Zap.* Saratovskii Gosudarstvennyi-Pedagogičeskii Institut. Učenyje Zapiski. (Saratov)
- Sb. Praci Ped. Fak. v Ostravě Ser. A* Sborník Prací Pedagogické Fakulty v Ostravě. Seria A. (Prague)
- Sb. Praci Přírodověd. Fak. Unio. Palackého v Olomouci* Sborník Prací Přírodovědecké Fakulty University Palackého v Olomouci. (Prague) (Continued as: *Sb. Praci Přírodověd. Fak. Unio. Palackého v Olomouci Chem.*, *Sb. Praci Přírodověd. Fak. Unio. Palackého v Olomouci Mat.*, and *Sb. Praci Přírodověd. Fak. Unio. Palackého v Olomouci Fyz.*)
- * *Sb. Praci Přírodověd. Fak. Unio. Palackého v Olomouci Chem.* Sborník Prací Přírodovědecké Fakulty University Palackého v Olomouci. Obor Chemica. (Prague)
- Sb. Praci Přírodověd. Fak. Unio. Palackého v Olomouci Fyz.* Sborník Prací Přírodovědecké Fakulty University Palackého v Olomouci. Obor Fyzika. (Prague)
- Sb. Praci Přírodověd. Fak. Unio. Palackého v Olomouci Mat.* Sborník Prací Přírodovědecké Fakulty University Palackého v Olomouci. Obor Matematika. (Prague)
- Sb. Trudov Inst. Problem Upraven.* Institut Problem Upravleniya. Sbornik Trudov. (Moscow)
- Sb. Trudov Odess. Elektrotehn. Inst. Sojazi* Sbornik Trudov Odesskogo Elektrotehnického Instituta Svjazi im. A. S. Popova. (Odessa)
- Sb. Trudov Vsesojuz. Zaočn. Politehn. Inst.* Sbornik Trudov Vsesojuznogo Zaočnogo Politehnického Instituta. (Moscow)
- Sb. Vysoké. Učení Tech. v Brně* Sborník Vysokého Učení Technického v Brně. (Brno)
- Scand. Actuar. J.* Scandinavian Actuarial Journal. (Stockholm)
- Scand. J. Statist.* Scandinavian Journal of Statistics. Theory and Applications. (Stockholm)
- Schr. Math. Inst. Unio. Münster* Schriftenreihe des Mathematischen Instituts der Universität Münster. (Münster) (Continued as: *Schr. Math. Inst. Unio. Münster (2)*)
- Schr. Math. Inst. Unio. Münster (2)* Schriftenreihe des Mathematischen Instituts der Universität Münster. 2. Serie. (Münster)
- † *Schriften des Nikolaus von Kues* Schriften des Nikolaus von Kues. [Writings of Nikolaus von Kues] Felix Meiner Verlag, Hamburg.
- † *Schriften Wirtschaftswiss. Forsch.* Schriften zur Wirtschaftswissenschaftlichen Forschung. [Notes on Economic Research] Verlag Anton Hain, Meisenheim am Glan.
- † *Schriftenreihe* Schriftenreihe. [Series] Universität Münster, Rechenzentrum, Münster.
- † *Schriftenreihe Didaktik Math.* Schriftenreihe Didaktik der Mathematik. [Teaching of Mathematics Series] Holder-Pichler-Tempsky, Vienna.
- † *Schriftenreihe Lehrstuhls Meß-Regelungstechn.* Schriftenreihe des Lehrstuhls für Meß- und Regelungstechnik. [Series of the Department of Measure and Control] Ruhr Universität, Bochum.
- † *Schriftenreihe Rechenzentrum Unio. Köln* Schriftenreihe des Rechenzentrums der Universität zu Köln. [Series of the Computer Center of the University of Cologne] Universität Köln, Cologne.
- † *Schriftenreihe Zentralinst. Math. Mech.* Schriftenreihe des Zentralinstituts für Mathematik und Mechanik. [Series of the Central Institute for Mathematics and Mechanics] Akademie-Verlag, Berlin.
- Sci. Bull. Fac. Ed. Nagasaki Unio.* Science Bulletin of the Faculty of Education. Nagasaki University. (Nagasaki)
- * *Sci. Exploration* Science Exploration. Kexue Tansuo. (Changsha)
- Sci. Hist.* Scientiarum Historia. Driemaandelijks Tijdschrift voor de Geschiedenis van de Geneskunde, Wiskunde en Natuurwetenschappen. (Antwerp)
- † *Sci. Mat.* Scienze Matematiche. Vita e Pensiero, Università Cattolica Sacro Cuore, Milan.
- † *Sci. Paperbacks* Science Paperbacks. Chapman and Hall, London.
- Sci. Papers College Gen. Ed. Unio. Tokyo* Scientific Papers of the College of General Education. University of Tokyo. (Tokyo)
- Sci. Rep. College Gen. Ed. Osaka Unio.* Science Reports. College of General Education. Osaka University. (Osaka)
- Sci. Rep. Fac. Ed. Fukushima Unio.* Fukushima University. Faculty of Education. Science Reports. (Fukushima)
- Sci. Rep. Fac. Ed. Gifu Unio. Natur. Sci.* Science Reports of the Faculty of Education. Gifu University. Natural Science. (Gifu)
- Sci. Rep. Hirosaki Unio.* Science Reports of the Hirosaki University. (Hirosaki)
- Sci. Rep. Kagoshima Unio.* Science Reports of Kagoshima University. (Kagoshima)
- Sci. Rep. Kanazawa Unio.* The Science Reports of the Kanazawa University. (Kanazawa)
- Sci. Rep. Kyoto Pref. Unio. Natur. Sci. Living Sci.* Kyoto Prefectural University. Scientific Reports. Natural Science and Living Science. (Kyoto) (Continued as: *Sci. Rep. Kyoto Prefect. Unio. Natur. Sci. Living Sci.*)
- Sci. Rep. Kyoto Prefect. Unio. Natur. Sci. Living Sci.* Kyoto Prefectural University. Scientific Reports. Natural Science and Living Science. (Kyoto)
- Sci. Rep. Niigata Unio. Ser. A* Science Reports of Niigata University. Series A. Mathematics. (Niigata)
- Sci. Rep. Res. Inst. Engrg. Kanagawa Unio.* Kanagawa University. Research Institute for Engineering. Science Reports. (Yokohama)
- Sci. Rep. Saitama Unio. Ser. A* The Science Reports of the Saitama University. Series A. Mathematics, Physics and Chemistry. (Urawa)
- Sci. Rep. Tokyo Kyoiku Daigaku Sect. A* Science Reports of the Tokyo Kyoiku Daigaku (Tokyo University of Education). Section A. (Tsukuba) (Continued as: *Tsukuba J. Math.*)
- Sci. Rep. Tokyo Woman's Christian College* Science Reports of Tokyo Woman's Christian College. (Tokyo) (Continued as: *Sci. Rep. Tokyo Woman's Christian Unio.*)
- Sci. Rep. Tokyo Woman's Christian Unio.* Tokyo Woman's Christian University. Science Reports. (Tokyo)
- Sci. Rep. Yokohama Nat. Unio. Sect. I* Science Reports of the Yokohama National University. Section I. Mathematics, Physics. (Yokohama)
- Sci. Rev.* Scientia Revue. (Belgrade)
- Sci. Sinica* Scientia Sinica. Zhongguo Kexue. (Beijing)
- Sci. Sinica Suppl.* Scientia Sinica Supplement. Zhongguo Kexue Zengkan. (Beijing)
- Science* American Association for the Advancement of Science. Science. (Washington, D.C.)
- † *Science in History* Science in History. Sijthoff & Noordhoff International Publishers, Alphen aan den Rijn.
- Scientia (Milano)* Scientia. Rivista Internazionale di Sintesi Scientifica. (Milan)
- Scientia (Valparaiso)* Universidad Técnica Federico Santa Maria. Scientia. (Valparaiso)
- * *Scripta Fac. Sci. Natur. UJEP Brunensis—Biol.* Scripta Facultatis Scientiarum Naturalium Universitatis J. E. Purkyně Brunensis. Biologia. (Brno)
- * *Scripta Fac. Sci. Natur. UJEP Brunensis—Chem.* Scripta Facultatis Scientiarum Naturalium Universitatis J. E. Purkyně Brunensis. Chemia. (Brno)
- Scripta Fac. Sci. Natur. UJEP Brunensis—Geog.* Universitatis J. E. Purkyně Facultatis Scientiarum Naturalium. Scripta Geographica. (Brno)
- Scripta Fac. Sci. Natur. UJEP Brunensis—Geographia* Universitatis J. E. Purkyně Facultatis Scientiarum Naturalium. Scripta Geographica. (Brno) (Continued as: *Scripta Fac. Sci. Natur. UJEP Brunensis—Geog.*)
- * *Scripta Fac. Sci. Natur. UJEP Brunensis—Geol.* Scripta Facultatis Scientiarum Naturalium Universitatis J. E. Purkyně Brunensis. Geologia. (Brno)
- Scripta Fac. Sci. Natur. UJEP Brunensis—Math.* Scripta Facultatis Scientiarum Naturalium Universitatis J. E. Purkyně Brunensis. Mathematica. (Brno)
- Scripta Fac. Sci. Natur. UJEP Brunensis—Phys.* Scripta Facultatis Scientiarum Naturalium Universitatis J. E. Purkyně Brunensis. Physica. (Brno)
- † *SEAMS Monograph* SEAMS Monograph. Southeast Asian Mathematical Society, Singapore.
- † *Selecta Statist. Canadiana* Selecta Statistica Canadiana. University Press of Canada, Toronto, Ont.
- † *Sém. Anal.* Séminaire d'Analyse. [Seminar on Analysis] Univ. Bordeaux I, Talence.
- † *Sém. Anal. Moderne* Séminaire d'Analyse Moderne. [Seminar on Modern Analysis] Université de Sherbrooke, Sherbrooke.
- Sem. Inst. Prikl. Mat. Annotac. Doklady* Tbilisskii Universitet. Seminar Instituta Prikladnoi Matematiki. Annotacii Dokladov. (Tbilisi) See *Gamogenez. Math. Inst. Sem. Moysen. Annotac.* (Continued as: *Sem. Inst. Prikl. Mat. Dokl.*)
- Sem. Inst. Prikl. Mat. Dokl.* Tiflis. Universitet. Institut Prikladnoi Matematiki. Seminar. Doklady. (Tbilisi)
- † *Sem. Math. Sci.* Seminar on Mathematical Sciences. Keio University, Department of Mathematics, Yokohama.
- † *Sém. Math. Supérieures* Séminaire de Mathématiques Supérieures. [Seminar on Higher Mathematics] Presses de l'Université de Montréal, Montréal, Que.
- Sem. Math. V. A. Steklov* Seminars in Mathematics. V. A. Steklov Mathematical Institute. Leningrad. (New York)
- † *Sem. Nota* Seminario Nota. [Seminar Notes] Ryukyu University, Naha.
- Semigroup Forum* Semigroup Forum. (New York)
- † *Seminarberichte* Seminarberichte. [Seminar Reports] Humboldt Universität, Sektion Mathematik, Berlin.
- † *Ser. Ciencia Tec.* Serie Ciencia y Técnica. [Science and Technology Series] Instituto Politécnico Nacional, Mexico City.
- † *Sér. Conf. Union Math. Internat.* Série des Conférences de l'Union Mathématique Internationale. [Lecture Series of the International Mathematics Union] Université de Genève, Enseignement Mathématique, Geneva.
- † *Ser. Preprint. Naučn. Dokl.* Серия Препринтов "Научные Доклады". [Preprint Series "Scientific Lectures"] Komi Filial Akad. Nauk SSSR, Syktyvkar.
- † *Ser. Universitaria* Serie Universitaria. Fundación Juan March, Madrid.
- Serdica* Serdica. Bulgaricae Mathematicae Publicationes. (Sofia)
- † *Shiva Math. Ser.* Shiva Mathematics Series. Shiva, Orpington.
- Shuxue Niankan* See Chinese Ann. Math.
- Shuxue Wuli Xuebao* See Acta Math. Sci.
- Shuxue Xuebao* See Acta Math. Sinica
- Shuxue Yanjiu Yu Pinglun* See J. Math. Res. Exposition
- Shuxuede Shijian Yu Renshi* See Knowledge Practice Math.
- † *SIAM-AMS Proc.* SIAM-AMS Proceedings. American Mathematical Society, Providence, R.I.
- SIAM J. Algebraic Discrete Methods* Society for Industrial and Applied Mathematics. Journal on Algebraic and Discrete Methods. (Philadelphia, Pa.)
- SIAM J. Appl. Math.* SIAM Journal on Applied Mathematics. (Philadelphia, Pa.)
- SIAM J. Comput.* SIAM Journal on Computing. (Philadelphia, Pa.)
- SIAM J. Control Optim.* Society for Industrial and Applied Mathematics. Journal on

- Control and Optimization. (Philadelphia, Pa.)
- SIAM J. Control Optimization Society for Industrial and Applied Mathematics.* Journal on Control and Optimization. (Philadelphia, Pa.) (Continued as: *SIAM J. Control Optim.*)
- SIAM J. Math. Anal.* SIAM Journal on Mathematical Analysis. (Philadelphia, Pa.)
- SIAM J. Numer. Anal.* SIAM Journal on Numerical Analysis. (Philadelphia, Pa.)
- SIAM J. Sci. Statist. Comput.* Society for Industrial and Applied Mathematics. Journal on Scientific and Statistical Computing. (Philadelphia, Pa.)
- SIAM Rev.* SIAM Review. A Publication of the Society for Industrial and Applied Mathematics. (Philadelphia, Pa.)
- †*SIAM-SIMS Conf. Ser.* SIAM-SIMS Conference Series. Society for Industrial and Applied Mathematics, Philadelphia, Pa.
- †*SIAM Studies in Appl. Math.* SIAM Studies in Applied Mathematics. Univ. South Africa, Pretoria.
- Siberian Math. J.* Siberian Mathematical Journal. (New York) (Translation of *Sibirsk. Mat. Ž.*)
- Sibirsk. Mat. Ž.* Akademija Nauk SSSR. Sibirskoe Otdelenie. Sibirskii Matematicheskii Zhurnal. (Moscow) (Translated as: *Siberian Math. J.*)
- Siemens Forsch. Entwickl.* Siemens Forschungs-und Entwicklungsberichte. Research and Development Reports. (Berlin)
- Siemens Forsch.-und Entwicklungsber.* Siemens Forschungs-und Entwicklungsberichte. Research and Development Reports. (Berlin) (Continued as: *Siemens Forsch. Entwickl.*)
- †*Sigma Ser. Pure Math.* Sigma Series in Pure Mathematics. Heldermann, Berlin.
- Signal Process.* Signal Processing. (Amsterdam)
- Simon Stevin* Simon Stevin. Wis- en Natuurkundig Tijdschrift. (Ghent)
- Simulation Society for Computer Simulation.* Technical Journal. Simulation. (La Jolla, Calif.)
- †*Simulations Councils Proc.* Simulations Councils Proceedings. AFIPS Press, Arlington, Va.
- SINET* SINET; an Ethiopian Journal of Science. (Addis Ababa)
- SINET Newlett.* SINET Newsletter. (Addis Ababa)
- Singapore Statist. Bull.* Singapore Statistical Bulletin. (Singapore)
- †*Sistem. Model.* Системное Моделирование. [Systems Modeling] Sibirsk. Otdel. Akad. Nauk SSSR Vyčisl. Centr, Novosibirsk.
- †*Sitzungsber. Akad. Wiss. DDR, Math.-Naturwiss.-Tech., Jahrgang 1977* Sitzungsberichte der Akademie der Wissenschaften der DDR, Mathematik-Naturwissenschaften-Technik, Jahrgang 1977. [Proceedings of the Academy of Sciences of the DDR, Mathematics-Sciences-Technology, 1977] Akademie-Verlag, Berlin.
- Sitzungsber. Heidelb. Akad. Wiss. Math.-Natur. Kl.* Sitzungsberichte der Heidelberger Akademie der Wissenschaften. Mathematisch-Naturwissenschaftliche Klasse. (Heidelberg)
- Sitzungsber. Sachs. Akad. Wiss. Leipzig. Math.-Natur. Kl.* Sitzungsberichte der Sächsischen Akademie der Wissenschaften zu Leipzig. Mathematisch-Naturwissenschaftliche Klasse. (Berlin)
- †*Sitzungsber. Wiss. Gesellschaft J. W. Goethe-Univ. Frankfurt, Band XIV* Sitzungsberichte der Wissenschaftlichen Gesellschaft an der Johann Wolfgang Goethe-Universität, Frankfurt am Main, Band XIV. [Proceedings of the Scientific Society at the Johann Wolfgang Goethe University, Frankfurt am Main, Vol. XIV] Franz Steiner Verlag GmbH, Wiesbaden.
- Skr. Norske Vid.-Akad. Oslo I* Skrifter Utgitt av det Norske Videnskaps-Akademi i Oslo. I. Mat.-Naturv. Klasse. (Oslo) (Continued as: *Norske Vid.-Akad. Oslo Mat.-Natur. Kl. Skr. (N.S.)*)
- †*Skrifter. Roskilde Universitetsbibl.* Skriftserie fra Roskilde Universitetsbibliotek. [Publication Series from Roskilde University Library] Roskilde Univ. Library, Roskilde.
- SM Arch.* Solid Mechanics Archives. (Leiden) (Continued as: *Solid Mech. Arch.*)
- †*Smithsonian Studies in History and Technology* Smithsonian Studies in History and Technology. Smithsonian Institution Press, Washington, D.C.
- Smolensk. Gos. Ped. Inst. Učen. Zap.* Smolenskii Gosudarstvennyi Pedagogičeskii Institut. Učenyje Zapiski. Smolenskii Matematicheskii Sbornik. (Smolensk)
- Smolensk. Mat. Sb.* See *Smolensk. Gos. Ped. Inst. Učen. Zap.*
- Soc. Actuar. Trans.* Society of Actuaries. Transactions. (Chicago, Ill.)
- Soc. Sci. Fenn. Comment. Phys.-Math.* Societas Scientiarum Fennica. Commentationes Physico-Mathematicae. (Helsinki)
- Social Networks* Social Networks. An International Journal of Structural Analysis. (Lausanne)
- †*Social Sci. Res. Council Rev. Current Res.* Social Science Research Council Reviews of Current Research. Heinemann, London.
- Solid Mech. Arch.* Solid Mechanics Archives. (Dordrecht)
- †*Sonderhefte zum Allgemeinen. Statist. Arch.* Sonderhefte zum Allgemeinen Statistischen Archiv. [Special Issue of the General Statistical Archive] Vandenhoeck & Ruprecht, Göttingen.
- Soobšč. Akad. Nauk Gruz. SSR* Soobščeniia Akademii Nauk Gruzinskoi SSR. (Tbilisi) (May also appear as: *Sakharth. SSR Mecn. Akad. Moambe*)
- Soobšč. Vyčisl. Mat.* Akademija Nauk SSSR. Vyčislitel'nyi Centr. Soobščeniia po Vyčislitel'noi Matematike. (Moscow)
- Soochow J. Math.* Soochow Journal of Mathematics. (Taipei)
- Soochow J. Math. Natur. Sci.* Soochow Journal of Mathematical and Natural Sciences. (Taipei) (Continued as: *Soochow J. Math.*)
- †*Sources in Hist. of Math. and Phys. Sci.* Sources in the History of Mathematics and Physical Sciences. Springer, New York.
- †*Sources & Stud. Hist. Arabic-Islamic Sci.: Hist. of Technology Ser.* Sources & Studies in the History of Arabic-Islamic Science: History of Technology Series. University of Aleppo, Institute for the History of Arabic Science, Aleppo.
- South African Statist. J.* South African Statistical Journal. (Pretoria)
- Southeast Asian Bull. Math.* Southeast Asian Bulletin of Mathematics. (Singapore)
- Soviet Aeronaut.* Soviet Aeronautics. (New York) (Translation of *Izv. Vyš. Učebn. Zaved. Aviac. Tehn.*)
- Soviet Appl. Mech.* Soviet Applied Mechanics. (New York) (Translation of *Prikl. Meh.*)
- Soviet Astronom.* Soviet Astronomy. A translation of *Astronomičeskii Zhurnal*, the astronomical journal of the Academy of Sciences of the USSR. (New York) (Translation of *Astronom. Ž.*)
- Soviet Automat. Control* Soviet Automatic Control. (Silver Spring, Md.) (Translation of *Avtomatika*)
- **Soviet J. Contemporary Math. Anal.* Soviet Journal of Contemporary Mathematical Analysis. (New York) (Translation of *Izv. Akad. Nauk Armjan. SSR Ser. Mat.*)
- Soviet J. Nuclear Phys.* American Institute of Physics. Soviet Journal of Nuclear Physics. (New York) (Translation of *Jadernaja Fiz.*)
- Soviet J. Particles and Nuclei* Soviet Journal of Particles and Nuclei. (New York) (Translation of *Fiz. Elementar. Častic i Atom. Jadra*)
- Soviet Math. Dokl.* Soviet Mathematics. Doklady. A translation of the mathematics section of *Doklady Akademii Nauk SSSR*. (Providence, R. I.) (Translation of mathematics section of *Dokl. Akad. Nauk SSSR*)
- Soviet Math. (Iz. VUZ)* Soviet Mathematics (Izvestija Vyših Učebnyh Zavedenii. Matematika). (New York) (Translation of *Izv. Vyš. Učebn. Zaved. Matematika*)
- Soviet Phys. Acoust.* Soviet Physics. Acoustics. A translation of *Akustičeskii Zhurnal* of the Academy of Sciences of the USSR. (New York) (Translation of *Akust. Ž.*)
- Soviet Phys.—Collection* Soviet Physics. Collection. (New York) (Translation of *Litovsk. Fiz. Sb.*)
- Soviet Phys. Cryst.* Soviet Physics Crystallography. (New York) (Translation of *Kristallografiia*)
- Soviet Phys. Dokl.* Soviet Physics. Doklady. A translation of the physics sections of *Doklady Akademii Nauk SSSR*. (New York) (Translation of physics sections of *Dokl. Akad. Nauk SSSR*)
- Soviet Phys. J.* Soviet Physics Journal. (New York) (Translation of *Izv. Vyš. Učebn. Zaved. Fizika*)
- Soviet Phys. JETP* Soviet Physics. JETP. A translation of *Ž. Ėksperimental'noi i Teoretičeskoj Fiziki* of the USSR. (New York) (Translation of *Ž. Ėksp. Teoret. Fiz.*)
- Soviet Phys. Uspekhi* Soviet Physics. Uspekhi. A translation of the *Uspekhi Fizicheskikh Nauk* (Advances in the Physical Sciences) of the Academy of Sciences of the USSR. (New York) (Translation of *Uspekhi Fiz. Nauk*)
- Soviet Physics Acoust.* Soviet Physics. Acoustics. A translation of *Akustičeskii Zhurnal* of the Academy of Sciences of the USSR. (New York) (Translation of *Akust. Ž.*) (Continued as: *Soviet Phys. Acoust.*)
- Soviet Physics—Collection* Soviet Physics. Collection. (New York) (Translation of *Litovsk. Fiz. Sb.*) (Continued as: *Soviet Phys.—Collection*)
- Soviet Physics Dokl.* Soviet Physics. Doklady. A translation of the physics sections of *Doklady Akademii Nauk SSSR*. (New York) (Translation of physics sections of *Dokl. Akad. Nauk SSSR*) (Continued as: *Soviet Phys. Dokl.*)
- Soviet Physics J.* Soviet Physics Journal. (New York) (Translation of *Izv. Vyš. Učebn. Zaved. Fizika*) (Continued as: *Soviet Phys. J.*)
- Soviet Physics JETP* Soviet Physics. JETP. A translation of *Ž. Ėksperimental'noi i Teoretičeskoj Fiziki* of the USSR. (New York) (Translation of *Ž. Ėksp. Teoret. Fiz.*) (Continued as: *Soviet Phys. JETP*)
- Soviet Physics Uspekhi* Soviet Physics. Uspekhi. A translation of *Uspekhi Fizicheskikh Nauk* (Advances in the Physical Sciences) of the Academy of Sciences of the USSR. (New York) (Translation of *Uspekhi Fiz. Nauk*) (Continued as: *Soviet Phys. Uspekhi*)
- †*Spomenice* Spomenice. [Memoirs] Srpska Akad. Nauk i Umetnost, Belgrade.
- †*Springer Ser. Chem. Phys.* Springer Series in Chemical Physics. Springer, Berlin.
- †*Springer Ser. Electrophys.* Springer Series in Electrophysics. Springer, Berlin.
- †*Springer Ser. Inform. Sci.* Springer Series in Information Sciences. Springer, Berlin.
- †*Springer Ser. Optical Sci.* Springer Series in Optical Sciences. Springer, Berlin.
- †*Springer Ser. Solid-State Sci.* Springer Series in Solid-State Sciences. Springer, Berlin.
- †*Springer Ser. Statist.* Springer Series in Statistics. Springer, New York.
- †*Springer Ser. Synergetics* Springer Series in Synergetics. Springer, Berlin.
- †*Springer Tracts Modern Phys.* Springer Tracts in Modern Physics. Springer, Berlin.
- †*Springer Tracts Nat. Philos.* Springer Tracts in Natural Philosophy. Springer, Berlin.
- †*Statist. Décisions Économ.* Statistique et Décisions Économiques. [Statistics and Economic Decisions] Masson, Paris.
- †*Statist. Distributions Sci. Work* Statistical Distributions in Scientific Work. International Co-operative Publishing House, Fairland, Md.
- Statist. Hefte* Statistische Hefte. (Wiesbaden) (Continued as: *Statist. Hefte (N.F.)*)
- Statist. Hefte (N.F.)* Statistische Hefte. Neue Folge. (Wiesbaden)
- Statist. i Elektron.-Vyčisl. Tehn. v Ėkonom.* Naučno-Issledovatel'skii Institut po Proektirovaniju Vyčislitel'nykh Centrov i Sistem Ėkonomičeskoi Informacii CSU SSSR. Statistika i Elektronno-Vyčislitel'naja Tekhnika v Ėkonomike. (Moscow)
- Statist. Neerlandica* Statistica Neerlandica. Orgaan van de Vereniging voor Statistiek. (Rotterdam)
- Statist. Problemy Upravljenija—Trudy Sem. Procces Optimal. Upravljenija V Sekcija Akademija Nauk Litovskoi SSR.* Institut Fiziki i Matematiki. Institut Fiziko-Tekhnicheskikh Problem Energetiki. Litovskaja Territorial'naja Gruppy NKAU SSR Meždunarodnoi Federacii po Avtomatičeskomu Upravljeniju Litovskoi NII NTI i TEI. Statističeskie Problemy Upravljenija. Trudy Seminara "Procces Optimal'nogo Upravljenija." V Sekcija. (Vilnius)
- †*Statist. Teor. Sojazi Čisločivitel'skaja Teorija Čisla.* [Statistical Theory of Communications] Izdat. "Svjaz", Moscow.
- †*Statist. Theory Method Abstracts* Statistical Theory and Method Abstracts. (Edinburgh) (Usually abbreviated as *STMA* in the text of *Math. Rev.*)

- Statistica (Bologna)* Statistica. (Bologna)
Statistica Neerlandica Statistica Neerlandica. Orgaan van de Vereniging voor Statistiek. (The Hague) (Continued as: *Statist. Neerlandica*)
 † *Statistics* Statistics: Textbooks and Monographs. Marcel Dekker, Inc., New York-Basel.
 † *STMA* Statistical Theory and Method Abstracts. (London) See *Statist. Theory Method Abstracts*
Stochastic Process. Appl. Stochastic Processes and their Applications. (Amsterdam)
Stochastic Processes Appl. Stochastic Processes and their Applications. (Amsterdam) (Continued as: *Stochastic Process. Appl.*)
Stochastica Stochastica. (Barcelona)
Stochastics Stochastics. (New York)
Structural Topology Structural Topology. Topologie Structurale. (Montreal)
Struktura. i Mat. Lingvistika Kievskii Gosudstvennyi Universitet. Strukturnaja i Matematičeskaja Lingvistika. (Kiev)
 † *Strum. una Nuova Cultura: Guide e Manuali* Strumenti per una Nuova Cultura: Guide e Manuali. [Tools for a New Learning: Guides and Manuals] Mursia, Milan.
 † *Stud. Algebra Anwendungen* Studien zur Algebra und ihre Anwendungen. [Studies in Algebra and its Applications] Akademie-Verlag, Berlin.
Stud. Appl. Math. Studies in Applied Mathematics. (New York)
 † *Stud. Appl. Mech.* Studies in Applied Mechanics. Elsevier, Amsterdam.
 † *Stud. Automat. Control* Studies in Automation and Control. Elsevier, Amsterdam.
 † *Stud. Bayesian Econometrics* Studies in Bayesian Econometrics. Elsevier, Amsterdam.
Stud. Cerc. Econom. Studii și Cercetări Economice. (Bucharest)
Stud. Cerc. Fiz. Studii și Cercetări de Fizică. (Bucharest)
Stud. Cerc. Mat. Studii și Cercetări Matematice. (Bucharest)
Stud. Cerc. Mec. Apl. Studii și Cercetări de Mecanică Aplicată. (Bucharest)
Stud. Develop. Middle East Technical University. Studies in Development. (Ankara)
Stud. Develop. Special Issue Middle East Technical University. Studies in Development. Special Issue. (Ankara)
 † *Stud. Gesch. Akad. Wiss. DDR* Studien zur Geschichte der Akademie der Wissenschaften der DDR. [Studies in the History of the Academy of Sciences of the DDR] Akademie-Verlag, Berlin.
 † *Stud. Hist. Math. Phys. Sci.* Studies in the History of Mathematics and Physical Sciences. Springer, New York.
 † *Stud. Hist. Modern Sci.* Studies in the History of Modern Science. Reidel, Dordrecht.
Stud. Hist. Philos. Sci. Studies in History and Philosophy of Science. (Oxford)
 † *Stud. Intellectual Precocity* Studies of Intellectual Precocity. Johns Hopkins University Press, Baltimore, Md.
 † *Stud. Logic Foundations Math.* Studies in Logic and the Foundations of Mathematics. North-Holland, Amsterdam-New York.
 † *Stud. Management Sci.* Studies in the Management Sciences. North-Holland, Amsterdam-New York.
 † *Stud. Management Sci. Systems* Studies in Management Sciences and Systems. North-Holland, Amsterdam-New York.
 † *Stud. Materialien Geschichte Philos.* Studien und Materialien zur Geschichte der Philosophie. [Studies and Materials on the History of Philosophy] Olms, Hildesheim.
 † *Stud. Math. Appl.* Studies in Mathematics and its Applications. North-Holland, Amsterdam-New York.
 † *Stud. Math. Managerial Econom.* Studies in Mathematical and Managerial Economics. North-Holland, Amsterdam-New York.
 † *Stud. Modern Thermodynamics* Studies in Modern Thermodynamics. Elsevier, New York.
 † *Stud. Nat. Sci.* Studies in the Natural Sciences. Consultants Bureau, New York.
 † *Stud. Naturwiss. Tech.* Studienbücher Naturwissenschaft und Technik. [Textbooks for Science and Technology] Vieweg, Braunschweig.
 † *Stud. Philos.* Studies in Philosophy. Mouton, The Hague.
 † *Stud. Regional Sci. Urban Econom.* Studies in Regional Science and Urban Economics. North-Holland, Amsterdam-New York.
 † *Stud. Statist. Mech.* Studies in Statistical Mechanics. Elsevier, Amsterdam.
Studia Automat. Studia z Automatyki. Poznańskie Towarzystwo Przyjaciół Nauk. Wydział Nauk Technicznych. Prace Komisji Automatyki. (Warsaw/Poznań)
 † *Studia Copernicana* Studia Copernicana. Ossolineum, Wrocław.
Studia Geotech. Mech. Studia Geotechnica et Mechanica. (Wrocław)
Studia Leibnitiana Studia Leibnitiana. Vierteljahrsschrift für Philosophie und Geschichte der Wissenschaften. (Wiesbaden)
 † *Studia Leibnitiana Suppl.* Studia Leibnitiana Supplementa. Franz Steiner Verlag GmbH, Wiesbaden.
Studia Logica Polska Akademia Nauk. Instytut Filozofii i Socjologii. Studia Logica. (Wrocław)
Studia Math. Polska Akademia Nauk. Instytut Matematyczny. Studia Mathematica. (Warsaw)
 † *Studia Math./Math. Lehrbücher* Studia Mathematica/Mathematische Lehrbücher. [Studia Mathematica/Mathematical Textbooks] Vandenhoeck & Ruprecht, Göttingen.
 † *Studia Math.: Skript* Studia Mathematica: Skript. Vandenhoeck & Ruprecht, Göttingen.
 † *Studia Math./Math. Lehrbücher, Taschenbuch* Studia Mathematica/Mathematische Lehrbücher, Taschenbuch. [Studia Mathematica/Mathematical Textbooks, Paperback] Vandenhoeck & Ruprecht, Göttingen.
Studia Sci. Math. Hungar. Consilium Instituti Mathematici Academiae Scientiarum Hungaricae. Studia Scientiarum Mathematicarum Hungarica. (Budapest)
 † *Studia: Ser. Math.* Studia: Series Mathematica. Univ. South Africa, Pretoria.
Studia Univ. Babeş-Bolyai Math. Universitas Babeş-Bolyai. Studia Mathematica. (Cluj)
Studia Univ. Babeş-Bolyai Ser. Math.-Mech. Studia Universitatis Babeş-Bolyai. Series Mathematica-Mechanica. (Cluj) (Continued as: *Studia Univ. Babeş-Bolyai Math.*)
Studia Univ. Babeş-Bolyai Ser. Phys. Studia Universitatis Babeş-Bolyai. Series Physica. (Cluj)
 † *Studienschriften zur Sozial.* Studienschriften zur Soziologie. [Research Papers on Sociology] Teubner, Leipzig.
Studies in Appl. Math. Studies in Applied Mathematics. (Cambridge, Mass.) (Continued as: *Stud. Appl. Math.*)
Su-hak kwa Mul-li Academy of Science of the People's Democratic Republic of Korea. Research Center for Physics and Mathematics. Su-hak kwa Mul-li (Mathematics and Physics). (Pyongyang)
Sudhoffs Arch. Sudhoffs Archiv für Geschichte der Medizin und der Naturwissenschaften. (Wiesbaden)
Sûgaku Mathematical Society of Japan. Sûgaku (Mathematics). (Tokyo)
 † *Sûgaku no Rekishi* Sûgaku no Rekishi. [History of Mathematics] Kyoritsu Shuppan, Tokyo.
Sûgakushi Kenkyû History of Mathematics Society of Japan. Sûgakushi Kenkyû (Journal of History of Mathematics of Japan). (Tokyo)
Suken Kenkyû Ripôto Suken Kenkyû Ripôto. (Tokyo)
Sûrikaiseikikenkyûsho Kôkyûroku Sûrikaiseikikenkyûsho Kôkyûroku. (Kyoto)
 † *Surveys Reference Works Math.* Surveys and Reference Works in Mathematics. Pitman, Boston, Mass.
Soerdlovsk. Gos. Ped. Inst. Naučn. Trudy Sverdlovskii Gosudarstvennyi Pedagogičeskii Institut. Naučnye Trudy. (Sverdlovsk)
Soerdlovsk. Gos. Ped. Inst. Učen. Zap. Sverdlovskii Gosudarstvennyi Pedagogičeskii Institut. Učenyje Zapiski. (Sverdlovsk) (Continued as: *Soerdlovsk. Gos. Ped. Inst. Naučn. Trudy*)
 † *Sympos. Univ. Upsaliensis Annum Quingentesimum Celebrantis* Symposia Universitatis Upsaliensis Annum Quingentesimum Celebrantis. Almqvist & Wiksell, Stockholm.
 † *Symposia Mathematica* Symposia Mathematica. Academic Press, New York.
Synthese Synthese. An International Journal for Epistemology, Methodology and Philosophy of Science. (Dordrecht)
 † *Synthese Historical Library* Synthese Historical Library. Reidel, Dordrecht.
 † *Synthese Library* Synthese Library. Reidel, Dordrecht.
Systems and Control Systems and Control (Shisutemu to Seigyo). (Kyoto)
Systems-Comput.-Controls Systems-Computers-Controls. The Transactions of the Institute of Electronics and Communication Engineers of Japan. (Silver Spring, Md.) (Partial translation of *Denshi Tsushin Gakkai Ronbunshi Sect. A-D*) (See also *Electron. Comm. Japan*)
Systems-Computers-Controls Systems-Computers-Controls. The Transactions of the Institute of Electronics and Communication Engineers of Japan. (Washington, D.C.) (Partial translation of *Denshi Tsushin Gakkai Ronbunshi Sect. A-D*) (See also *Electron. Commun. Japan*) (Continued as: *Systems-Comput.-Controls*)
Systems Sci. Wrocław Technical University. Systems Science. (Wrocław)
Systems Theory Res. Systems Theory Research. (New York) (Translation of *Problemy Kibernet.*) (Formerly: *Problemy der Kybernetik*)
 † *Számki Közlem.* Számki Közlemények. [Communications Notes] Research Institute for Applied Computer Science, Budapest.
SZÁMKI Tanulmányok Számítógépekalkalmazási Kutató Intézet. Tanulmányok. (Budapest)
Szigma—Mat.-Közzgazdasági Folyóirat Sigma. Matematikai-Közzgazdasági Folyóirat. (Budapest)
Tadzik. Gos. Univ. Trudy Meh.-Mat. Fak. Tadziškii Gosudarstvennyi Universitet im. V. I. Lenina. Trudy Mehniko-Matematicheskogo Fakul'teta. (Dushanbe)
Tadzik. Gos. Univ. Učen. Zap. Tadziškii Gosudarstvennyi Universitet im. V. I. Lenina. Učenyje Zapiski. Trudy Fiziko-Matematicheskogo Fakul'teta. Seriya Matematicheskaja. (Dushanbe)
Tadzik. S.-h. Inst. Trudy Tadziškii Sel'skhozhojstvennyi Institut i Tadziškii Gosudarstvennyi Universitet. Trudy. (Dushanbe)
Tallin. Polüteh. Inst. Toimetised Tallinna Polütehnilise Instituudi Toimetised. (Tallin)
Tallin. Polüteh. Inst. Toimetised Seer. A Tallinna Polütehnilise Instituudi Toimetised Seeria A. (Tallin) (Continued as: *Tallin. Polüteh. Inst. Toimetised*)
Tamkang J. Math. Tamkang Journal of Mathematics. (Taipei)
 † *Tamsui Oxford Coll. Lecture Notes Ser.* Tamsui Oxford College Lecture Notes Series. Tamsui Oxford College, Department of Computer Science, Taipei.
Tanulmányok—MTA Számítástech. Automat. Kutató Int. Budapest Tanulmányok. MTA Számítástech. Automat. Kutató Int. Budapest Tanulmányok. (Budapest)
Tanulmányok—MTA Számítástech. Automat. Kutató Int. Budapest Tanulmányok. MTA Számítástech. Automat. Kutató Int. Budapest Tanulmányok. (Budapest)
 (Continued as: *Tanulmányok—MTA Számítástech. Automat. Kutató Int. Budapest*)
Tartu Riikl. Ül. Toimetised Tartu Riikliku Ülikooli Toimetised. Učenyje Zapiski Tartusko Gosudarstvennogo Universiteta. Acta et Commentationes Universitatis Tartuens. Matematika ja Mehhanikaalseid Töid. Trudy po Matematike i Mehanike. (Tartu)
Taşkent. Gos. Ped. Inst. Učen. Zap. Taşkentskii Gosudarstvennyi Pedagogičeskii Institut im. Nizami. Učenyje Zapiski. (Tashkent)
Taşkent. Gos. Univ.—Buharsk. Ped. Inst. Naučn. Trudy Taşkentskii Gosudarstvennyi Universitet. Buharskii Pedagogičeskii Institut. Naučnye Trudy. (Tashkent)
Taşkent. Gos. Univ. Naučn. Trudy Taşkentskii Gosudarstvennyi Universitet im. V. I. Lenina. Naučnye Trudy. (Tashkent) (Continued as: *Taşkent. Gos. Univ. Sb. Naučn. Trudov*)
Taşkent. Gos. Univ. Sb. Naučn. Trudov Taşkentskii Gosudarstvennyi Universitet. Sbornik Naučnykh Trudov. (Tashkent)
Taşkent. Inst. Inž. Železnodorož. Transporta Trudy Taşkentskii Institut Inženerov Železnodorožnogo Transporta. Trudy. (Tashkent)

- Taškent. Inst. Narod. Hoz. Naučn. Zap.* Taškentskii Institut Narodnogo Hozajstva. Naučnye Zapiski. (Tashkent) (Formerly: *Taškent. Inst. Narod. Hoz. Naučn. Zap. Mat. o Priložn.*)
- Taškent. Inst. Narod. Hoz. Naučn. Zap. Mat. o Priložn.* Taškentskii Institut Narodnogo Hozajstva. Naučnye Zapiski. Matematika v Priloženijah. (Tashkent) (Continued as: *Taškent. Inst. Narod. Hoz. Naučn. Zap.*)
- Taškent. Politehn. Inst. Naučn. Trudy* Taškentskii Politehničeskii Institut. Naučnye Trudy. Novaja Serija. (Tashkent)
- Taškent. Tekstil. Inst. Kaf. Vysš. Mat. Sb. Naučn.-Issled. Rabot Ser. Mat.* Taškentskii Tekstil'nyi Institut. Kafedra Vysšej Matematiki. Sbornik Naučno-Issledovatel'skikh Rabot. Serija Matematiki. (Tashkent)
- † *Tata Inst. Fund. Res. Lectures on Math. and Phys.* Tata Institute of Fundamental Research Lectures on Mathematics and Physics. Springer, Berlin.
- † *Tata Inst. Fund. Res. Studies in Math.* Tata Institute of Fundamental Research Studies in Mathematics. Springer, Berlin.
- Tbilis. Gos. Univ. Inst. Prikl. Mat. Trudy* Tbilisskii Gosudarstvennyi Universitet. Institut Prikladnoi Matematiki. Trudy. (Tbilisi) (May also appear as: *Tbilis. Sahelmc. Univ. Gamoqeneb. Math. Inst. Šrom.*)
- Tech. Rep. Inst. Atom. Energy Kyoto Univ.* Technical Reports of the Institute of Atomic Energy. Kyoto University. (Kyoto)
- Tech. Rep. Kansai Univ.* Kansai University. Technology Reports. (Suita)
- Tech. Rep. Osaka Univ.* Technology Reports of the Osaka University. (Suita)
- † *Tech. Twórczego Myślenia Techniki Twórczego Myślenia.* [Techniques of Creative Thinking] WNT, Warsaw.
- Technikgeschichte* Technikgeschichte. Verein Deutscher Ingenieure. (Düsseldorf)
- † *Techniques Phys.* Techniques of Physics. Academic Press, New York.
- Technometrics* Technometrics. A Journal of Statistics for the Physical, Chemical and Engineering Sciences. (Washington, D.C.)
- † *Tekst. IMFUFA* Tekster za IMFUFA. [Texts from IMFUFA] Roskilde Universitetscenter, Institut for Studiet af Matematik og Fysik, Roskilde.
- Tellus Svenska Geofysiska Föreningen.* Tellus. A Quarterly Journal of Geophysics. (Copenhagen)
- Tensor Tensor.* New Series. The Tensor Society. (Tokyo) (Continued as: *Tensor (N.S.)*)
- Tensor (N.S.)* The Tensor Society. Tensor. New Series. (Chigasaki)
- Teor. Funkcii Funkcional. Anal. i Priložn.* Har'kovskii Ordena Trudovogo Krasnogo Znameni Gosudarstvennyi Universitet im. A. M. Gor'kogo. Teorija Funkcij, Funkcional'nyj Analiz i ih Priložnija. (Kharkov)
- Teor. Konečn. Avtomatov i Priložn.* Institut Elektroniki i Vychislitel'noj Tehniki. Akademija Nauk Latviiškoj SSR. Teorija Konečnyh Avtomatov i ee Priložnija. (Riga)
- Teor. Optimal. Rešenij—Trudy Sem. Processy Optimal. Upravlenija VI Sekcija Akademii Nauk Litovskoj SSR.* Institut Fiziki i Matematiki. Teorija Optimal'nyh Rešenij—Trudy Seminara "Processy Optimal'nogo Upravlenija". (Vilnius)
- Teor. Primen. Meh.* Jugoslovensko Društvo za Mehaniku. Teorijska i Primenjena Mehanika. (Belgrade)
- † *Teor. Techn. System.* Teoria i Technika Systemów. [Theory and Technology of Systems] PWN, Warsaw.
- Teor. Verojatnost. i Mat. Statist.* Teorija Verojatnostej i Matematičeskaja Statistika. (Kiev) (Translated as: *Theory Probab. Math. Statist.*)
- Teor. Verojatnost. i Primenen.* Akademija Nauk SSSR. Teorija Verojatnostej i ee Primenenija. (Moscow) (Translated as: *Theory Probab. Appl.*)
- Teorema* Teorema. (Valencia)
- Teoret. Elektrotehn.* L'vovskii Gosudarstvennyi Universitet. Teoretičeskaja Elektrotehnika. (Lvov)
- Teoret. i Prikl. Meh. (Kiev/Donetsk)* Doneckii Gosudarstvennyi Universitet. Teoretičeskaja i Prikladnaja Mehanika. (Kiev/Donetsk)
- Teoret. i Prikl. Meh. (Minsk)* Belorusskii Politehničeskii Institut. Teoretičeskaja i Prikladnaja Mehanika. (Minsk)
- Teoret. i Prikladnaja Meh. (Kharkov)* Har'kovskii Deržavni Universitet im. O. M. Gor'kogo. Teoretična i Prikladnaja Mehanika. (Kharkov) See *Teoret. i Prikl. Meh. (Kiev/Donetsk)*
- Teoret. i Prilož. Meh.* B'lgarska Akademija na Naukite. Teoretična i Priložna Mehanika. (Sofia) (Continued as: *Teoret. Prilož. Meh.*)
- Teoret. Mat. Fiz.* Akademija Nauk SSSR. Teoretičeskaja i Matematičeskaja Fizika. (Moscow) (Translated as: *Theoret. and Math. Phys.*)
- Teoret. Prikl. Mat.* MYSSO URSR L'vivskii Ordena Lenina Deržavni Universitet im. I. Franka. Teoretična i Prikladnaja Matematika. (Lvov)
- Teoret. Prilož. Meh.* B'lgarska Akademija na Naukite. Teoretična i Priložna Mehanika. (Sofia)
- TESLA Electron.* TESLA Electronics. Quarterly Review of Czechoslovak Electronics and Telecommunications. (Prague)
- TESLA Electronics* TESLA Electronics. Quarterly Review of Czechoslovak Electronics and Telecommunications. (Prague) (Continued as: *TESLA Electron.*)
- † *Teubner Studiensk. Teubner Studienskripten.* [Teubner Study Scripts] Teubner, Leipzig.
- † *Teubner-Texte zur Math.* Teubner-Texte zur Mathematik. [Teubner Texts in Mathematics] Teubner, Leipzig.
- Texas J. Sci.* The Texas Journal of Science. (San Angelo, Tex.)
- † *Text. Metod. Mat.* Textos de Métodos Matemáticos. [Texts on Mathematical Methods] Universidade Federal do Rio de Janeiro, Instituto de Matemática, Rio de Janeiro.
- † *Texte Kritisch. Psych.* Texte zur Kritischen Psychologie. [Texts in Critical Psychology] Campus Verlag, Frankfurt.
- Tbilis. Sahelmc. Univ. Gamoqeneb. Math. Inst. Šrom.* Tbilisskii Sahelmcipho Universiteti Gamoqenebithi Matematikis Instituti. Šromebi. (Tbilisi) See *Tbilis. Gos. Univ. Inst. Prikl. Mat. Trudy*
- Tbilis. Univ. Šrom.* Tbilisskii Universitetis. Fizika-Matematikisa de Sabunebis-metvelo Mecnierebani. Šromebi. (Tbilisi) See *Trudy Tbilis. Univ.*
- Tbilis. Univ. Šrom. A* Tbilisskii Universitetis Šromebi. A. Fizika-Matematikisa de Sabunebis-metvelo Mecnierebani. (Tbilisi) (Continued as: *Tbilis. Univ. Šrom.*)
- Theor. Probability Appl.* Theory of Probability and its Applications. An English translation of the Soviet journal *Teorija Verojatnostej i ee Primenenija*. (Philadelphia, Pa.) (Translation of *Teor. Verojatnost. i Primenen.*) (Continued as: *Theory Probab. Appl.*)
- Theoret. and Math. Phys.* Theoretical and Mathematical Physics. (New York) (Translation of *Teoret. Mat. Fiz.*)
- Theoret. Chim. Acta* Theoretica Chimica Acta. (Berlin)
- Theoret. Comput. Sci.* Theoretical Computer Science. (Amsterdam)
- Theoret. Linguist.* Theoretical Linguistics. (Berlin)
- Theoret. Population Biol.* Theoretical Population Biology. (New York)
- Theoret. Population Biology* Theoretical Population Biology. (New York) (Continued as: *Theoret. Population Biol.*)
- Theoria* Theoria. A Swedish Journal of Philosophy. (Stockholm/Vällingby)
- Theory and Decision* Theory and Decision. An International Journal for Philosophy and Methodology of the Social Sciences. (Dordrecht)
- † *Theory and Decision Library* Theory and Decision Library. Reidel, Dordrecht.
- Theory Probab. Appl.* Theory of Probability and its Applications. An English translation of the Soviet journal *Teorija Verojatnostej i ee Primenenija*. (Philadelphia, Pa.) (Translation of *Teor. Verojatnost. i Primenen.*)
- Theory Probab. Math. Statist.* Theory of Probability and Mathematical Statistics. (Providence, R.I.) (Translation of *Teor. Verojatnost. i Mat. Statist.*)
- Theory Probability and Math. Statist.* Theory of Probability and Mathematical Statistics. (Providence, R.I.) (Translation of *Teor. Verojatnost. i Mat. Statist.*) (Continued as: *Theory Probab. Math. Statist.*)
- † *Thèse* Thèse. [Thesis] Juris Druck und Verlag, Zurich.
- Tianmen Xuebao* See *Acta Astronom. Sinica*
- Tianti Wuli Xuebao* See *Acta Astrophys. Sinica*
- † *Tilastotieteellisiä Tutkimuksia* Tilastotieteellisiä Tutkimuksia. [Statistical Studies] Finnish Statist. Soc., Helsinki.
- Tiraspol. Gos. Ped. Inst. Učen. Zap.* Tiraspol'skii Gosudarstvennyi Pedagogičeskii Institut im. T. G. Ševčenko. Učenyje Zapiski. (Kishinev)
- Tjumen. Gos. Ped. Inst. Učen. Zap.* Ministerstvo Prosveščenija RSFSR. Tjumenskii Gosudarstvennyi Pedagogičeskii Institut. Učenyje Zapiski. (Tyumen)
- Točn. i Nadežn. Kibernet. Sistem Akademija Nauk Ukrainkoj SSR.* Institut Elektrodinamiki. Točnost' i Nadežnost' Kibernetičeskikh Sistem. (Kiev)
- Tōhoku Math. J.* The Tōhoku Mathematical Journal. (Sendai) (Continued as: *Tōhoku Math. J. (2)*)
- Tōhoku Math. J. (2)* The Tōhoku Mathematical Journal. Second Series. (Sendai)
- Tokyo J. Math.* Tokyo Journal of Mathematics. (Tokyo)
- Tomsk. Gos. Univ. Učen. Zap.* Tomskii Gosudarstvennyi Universitet im. V. V. Kuibyševa. Učenyje Zapiski. (Tomsk)
- † *Topics Appl. Phys.* Topics in Applied Physics. Springer, Berlin.
- † *Topics Current Phys.* Topics in Current Physics. Springer, Berlin.
- Topology* Topology. An International Journal of Mathematics. (Oxford)
- Topology Appl.* Topology and its Applications. (Amsterdam)
- Topology Proc.* Topology Proceedings. (Aurum, Ala.)
- Trabajos Estadist.* Trabajos de Estadística. (Madrid) (Continued as: *Trabajos Estadist. Investigación Oper.*)
- Trabajos Estadist. Investigación Oper.* Trabajos de Estadística y de Investigación Operativa. (Madrid)
- † *Traité d'Électricité* Traité d'Électricité. [Treatise on Electricity] Georgi Publishing (Éditions Georgi), St. Saphorin.
- Trans. Amer. Math. Soc.* Transactions of the American Mathematical Society. (Providence, R.I.)
- Trans. ASME Ser. E J. Appl. Mech.* American Society of Mechanical Engineers. Transactions of the ASME. Series E. Journal of Applied Mechanics. (New York)
- Trans. ASME Ser. G J. Dynamic Systems Measurement and Control* American Society of Mechanical Engineers. Transactions of the ASME. Series G. Journal of Dynamic Systems, Measurement and Control. (New York) (Continued as: *Trans. ASME Ser. G J. Dynamic Systems Measurement Control*)
- Trans. ASME Ser. G J. Dynamic Systems Measurement Control* American Society of Mechanical Engineers. Transactions of the ASME. Series G. Journal of Dynamic Systems, Measurement and Control. (New York)
- Trans. Illinois State Acad. Sci.* Illinois State Academy of Science. Transactions. (Springfield, Ill.)
- † *Trans. Math. Monographs* Translations of Mathematical Monographs. American Mathematical Society, Providence, R.I.
- Trans. Moscow Math. Soc.* Transactions of the Moscow Mathematical Society. (Providence, R.I.) (Translation of *Trudy Moskov. Mat. Obšč.*)
- Trans. Roy. Soc. Canada* Transactions of the Royal Society of Canada. Chemical, Mathematical and Physical Sciences. (Ottawa, Ont.) (Continued as: *Proc. Roy. Soc. Canada (4)* and *Trans. Roy. Soc. Canada (4)*)
- Trans. Roy. Soc. Canada (4)* Transactions of the Royal Society of Canada. Chemical, Mathematical and Physical Sciences. Fourth Series. (Ottawa, Ont.)
- Trans. Roy. Soc. South Africa* Transactions of the Royal Society of South Africa. (Cape Town)
- Trans. Soc. Rheol.* Society of Rheology. Transactions. (New York) (Continued as: *J. Rheol.*)
- Transport Theory Statist. Phys.* Transport Theory and Statistical Physics. An International Journal for Rapid Communication. (New York)
- Transportation Plann. Tech.* Transportation Planning and Technology. (London)
- Transportation Res.* Transportation Research. (Oxford) (Continued as: *Transportation Res. Part A and Transportation Res. Part B*)

- Transportation Res. Part A* Transportation Research. Part A. General. (Oxford) (Formerly: *Transportation Res.*) (Mathematical Reviews does not review part A, see part B.)
- Transportation Res. Part B* Transportation Research. Part B. Methodological. (Oxford)
- Transportation Sci.* Operations Research Society of America. Transportation Science Section. Transportation Science. (Baltimore, Md.)
- † *Travaux Humanisme et Renaissance* Travaux de l'Humanisme et Renaissance. [Works of Humanism and the Renaissance] Droz, Geneva.
- Travaux Sémin. Anal. Convexe* Travaux du Séminaire d'Analyse Convexe. (Montpellier)
- TRU Math.* TRU Mathematics. (Tokyo)
- Trud. Visš. Ikonom. Inst. "Karl Marks"*—Sofija Visšija Ikonomičeskij Institut "Karl Marks"—Sofija. Trudove. (Sofia)
- Trudove Visš. Ikonom. Inst. "Karl Marks"*—Sofija Visšija Ikonomičeskij Institut "Karl Marks"—Sofija. Trudove. (Sofia) (Continued as: *Trud. Visš. Ikonom. Inst. "Karl Marks"*—Sofija)
- Trudy Akad. Nauk Litov. SSR Ser. B* Lietuvos TSR Mokslų Akademijos Darbai. Serija B. Akademii Nauk Litovskoi SSR. Trudy. Serija B. (Vilnius)
- Trudy Altaï. Politehn. Inst.* Altaiskij Politehničeskij Institut im. I. I. Polizunova. Trudy. (Barnaul) (Formerly: *Trudy Altaisk. Politehn. Inst.*)
- Trudy Altaisk. Politehn. Inst.* Altaiskij Politehničeskij Institut im. I. I. Polizunova. Trudy. (Barnaul) (Continued as: *Trudy Altaï. Politehn. Inst.*)
- Trudy Baikir. S.-h. Inst.* Trudy Baikirskogo Sel'skhozjaistvennogo Instituta. (Ufa)
- Trudy Doneck. Politehn. Inst.* Trudy Doneckogo Politehničeskogo Instituta. (Doneck)
- Trudy Fiz. Inst. Lebedev.* Akademija Nauk SSSR. Trudy Fizičeskogo Instituta imeni P. N. Lebedeva. (Moscow) (Translated as: *Proc. (Trudy) P. N. Lebedev Phys. Inst.*)
- Trudy Frunze. Politehn. Inst.* Frunzenskij Politehničeskij Institut. Trudy Frunzenskogo Politehničeskogo Instituta. (Frunze)
- Trudy Geom. Sem. Kazan. Univ.* Kazanskij Universitet. Geometričeskogo Seminara. Trudy. (Kazan)
- Trudy Geometr. Sem.* Akademija Nauk SSSR. Institut Naučnoj Informacii. VINITI. Trudy Geometričeskogo Seminara. (Moscow) See *Problems in geometry*
- Trudy Gor'kov. Politehn. Inst.* Gor'ki Politehničeskij Institut. Trudy. (Gorki)
- Trudy Inst. Istor. Estestvozn. Tehn.* Akademija Nauk SSSR. Trudy Instituta Istorii Estestvoznaniya i Tehniki. (Moscow) (Continued as: *Voprosy Istor. Estestvozn. i Tehn.*)
- Trudy Inst. Mat. i Meh. Ural. Naučn. Centr Akad. Nauk SSSR* Trudy Instituta Matematiki i Mekhaniki. Ural'skij Nauchnyj Centr. Akademija Nauk SSSR. (Sverdlovsk)
- Trudy Inst. Sistem Upravlenija Akad. Nauk Gruzin. SSR* Akademija Nauk Gruzinskoi SSR. Trudy Instituta Sistem Upravleniya. (Tbilisi) (May also appear as: *Sakharth. SSR Mecn. Akad. Math. Inst. Šrom.*)
- Trudy Inst. Teoret. Astronom.* Akademija Nauk SSSR. Trudy Instituta Teoretičeskoi Astronomii. (Moscow)
- Trudy Irkutsk. Gos. Univ.* Trudy Irkutskogo Gosudarstvennogo Universiteta. (Irkutsk)
- Trudy Iževsk. Sel'skhozjaistvo. Inst.* Iževskij Sel'skhozjaistvennyj Institut. Trudy. (Izhevsk)
- Trudy Kaf. Teorii Funkcii i Funkcional. Anal. Moskov. Gos. Univ.* Moskovskij Gosudarstvennyj Universitet. Mekhaniko-matematičeskij Fakul'tet. Kafedra Teorii Funkcii i Funkcional'nogo Analiza. Trudy. (Moscow)
- Trudy Kaliningrad. Gos. Univ.* *Differencial'naja Geometr. Mnogoobraz. Figur* Trudy Kaliningradskogo Gosudarstvennogo Universiteta. *Differencial'naja Geometrija Mnogoobrazij Figur.* (Kaliningrad) (Continued as: *Kaliningrad. Gos. Univ. Differencial'naja Geom. Mnogoobraz. Figur*)
- Trudy Kazan. Aviacion. Inst.* Trudy Kazanskogo Aviacionnogo Instituta. Matematika i Mekhanika. (Kazan)
- Trudy Kazan. Gorod. Astronom. Observator.* Kazanskij Ordena Trudogo Krasnogo Znameni Gosudarstvennyj Universitet im. V. I. Uljanova-Lenina. Trudy Kazanskoi Gorodskoi Astronomičeskoi Observatorii. (Kazan)
- Trudy Kirgiz. Gos. Univ. Ser. Mat. Nauk* Kirgizskij Gosudarstvennyj Universitet. Trudy Kirgizskogo Gosudarstvennogo Universiteta. Serija Matematičeskijh Nauk. (Frunze)
- Trudy Komi Filiala Akad. Nauk SSSR* Trudy Komi Filiala Akademii Nauk SSSR. (Syktyvkar)
- Trudy Leningrad. Tehnolog. Inst. Holod. Promyšl.* Trudy Leningradskogo Tehnologičeskogo Instituta Holodil'noj Promyšlennosti. (Leningrad)
- Trudy Mat. Inst. Steklov.* Akademija Nauk Sojuza Sovetskijh Socialističeskijh Respublik. Trudy Matematičeskogo Instituta imeni V. A. Steklova. (Moscow) (Translated as: *Proc. Steklov Inst. Math.*)
- Trudy Moskov. Mat. Obšč.* Trudy Moskovskogo Matematičeskogo Obščestva. (Moscow) (Translated as: *Trans. Moscow Math. Soc.*)
- Trudy Moskov. Orden. Lenin. Energet. Inst.* Trudy Moskovskogo Ordena Lenina Energetičeskogo Instituta. (Moscow)
- Trudy Otdel. Ekonom. Issled. Burjat. Filiala Sibirsk. Otdel. Akad. Nauk SSSR* Trudy Otdela Ekonomičeskijh Issledovanij Burjatskogo Filiala Sibirskogo Otdelenija Akademii Nauk SSSR. (Ulan Ude)
- Trudy Ped. Inst. Gruzin. SSR Ser. Fiz. i Mat.* Trudy Pedagogičeskijh Institutov Gruzinskoi SSR. Serija Fiziki i Matematiki. (Tbilisi) See *Sakharth. SSR Ped. Inst. Šrom. Fiz.-Math. Ser.*
- Trudy Prževal'sk. Gos. Ped. Inst.* Trudy Prževal'skogo Gosudarstvennogo Pedagogičeskogo Instituta. (Prževal'sk)
- Trudy Rjazan. Radiotehn. Inst.* Trudy Rjazanskogo Radiotehničeskogo Instituta. (Ryazan)
- Trudy Samarkand. Gos. Univ.* Trudy Samarkandskogo Gosudarstvennogo Universiteta imeni A. Navoi. (Samarkand) (Continued as: *Trudy Samarkand. Gos. Univ. (N.S.)*)
- Trudy Samarkand. Gos. Univ. (N.S.)* Ministerstvo Vysšego i Srednego Special'nogo Obrazovaniya UzSSR. Trudy Samarkandskogo Gosudarstvennogo Universiteta imeni A. Navoi. Novaja Serija. (Samarkand)
- Trudy Saratov. Inst. Meh. S.-h.* Trudy Saratovskogo Instituta Mehanizacii Sel'skogo Khozjaistva. (Saratov)
- Trudy Sem. Kaf. Teoret. Meh. i Vyš. Mat. (Džambul)* Džambulskij. Tehnologičeskij Institut Legkoj i Piščevoj Promyšlennosti. Seminar Kafedri Teoretičeskoi Mekhaniki i Vyšej Matematiki. Trudy. (Džambul)
- Trudy Sem. Kraev. Zadačam* Trudy Seminara po Kraevym Zadačam. (Kazan)
- Trudy Sem. Mat. Fiz. Nelinein. Koleban.* Akademija Nauk Ukrainskoi SSR. Institut Matematiki. Trudy Seminara po Matematičeskoi Fizike i Nelineinym Kolebanijam. (Kiev)
- Trudy Sem. Petrovsk.* Moskovskij Universitet. Trudy Seminara imeni I. G. Petrovskogo. (Moscow)
- † *Trudy Sem. S. L. Soboleva, No. 1* Труды Семинара С. Л. Соболева, No. 1. [Proceedings of the S. L. Sobolev Seminar, No. 1] Akad. Nauk SSSR Sibirsk. Otdel. Inst. Mat., Novosibirsk.
- † *Trudy Sem. S. L. Soboleva, No. 2* Труды Семинара С. Л. Соболева, No. 2. [Proceedings of the S. L. Sobolev Seminar, No. 2] Akad. Nauk SSSR Sibirsk. Otdel. Inst. Mat., Novosibirsk.
- Trudy Sem. Teor. Differencial. Uravnenij s Otklon. Argumentom Univ. Družby Narodov* *Patrisa Lumumbi* Trudy Seminara po Teorii Differencial'nyh Uravnenij s Otklonjajuščimja Argumentom. Universitet Družby Narodov im. Patrisa Lumumbi. (Moscow)
- Trudy Sem. Vektor. Tenzor. Anal.* Trudy Seminara po Vektornomu i Tenzornomu Analizu s ih Priloženijami k Geometrii, Mekhanike i Fizike. (Moscow)
- Trudy Sibirsk. Fiz.-Tehn. Inst.* Trudy Sibirskogo Fiziko-Tehničeskogo Instituta imeni Akademika V. D. Kuznecova. (Tomsk)
- Trudy SibNII* Sibirskij Naučno-Issledovatel'skij Institut Energetiki. Trudy. (Moscow)
- Trudy Taškent. Gos. Univ.* Trudy Taškentskogo Gosudarstvennogo Universiteta imeni V. I. Lenina. Matematika. (Tashkent) See *Taškent. Gos. Univ. Naučn. Trudy*
- Trudy Tbilis. Mat. Inst. Razmadze Akad. Nauk Gruzin. SSR* Akademija Nauk Gruzinskoi SSR. Trudy Tbilisskogo Matematičeskogo Instituta im. A. M. Razmadze. (Tbilisi) (May also appear as: *Sakharth. SSR Mecn. Akad. Math. Inst. Šrom.*)
- Trudy Tbilis. Univ.* Tbilisskogo Universiteta. Fiziko-Matematičeskije i Estestvennye Nauki. Trudy. (Tbilisi) (May also appear as: *Tbilis. Univ. Šrom.*)
- Trudy Tbilis. Univ. A* Trudy Tbilisskogo Universiteta. A. Fiziko-Matematičeskije i Estestvennye Nauki. (Tbilisi)
- Trudy Tomsk. Gos. Univ.* Trudy Tomskogo Gosudarstvennogo Universiteta im. V. V. Kuľbyševa. (Tomsk)
- Trudy Univ. Družby Narod.* Trudy Universiteta Družby Narodov im. Patrisa Lumumbi. (Moscow)
- Trudy Vsesojuz. Zaočn. Energet. Inst.* Trudy Vsesojuznogo Zaočnogo Energetičeskogo Instituta. (Moscow)
- Trudy Vyčisl. Centra Akad. Nauk Armjan. SSR i Erevan. Gos. Univ. Mat. Voprosy Kibernet. i Vyčisl. Tehn.* Trudy Vyčislitel'nogo Centra Akademii Nauk Armjanskoi SSR i Erevanskogo Gosudarstvennogo Universiteta. Matematičeskije Voprosy Kibernetiki i Vyčislitel'noj Tehniki. (Erevan)
- Trudy Vyčisl. Centra Akad. Nauk Gruzin. SSR* Akademija Nauk Gruzinskoi SSR. Trudy Vyčislitel'nogo Centra. (Tbilisi) (May also appear as: *Sakharth. SSR Mecn. Akad. Gamotol. Centr. Šrom.*)
- Trudy Vyčisl. Centra Tartu. Gos. Univ.* Trudy Vyčislitel'nogo Centra Tartuskij Gosudarstvennyj Universitet. (Tartu)
- † *TS-3 Bibliograf. Informacija* TS-3 Bibliografija Informacija. (Moscow)
- † *TS-3 Ekspres—Informacija* TS-3 Ekspres—Informacija. (Moscow)
- † *TS-3 Obzor. Informacija* TS-3 Obzorja Informacija. (Moscow)
- † *TS-3 Referativnyi Sb.* TS-3 Referativnyj Sbornik. (Moscow)
- Tsukuba J. Math.* Tsukuba Journal of Mathematics. (Ibaraki)
- † *TUM-INFO* TUM-INFO. Technische Universität München, Institut für Mathematik, Munich.
- Turkmen. Gos. Univ. Učen. Zap.* Turkmeniskij Gosudarstvennyj Universitet im. A. M. Gor'kogo. Učenyje Zapiski. (Ashkhabad)
- † *Tutkimuksia—Res. Rep.* Tutkimuksia—Research Reports. University of Helsinki, Computing Center, Helsinki.
- Tydkr. Naturwetenskap.* Die Suid-Afrikaanse Akademie vir Wetenskap en Kuns. Tydskrif vir Natuurwetenskap. (Pretoria)
- U.S.S.R. Comput. Math. and Math. Phys.* U.S.S.R. Computational Mathematics and Mathematical Physics. (Oxford) (Translation of *Ž. Vyčisl. Mat. i Mat. Fiz.*)
- Učen. Zap. CAGI* Učenyje Zapiski Central'nogo Aero-Gidrodinamičeskogo Instituta (CAGI). (Moscow)
- Učen. Zap. Erevan. Gos. Univ. Estestv. Nauki* Učenyje Zapiski Erevanskogo Gosudarstvennogo Universiteta. Estestvennye Nauki. (Erevan)
- Učen. Zap. Statist.* Akademija Nauk SSSR. Central'nyj Ekonomiko-Matematičeskij Institut. Učenyje Zapiski po Statistike. (Moscow)
- Ufim. Aviacion. Inst. Trudy* Ufinskij Aviacionnyj Institut im. Ordžonikidze. Trudy. (Ufa)
- UIT Rep.* Ulsan Institute of Technology. Report. (Ulsan) (Continued as: *Ulsan Inst. Tech. Rep.*)
- Ukrain. Fiz. Ž.* Akademija Nauk Ukrainskoi SSR. Otdelenie Fiziki. Ukrainskij Fizičeskij Žurnal. (Kiev)
- Ukrain. Fiz. Ž.* Akademija Nauk Ukrainskoi SSR. Viddil Fiziki. Ukrainskij Fizičeskij Žurnal. (Ukrainian edition). (Kiev) (Translated as: *Ukrain. Fiz. Ž.*)

- Ukrain. Geom. Sb. Ukrainiskii Geometričeskii Sbornik. (Kharkov)
 Ukrain. Geometr. Sb. Ukrainiskii Geometričeskii Sbornik. (Kharkov) (Continued as: *Ukrain. Geom. Sb.*)
- Ukrain. Mat. Ž. Akademija Nauk Ukrain'skoj RSR. Institut Matematiki. Ukrain'skii Matematičnii Žurnal. (Ukrainian edition). (Kiev) (Translated as: *Ukrain. Mat. Ž.* and *Ukrainian Math. J.*)
- Ukrain. Mat. Ž. Akademija Nauk Ukrain'skoj SSR. Institut Matematiki. Ukrainiskii Matematičeskii Žurnal. (Kiev)
- Ukrainian Math. J. Ukrainian Mathematical Journal. (New York)
- U'janovsk. Gos. Ped. Inst. Učen. Zap. U'janovskii Gosudarstvennyi Pedagogičeskii Institut im. I. N. U'janova. Učennye Zapiski. (Saratov)
- Ullstein Buch. Ullstein Buch. [Ullstein Book] Ullstein, Berlin.
- Ulsan Inst. Tech. Rep. Ulsan Institute of Technology. Report. (Ulsan)
- Uni-Taschenbücher. Uni-Taschenbücher. [Uni Paperbacks] Birkhäuser, Basel-Boston.
- Unio. Arkansas Lecture Notes in Math. University of Arkansas Lecture Notes in Mathematics. University of Arkansas, Fayetteville, Ark.
- Unio. Beograd. Publ. Elektrotehn. Fak. Ser. Elektron. Telekomun. Automat. Univerzitet u Beogradu Publikacije Elektrotehničkog Fakulteta. Serija Elektronika, Telekomunikacije, Automatika. (Belgrade)
- Unio. Beograd. Publ. Elektrotehn. Fak. Ser. Mat. Fiz. Univerzitet u Beogradu. Publikacije Elektrotehničkog Fakulteta. Serija Matematika i Fizika. (Belgrade)
- Unio. Beograd. Radovi Zavoda za Fiz. Univerzitet u Beogradu. Radovi. Zavoda za Fiziku. (Belgrade) (Continued as: *Unio. Beograd. Tehn. Fiz.*)
- Unio. Beograd. Tehn. Fiz. Univerzitet u Beogradu. Tehnička Fizika. Journal of Engineering Physics. (Belgrade)
- Unio. Beograd. Zb. Radova Građevin. Fak. Univerzitet u Beogradu. Zbornik Radova Građevinskog Fakulteta u Beogradu. (Belgrade)
- Unio. Braşov. Lucrari Ştiinţ. Universitatea din Braşov. Lucrari Ştiinţifice. (Braşov) (Continued as: *Bul. Univ. Braşov Ser. C*)
- Unio. Genova Publ. Ist. Mat. Università di Genova. Pubblicazioni dell'Istituto di Matematica. (Genoa)
- Unio. Habana. Universidad de la Habana. (Havana)
- Unio. Kiril Metodij—Skopje Fac. Math. Université Kiril et Metodij—Skopje. Faculté des Mathématiques. (Skopje) (See *Fak. Mat. Unio. Kiril Metodij Skopje Godišen Zb.* Special Issue (See also *Prirod.-Mat. Fak. Unio. Kiril Metodij Skopje Godišen Zb.*)
- Unio. Lisboa Rev. Fac. Ciênc. A (2) Universidade de Lisboa. Revista da Faculdade de Ciências. 2.ª Série. A. Ciências Matemáticas. (Lisbon)
- Unio. Lisboa Revista Fac. Ci. A Universidade de Lisboa. Revista de Faculdade de Ciências. 2.ª Série. A. Ciências Matemáticas. (Lisbon) (Continued as: *Unio. Lisboa Rev. Fac. Ciênc. A (2)*)
- Unio. Missouri Stud. University of Missouri Studies. Univ. Missouri Press, Columbia, Mo.
- Unio. Nac. Tucumán Rev. Ser. A Universidad Nacional de Tucumán. Facultad de Ciencias Exactas y Tecnología. Revista. Serie A. Matemáticas y Física Teórica. (Tucumán)
- Unio. Palermo Ann. Fac. Econom. Commercio Università di Palermo. Annali della Facoltà di Economia e Commercio. (Palermo)
- Unio. Palermo Ann. Fac. Econom. e Commercio Università di Palermo. Annali della Facoltà di Economia e Commercio. (Palermo) (Continued as: *Unio. Palermo Ann. Fac. Econom. Commercio*)
- Unio. Stud. Math. (Jaipur) University Studies in Mathematics. (Jaipur)
- Unio. Studies Math. University Studies in Mathematics. (Jaipur) (Continued as: *Unio. Stud. Math. (Jaipur)*)
- Unio. u. Novom Sadu Zb. Rad. Prirod.-Mat. Fak. Univerzitet u Novom Sadu. Zbornik Radova Prirodno-Matematičkog Fakulteta. (Novi Sad)
- Unio. Western Ontario Series in Philos. Sci. University of Western Ontario Series in Philosophy of Science. Reidel, Dordrecht.
- Univ. Ślaski w Katowicach. Prace Nauk. Uniwersytet Ślaski w Katowicach. Prace Naukowe. (Katowice) (Formerly: *Univ. Ślaski w Katowicach. Prace Naukowe*) (Treated as monograph series.)
- Univ. Ślaski w Katowicach. Prace Nauk.-Prace Mat. Uniwersytet Ślaski w Katowicach. Prace Naukowe. Prace Matematyczne. (Katowice)
- Univ. Ślaski w Katowicach. Prace Naukowe Uniwersytet Ślaski w Katowicach. Prace Naukowe. (Katowice) (Continued as: *Univ. Ślaski w Katowicach. Prace Nauk.*)
- Univ. Ślaski w Katowicach. Prace Naukowe—Prace Mat. Uniwersytet Ślaski w Katowicach. Prace Naukowe. Prace Matematyczne. (Katowice) (Continued as: *Univ. Ślaski w Katowicach. Prace Nauk.-Prace Mat.*)
- Upravljeni Složn. Sistemami (Riga) Rīzskii Politehničkii Institut. Upravlēnie Složnymi Sistemami. (Riga)
- Upravljajemye Sistemy Upravljajemye Sistemy. Institut Matematiki, Institut Kataliza Sibirskogo Otdelenija Akademii Nauk SSSR. (Novosibirsk)
- Ural. Gos. Univ. Mat. Zap. Ural'skii Gosudarstvennyi Universitet im. A. M. Gork'ogo. Ural'skoe Matematičeskoe Obščestvo. Matematičeskie Zapiski. (Sverdlovsk)
- Ural. Politehn. Inst. Sb. Ural'skii Politehničkii Institut im. S. M. Kirova. Sbornik. (Sverdlovsk)
- US i M—Upravljajučie Sistemy i Mašiny US i M—Upravljajučie Sistemy i Mašiny. (Kiev)
- Uspehi Fiz. Nauk Akademija Nauk SSSR. Uspehi Fizičeskikh Nauk. (Moscow) (Translated as: *Soviet Phys. Uspekhi*)
- Uspehi Mat. Nauk Akademija Nauk SSSR i Moskovskoe Matematičeskoe Obščestvo. Uspehi Matematičeskikh Nauk. (Moscow) (Translated as: *Russian Math. Surveys*)
- Utilitas Math. Utilitas Mathematica. A Canadian Journal of Applied Mathematics, Computer Science, and Statistics. (Winnipeg, Man.)
- V. I. Lenin. Sakharth. Politekh. Inst. Samecn. Šrom. V. I. Lenin's Sahelebis Šromis Ciheli Drodis Ordenosani Sakharthvelos Politehnikuri Institut. Samecniero Šromebi. (Tbilisi)
- † Various Publ. Ser. Various Publications Series. Aarhus Universitet, Matematisk Institut, Aarhus.
- Verh. Konink. Acad. Wetensch. België Verhandlungen van de Koninklijke Academie voor Wetenschappen, Letteren en Schone Kunsten van België. Klasse der Wetenschappen. (Brussels)
- Verh. Konink. Acad. Wetensch. Lett. Schone Kunst. België Kl. Wetensch. Verhandlungen van de Koninklijke Academie voor Wetenschappen, Letteren en Schone Kunsten van België. Klasse der Wetenschappen. (Brussels) (Continued as: *Verh. Konink. Acad. Wetensch. België*)
- † Veröffentlich. Forschungsinst. Deutsch. Museum Gesch. Naturwiss. Tech., Reihe A Veröffentlichungen des Forschungsinstituts des Deutschen Museums für die Geschichte der Naturwissenschaften und der Technik, Reihe A. [Publications of the Research Institute of the German Museum for the History of Natural Sciences and Technology, Series A] Forschungsinstitut des Deutschen Museums für die Geschichte der Naturwissenschaften und der Technik, Munich.
- † Veröffentlich. Forschungsinst. Deutsch. Museum Gesch. Naturwiss. Tech., Reihe C Veröffentlichungen des Forschungsinstituts des Deutschen Museums Geschichte Naturwissenschaft und Technik, Reihe C. [Publications of the Research Institute of the German Museum for the History of Natural Sciences and Technology, Series C] Forschungsinstitut des Deutschen Museums für die Geschichte der Naturwissenschaften und der Technik, Munich.
- † Veröffentlich. Geodät. Inst. Rheinisch-Westfäl. Techn. Hochsch. Aachen Veröffentlichung des Geodätischen Instituts der Rheinisch-Westfälischen Technischen Hochschule Aachen. [Publications of the Institute of Geodesics of the Rheinisch-Westfälischen Technischen Hochschule Aachen] Rheinisch-Westfälische Technische Hochschule, Aachen.
- † Veröffentlich. Leibniz-Archiv Veröffentlichungen des Leibniz-Archivs. [Publications of the Leibniz Archive] Vittorio Klostermann, Frankfurt.
- † Veröffentlich. Schweizer. Medizin. Naturwissensch. Veröffentlichungen der Schweizerischen Gesellschaft für Geschichte der Medizin und der Naturwissenschaften. [Publications of the Swiss Society for the History of Medicine and Sciences] Sauerlander, Aarau.
- Verzekerings-Arch. Het Verzekerings-Archief. (The Hague)
- Vesci Akad. Nauk BSSR Ser. Fiz.-Mat. Nauk Vesci Akademii Nauk BSSR. Serija Fizika-Matematyčnyh Navuk. (Minsk)
- Vestnik Akad. Nauk Kazah. SSR Vestnik Akademii Nauk Kazahskoi SSR. (Alma-Ata)
- Vestnik Akad. Nauk SSSR Vestnik Akademii Nauk SSSR. (Moscow)
- Vestnik Beloruss. Gos. Univ. Ser. I Vestnik Belorusskogo Gosudarstvennogo Universiteta im. V. I. Lenina. Naučnyi Žurnal. Serija I. Matematika, Fizika, Mehanika. (Minsk)
- Vestnik Har'kov. Gos. Univ. Vestnik Har'kovskogo Gosudarstvennogo Universiteta. Serija Mehaniko-Matematičeskaja. 7 apiski Mehaniko-Matematičeskogo Fakulteta i Har'kovskogo Matematičeskogo Obščestva. (Kharkov)
- Vestnik Har'kov. Politehn. Inst. Vestnik Har'kovskogo Politehničeskogo Instituta. (Kharkov)
- Vestnik Jaroslavl. Univ. Jaroslavl'skii Universitet. Vestnik. (Jaroslavl)
- Vestnik Karakalpak. Fil. Akad. Nauk UzSSR Akademija Nauk UzSSR. Karakalpak'skii Filial. Vestnik. (Nukus)
- Vestnik Kiev. Politehn. Inst. Ser. Tehn. Kibernet. Vestnik Kievskogo Politehničeskogo Instituta Serija Tehničeskoi Kibernetiki. (Kiev)
- Vestnik Leningrad. Univ. Fiz. Him. Vestnik Leningradskogo Universiteta. Fizika, Himija. (Leningrad)
- Vestnik Leningrad. Univ. Mat. Meh. Astronom. Vestnik Leningradskogo Universiteta. Matematika, Mehanika, Astronomija. (Leningrad) (Mathematics section translated as: *Vestnik Leningrad Univ. Math.*)
- Vestnik Leningrad Univ. Math. Vestnik Leningrad University. Mathematics. (Providence, R.I.) (Translation of the mathematics section of *Vestnik Leningrad Univ. Mat. Meh. Astronom.*)
- Vestnik L'vov. Politehn. Inst. Vestnik L'vovskogo Politehničeskogo Instituta. (L'vov) (May also appear as: *Vestnik L'vov. Politehn. Inst.*)
- Vestnik Moskoo. Univ. Ser. I Mat. Meh. Vestnik Moskovskogo Universiteta. Serija I. Matematika, Mehanika. (Moscow) (Mathematics section translated as: *Moscow Univ. Math. Bull.*)
- Vestnik Moskoo. Univ. Ser. III Fiz. Astronom. Vestnik Moskovskogo Universiteta. Serija III. Fizika, Astronomija. (Moscow) (Physics section translated as: *Moscow Univ. Phys. Bull.*)
- Vestnik Moskoo. Univ. Ser. XV Vyčisl. Mat. Kibernet. Vestnik Moskovskogo Universiteta. Serija XV. Vyčislitel'naja Matematika i Kibernetika. (Moscow)
- Vestnik Statist. Vestnik Statistiki. (Moscow)
- Vidya B Vidya B. Sciences. The Journal of the Gujarat University. (Ahmedabad)
- † Vienna Circle Coll. Vienna Circle Collection. Reidel, Dordrecht.
- † Vieweg Stud., Aufbaukurs Math. Vieweg Studium, Aufbaukurs Mathematik. [Vieweg Studies: Mathematics Course] Vieweg, Braunschweig.
- † Vieweg Tracts Pure Appl. Phys. Vieweg Tracts in Pure and Applied Physics. Vieweg, Braunschweig.
- Vignana Bharathi Vignana Bharathi. (Bangalore)
- Vijnana Parishad Anusandhan Patrika Vijnana Parishad Anusandhan Patrika (The Research Journal of the Hindu Science Academy). (Allahabad)
- Vikram Vikram. (Ujjain)
- Vikram—Quart. Res. J. Vikram University The Vikram. Quarterly Research Journal of Vikram University. (Ujjain) (Continued as: *Vikram*)
- Virginia J. Sci. Virginia Journal of Science. (Richmond, Va.)
- Viznik Kiv. Univ. Ser. Mat. Meh. Viznik Kiiv'skogo Universitetu. Serija Matematiki ta Mehaniki. (Kiev)

- Visnik L'vov. Derz. Univ. Ser. Meh.-Mat.* Visnik L'viv's'kogo Ordena Lenina Derzavogo Universitetu im. Ivana Franka. Serija Mehaniko-Matematična. (Lvov)
- Visnik L'vov. Politehn. Inst.* Visnik L'viv's'kogo Politehničeskogo Institutu. (Lvov)
- See *Vestnik L'vov. Politehn. Inst.*
- Vistas Astronom.* *Vistas in Astronomy.* (Oxford)
- † *Vital Health Statist., Ser. 2: Data Evaluation Methods Res.* Vital and Health Statistics, Series 2: Data Evaluation and Methods Research. National Center for Health Statistics, Hyattsville, Md.
- Vladimir. Vser. Politehn. Inst. Sb. Naučn. Trudov* Vladimiriš Vserni Politehničeskij Institut. Sbornik Naučnyh Trudov. (Vladimir)
- † *VNR New Math. Library* VNR New Mathematics Library. Van Nostrand Reinhold, New York.
- Vologod. Gos. Ped. Inst. Učen. Zap.* Vologodskij Gosudarstvennyj Pedagogičeskij Institut. Učenyje Zapiski. (Vologda) (May also appear as: *Vologod. i Čerepovec. Gos. Ped. Inst. Učen. Zap.*)
- Vologod. i Čerepovec. Gos. Ped. Inst. Učen. Zap.* Vologodskij Gosudarstvennyj Pedagogičeskij Institut. Čerepoveckij Gosudarstvennyj Pedagogičeskij Institut. Učenyje Zapiski. (Vologda) (May also appear as: *Vologod. Gos. Ped. Inst. Učen. Zap.*)
- Volž. Mat. Sb.* Ministerstvo Prosvetšeniija RSFSR. Kuibyševskij Gosudarstvennyj Pedagogičeskij Institut im. V. V. Kuibyševa. Volžskij Matematičeskij Sbornik. (Kuibyšev)
- Voprosy Dinamiki i Pročnosti* Rižskij Politehničeskij Institut. Voprosy Dinamiki i Pročnosti. (Riga)
- Voprosy Filos.* Akademija Nauk SSSR. Institut Filosofii. Voprosy Filosofii. (Moscow)
- Voprosy Informacion. Teorii i Praktiki* Akademija Nauk SSSR. Vsesojuznyj Institut Naučnoj i Tehničkoj Informacii. Voprosy Informacionnoj Teorii i Praktiki. (Moscow)
- Voprosy Istor. Estestvoznani. i Tehn.* Akademija Nauk SSSR. Voprosy Istorii Estestvoznanija i Tehniki. (Moscow)
- Voprosy Kibernet. (Moscow)* Akademija Nauk SSSR. Naučnyj Sovet po Kompleksnoj Probleme "Kibernetika". Voprosy Kibernetiki. (Moscow)
- Voprosy Kibernet. (Tashkent)* Voprosy Kibernetiki. Akademija Nauk Uzbekskoj SSR. (Tashkent)
- † *Voprosy Meh. Process. Upravl.* Вопросы Механики и Процессов Управления. [Questions of Mechanics and Control Processes] Izdat. Leningrad. Univ., Leningrad.
- † *Voprosy Sistemoteh.* Вопросы Системотехники. [Problems of Systems Technology] Izdat. Leningrad. Univ., Leningrad.
- Voprosy Teor. Sistem Avtomat. Upravlenija* Leningradskij Universitet. Voprosy Teorii Sistem Avtomatičeskogo Upravlenija. (Leningrad)
- Voprosy Vyčisl. i Prikl. Mat. (Tashkent)* Akademija Nauk Uzbekskoj SSR. Trudy Ordena Trudovogo Krasnogo Znameni Instituta Kibernetiki s Vyčislitel'nyh Centrom. Voprosy Vyčislitel'noj i Prikladnoj Matematiki. (Tashkent)
- † *Vorlesungen Fachbereich Math. Univ. Essen* Vorlesungen aus dem Fachbereich Mathematik der Universität Essen. [Lecture Notes in Mathematics at the University of Essen] Universität Essen, Fachbereich Mathematik, Essen.
- † *Vorlesungen Math. Inst. Giessen* Vorlesungen aus dem Mathematischen Institut Giessen. [Lecture Notes of the Mathematical Institute of Giessen] Universität Giessen, Mathematisches Institut Giessen, Giessen.
- Voronež. Gos. Univ. Sb. Naučn. Trudov Fak. Prikl. Mat. Meh. VGU* Ministerstvo Vysshego i Srednego Special'nogo Obrazovanija RSFSR. Voronežskij Ordena Lenina Gosudarstvennyj Universitet im. Leninskogo Komsomola. Sbornik Naučnyh Trudov Fakulteta Prikladnoj Matematiki i Mekhaniki. (Voronezh)
- Voronež. Gos. Univ. Trudy Mat. Fak.* Voronežskij Gosudarstvennyj Universitet im. Leninskogo Komsomola. Trudy Matematičeskogo Fakul'teta. (Voronezh)
- Voronež. Gos. Univ. Trudy Naučn.-Issled. Inst. Mat. VGU* Voronežskij Ordena Lenina Gosudarstvennyj Universitet im. Leninskogo Komsomola. Trudy Naučno-Issledovatel'skogo Instituta Matematiki. (Voronezh)
- Voronež. Gos. Univ. Trudy Sem. Funkcional. Anal.* Ministerstvo Vysshego Obrazovanija SSSR. Voronežskij Gosudarstvennyj Universitet. Trudy Seminara po Funkcional'nomu Analizu. (Voronezh)
- † *Vorträge Automaten-theorie* Vorträge zur Automaten-theorie. [Lectures on Automata Theory] Technische Universität Dresden, Dresden.
- † *Vorträge Rheinisch-Westfäl. Akad. Wiss.* Vorträge der Rheinisch-Westfälische Akademie der Wissenschaften. [Lectures of the Academy of Sciences of Rhine-Westphalia] Rheinisch-Westfälische Akademie der Wissenschaften, Düsseldorf.
- Vsesojuz. Zaočn. Politehn. Inst. Sb. Trudov* Vsesojuznyj Zaočnyj Politehničeskij Institut. Sbornik Trudov. (Moscow)
- Vyčisl. Mat. i Vyčisl. Tehn. (Kharkov)* Fiziko-Tehničeskij Institut Nizkih Temperatur Akademii Nauk Ukrainskoj SSR. Vyčislitel'naja Matematika i Vyčislitel'naja Tehnika. (Kharkov)
- Vyčisl. Metody i Programirovanie* Moskovskij Universitet. Sbornik Rabot Vyčislitel'nogo Centra Moskovskogo Universiteta. Vyčislitel'nye Metody i Programirovanie. (Moscow)
- Vyčisl. Prikl. Mat. (Kiev)* Kievskij Gosudarstvennyj Universitet. Mežvedomstvennyj Naučnyj Sbornik. Vyčislitel'naja i Prikladnaja Matematika. (Kiev)
- Vyčisl. Sistemy* Akademija Nauk SSSR. Sibirskoe Otdelenie. Institut Matematiki. Vyčislitel'nye Sistemy. Sbornik Trudov. (Novosibirsk)
- Vyčisl. Tehn. i Voprosy Kibernet.* Leningradskij Gosudarstvennyj Universitet. Vyčislitel'nyj Centr. Moskovskij Gosudarstvennyj Universitet. Vyčislitel'nyj Centr. Vyčislitel'naja Tehnika i Voprosy Kibernetiki. (Leningrad)
- Vyčisl. Tehn. v Mašinostroen.* Akademija Nauk BSSR. Institut Tehničkoj Kibernetiki. Vyčislitel'naja Tehnika v Mašinostroenii. (Minsk)
- Wave Motion* Wave Motion. (Amsterdam)
- † *Wege der Forschung* Wege der Forschung. [Paths of Research] Wissenschaftliche Buchgesellschaft, Darmstadt.
- † *Weiterbildungszentrum Math. Kybernet. Rechentech.* Weiterbildungszentrum für Mathematische Kybernetik und Rechentechnik. [Center for Continuing Education for Mathematical Cybernetics and Computing Technique] Technische Universität Dresden, Dresden.
- † *Weiterbildungszentrum Math. Kybernet. Rechentech. Informationsverarbeitung* Weiterbildungszentrum für Mathematische Kybernetik und Rechentechnik, Informationsverarbeitung. [Center for Continuing Education for Mathematical Cybernetics, Computing Technique and Information Processing] Technische Universität Dresden, Dresden.
- Wiadom. Mat. Roczniki Polskiego Towarzystwa Matematycznego. Seria II.* Wiadomości Matematyczne. (Warsaw) (Continued as: *Wiadom. Mat. (2)*)
- Wiadom. Mat. (2)* Roczniki Polskiego Towarzystwa Matematycznego. Seria II. Wiadomości Matematyczne. (Warsaw)
- Wisconsin Acad. Sci. Arts Lett. Trans.* Wisconsin Academy of Sciences, Arts & Letters. Transactions. (Madison, Wis.)
- Wiss. Beitr. Martin-Luther-Univ. Halle-Wittenberg M* Martin-Luther-Universität Halle-Wittenberg. Wissenschaftliche Beiträge. M. (Halle) (Continued as: *Beiträge Algebra Geom.*)
- Wiss. Beitr. Martin-Luther-Univ. Halle-Wittenberg M* See *Beiträge Algebra Geom.*
- Wiss. Beitr. Martin-Luther-Univ. Halle-Wittenberg M Beitr. Algebra Geom.* Martin-Luther-Universität Halle-Wittenberg. Wissenschaftliche Beiträge. M. Beiträge zur Algebra und Geometrie. (Halle) (Continued as: *Wiss. Beitr. Martin-Luther-Univ. Halle-Wittenberg M*) (Formerly: *Wiss. Beitr. Martin-Luther-Univ. Halle-Wittenberg Reihe M*)
- Wiss. Beitr. Martin-Luther-Univ. Halle-Wittenberg M Kongress Tagungsber.* Martin-Luther-Universität Halle-Wittenberg. Wissenschaftliche Beiträge. M. Kongress und Tagungsberichte. (Halle) (Continued as: *Wiss. Beitr. Martin-Luther-Univ. Halle-Wittenberg M*)
- Wiss. Beitr. Martin-Luther-Univ. Halle-Wittenberg Reihe M* Martin-Luther-Universität Halle-Wittenberg. Wissenschaftliche Beiträge. Reihe M. (Halle) (Continued as: *Wiss. Beitr. Martin-Luther-Univ. Halle-Wittenberg M Beitr. Algebra Geom.*)
- Wiss. Z. Ernst-Moritz-Arndt-Univ. Greifswald Math.-Natur. Reihe* Wissenschaftliche Zeitschrift der Ernst-Moritz-Arndt-Universität Greifswald. Mathematisch-Naturwissenschaftliche Reihe. (Greifswald) (Continued as: *Wiss. Z. Greifswald. Ernst-Moritz-Arndt-Univ. Math.-Natur. Reihe*)
- Wiss. Z. Friedrich-Schiller-Univ. Jena Math.-Natur. Reihe* Friedrich-Schiller-Universität Jena. Wissenschaftliche Zeitschrift. Mathematisch-Naturwissenschaftliche Reihe. (Jena)
- Wiss. Z. Friedrich-Schiller-Univ. Jena Math.-Naturwiss. Reihe* Friedrich-Schiller-Universität Jena. Wissenschaftliche Zeitschrift. Mathematisch-Naturwissenschaftliche Reihe. (Jena) (Continued as: *Wiss. Z. Friedrich-Schiller-Univ. Jena Math.-Natur. Reihe*)
- Wiss. Z. Greifswald. Ernst-Moritz-Arndt-Univ. Math.-Natur. Reihe* Greifswald. Ernst-Moritz-Arndt-Universität. Wissenschaftliche Zeitschrift. Mathematisch-Naturwissenschaftliche Reihe. (Greifswald)
- Wiss. Z. Hochsch. Verkehrswesen "Friedrich List" Dresden* Wissenschaftliche Zeitschrift der Hochschule für Verkehrswesen "Friedrich List" in Dresden. Die Anwendung Mathematischer Methoden im Transport und Nachrichtenwesen. (Dresden)
- Wiss. Z. Humboldt-Univ. Berlin Math.-Natur. Reihe* Wissenschaftliche Zeitschrift der Humboldt-Universität Berlin. Mathematisch-Naturwissenschaftliche Reihe. (Berlin)
- Wiss. Z. Karl-Marx-Univ. Leipzig Ges. Sprachwiss. Reihe* Leipzig. Universität. Wissenschaftliche Zeitschrift der Karl-Marx-Universität Leipzig. Gesellschaft- und Sprachwissenschaftliche Reihe. (Leipzig)
- Wiss. Z. Karl-Marx-Univ. Leipzig Math.-Natur. Reihe* Wissenschaftliche Zeitschrift der Karl-Marx-Universität Leipzig. Mathematisch-Naturwissenschaftliche Reihe. (Leipzig)
- Wiss. Z. Martin-Luther-Univ. Halle-Wittenberg Math.-Natur. Reihe* Wissenschaftliche Zeitschrift der Martin-Luther-Universität Halle-Wittenberg. Mathematisch-Naturwissenschaftliche Reihe. (Halle/Wittenberg)
- Wiss. Z. Pädagog. Hochsch. "Karl Liebknecht" Potsdam* Wissenschaftliche Zeitschrift der Pädagogischen Hochschule "Karl Liebknecht" Potsdam. (Potsdam)
- Wiss. Z. Tech. Hochsch. Ilmenau* Wissenschaftliche Zeitschrift der Technischen Hochschule Ilmenau. (Ilmenau)
- Wiss. Z. Tech. Hochsch. Karl-Marx-Stadt* Wissenschaftliche Zeitschrift der Technischen Hochschule Karl-Marx-Stadt. (Karl-Marx-Stadt)
- Wiss. Z. Tech. Hochsch. Leuna-Merseburg* Leuna-Merseburg. Technische Hochschule. Wissenschaftliche Zeitschrift. (Leuna-Merseburg)
- * *Wiss. Z. Tech. Hochsch. Magdeburg* Wissenschaftliche Zeitschrift der Technischen Hochschule Otto von Guericke Magdeburg. (Magdeburg)
- Wiss. Z. Tech. Univ. Dresden* Wissenschaftliche Zeitschrift der Technischen Universität Dresden. (Dresden)
- Wiss. Z. Techn. Hochsch. Chem. Leuna-Merseburg* Wissenschaftliche Zeitschrift der Technischen Hochschule für Chemie Leuna-Merseburg. (Leuna-Merseburg) (Continued as: *Wiss. Z. Tech. Hochsch. Leuna-Merseburg*)
- Wiss. Z. Techn. Hochsch. Ilmenau* Wissenschaftliche Zeitschrift der Technischen Hochschule Ilmenau. (Ilmenau) (Continued as: *Wiss. Z. Tech. Hochsch. Ilmenau*)
- Wiss. Z. Techn. Hochsch. Karl-Marx-Stadt* Wissenschaftliche Zeitschrift der Technischen Hochschule Karl-Marx-Stadt. (Karl-Marx-Stadt) (Continued as: *Wiss. Z. Tech. Hochsch. Karl-Marx-Stadt*)
- Wiss. Z. Techn. Hochsch. Leuna-Merseburg* Leuna-Merseburg. Technische Hochschule. Wissenschaftliche Zeitschrift. (Leuna-Merseburg) (Continued as: *Wiss. Z. Tech. Hochsch. Leuna-Merseburg*) (Formerly: *Wiss. Z. Techn. Hochsch. Chem. Leuna-Merseburg*)
- Wiss. Z. Techn. Univ. Dresden* Wissenschaftliche Zeitschrift der Technischen Universität Dresden. (Dresden) (Continued as: *Wiss. Z. Tech. Univ. Dresden*)

- Wiss. Z. Univ. Rostock Math.-Natur. Reihe Universität Rostock. Wissenschaftliche Zeitschrift. Mathematisch-Naturwissenschaftliche Reihe. (Rostock) (Formerly: Wiss. Z. Univ. Rostock Math.-Naturwiss. Reihe)
- Wiss. Z. Univ. Rostock Math.-Naturwiss. Reihe Universität Rostock. Wissenschaftliche Zeitschrift. Mathematisch-Naturwissenschaftliche Reihe. (Rostock) (Continued as: Wiss. Z. Univ. Rostock Math.-Natur. Reihe)
- †Wissensch. Inform. Wissenschaftliche Informationen. [Scientific Information] Tech. Hochsch., Karl-Marx-Stadt.
- †Wissensch. Sitzungen Stochastik 80 Wissenschaftliche Sitzungen zur Stochastik 80. [Scientific Meetings on Stochastics 80] Akademie der Wissenschaften der DDR, Zentralinstitut für Mathematik und Mechanik, Berlin.
- †Wissensch. Taschenbücher, Reihe Math./Phys. Wissenschaftliche Taschenbücher, Reihe Mathematik/Physik. [Scientific Paperbacks, Mathematics/Physics Series] Akademie-Verlag, Berlin.
- †Wissensch. Taschenbücher, Reihe Texte Stud. Wissenschaftliche Taschenbücher, Reihe Texte und Studien. [Scientific Paperbacks, Texts and Studies Series] Akademie-Verlag, Berlin.
- †Wissenschaft und Kultur Wissenschaft und Kultur. [Science and Culture] Birkhäuser, Basel-Boston.
- †Wissenschaftstheorie—Wissenschaft Philos. Wissenschaftstheorie—Wissenschaft und Philosophie. [Theory of Science—Science and Philosophy] Vieweg, Braunschweig.
- †Working Papers Working Papers. Universität Bielefeld, Institut für Mathematische Wirtschaftsforschung, Bielefeld.
- *Wuhan Daxue Xuebao Wuhan Daxue Xuebao. Ziran Kexue Ban. Wuhan University Journal. Natural Sciences. (Wuhan)
- Wuhan Univ. J. See Wuhan Daxue Xuebao
- Wuli Xuebao See Acta Phys. Sinica
- Wyz. Szkol. Ped. Krakow. Rocznik Nauk.-Dydakt. Prace Dydakt. Mat. Wyższa Szkoła Pedagogiczna w Krakowie. Rocznik Naukowo-Dydaktyczny. Prace z Dydaktyki Matematyki. (Kraków) (Continued as: Wyz. Szkol. Ped. Krakow. Rocznik Nauk.-Dydakt. Prace Mat.)
- Wyz. Szkol. Ped. Krakow. Rocznik Nauk.-Dydakt. Prace Mat. Wyższa Szkoła Pedagogiczna w Krakowie. Rocznik Naukowo-Dydaktyczny. Prace Matematyczne. (Kraków) (Continued as: Wyz. Szkoła Ped. Krakow. Rocznik Nauk.-Dydakt. Prace Mat.)
- Wyz. Szkoła Ped. Krakow. Rocznik Nauk.-Dydakt. Prace Mat. Wyższa Szkoła Pedagogiczna w Krakowie. Rocznik Naukowo-Dydaktyczny. Prace Matematyczne. (Kraków)
- †Yale Math. Monographs Yale Mathematical Monographs. Yale University Press, New Haven, Conn.
- Yingyong Shuxue He Lixue See Appl. Math. Mech.
- Yingyong Shuxue Xuebao See Acta Math. Appl. Sinica
- *Yingyong Shuxue Yu Jisuan Shuxue Yingyong Shuxue Yu Jisuan Shuxue. Applied Mathematics and Computational Mathematics. (Chongqing)
- Yokohama Math. J. Yokohama Mathematical Journal. (Yokohama)
- Z. Allgemeine Wissenschaftstheorie Zeitschrift für Allgemeine Wissenschaftstheorie. (Wiesbaden)
- Z. Angew. Math. Mech. Zeitschrift für Angewandte Mathematik und Mechanik. Ingenieurwissenschaftliche Forschungsarbeiten. (Berlin)
- Z. Angew. Math. Phys. Zeitschrift für Angewandte Mathematik und Physik. ZAMP. Journal of Applied Mathematics and Physics. Journal de Mathématiques et de Physiques Appliquées. (Basel)
- Ž. Eksp. Teor. Fiz. Akademija Nauk SSSR. Žurnal Eksperimental'noi i Teoretičeskoj Fiziki. (Moscow) (Translated as: Soviet Phys. JETP)
- Z. Elek. Informations-und Energietechn. Zeitschrift für Elektrische Informations-und Energietechnik. (Leipzig) (Continued as: Z. Elektr. Inform. Energietechn.)
- Z. Elektr. Inform. Energietechn. Zeitschrift für Elektrische Informations-und Energietechnik. (Leipzig)
- Z. Krist. Zeitschrift für Kristallographie, Kristallgeometrie, Kristallphysik, Kristallchemie. (Wiesbaden)
- Z. Math. Logik Grundlag. Math. Zeitschrift für Mathematische Logik und Grundlagen der Mathematik. (Berlin)
- Z. Math. Logik Grundlagen Math. Zeitschrift für Mathematische Logik und Grundlagen der Mathematik. (Berlin) (Continued as: Z. Math. Logik Grundlag. Math.)
- Z. Nationalökonom. Zeitschrift für Nationalökonomie. Journal of Economics. (Vienna)

- Z. Naturforsch. Zeitschrift für Naturforschung. (Tübingen) (Continued as: Z. Naturforsch. A)
- Z. Naturforsch. A Zeitschrift für Naturforschung. A. (Tübingen)
- Z. Oper. Res. Ser. A-B Zeitschrift für Operations Research. Serie A. Serie B. (Würzburg)
- Z. Operations Res. Ser. A-B Zeitschrift für Operations Research. Serie A. Serie B. (Würzburg) (Continued as: Z. Oper. Res. Ser. A-B)
- Z. Phys. A Zeitschrift für Physik. A. Atoms and Nuclei. (Berlin)
- Z. Phys. B Zeitschrift für Physik. B. Condensed Matter and Quanta. (Berlin)
- Z. Phys. C Zeitschrift für Physik. C. Particles and Fields. (Berlin)
- Ž. Prikl. Meh. i Tehn. Fiz. Žurnal Prikladnoj Mehaniki i Tehničeskoj Fiziki. (Moscow) (Translated as: J. Appl. Mech. Tech. Phys.)
- Ž. Strukt. Him. Akademija Nauk SSSR. Sibirskoe Otdelenie. Žurnal Strukturnoj Himii. (Moscow)
- Ž. Vyčisl. Mat. i Mat. Fiz. Akademija Nauk SSSR. Žurnal Vyčislitel'noj Matematiki i Matematičeskoj Fiziki. (Moscow) (Translated as: U.S.S.R. Comput. Math. and Math. Phys.)
- Z. Wahrsch. Verw. Gebiete Zeitschrift für Wahrscheinlichkeitstheorie und Verwandte Gebiete. (Berlin)
- Z. Wahrscheinlichkeitstheorie und Verw. Gebiete Zeitschrift für Wahrscheinlichkeitstheorie und Verwandte Gebiete. (Berlin) (Continued as: Z. Wahrsch. Verw. Gebiete)
- Zap. Meh.-Mat. Fak. i Har'kov. Mat. Obšč. See Vestnik Har'kov. Gos. Univ.
- Zap. Naučn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI) Zapiski Nauchnyh Seminarov Leningradskogo Otdelenija Matematičeskogo Instituta im. V. A. Steklova Akademii Nauk SSSR (LOMI). (Leningrad) (Translated as: J. Soviet Math.)
- Zastos. Mat. Polska Akademia Nauk. Instytut Matematyczny. Zastosowania Matematyki. (Warsaw)
- Zb. Rad. Math. Inst. Beograd. (N.S.) Beograd. Matematički Institut. Zbornik Radova. Nouvelle Série. (Belgrade)
- †Zbirka Izbran. Poglavl. Fiz. Zbirka Izbranih Poglavlja iz Fizike. [Collection of Selected Papers in Physics] University of Ljubljana, Ljubljana.
- †Zbirka Izbran. Poglavl. Mat. Zbirka Izbranih Poglavlja iz Matematike. [Collection of Selected Papers in Mathematics] University of Ljubljana, Ljubljana.
- †Zbl. Zentralblatt für Mathematik und ihre Grenzgebiete. (Berlin) See Zbl. Math.
- †Zbl. Math. Zentralblatt für Mathematik und ihre Grenzgebiete. (Berlin) (Usually abbreviated as Zbl in the text of Math. Rev.)
- Zbornik Rad. Math. Inst. Beograd. Matematički Institut. Zbornik Radova. (Belgrade) (Continued as: Zb. Rad. Math. Inst. Beograd. (N.S.))
- Zeszyty Nauk. Akad. Gór.-Hutniczej—Mat.-Fiz.-Chem. Zeszyty Naukowe Akademii Górniczo-Hutniczej im. Stanisława Staszica. Matematyka-Fizyka-Chemia. (Kraków)
- Zeszyty Nauk. Politech. Łódź. Mat. Zeszyty Naukowe Politechniki Łódzkiej. Matematyka. (Łódź)
- Zeszyty Nauk. Politech. Śląsk. Automat. Zeszyty Naukowe Politechniki Śląskiej. Automatyka. (Gliwice)
- Zeszyty Nauk. Politech. Śląsk. Mat.-Fiz. Zeszyty Naukowe Politechniki Śląskiej. Matematyka-Fizyka. (Gliwice)
- Zeszyty Nauk. Politech. Szczecin. Zeszyty Naukowe Politechniki Szczecińskiej. (Szczecin)
- Zeszyty Nauk. Szkoły Główn. Planowania i Statyst. Zeszyty Naukowe Szkoły Głównej Planowania i Statystyki. (Warsaw)
- Zeszyty Nauk. Uniw. Jagielloń. Prace Fiz. Zeszyty Naukowe Uniwersytetu Jagiellońskiego. Prace Fizyczne. (Warsaw/Kraków)
- Zeszyty Nauk. Uniw. Jagielloń. Prace Mat. Zeszyty Naukowe Uniwersytetu Jagiellońskiego. Prace Matematyczne. (Warsaw/Kraków)
- Zeszyty Nauk. Wyz. Szkoły Ped. w Opolu Fiz. Zeszyty Naukowe Wyższej Szkoły Pedagogicznej w Opolu. Fizyka. (Opole)
- Zeszyty Nauk. Wyz. Szkoły Ped. w Opolu Mat. Zeszyty Naukowe Wyższej Szkoły Pedagogicznej w Opolu. Matematyka. (Opole)
- Zhongguo Kexue See Sci. Sinica
- Zhongguo Kexue Shuxue Zhuanji See J. Huazhong Inst. Tech.
- Zidonghua Xuebao See Acta Automat. Sinica
- †ZKI-Inform. 78 ZKI-Informationen 78. [ZKI Information 78] Akademie der Wissenschaften der DDR, Zentralinstitut für Kubermetik und Informationsprozesse, Berlin.

JOURNALS IN TRANSLATION

- Algebra and Logic* Algebra and Logic. (New York) (Translation of *Algebra i Logika*)
- * *Appl. Math. Mech.* (English Ed.) Applied Mathematics and Mechanics. English Edition. (Hong Kong) (Translation of *Appl. Math. Mech.*)
- Astrophysics* Astrophysics. A translation of *Astrofizika* of the Academy of Sciences of the Armenian SSR. (New York) (Translation of *Astrofizika*)
- Automat. Control Comput. Sci.* Automatic Control and Computer Sciences. (New York) (Translation of *Automat. i Vychisl. Tehn.* (Riga))
- Automat. Document. and Math. Linguistics* Automatic Documentation and Mathematical Linguistics. (New York) (Translation of *Naučn.-Tehn. Informacija (VINITI) Ser. 2. Informacionnye Processy i Sistemy*)
- Automat. Remote Control* Automation and Remote Control. A translation of *Avtomatika i Telemekhanika*, a publication of the Academy of Sciences of the USSR. (New York) (Translation of *Avtomat. i Telemekh.*)
- Chinese Astronom.* Chinese Astronomy. (Oxford) (Translation of *Acta Astronom. Sinica*) (Continued as: *Chinese Astronom. Astrophys.*)
- Cybernetics* Cybernetics. (New York) (Translation of *Kibernetika* (Kiev))
- Differential Equations* Differential Equations. (New York) (Translation of *Differentsial'nye Uravneniya*)
- Electron. Comm. Japan* Electronics and Communications in Japan. The Transactions of the Institute of Electronics and Communication Engineers of Japan. (Washington, D.C.) (Partial translation of *Denshi Tsushin Gakkai Ronbunshi Sect. A-D*) (See also *Systems-Comput.-Controls*)
- Engng. Cybernetics* Engineering Cybernetics. English Edition of *Tekhnicheskaya Kibernetika*. (Silver Spring, Md.) (Translation of *Izv. Akad. Nauk SSSR Tehn. Kibernet.*)
- Fluid Dynamics* Fluid Dynamics. (New York) (Translation of *Izv. Akad. Nauk SSSR Meh. Zhidk. Gaza*)
- Fluid Mech.—Soviet Res.* Fluid Mechanics. Soviet Research. (Silver Spring, Md.)
- Functional Anal. Appl.* Functional Analysis and its Applications. (New York) (Translation of *Funktsional. Anal. i Prilozhen.*)
- Geodes. Mapp. Photogramm.* Geodesy Mapping and Photogrammetry. (Washington, D.C.) (Partial translation of *Izv. Vysš. Učebn. Zaved. Geod. i Aërofot.*)
- Izv. Acad. Sci. USSR Atmospher. Ocean. Phys.* Izvestiya Academy of Sciences USSR. Atmospheric and Oceanic Physics. (Washington, D.C.) (Translation of *Izv. Akad. Nauk SSSR Ser. Fiz. Atmosfer. i Okeana*)
- Izv. Acad. Sci. USSR Phys. Solid Earth* Izvestiya Academy of Sciences USSR. Physics of the Solid Earth. (Washington, D.C.) (Translation of *Izv. Akad. Nauk SSSR Ser. Fiz. Zemli*)
- J. Appl. Math. Mech.* Journal of Applied Mathematics and Mechanics. Translation of the Soviet journal *Prikladnaya Matematika i Mekhanika*. (Oxford) (Translation of *Prikl. Mat. Meh.*)
- J. Appl. Mech. Tech. Phys.* Journal of Applied Mechanics and Technical Physics. (New York) (Translation of *Ž. Prikl. Meh. i Tehn. Fiz.*)
- J. Engng. Phys.* Journal of Engineering Physics. (New York) (Translation of *Inž.-Fiz. Ž.*)
- J. Soviet Math.* Journal of Soviet Mathematics. (New York) (Translation of *Itogi Nauki—Seriya "Matematika" (Progress in Science—Mathematical Series), Problemy Matematicheskogo Analiza (Problems in Mathematical Analysis), and Zap. Naučn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI)*)
- Lithuanian Math. J.* Lithuanian Mathematical Journal. (New York) (Translation of *Litovsk. Mat. Sb.*)
- Magnetohydrodynamics* Magnetohydrodynamics. (A translation of *Magnitnaya Gidrodinamika* of the Academy of Sciences of the Latvian SSR). (New York) (Translation of *Magnit. Gidrodinamika*)
- Math. Notes* Mathematical Notes of the Academy of Sciences of the USSR. (New York) (Translation of *Mat. Zametki*)
- Math. USSR—Izv.* Mathematics of the USSR—Izvestiya. (Providence, R.I.) (Translation of *Izv. Akad. Nauk SSSR Ser. Mat.*)
- Math. USSR—Sb.* Mathematics of the USSR—Sbornik. (Providence, R.I.) (Translation of *Mat. Sb. (N.S.)*)
- Mech. Solids* Mechanics of Solids. (New York) (Translation of *Izv. Akad. Nauk SSSR Meh. Tverd. Tela*)
- Moscow Univ. Math. Bull.* Moscow University Mathematics Bulletin. (New York) (Translation of the mathematics section of *Vestnik Moskov. Univ. Ser. I Mat. Meh.*)
- Moscow Univ. Phys. Bull.* Moscow University Physics Bulletin. (New York) (Translation of the physics section of *Vestnik Moskov. Univ. Ser. III Fiz. Astronom.*)
- Problems Inform. Transmission* Problems of Information Transmission. (New York) (Translation of *Problemy Peredachi Informatsii*)
- Proc. Steklov Inst. Math.* Proceedings of the Steklov Institute of Mathematics. (Providence, R.I.) (Translation of *Trudy Mat. Inst. Steklov.*)
- Proc. (Trudy) P. N. Lebedev Phys. Inst.* Proceedings (Trudy) of the P. N. Lebedev Physics Institute. (New York) (Translation of *Trudy Fiz. Inst. Lebedev.*)
- Programming and Comput. Software* Programming and Computer Software. (New York) (Translation of *Programmirovaniye*)
- Radio Engng. Electron. Phys.* Radio Engineering and Electronic Physics. Translation of *Radiotekhnika i Elektronika*, a U.S.S.R. Academy of Sciences Publication. (Silver Spring, Md.) (Translation of *Radiotekhn. i Elektron.*)
- Radiophys. and Quantum Electronics* Radiophysics and Quantum Electronics. A translation of the *Izvestiya Vysših Učebnyh Zavedenii Radiofizika* of the Ministry of Higher Education of the USSR. (New York) (Translation of *Izv. Vysš. Učebn. Zaved. Radiofizika*)
- Rech. Aéropat.* (English) La Recherche Aéropatiale. English edition. (Châtillon) (Translation of *Rech. Aéropat.*)
- Russian Math. Surveys* Russian Mathematical Surveys. A translation of the survey articles and of selected biographical articles in *Uspehi Matematicheskikh Nauk*. (London) (Translation of *Uspehi Mat. Nauk*)
- Siberian Math. J.* Siberian Mathematical Journal. (New York) (Translation of *Sibirsk. Mat. Ž.*)
- Soviet Aeronaut.* Soviet Aeronautics. (New York) (Translation of *Izv. Vysš. Učebn. Zaved. Aviacion. Tehn.*)
- Soviet Appl. Mech.* Soviet Applied Mechanics. (New York) (Translation of *Prikl. Meh.*)
- Soviet Astronom.* Soviet Astronomy. A translation of *Astronomicheskii Zhurnal*, the astronomical journal of the Academy of Sciences of the USSR. (New York) (Translation of *Astronom. Zh.*)
- Soviet Automat. Control* Soviet Automatic Control. (Silver Spring, Md.) (Translation of *Avtomatika*)
- Soviet J. Nuclear Phys.* American Institute of Physics. Soviet Journal of Nuclear Physics. (New York) (Translation of *Jadernaya Fiz.*)
- Soviet J. Particles and Nuclei* Soviet Journal of Particles and Nuclei. (New York) (Translation of *Fiz. Elementar. Častit i Atom. Jadra*)
- Soviet Math. Dokl.* Soviet Mathematics. Doklady. A translation of the mathematics section of *Doklady Akademii Nauk SSSR*. (Providence, R. I.) (Translation of mathematics section of *Dokl. Akad. Nauk SSSR*)
- Soviet Math. (Iz. VUZ)* Soviet Mathematics (Izvestiya Vysših Učebnyh Zavedenii Matematika). (New York) (Translation of *Izv. Vysš. Učebn. Zaved. Matematika*)
- Soviet Phys. Acoust.* Soviet Physics. Acoustics. A translation of *Akusticheskii Zhurnal* of the Academy of Sciences of the USSR. (New York) (Translation of *Akust. Zh.*)
- Soviet Phys.—Collection* Soviet Physics. Collection. (New York) (Translation of *Litovsk. Fiz. Sb.*)
- Soviet Phys. Dokl.* Soviet Physics. Doklady. A translation of the physics sections of *Doklady Akademii Nauk SSSR*. (New York) (Translation of physics sections of *Dokl. Akad. Nauk SSSR*)
- Soviet Phys. J.* Soviet Physics Journal. (New York) (Translation of *Izv. Vysš. Učebn. Zaved. Fizika*)
- Soviet Phys. JETP* Soviet Physics. JETP. A translation of *Ž. Eksperimental'noi i Teoreticheskoi Fiziki* of the USSR. (New York) (Translation of *Ž. Eksper. Teoret. Fiz.*)
- Soviet Phys. Uspekhi* Soviet Physics. Uspekhi. A translation of the *Uspehi Fizicheskikh Nauk* (Advances in the Physical Sciences) of the Academy of Sciences of the USSR. (New York) (Translation of *Uspehi Fiz. Nauk*)
- Systems-Comput.-Controls* Systems-Computers-Controls. The Transactions of the Institute of Electronics and Communication Engineers of Japan. (Silver Spring, Md.) (Partial translation of *Denshi Tsushin Gakkai Ronbunshi Sect. A-D*) (See also *Electron. Comm. Japan*)
- Theoret. and Math. Phys.* Theoretical and Mathematical Physics. (New York) (Translation of *Teoret. Mat. Fiz.*)
- Theory Probab. Appl.* Theory of Probability and its Applications. An English translation of the Soviet journal *Teoriya Veroyatnostei i ee Primeneniya*. (Philadelphia, Pa.) (Translation of *Teor. Veroyatnost. i Primenen.*)
- Theory Probab. Math. Statist.* Theory of Probability and Mathematical Statistics. (Providence, R.I.) (Translation of *Teor. Veroyatnost. i Mat. Statist.*)
- Trans. Moscow Math. Soc.* Transactions of the Moscow Mathematical Society. (Providence, R.I.) (Translation of *Trudy Moskov. Mat. Obšč.*)
- U.S.S.R. Comput. Math. and Math. Phys.* U.S.S.R. Computational Mathematics and Mathematical Physics. (Oxford) (Translation of *Ž. Vychisl. Mat. i Mat. Fiz.*)
- Ukrain. Fiz. Ž.* Akademiya Nauk Ukrainkoï SSR. Otdelenie Fiziki. Ukrainskii Fizicheskii Zhurnal. (Kiev)
- Ukrain. Mat. Ž.* Akademiya Nauk Ukrainkoï SSR. Institut Matematiki. Ukrainskii Matematicheskii Zhurnal. (Kiev)
- Ukrainian Math. J.* Ukrainian Mathematical Journal. (New York)
- Vestnik Leningrad Univ. Math.* Vestnik Leningrad University. Mathematics. (Providence, R.I.) (Translation of the mathematics section of *Vestnik Leningrad. Univ. Mat. Meh. Astronom.*)

TRANSLITERATION OF CYRILLIC

Russian Letter Cap. Ital.	Mathematical Reviews; Zentralblatt für Mathematik	Bulletin Signalétique	Applied Mechanics Reviews	Science Abstracts	U.S. Library of Congress	Amer. Slavic & E. European Review	Journal of Symbolic Logic
А а	a	a	a	a	a	a	a
Б б	b	b	b	b	b	b	b
В в	v	v	v	v	v	v	v
Г г	g	g	g	g	g	g	g
Д д	d	d	d	d	d	d	d
Е е	e	e	e	e	e	e	é
Ё ё	e	ē	e	ē	ē	ē	ē
Ж ж	zh	zh	zh	zh	zh	ž	ž
З з	z	z	z	z	z	z	z
И и	i	i	i	i	i	i	i
Й й	i	j	i	i	i	j	j
К к	k	k	k	k	k	k	k
Л л	l	l	l	l	l	l	l
М м	m	m	m	m	m	m	m
Н н	n	n	n	n	n	n	n
О о	o	o	o	o	o	o	o
П п	p	p	p	p	p	p	p
Р р	r	r	r	r	r	r	r
С с	s	s	s	s	s	s	s
Т т	t	t	t	t	t	t	t
У у	u	u	u	u	u	u	u
Ф ф	f	f	f	f	f	f	f
Х х	h	kh	kh	kh	kh	kh	h
Ц ц	c	c	ts	ts	ts	c	c
Ч ч	č	ch	ch	ch	ch	č	č
Ш ш	š	sh	sh	sh	sh	š	š
Щ щ	šč	shch	shch	shch	shch	šč	šč
Ъ ъ	"	"	"	"	"	"	"
Ы ы	y	y	y	y	y	y	y
Ь ь	'	'	'	'	'	'	'
Э э	è	e	e	é	é	è	e
Ю ю	ju	ju	yu	yu	iū	ju	ú
Я я	ja	ja	ya	ya	ia	ja	á

Other *Mathematical Reviews* conventions are as follows:

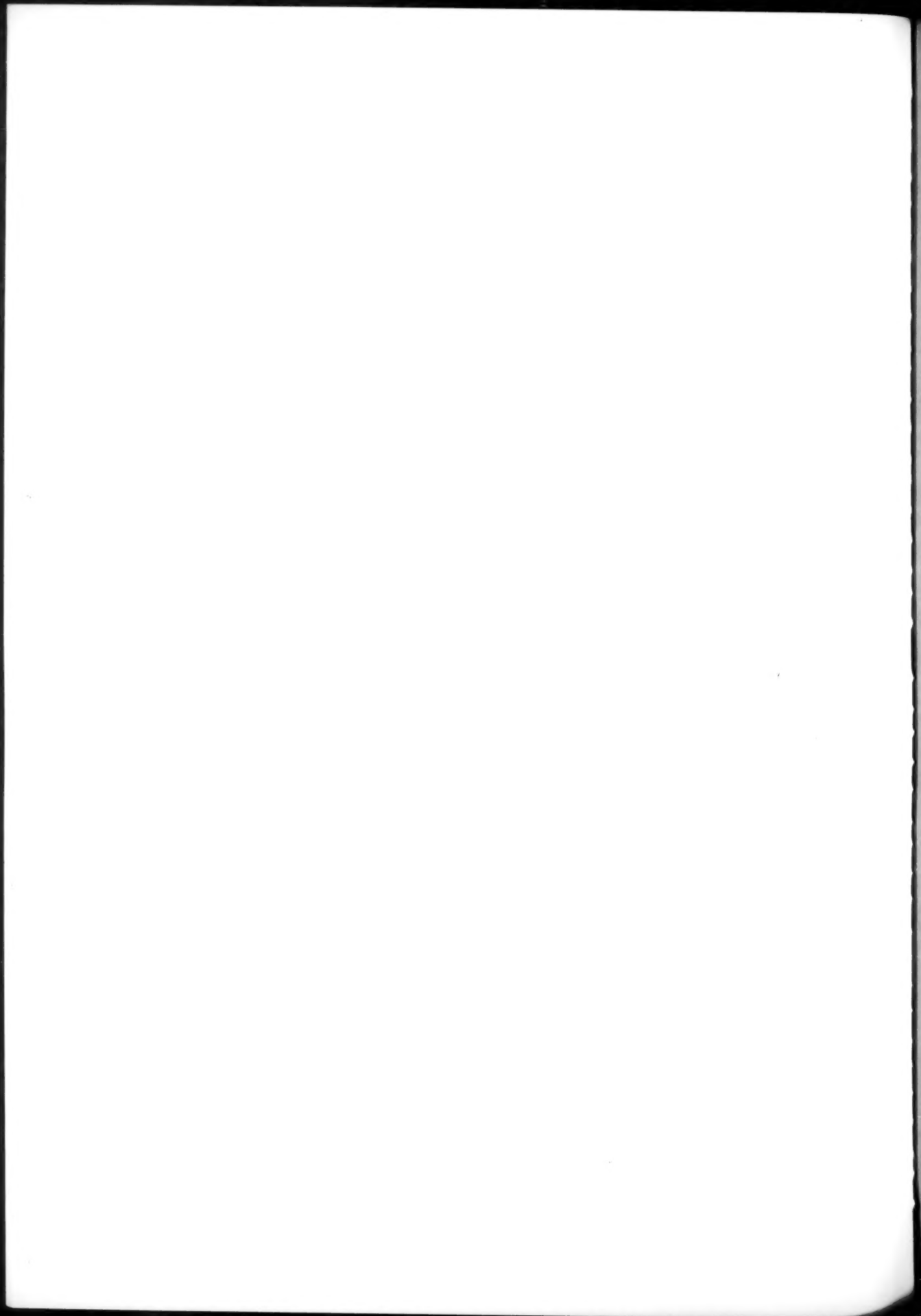
The Ukrainian І, і are transliterated I, i, respectively.

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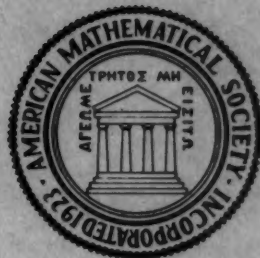
The Ukrainian Є, є are transliterated Ē, ē.

The Serbian Ђ, ђ are transliterated Đ, đ, respectively.

The Serbian Ћ, ћ are transliterated Ć, ć; the Serbian Љ, љ are transliterated Dž, dž.



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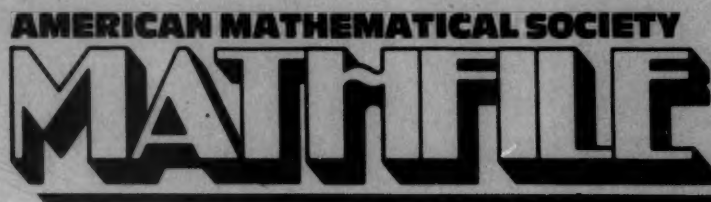
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